ASEAN Food and Nutrition Security Report 2021

Volume 1

WFP World Food Programme

unicef for every child

asean one vision one identity one community

ASEAN Food and Nutrition Security Report 2021 Volume 1

The ASEAN Secretariat
Jakarta

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia.

For inquiries, contact:
The ASEAN Secretariat
Community Relations Division (CRD)
70A Jalan Sisingamangaraja
Jakarta 12110, Indonesia
Phone: (62 21) 724-3372, 726-2991
Fax: (62 21) 739-8234, 724-3504
E-mail: public@asean.org

Catalogue-in-Publication Data

ASEAN Food and Nutrition Security Report 2021 Volume 1
Jakarta, ASEAN Secretariat, August 2022

363.8095
1. ASEAN – Food Security – Nutrition Security
2. Policy – Programme

ISBN 978-623-6945-74-2 (Jilid lengkap)
978-623-6945-75-9 (Jilid 1)

ASEAN: A Community of Opportunities for All.

The Publication is produced with the support of WFP World Food Programme and unicef for every child

General information on ASEAN appears online at the ASEAN Website: www.asean.org

This document was prepared in consultation and coordination with ASEAN member states through the ASEAN Health Cluster 1.

The findings, interpretations and conclusions expressed in this work do not necessarily reflect the views of ASEAN or its Member States, UNICEF, WFP or its committees.

All reasonable precautions have been taken by ASEAN, UNICEF and WFP to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall ASEAN, UNICEF or WFP be liable for damages arising from its use.

The boundaries, colours, denominations and other information shown on any map in this work do not imply any judgment on the part of ASEAN, UNICEF or WFP concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Financial support

This document has been produced with the financial assistance of UNICEF and WFP. UNICEF recognizes the support by the Bill & Melinda Gates Foundation for the development of this document. The views expressed herein can in no way be taken to reflect the official opinion of UNICEF and WFP.

Suggested citation

ASEAN, UNICEF and WFP. 2022. ASEAN Food and Nutrition Security Report 2021, Volume 1. Jakarta; UNICEF.

Photo credits cover:

© UNICEF/ 2021/ Fauzan

Sakha, 8 months, holds an orange at his home in Pasung Village, Klaten, Central Java Province, Indonesia, on 7 September 2021.

This report was printed by support from the World Food Programme (WFP).

Printed in Jakarta, Indonesia

Message from the **ASEAN Health Ministers Meeting Chair**

I would like to acknowledge the contribution of the Department of Health and National Nutrition Council of the Philippines in the development of this Report. I also would like to recognize the leadership of the AHMM Chair Minister of Health Indonesia during the launch of the Report at the side event of the 15th AHMM.

In 2017, the ASEAN Leaders adopted the ASEAN Leaders' Declaration on Ending all Forms of Malnutrition (ALDEAFM) to confirm the highest political commitment of ASEAN Member States to address malnutrition in the region. The declaration agrees on the urgent need to accelerate evidence-based, multi-sectoral actions. This can be done by continuously monitoring and analyzing the nutrition situation and progress in implementing nutrition action plans in each of the ASEAN Member States.

The ASEAN Food and Nutrition Security Report 2021 is the successor of the 2016 ASEAN Regional Report on Nutrition Security. The 2016 Report proved to be a useful technical reference on the updates of the nutrition situation in the ASEAN region. In consultation with the ASEAN Member States, the 2021 Report updated the progress of nutrition actions and key accomplishment in the ASEAN region as well identified challenges and achievements towards the global targets on maternal and young child nutrition and diet-related noncommunicable diseases, as well as the targets of relevant Sustainable Development Goals.

The declaration also agrees to strengthen nutrition surveillance in the ASEAN region. The ASEAN Nutrition Surveillance System serves as the platform for regular monitoring of progress on key nutrition indicators and the underlying determinants of poor nutrition. The establishment of the ASEAN Nutrition Surveillance System may also support the identification of regional nutrition policies and the development of regional plans of action. The data submitted by each ASEAN Member State into the ASEAN Nutrition Surveillance System are the basis for the development of the 2021 ASEAN Food and Nutrition Security Report.

The 2021 Report also presents good practices in the implementation of nutrition programmes as well as a set of strategic recommendations to monitor the implementation of the ASEAN Strategic Framework and Action Plan for Nutrition 2018-2030. The Report shall thus be very useful for setting priorities, developing socially inclusive policies and programmes and evaluating interventions related to the elimination of all forms of malnutrition in the ASEAN region.

H.E. Dr. Bounfeng PHOUMMALAYSITH MSc, MMA, Ph.D.
AHMM Chair
Minister of Health of the Lao PDR

Message from **UNICEF**

Well-nourished children and families are the cornerstone of healthy communities and thriving nations. Nutritious diets fuel growth and development, drive learning, and pave the way to a more sustainable and prosperous future.

The ten countries that comprise the Association of Southeast Asian Nations (ASEAN) have experienced rapid economic growth and laudable improvements in socioeconomic and health outcomes in recent years. Despite demonstrable progress, individuals and families in the ASEAN region still face significant barriers to consuming healthy diets and accessing adequate nutrition and health services. While many of these barriers to good nutrition have persisted over time, others are new and evolving in an increasingly modern and urbanized world.

In 2016, an inaugural Regional Report on Nutrition Security in ASEAN was released in two volumes. These reports compiled the most recent and relevant data on nutrition, food security and related factors as well as the policy environment. This landmark effort to comprehensively document the nutrition policy and programme environment provided the region with evidence-based advocacy to support ASEAN's commitment to position nutrition and food security as a national and regional development priority.

Much has been achieved since these inaugural regional reports on nutrition and food security were first released. Most notably, the ASEAN Leaders Declaration on Ending All Forms of Malnutrition was adopted in 2017 and the ASEAN Strategic Framework and Action Plan on Nutrition 2018–2030 was developed to operationalize the Declaration and guide action over the next decade. As part of the Strategic Framework and Action Plan, follow-up regional reports are to be produced every five years in order to track progress across the ASEAN region.

This ASEAN Food and Nutrition Security Report 2021 – published in two volumes – is the first update. This 2021 report was a joint effort between ASEAN, UNICEF and the World Food Programme to provide an in-depth update on the current nutrition and food security situation in the region and take stock of status of essential nutrition policies and programmes across Member States. This report provides the most extensive investigation into the status of nutrition actions in the ASEAN region to date. Further, the extensive contributions of each Member State in the preparation of both volumes 1 and 2 of this report indicate a high-level of support for ASEAN's commitments to improving nutrition and food security in the region.

This report shows that significant progress has been achieved in creating an enabling environment for nutrition in ASEAN Member States. However, there are still barriers to overcome to help individuals and families access the food and services they need to live healthfully.

A world without malnutrition is possible. With better knowledge of the progress made – and the challenges and gaps that remain – we can further strengthen programmes and policies to reach those most in need and build a healthier, brighter, and more equitable future for children and their families.

Debora Comini
Regional Director
UNICEF East Asia and Pacific Regional Office

Message from **WFP**

As this report illustrates, significant progress has been made to address malnutrition in Southeast Asia. This is encouraging and we want to see more of it.

Some credit to this progress can surely be attributed to the fact that, more so today than in the past, we understand that food security and nutrition are part of an interconnected network. If the people of the ASEAN region are to thrive, we need to work across sectors and systems to sustainably address all forms of malnutrition and to ensure availability, access, affordability, and demand for safe and healthy diets.

Nevertheless, more can be done. We must further enhance the effectiveness and efficiency of food systems to meet the nutritional requirements of vulnerable groups. Partnerships between government and private sector are key to achieving meaningful long-term change. Actions such as staple food fortification and the production of healthy fortified complementary food for young children can help increase the value of these foods within the food system and address nutrient gaps of the population in Southeast Asia. Additionally, as shown by analysis recently conducted in the region, nutrition-sensitive social protection schemes that support the poorest and most nutritionally vulnerable people at scale could help offset by 20% to 60% the cost of healthy diets. The education system is another excellent platform with wide coverage that can foster positive lifelong dietary choices and practices within children, while supporting a healthy food environment within and outside of schools.

Furthermore, given the vulnerability of the region to natural disasters and shocks – and learning from the on-going COVID-19 pandemic, which has increased the risk of poor child nutritional outcome – it is essential that governments in the region invest in stronger disaster preparedness, early warning and response systems, including shock-responsive safety nets. These can help build resilience and protect people - especially the most vulnerable family members and communities - from future disasters and epidemics.

Governments have already made great strides and must continue to spearhead action against malnutrition throughout the life-cycle – leading the way for policies, programmes, investment, and financing for child nutrition. But we must remember: reducing malnutrition is not in the hands of governments alone. The path to good nutrition for all demands a shared vision, strong collaboration and determined commitment from all of us.

John Aylieff
WFP Regional Director for Asia and Pacific

Contents

Contents

List of Tables

List of Figures

List of Boxes

Acknowledgements

The designated representatives from ASEAN Member States, international partners and organizations (e.g., UNICEF, WFP, Alive & Thrive, FAO, WHO), and the ASEAN Secretariat jointly contributed to the development of the *ASEAN Food and Nutrition Security Report 2021* (AFNSR).

The processes involved were the development and finalization of the concept note and report outline; data collection and verification; drafting, review and finalization of the report; and, coordination with ASEAN Member States, authors and contributors to the report. These were undertaken with the overall guidance of lead country the Philippines, through the National Nutrition Council of the Department of Health, together with co-lead country Indonesia, through the Department of Public Health Nutrition, Ministry of Health, with the overall coordination by the Health Division of the ASEAN Secretariat.

The AFNSR was endorsed by the *ASEAN Health Cluster 1 (AHC 1) on Promoting Healthy Lifestyles and by the ASEAN Senior Officials Meeting on Health Development (SOMHD)*; and adopted by the *ASEAN Health Minister Meeting (AHMM)*.

The technical assistance for the development of the AFNSR was led by the technical writer Jessica White (Consultant of UNICEF HQ) under the strategic direction of Dr. Jessica Blankenship (Nutrition Specialist of UNICEF EAPRO) and supervision of Dr. Roland Kupka (Regional Nutrition Adviser of UNICEF EAPRO). As co-partner, the World Food Programme (WFP Regional Bureau for Asia and Pacific, under the coordination of the Senior Regional Nutrition Adviser, Dr. Britta Schumacher, provided additional technical insights to the final AFNSR and support to its printing. Alive & Thrive, Food and Agriculture Organization (FAO and World Health Organization (WHO also contributed via the provision of data and technical text.

The authorship of the case studies is attributable to each of the ASEAN Member State. The AFNSR was edited by Julia D'Aloisio; and, Cori Park prepared the design, layout and graphics following the ASEAN corporate design manual.

ASEAN Member State contributors

Brunei Darussalam	Dr. Roslin Sharbawi	Senior Medical Officer & Head of Community Maternal Health Services, Ministry of Health
	Dr. Rohayati Md. Taib	Paediatric Consultant Cardiologist & Chief of Paediatric Services, Ministry of Health
	Dr. Linda Lai Swee Ching	Senior Medical Officer & Head of Community Child Health Services, Ministry of Health
	Dr. Norhayati Md. Kassim	Senior Medical Officer & Head of Health Promotion Centre, Ministry of Health
	Dr. Faezah Mohd Amin	Medical Officer, Department of Environmental Health Services, Ministry of Health
	Roseyati Yaakub	Senior Dietitian, Strategic Lead for Nutrition, Health Promotion Centre, Ministry of Health
	Rusydiah Sudin	Health Education Officer (Nutrition), Health Promotion Centre, Ministry of Health
	Lee Hui Wen@Yvonne Lee	Nutrition Project Assistant, Health Promotion Centre, Ministry of Health
	Dr. Ong Sok King	Consultant and Head NCD Prevention Unit, Ministry of Health

Cambodia	Dr. Kol Hero	Director of Department of Preventive Medicine
	Dr. Chhun Loun	Chief of NCD Bureau, Department of Preventive Medicine, Ministry of Health
	Dr. Chea Mary	Manager of National Nutrition Program (NNP), National Maternal and Child Health Center (NMCHC)
	Hou Kroeun	Deputy Country Director, Helen Keller International Cambodia
Indonesia	Dr. Dhian Dipo, MA	Director of Public Health Nutrition, Ministry of Health
	Inti Mujiati, MD, MKM	Deputy Director of Public Health Nutrition, Ministry of Health
	Iwan Halwani, M.Sc	Deputy Director of Public Health Nutrition, Ministry of Health
	Dr. Hera Nurlita	Head of Quality Nutrition, Directorate of Public Health Nutrition, Ministry of Health
	Andri Mursita, MKM	Senior Officer, Directorate of Public Health Nutrition, Ministry of Health
	Evi Fatimah	Senior Officer, Directorate of Public Health Nutrition, Ministry of Health
	Dr. Maya Safrina Suraningsih	Head of Food Consumption Division, Food Security Agency, Ministry of Agriculture
	Directorate of Processed Food Standardization, National Drug and Food Control Agency	
	Directorate of Health and Community Nutrition, Ministry of Development Planning/National Development Planning Agency	
	Directorate of Food and Agriculture, Ministry of Development Planning/National Development Planning Agency	
Lao People's Democratic Republic	Dr. Phonesavanh Keonakhone	Acting Director of Nutrition Center
	Dr. Khamseng Philavong	Deputy Director of Nutrition Center
	Dr. Khouanheuane Sengkhamyong	Technical staff of Nutrition Center
Malaysia	Zalma Abdul Razak	Director of Nutrition Division, Ministry of Health
	Rusidah Selamat	Deputy Director, Nutrition Division, Ministry of Health
	Zaiton Daud	Deputy Director, Nutrition Division, Ministry of Health
	Nazli Suhardi Ibrahim	Deputy Director, Nutrition Division, Ministry of Health
	Noriza Zakaria	Senior Principal Assistant Director, Nutrition Division, Ministry of Health
	Rashadiba Ibrahim	Senior Principal Assistant Director, Nutrition Division, Ministry of Health
	Wirdah Mohamed	Senior Principal Assistant Director, Nutrition Division, Ministry of Health
	Fatimah Sulong	Senior Principal Assistant Director, Nutrition Division, Ministry of Health
	Teh Wai Siew	Principal Assistant Director, Nutrition Division, Ministry of Health
	Fatimah Zurina Mohamad	Principal Assistant Director, Nutrition Division, Ministry of Health
	Ainan Nasrina Ismail	Principal Assistant Director, Nutrition Division, Ministry of Health
	Ain Hanani Budiono	Senior Assistant Director, Nutrition Division, Ministry of Health
	Nur Azlina Abdul Aziz	Senior Assistant Director, Nutrition Division, Ministry of Health

Myanmar	Dr. Myat Wanna Soe	Director General, Department of Public Health/Medical Services, Ministry of Health
	Dr. Myint Myint Than	Deputy Director General, Department of Public Health, Ministry of Health
	Dr. Htet Lynn	Assistant Director, Department of Public Health, Ministry of Health
Philippines	Dr. Azucena M. Dayanghirang	Executive Director, National Nutrition Council, Department of Health of the Philippines
	Ellen Ruth F. Abella	Nutrition Officer IV, Officer-in-Charge, Nutrition Surveillance Division, National Nutrition Council, Department of Health of the Philippines
	Hygeia Ceres Catalina B. Gawe+	Chief, Nutrition Policy and Planning Division, National Nutrition Council, Department of Health of the Philippines
	Jasmine Anne DF. Tandingan	Nutrition Officer III, Nutrition Surveillance Division, National Nutrition Council, Department of Health of the Philippines
	Leah M. Felismino	Nutrition Officer II, Nutrition Surveillance Division, National Nutrition Council, Department of Health of the Philippines
	Luz B. Tagunicar	Supervising Health Program Officer, Disease Prevention and Control Bureau, Department of Health of the Philippines
Singapore	Dr. Chow Wai Leng	Director, Epidemiology & Disease Control Division, Ministry of Health
	Dr. Albert Ty	Deputy Director (Non-Communicable Diseases), Epidemiology & Disease Control Division, Ministry of Health
	Dr. Stefan Ma	Deputy Director (Bio-statistics & Research), Epidemiology & Disease Control Division, Ministry of Health
	Guo Siqi	Senior Assistant Director (Non-Communicable Diseases), Epidemiology & Disease Control Division, Ministry of Health
	Ng Yixiang	Senior Statistician (Biostatistics & Research), Epidemiology & Disease Control Division, Ministry of Health
	Ngoh Yoke Ting	Senior Manager (Non-Communicable Diseases), Epidemiology & Disease Control Division, Ministry of Health
	Lim Jia Min	Manager (Non-Communicable Diseases), Epidemiology & Disease Control Division, Ministry of Health
	Seow Lee Seng Esmond	Manager (Population Health Analytics), Epidemiology & Disease Control Division, Ministry of Health
	Dr. Chew Ling	Group Director, Youth Preventive Services
	Ann Low	Director, Healthy Food & Dining
	Chiang Li Hui	Deputy Director, Strategic Planning and Collaborations
	Shu E Soh	Assistant Director, Policy, Research & Strategy
	Lee Yi Ling	Assistant Director, School Health Outreach Division
	Elaine Ho	Manager, Strategic Planning and Collaborations
Thailand	Saipin Chotivichien, MD. PhD	Director of Bureau of Nutrition, Department of Health, Ministry of Public Health
	Teeraphat Attavinijtrakarn MD.	Physician Professional Level, Bureau of Nutrition, Department of Health, Ministry of Public Health
	Narttaya Ungkanavin	Nutritionist Professional Level, Bureau of Nutrition, Department of Health, Ministry of Public Health
	Dr. Wannachanok Boonchoo	Medical Scientist Professional level, Bureau of Nutrition, Department of Health, Ministry of Public Health

Viet Nam	Tran Khanh Van	Researcher, Medical Doctor, National Institute of Nutrition
	Huynh Nam Phuong	Researcher, Medical Doctor, National Institute of Nutrition
	Nguyen Duy Son	Researcher, National Institute of Nutrition
	Tuan Thi Mai Phuong	Researcher, National Institute of Nutrition
	Nguyen Dinh Quang	Senior Officer, UNICEF Viet Nam

Contributors from United Nations and international organizations

Alive & Thrive	Dr. Paul Zambrano	Regional Technical Adviser for Southeast Asia
	Roger Mathisen	Program Director for Southeast Asia
	Janice Datu-Sanguyo	Technical Consultant, Philippines
	Jennifer Cashin	Regional Technical Specialist, Myanmar
	Duong Vu	Regional Technical Specialist, Vietnam
	Tuan Nguyen	Technical Specialist for Monitoring and Evaluation, Vietnam
	Putu Widhiantara	Technical Consultant, Indonesia
Food and Agriculture Organization of the United Nations	Dr. Carlo Cafiero	Senior Statistician and Economist, ESS Division, FAO Headquarter Rome
	Dr. Juan Feng	Statistician, ESS Division, FAO Headquarter Rome
	Dr. Warren Lee	Senior Nutrition Officer, FAO Regional Office for Asia and the Pacific
World Food Programme	Britta Schumacher	Senior Regional Nutrition Adviser, WFP Regional Bureau for Asia and Pacific
	Anusara Singhkumarwong	Regional Nutritionist, WFP Regional Bureau for Asia and Pacific
	Nicolas Bidault	Senior Food security and vulnerability analysis Adviser, WFP Regional Bureau for Asia and Pacific
	Joris van Hees	School Health and Nutrition Specialist, WFP Regional Bureau for Asia and Pacific
	Almudena Serrano	Food security and vulnerability analysis Adviser, WFP Regional Bureau for Asia and Pacific
World Health Organization	Dr. Gyanendra Gongal	Regional Adviser (Food safety), Division of Healthier Populations and NCD, WHO Regional Office for South East Asia
	Dr. Angela de Silva	Regional Adviser Nutrition and Health for Development, WHO Regional Office for South East Asia
	Dr. Juliawati Untoro	Technical Lead Nutrition, Division of Healthy Environments and Populations, World Health Organization Regional Office for the Western Pacific
UNICEF	Dr. Roland Kupka	Regional Nutrition Adviser, UNICEF East Asia and the Pacific Regional Office
	Dr. Jessica Blankenship	Regional Nutrition Adviser, UNICEF East Asia and the Pacific Regional Office
	Jessica White	Consultant, UNICEF Headquarter New York

ASEAN Secretariat contributors

Ferdinal Fernando, MD, MDM	Assistant Director and Head of Health Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat
Jim Catampongan	Senior Officer, Health Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat
Jennifer E dela Rosa	Senior Officer, Health Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat
Lina Rospita	Programme Coordinator (Nutrition), Health Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat
Alautiah Miftahayati Rahmunanda	Health Officer, Health Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, ASEAN Secretariat

Acronyms

4P	Pantawid Pamilyang Pilipino Programme (Philippines)
ANC	Antenatal care
ANSS	ASEAN Nutrition Surveillance System
ASEAN	Association of Southeast Asian Nations
BFHI	Baby-friendly Hospital Initiative
BMS	Breastmilk substitutes
CPI	Consumer price index
CSG	Child Support Grant (Thailand)
FAO	Food and Agriculture Organization of the United Nations
FCF	Fortified complementary food
GDP	Gross domestic product
HACCP	Hazard Analysis Critical Control Points
IDD	Iodine deficiency disorders
IFA	Iron and folic acid
ILO	International Labour Organization
IMAM	Integrated Management of Acute Malnutrition
MCCT	Maternal and Child Cash Transfer (Myanmar)
ml	Millilitres
MIYCN	Maternal, infant and young child nutrition
MNP	Micronutrient powder
MMS	Multiple micronutrient supplements
NCDs	Non-communicable diseases
NiE	Nutrition in emergencies
PKH	Program Keluarga Harapan (Indonesia)
RUTF	Ready-to-use-therapeutic food
SAM	Severe acute malnutrition
SDGs	Sustainable Development Goals
SSBs	Sugar-sweetened beverages
UNICEF	United Nations Children's Fund
USI	Universal salt iodization
UIC	Urinary iodine concentration
VAS	Vitamin A supplementation
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHA	World Health Assembly
WHO	World Health Organization
WRA	Women of reproductive age
WASH	Water, sanitation and hygiene

Glossary[i]

Anaemia	A condition in which a person's red blood cell (haemoglobin) level is less than normal. The most common causes of anaemia include inadequate intake, poor absorption and/or excessive loss of vitamins and minerals (particularly iron). Women and young children are vulnerable populations. Pregnant adolescents are particularly at risk because they require iron both for their own growth and for the growth of the fetus.
Anthropometry	Use of body measurements such as weight, height, and mid-upper arm circumference, in combination with age and sex, to gauge nutritional status (including growth or failure to grow).
Breastmilk substitutes	Any food or drink marketed or otherwise represented as a partial or total replacement of breastmilk, whether or not suitable for that purpose. This includes infant formula in accordance with the Codex Alimentarius Standard for Infant Formula; any other product marketed or otherwise represented as suitable for feeding infants up to the age of 6 months; follow-up formula represented as suitable for feeding infants and young children older than 6 months of age in accordance with the Codex Alimentarius Standard for Follow-up Formula; and young child formula or growing-up milks represented as suitable for feeding young children from 12–36 months of age.
Complementary feeding	The process of feeding solid, semi-solid or soft foods to children between the ages of 6 and 23 months. Infants and young children aged 6–23 months should be introduced to complementary foods at the right time, fed frequently throughout the day, receive foods from a diverse range of food groups and be fed responsively.
Complementary foods	Solid, semi-solid and soft foods provided to children between the ages of 6 and 23 months to complement an already breastmilk-based diet. At 6 months of age, breastmilk and breastmilk substitutes are no longer sufficient to meet the full nutritional requirements of infants. Age-appropriate, nutritionally dense and safe solid, semi-solid and soft foods (both locally prepared and commercially manufactured) should be introduced at this time to ensure children's nutritional needs can be met.
Double-duty actions	Interventions, programmes and policies that have the potential to simultaneously reduce the risk or burden of both undernutrition (including wasting, stunting and micronutrient deficiency or insufficiency) and overweight, obesity or diet-related non-communicable diseases (including type 2 diabetes, cardiovascular disease and some cancers). For example, effective promotion of breastfeeding can avert stunting and also reduces the chances of diet-related non-communicable diseases later in life.
Equity and inequity	Equity focuses on opportunities rather than outcomes and encompasses the idea of fairness or justice. Inequity adds a moral dimension, and can be defined as 'unfairness of opportunity', or lack of equitable access to systems and processes that structure everyday conditions, leading to inequalities (or unequal outcomes/consequences). In other words, equality of opportunity, or equity, influences equality of outcome. Nutrition equity here focuses on opportunities and barriers within food systems and health systems that affect access to healthy, affordable food, and quality nutrition care, thus leading to unequal nutrition outcomes (or nutrition inequalities).

i Adapted from the Global Nutrition Report 2020, SOFI 2020 and other global nutrition documents

Food security and insecurity	Food security refers to a situation when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food insecurity refers to a situation when there is a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being.
Food environment	The physical, economic, political and sociocultural contexts that affect accessibility, availability, affordability and cultural/ sensory perceptions of food. This in turn influences people's food choices, such as in acquiring, preparing and eating food, and their nutritional status.
Food systems	The entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products. Food systems comprise all food products that originate from crop and livestock production, forestry, fisheries and aquaculture, as well as the broader economic, societal and natural environments in which these diverse production systems are embedded.
Food fortification	The addition of micronutrients to a food during or after processing to amounts greater than were present in the original food product. Fortification is one of the most cost-effective ways to improve the micronutrient intake and health of large numbers of people.
Infant and young child feeding	Feeding of infants (less than 12 months old) and young children (12–23 months old). Key interventions include protection, promotion and support of optimal breastfeeding practices (exclusive breastfeeding for the first six months and continued breastfeeding for two years or beyond) and support for and promotion of optimal complementary feeding practices.
Low birthweight	A weight at birth of less than 2,500g (<5.5 lbs) regardless of gestational age. Babies born with low birthweight have a higher risk of stunting, lower IQ and death in childhood and overweight and obesity and non-communicable diseases in adulthood.
Malnutrition	Malnutrition, in all its forms, refers to both undernutrition (including stunting, wasting, underweight and micronutrient deficiencies) and overweight, obesity and other diet-related non-communicable diseases. It includes a range of diet-related conditions caused by not having enough calories, nutrients or quality (healthy) food, or having too much low-quality (or unhealthy) food.
Maternal, infant and young child nutrition targets	The maternal, infant and young child nutrition targets are six global targets adopted at the World Health Assembly in 2012, to be attained by 2025, for: low birth weight, stunting in children under 5 years of age, wasting in children under 5 years of age, overweight in children under 5 years of age, anaemia in women of reproductive age, and exclusive breastfeeding. For example, Target 1 is 'Achieve a 40 per cent reduction in the number of children under 5 who are stunted'.
Micronutrients and micronutrient deficiency	Micronutrients are essential vitamins and minerals found in foods that are required for the body to grow, develop and function properly and they are essential for our health and well-being. They include minerals such as iron, calcium, sodium, magnesium, zinc and iodine, and vitamins such as A, B group (such as folate), C and D. Micronutrient deficiency occur when there is insufficient dietary intake, insufficient absorption, and/or suboptimal utilization or excessive loss of vitamins or minerals. The most common deficiencies for micronutrients are for iron, zinc, vitamin A, folate, vitamin B12 and iodine as these nutrients are the most difficult to acquire in adequate amounts without diverse diets or receipt through fortification and supplementation.

Non-communicable diseases (NCDs) and diet-related NCDs	NCDs are non-infectious chronic diseases that last a long time, progress slowly, and are caused by a combination of modifiable and non-modifiable risk factors, including lifestyle/behavioural, environmental, physiological and genetic factors. There are four main types of NCDs: cardiovascular disease (e.g., coronary heart disease, stroke), diabetes, cancer and chronic respiratory disease. Obesity is both a chronic disease and a risk factor for other NCDs. We refer to NCDs related to diet (or nutrition) as 'diet-related NCDs'. These mainly include obesity, cardiovascular disease, diabetes and specific cancer types.
Overweight (child and adult)	Refers to a person too heavy for his or her height. WHO defines childhood overweight as a weight-for-length or -height z-score more than two standard deviations above the median of the WHO Child Growth Standards. This can occur when children's caloric intake from food and beverages exceeds their energy requirements. Children affected by overweight suffer an increased risk of obesity and diet-related noncommunicable diseases later in life, such as cardiovascular disease – the leading cause of death worldwide. In adulthood, overweight is defined as a body mass index (BMI) of 25 kg/m^2 or more, and obesity as a BMI of 30 kg/m^2 or more.
Processed foods	Foods that have been commercially prepared or packaged using baking, canning, drying or freezing. Not all processed foods are unhealthy, but some highly or ultra-processed foods (e.g., ready-to-eat meals and snack foods) contain high levels of salt, sugar and unhealthy fat, which have been shown to increase the risk of overweight, obesity and chronic diseases.
Ready-to-use therapeutic food	Specialized ready-to-eat, portable, shelf-stable products, available as pastes or spreads that are used in a prescribed manner to treat children with wasting. The provision of ready-to-use foods facilitates home-based therapy of children with wasting.
Stunting	Refers to a child who is too short for his or her age. WHO defines childhood stunting (moderate and severe) as a length- or height-for-age z-score more than two standard deviations below the median of the WHO Child Growth Standards. This results from poor nutrition in utero, poor nutrient intake in early childhood and/or infection and disease. Children affected by stunting may never attain their full linear growth and their brains may never develop to their full cognitive capacity, with impacts on their school readiness, learning performance and life opportunities.
Sugar-sweetened beverages	Any liquid that is sweetened with added sugar, such as brown sugar, corn sweetener, corn syrup, dextrose, fructose, glucose, high-fructose corn syrup, honey, lactose, malt syrup, maltose, molasses, raw sugar or sucrose.
The Code	The International Code of Marketing of Breast-milk Substitutes (the Code) and all subsequent relevant resolutions adopted by the World Health Assembly. The Code aims to prohibit all forms of promotion of breastmilk substitutes, including infant formula, feeding bottles and teats.
Wasting	Refers to a child who is too thin for his or her height. WHO defines childhood wasting as weight-for-length or -height z-score more than two standard deviations below the median of the WHO Child Growth Standards. This can result from recent rapid weight loss or the failure to gain weight. Wasting is generally associated with a recent period of inadequate dietary intake or disease. Children suffering from wasting have weak immune systems and face an increased risk of infection and death. If they survive, they are more susceptible to stunted growth and long-term developmental delays.
Undernourishment	The condition in which an individual's habitual food consumption is insufficient to provide the amount of dietary energy required to maintain a normal, active, healthy life.

Executive summary

The consequences of poor nutrition extend beyond the health and development of individuals. Malnutrition in all its forms – undernutrition, micronutrient deficiencies, overweight and obesity – is also a social and economic problem.

The 2016 Association of Southeast Asian Nations (ASEAN) Regional Report on Nutrition Security reported that an alarming proportion of children, adolescents and adults in the region suffer from malnutrition and consume poor-quality diets in the region. In recognition of the potential public health and socioeconomic consequences of inaction on malnutrition, the ASEAN Leaders Declaration on Ending All Forms of Malnutrition was adopted in 2017 and the ASEAN Strategic Framework and Action Plan on Nutrition 2018–2030 was subsequently formulated to operationalize the Declaration. The development of a recurring ASEAN Food and Nutrition Security Report – to be published every five years – was included in the Strategic Framework and Action Plan. Five years after the inaugural report, this **ASEAN Food and Nutrition Security Report 2021, Volume 1** provides a snapshot of progress on nutrition in ASEAN Member States and offers recommendations on the way forward over the next five-year period. **Volume 2** of this report presents data-driven Food and Nutrition Security Profiles for each of the 10 ASEAN Member States.

Individuals and families in ASEAN Member States face economic, physical, social and cultural barriers to consuming nutritious diets and accessing adequate health and nutrition services. Many of these barriers to good nutrition have persisted over time, while others are new and evolving in an increasingly modern and urbanized world. More people are living in cities today than ever before; consumer preferences are shifting from purchasing food in markets to modern grocery stores; unhealthy foods are increasingly available, affordable and preferred; climate change and humanitarian crises pose critical threats to feeding populations sustainably; and health epidemics, such as the COVID-19 pandemic, are stressing already vulnerable systems and further eroding the poor quality of diets. These factors, among many others, are changing both our food environments and access to essential, quality nutrition services.

The most recent estimates of malnutrition, diets and food choices in ASEAN Member States indicate that progress is too slow in the ASEAN region to meet the 2025 global nutrition targets. Far too many children in ASEAN Member States are starting life at a disadvantage, with moderate to high levels of stunting, wasting and overweight in the majority of Member States. In middle childhood, adolescence and adulthood, undernutrition persists while overweight is on the rise and the prevalence of non-communicable disease (NCDs), such as high blood pressure and diabetes, is increasing. Several Member States still struggle with suboptimal breastfeeding and complementary feeding practices, while the consumption of unhealthy foods in adolescents and adults continues to rise.

Despite persistent malnutrition and a changing nutrition landscape, the ASEAN regional community and ASEAN Member States have made significant strides in adopting policies and programmes to improve nutrition across the lifecycle. These policies and programmes have helped foster an enabling environment for nutrition at the regional and national level and maintain healthy diets and lifestyles in the face of emergencies and shocks to vital systems.

From improving maternal nutrition to preventing NCDs, policies and actions to protect and improve nutrition across the life course are improving throughout the ASEAN region. An increasing number of Member States have updated their guidance on antenatal care to align with new global recommendations, and coverage of antenatal care in the region is high. National legislation to protect, promote and support breastfeeding is improving: new and strengthened legislation on the Code and maternity and paternity protection has been adopted in several Member States in recent years. Treatment of wasting is now integrated into child health policies in all Member States with wasting programmes and national treatment protocols have been updated to align with the most recent global recommendations. Member States are using schools as a platform to prevent and treat malnutrition in children, and all have a national school policy on physical activity and/or physical education to help promote healthy lifestyles during middle childhood and adolescence. Most Member States have operational, multisectoral policies on NCDs and an operational policy, strategy or action plan in place to reduce physical inactivity and tackle the growing trend of overweight and obesity in adults.

Deliberate priorities, policies, infrastructure and dedicated resources for nutrition are essential to effectively implement nutrition programmes at scale. These building blocks help create an enabling environment within which governments and partners can work to ensure that essential services and safe, affordable and nutritious diets are available to everyone. The adoption of the ASEAN Leaders Declaration on Ending All Forms of Malnutrition represented the highest level of regional political commitment to address malnutrition to date. All ASEAN Member States have nutrition coordination mechanisms in place and there is strong commitment across ASEAN Member States to monitor progress towards global maternal, infant and young child nutrition (MIYCN) targets. All ASEAN Member States have developed national food-based dietary guidelines, several are using economic tools to influence food consumption and food quality, and several have mandatory or voluntary legislation for fortification of salt, wheat flour, oil and/or rice.

Governments and health systems need to be prepared to respond to emergencies. A regional training on nutrition in emergencies produced a pool of national nutrition experts to support preparedness and response in ASEAN Member States; and many of these countries have now taken steps to improve national capacity through training and other efforts. Following the onset of the COVID-19 pandemic, governments throughout the ASEAN region recognized the potential negative impact of the COVID-19 pandemic on nutrition and took action: Nearly all ASEAN Member States included nutrition as a focus area in their COVID-19 response plans and employed communication activities to reinforce the importance of a healthy diet, particularly for infants and young children.

The crisis of malnutrition in the region is multifaceted and driven by a range of persistent and evolving factors – from lack of financial investment and accountability, to ineffective food systems, to inadequate and poor-quality services across the health, education, water and sanitation and social protection systems and more. These problems cannot be solved by nutrition actors alone, nor by the trickle-down effects of economic growth and poverty reduction. The individual food and lifestyle choices of families matter, but the policies, institutions and resources that are put in place – in Member States and by ASEAN – are equally important.

A great deal has been achieved by the ASEAN region in recent years, but more action is needed to meet global targets. Accelerating progress towards global nutrition and Sustainable Development Goals (SDG) goals is possible: with targeted investments and commitment to scale-up programmes where progress is lagging, we have the power to tackle persistent undernutrition and quell the increase in overweight, obesity and NCDs in the ASEAN region.

1 INTRODUCTION

1 Introduction

> Everyone has the right to adequate food and nutrition. Well-nourished children survive, grow and develop to their full potential, and well-nourished adults are healthier, more productive and better equipped to contribute to society. Good nutrition makes all people better placed to realize their rights – to be free from poverty, to live healthy lives, to learn and participate and to access equal opportunities throughout their lives.

Access to nutritious, safe and affordable foods and quality nutrition care are the cornerstones of good nutrition for mothers and children. They help children grow and develop well in the womb and continue to thrive throughout childhood and across the life course – with benefits that carry across generations, fueling prosperous families, productive workforces and powerful economies.

In contrast, poor nutrition in early childhood can have devastating and often lifelong consequences, threatening children's survival and delaying their cognitive and motor development.[1] Over the long-term, poor nutrition can impair academic and work capacity, reproductive outcomes and overall health, hindering economic development and contributing to the intergenerational cycle of malnutrition.[1-3] During middle childhood and adolescence, the overconsumption of nutrient-poor foods and poor eating habits can increase overweight and obesity in the short-term and the risk of NCDs in adulthood – consequences that exact a tremendous and expensive toll on individuals, families and health systems.

Despite clear and compelling evidence that poor nutrition is a detriment to national social and economic well-being, the prevalence of malnutrition in all its forms – undernutrition, micronutrient deficiencies, overweight and obesity – and associated NCDs remains high in Southeast Asia. The ASEAN Regional Report on Nutrition Security, published in two volumes in 2016, highlighted the alarming proportion of children, adolescents and adults suffering from malnutrition and consuming poor-quality diets in the region.[4,5]

In recognition of the high levels of malnutrition highlighted in these reports, and the potential public health and socioeconomic consequences of inaction, the ASEAN Leaders Declaration on Ending All Forms of Malnutrition was adopted in 2017. The Declaration was a multisectoral, multi-stakeholder effort, led by the ASEAN health sector, which recognized the need for active engagement and collaboration across various sectors involved in addressing malnutrition. Further, the ASEAN Strategic Framework and Action Plan on Nutrition 2018–2030, developed in collaboration with ASEAN sectors on health, social welfare and development, education and food and agriculture, was formulated to operationalize the Declaration.

This report – the **ASEAN Food and Nutrition Security Report 2021** – is an important output of the ASEAN Strategic Framework and Action Plan for Nutrition. The report aims to track progress on nutrition actions and key policy and programme accomplishments across the ASEAN region, and is intended to be updated and republished every five years for continued progress tracking.

The report is published in two volumes. **Volume 1** provides a snapshot of progress on nutrition in ASEAN Member States, five years after the inaugural report, and offers recommendations on the way forward over the next five-year period. **Chapter 1** presents the background and rationale for the report, while **Chapter 2** situates this report within the changing landscape of nutrition. **Chapter 3** takes stock of the nutrition and diet situation in the ASEAN region, including progress towards both the global 2025 MIYCN and NCD targets. **Chapter 4** captures the status of policies and programmes designed to improve nutrition in each ASEAN Member State. **Chapter 5** outlines the outstanding challenges to attaining healthy diets and improved nutritional outcomes in the ASEAN region. **Chapter 6** details strategic recommendations for key priorities and actions moving forward. Case studies on policy and programme initiatives and achievements over the last five years in each ASEAN Member State are included throughout the report.

Volume 2 presents data-driven Food and Nutrition Security Profiles for each of the 10 ASEAN Member States. Each profile includes extensive and up-to-date data related to economic and social determinants of malnutrition; coverage of essential nutrition interventions; dietary intake; food access, availability and consumption; infant and young child feeding; the nutritional status of women and children; and progress towards global nutrition targets.

The analyses presented in this report help elucidate the pressing factors facilitating or preventing progress on nutrition in the ASEAN region. With this deeper understanding of the current status of the policies and programmes necessary to improve nutrition, ASEAN will be better equipped to strengthen the capacity and accountability of national governments and their development partners to propel progress towards ending malnutrition in all its forms in the region.

2

THE CHALLENGE OF GOOD NUTRITION IN A CHANGING WORLD

2 The challenge of good nutrition in a changing world

Collectively, ASEAN Member States have experienced rapid economic growth in recent decades: The combined total gross domestic product (GDP) of the 10 ASEAN Member States doubled between 2008 and 2019, and the total combined ASEAN 2019 GDP was valued at US$3.2 trillion – making ASEAN the fifth largest economy in the world. Other socioeconomic and health indicators also show improvement: the under-five mortality rate in the ASEAN region decreased from 47.9 in 2000 to 27.7 in 2018; and total life expectancy increased from approximately 65 in 2000 to 69.4 in 2019. Further, the proportion of the population living below national poverty lines declined between 2005 and 2018 across all ASEAN Member States – and most particularly in Cambodia, Thailand and Lao People's Democratic Republic, where poverty decreased by 19 per cent, 17 per cent and 15 per cent, respectively.[6]

► Yet despite demonstrable economic and social progress, individuals and families in ASEAN Member States still face economic, physical, social and cultural barriers to consuming nutritious diets and accessing adequate health and nutrition services. While many of these barriers to good nutrition have persisted over time, others are new and evolving in an increasingly modern and urbanized world.

Many people still lack access to nutritious, safe and affordable foods. The prevalence of moderate to severe food insecurity in the ASEAN community was 18.6 per cent in 2019, leaving 122.6 million people in ASEAN without consistent access to food.[ii] Food scarcity and poor food system infrastructure increase the consumption of contaminated food: approximately 52 million people in the ASEAN region[iii] fall ill each year after eating unsafe foods.[7] The availability of essential micronutrients in national food supplies is inadequate to meet the nutritional needs of the population: approximately 24 per cent of the population in ASEAN Member States consume inadequate quantities of essential vitamins, minerals and trace elements due to limited micronutrient density in the food supply.[8]

Nutritious food also remains unaffordable for millions of people in the region. An estimated 46 per cent of the population in the ASEAN region – approximately 325 million people – are unable to afford a healthy diet.[9] Food taboos that result in avoidance of meat, fruit, vegetables or other nutritious foods persist in the region, particularly among ethnic minority populations, limiting consumption of nutrient-dense foods by the most vulnerable populations. Gender inequality can restrict access to adequate health and nutrition services for women and their children, while early marriage and early childbirth remain common in some communities and are associated with low birthweight and malnutrition in children.[10]

ii Calculated by FAO Headquarters (based on FAOSTAT data) specifically for ASEAN Member States
iii The estimated figure was produced specifically for the ASEAN region by the Foodborne disease Epidemiology Reference Group instituted by WHO with involvement of leading independent experts.

► Within this backdrop, the factors that influence how people live and what they eat are also changing.

More people are living in cities today than ever before. In 2020, ASEAN cities comprised approximately 50 per cent of the collective population of ASEAN Member States – an increase from 38 per cent in 2000. Between 2010 and 2020, ASEAN cities added approximately 70 million inhabitants – more than the combined populations of Brunei Darussalam, Cambodia, Lao People's Democratic Republic, Malaysia and Singapore. Estimates indicate that another 70 million will be added by 2030. While national urbanization rates vary within the ASEAN region – from 24 per cent in Cambodia to 100 per cent in Singapore[11] – it is clear that the increasing population in urban centres across ASEAN Member States is dramatically impacting the food environment[iv] of millions of people.

Consumer preference is shifting from purchasing food in markets to modern grocery stores. The growth in the number of modern grocery retailers – i.e., hypermarkets, supermarkets and convenience stores – in ASEAN Member States between 2013 and 2018 was one of the highest in the world. In fact, Viet Nam and Myanmar recorded the two highest growth rates in the world over the same time period (each with a >200 per cent increase in modern grocery retailers).[13] The rapid spread of more formal grocery stores influences consumer behaviour and food consumption patterns: modern grocery store retailers may increase consumer access to a wide variety of fresh and processed foods, but there is some evidence that this shift in food retailing is resulting in increased consumption of unhealthy foods and diminishing the often critical role of informal traders in meeting the food and nutrition needs of communities.[14]

Unhealthy foods are increasingly available, affordable and preferred. Processed foods, and especially 'ultra-processed foods', such as savoury or sweet snacks and sugar-sweetened beverages (SSBs), now comprise a significant share of many diets in the region. These packaged snacks or beverages are high in added sugars, trans-fat and salt but provide few essential nutrients. The fast food and processed food industries are thriving in the ASEAN region, driven by the demand for greater convenience and higher purchasing power in both urban and rural areas. Convenience foods help busy families cope with the constraints of modern life. Buying from street vendors, for example, saves families time and fuel costs.[15] These changes in dietary habits are also being fueled by advertising and marketing that promote unhealthy foods, snacks and soft drinks.[16,17]

Socioeconomic inequities in malnutrition and its drivers persist (and in some instances, are increasing). Despite the region's rapid economic growth, inequalities have increased, with widening gaps between the rich and the poor.[18] Poor and marginalized women are less likely to seek antenatal care (ANC) and attend the recommended eight or more visits. While there have been improvements in access to clean water and sanitation in the region,[6] access is generally worse among rural populations and the poorest households.[10,19] The prevalence of stunting and wasting is higher for children who live in poor families, for those who live in rural areas and for those whose mothers have less education.[20] Infants and young children residing in the poorest households or in rural areas are less likely to eat a minimally frequent and diverse diet.[20-22]

Climate change and humanitarian crises pose critical threats to feeding populations sustainably. ASEAN Member States are extremely vulnerable to natural hazards and disasters – both in terms of frequency of events and the high number of people affected[23] – and the impact of extreme climate events on human health, security, livelihoods and poverty is expected to increase in coming years.[24] These conditions can dramatically alter the quantity, quality and price of food available, resulting in food crises and increased food and nutrition insecurity. In a region with existing high levels of both chronic and acute malnutrition, these events pose a growing threat to nutrition. Protracted conflict, local insecurity and political crises can disrupt agricultural production and markets and create macro or micro-economic shocks, including

iv Food environments comprise 1) the foods available to people in their surroundings as they go about their everyday lives; and 2) the nutritional quality, safety, price, convenience, labelling and promotion of these foods. Food environments therefore serve as the link between food systems and diets.[12]

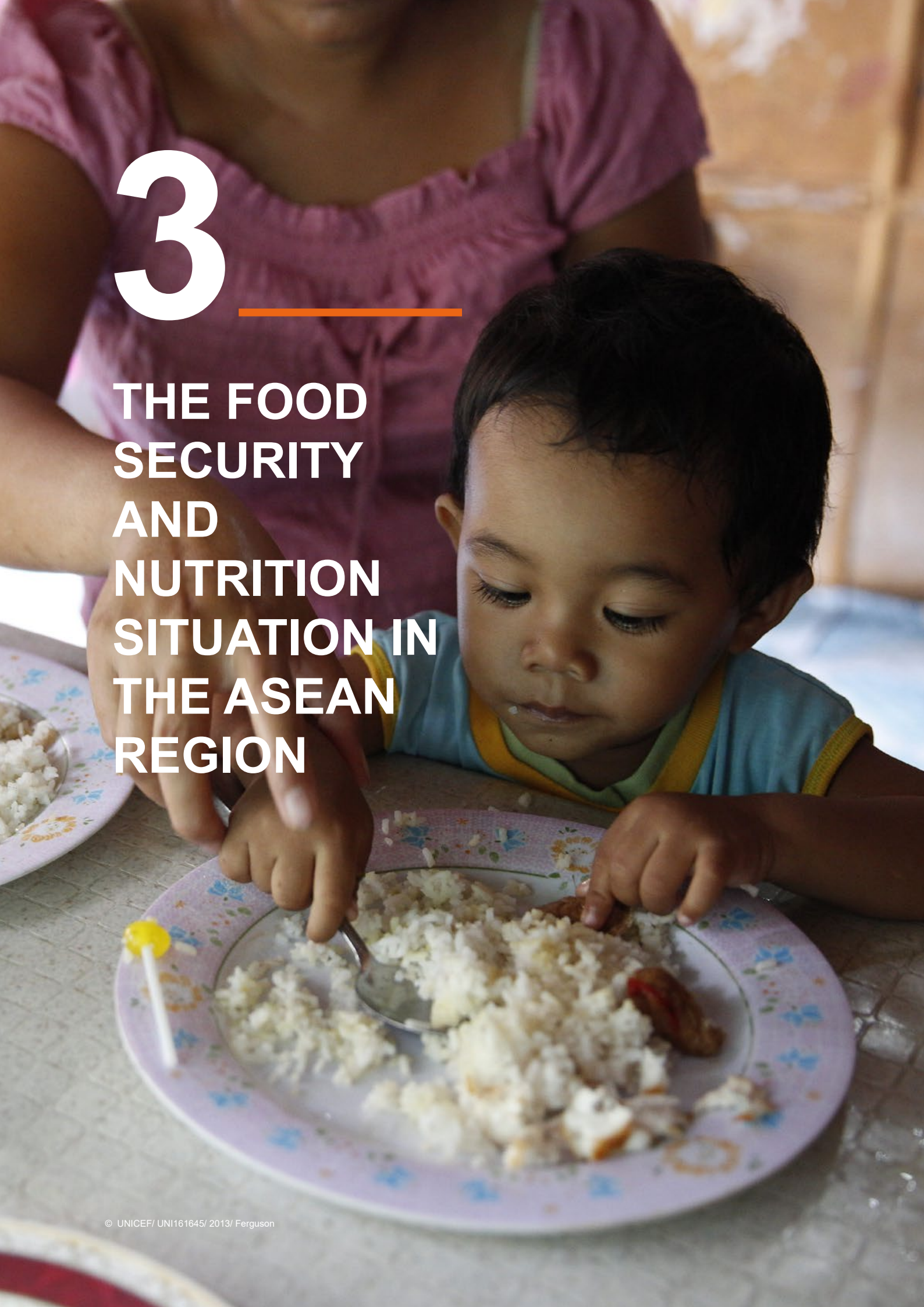
hyperinflation, economic downturns or decreases in purchasing power. This economic instability can result in increased food prices and undermine food security, particularly for the most vulnerable.

Health epidemics, such as the COVID-19 pandemic, are stressing already vulnerable systems and further eroding the poor quality of diets. The COVID-19 pandemic is expected to worsen existing challenges to the availability, accessibility and affordability of nutritious food. It is estimated that nearly three-quarters of households in ASEAN Member States experienced a decline in income as a result of the pandemic.[25] Lockdowns, mobility restrictions and border closures have disrupted food supply chains due to a lack of labour, transport and agricultural inputs, resulting in instances of nutritious, perishable foods such as chicken, fish, fruit and vegetables being thrown away due to transport challenges.[26] School closures affected millions of children, depriving many of the free meals their schools provided. Sales of nutrient-poor packaged food items, such as instant noodles, are likely to have increased during pandemic lockdowns as they provide a reliable, often inexpensive, source of food, with a longer shelf-life than fresh foods. Movement restrictions, isolation, school closures and working from home have reduced physical activity for many, causing more sedentary lifestyles.

These factors, among many others, are changing food environments and access to essential, quality nutrition services. As a result, individuals and families are increasingly shifting away from traditional and indigenous diets based on whole foods, towards processed foods that are higher in salt, sugar and unhealthy fats and low in essential nutrients.[22] Further, the need for services to address existing levels of poverty, food insecurity and other persistent drivers of malnutrition is greater than ever before.

It is within this context that policymakers are responding to the crisis of malnutrition in the ASEAN region. ASEAN leaders have already signalled their commitment to action with the adoption of the ASEAN Leaders Declaration on Ending All Forms of Malnutrition – a pledge that is now being operationalized through the Strategic Framework and Action Plan.

Now, with only 10 years remaining to achieve the SDGs – including an end to hunger and malnutrition – the need for continued leadership, investment and action across the ASEAN region to drive progress has never been more urgent. With the region's commitment to respond to the changing nutrition environment, recognizing the multiple drivers of poor diets and malnutrition across the life course, the ASEAN community is poised to drive progress on the path to 2030 and secure the right to nutritious food for all.



3

THE FOOD SECURITY AND NUTRITION SITUATION IN THE ASEAN REGION

3 The food security and nutrition situation in the ASEAN region

► This chapter presents the most recent estimates of nutritional status, food security and dietary habit indicators in each ASEAN Member State, and describes progress towards meeting global nutrition targets. The purpose of this analysis is to provide an updated snapshot of the state of nutrition and diets in the region, five years since the initial ASEAN Regional Report on Nutrition Security. More detailed data for each ASEAN Member State can be found in the Food and Nutrition Security Profiles in Volume 2 of this report.

The indicators presented in this chapter include, but are not limited to, the 2025 global nutrition targets, collectively referred to as the World Health Assembly (WHA) MIYCN targets[27] and the WHO diet-related NCD targets.[28] The specific global targets tracked for nutrition can be found in Figure 1. All ASEAN Member State estimates presented in this chapter were sourced from the ASEAN Nutrition Surveillance System (ANSS), unless otherwise stated. All data presented here were collected in 2010 or later.

The vast majority of data presented in this chapter were collected before the COVID-19 pandemic. Yet, where possible, the report presents evidence on how COVID-19 has impacted key food and nutrition indicators. As noted in Chapter 2, the pandemic has resulted in economic slowdowns and downturns in countries around the world. The loss of livelihoods and temporary disruptions in food systems (particularly in urban and peri-urban areas) have reduced access to nutritious foods and increased food insecurity and malnutrition, particularly for the most vulnerable.[9]

Figure 1. Global 2025 maternal, infant and young child nutrition and non-communicable disease targets

	Global targets
Maternal, infant and young child nutrition targets	A **40 per cent** reduction in the number of children under 5 who are **stunted**
	A **50 per cent** reduction in anaemia in **women of reproductive age**
	A **30 per cent** reduction in **low birthweight**
	Ensure that there is no increase in **childhood overweight**
	Increase the rate of **exclusive breastfeeding** in the first 6 months up to at least **50 per cent**
	Reduce and maintain **childhood wasting** to less than **5 per cent**

	Global targets
Non-communicable disease targets	A **25 per cent** relative **reduction in overall mortality** from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases
	A **30 per cent** relative reduction in mean population **intake of salt/sodium**
	A **25 per cent** relative reduction in the **prevalence of raised blood pressure** or contain the prevalence of raised blood pressure, according to national circumstances
	Halt the rise in **diabetes and obesity**

3.1 The global nutrition targets are within reach – if we redouble our efforts

Tracking progress towards the 2025 global nutrition targets helps shed light on the state of nutrition in the ASEAN region and highlight where efforts need to be amplified. Progress towards each of the 10 global nutrition targets is calculated annually by the Global Nutrition Report. Results for ASEAN Member States are shown in Table 1. Progress is classified as 'on course' if the target is met, 'some progress' or 'no progress or worsening'. There are several instances in which no data were available to assess progress towards targets. It is important to note that the Global Nutrition Report analysis to assess progress may not have considered the most recent estimates available today. However, the most up-to-date estimates on the MIYCN and NCD targets in ASEAN Member States are presented in this report. Therefore, the point estimates for the 10 global nutrition targets presented throughout the rest of this report should be reviewed alongside the progress estimates in Table 1 for better context.

Globally, the analysis by the Global Nutrition Report indicates that most MIYCN targets are off course, with only 'some progress' achieved for exclusive breastfeeding and low birthweight. In the ASEAN region, progress remains similarly elusive across the six MIYCN targets. In nearly all ASEAN Member States, no progress has been made in reducing anaemia in women of reproductive age (WRA), and no ASEAN Member State is 'on course' to meet the target to reduce low birthweight or to reduce or maintain childhood wasting.

Three ASEAN Member States are on course to increase exclusive breastfeeding to at least 50 per cent (Indonesia, Myanmar and Viet Nam) and five are 'on course' to have no increase in childhood overweight (Indonesia, Malaysia, Myanmar, the Philippines and Thailand). While recognizing that some ASEAN Member States are 'on course' or have made 'some progress' towards achieving targets, it is equally important to note that a significant proportion of children remain impacted by malnutrition or experience poor feeding practices. For example, while Lao People's Democratic Republic is 'on course' to reduce childhood stunting, 33 per cent of children under 5 nationally (more than 250,000 children) are still stunted today.

Across the region, seven ASEAN Member States are 'on course' to meet at least one MIYCN target (Brunei Darussalam and Singapore either do not track data on MIYCN targets or have limited data to assess progress and Cambodia is not 'on course' for any indicator). Three countries (Indonesia, Myanmar and Thailand) are 'on course' to meet two MIYCN targets.[14]

Progress towards diet-related NCD targets is reported for adult obesity and diabetes only. Progress was not assessed at the country level for salt intake and raised blood pressure due to lack of comparable projections.[14]

Globally, all diet-related NCD targets are off course, with projected probabilities of meeting any of the targets being close to zero.[14] Similarly, in the ASEAN region, most countries have shown no progress towards achieving any of the targets. Progress on adult obesity has either stagnated or deteriorated in all ASEAN Member States and progress to reduce adult diabetes is only considered 'on course' in one or two ASEAN Member States.

► These data make clear that progress is too slow to meet global targets. Yet there is still time to change this trajectory: with targeted investments and a commitment to scale up programmes where progress is lagging, there is still time to change course to tackle persistent undernutrition and quell the increase in overweight, obesity and NCDs in the ASEAN region.

Table 1. ASEAN progress towards the maternal, infant and young child nutrition and diet-related non-communicable disease targets

On course | Some progress | No progress or worsening | No data

Member state	Childhood stunting	Childhood wasting	Childhood overweight	Exclusive breastfeeding	Low birthweight	Women of reproductive age anaemia	Adult female obesity	Adult male obesity	Adult female diabetes	Adult male diabetes	Number "on track"
	Maternal, infant and young child nurition targets						Non-communicable disease targets				
Brunei Darussalam	⊘	⊘	⊘	⊘	●	●	●	●	●	●	1
Cambodia	●	●	●	●	●	●	●	●	●	●	0
Indonesia	●	●	●	●	●	●	●	●	●	●	2
Lao People's Democratic Republic	●	●	●	●	●	●	●	●	●	●	1
Malaysia	●	●	●	⊘	●	●	●	●	●	●	1
Myanmar	●	●	●	●	●	●	●	●	●	●	2
Philippines	●	●	●	⊘	●	●	●	●	●	●	1
Singapore	⊘	⊘	⊘	⊘	●	●	●	●	●	●	2
Thailand	●	●	●	●	●	●	●	●	●	●	2
Viet Nam	●	●	●	●	●	●	●	●	●	●	1
Number "on track"	2	0	5	3	0	0	0	0	2	1	

Note: Anaemia and low birthweight are based on modelled estimates. Obesity and diabetes are based on age-standardized modelled estimates for adults aged 18 years and older, using the WHO standard population; they are reported by sex due to limitations in data availability. To assess progress, an average relative percentage change in the prevalence of each indicator was calculated using a metric called the average annual rate of reduction (AARR). Two separate AARR estimates were calculated: 1) the required AARR represents the value needed for a country to achieve the global target from the baseline year to 2025; and 2) the current AARR reflects a country's actual achievement based on the available data between the baseline year and the most recent year. For each indicator, specific criteria were established to determine whether the AARR indicated that a country was 'on track', had achieved 'some progress' or 'no progress'. For diet-related NCD targets, only 'on track' or 'no progress' were considered in this assessment. For more detail on the methodology used, please refer to the 2020 Global Nutrition Report.

For Malaysia, the most recent estimate of exclusive breastfeeding in the first 6 months of life is 40.3 per cent according to Over or Under: Double Burden of Child Malnutrition in Malaysia: A Landscape Analysis Report based on the National Health and Morbidity Survey, 2016.

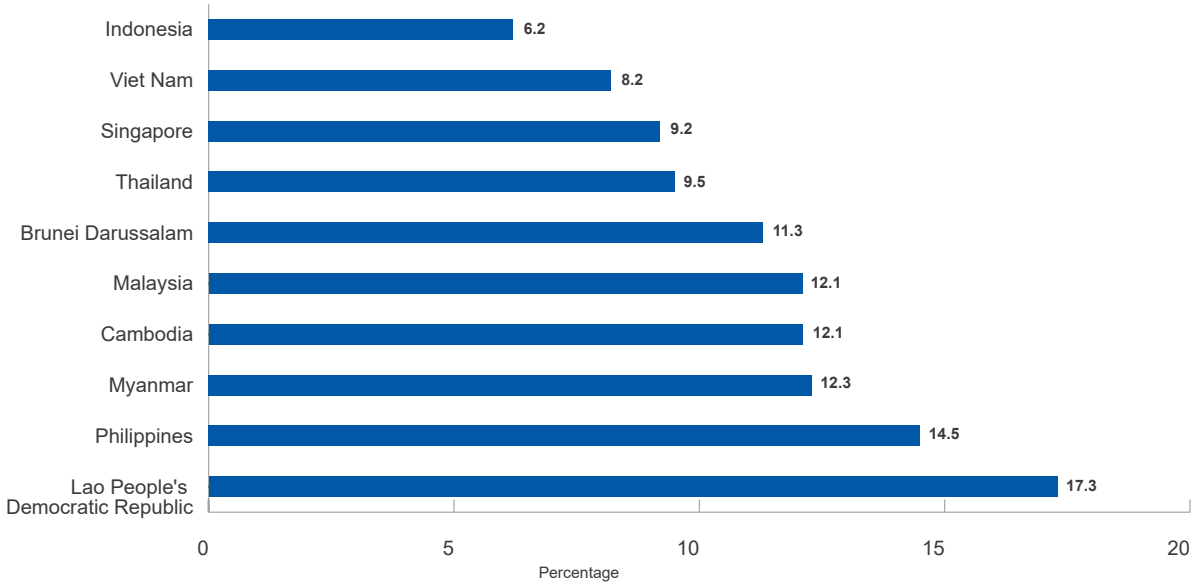
Source: 2020 Global Nutrition Report

3.2 Malnutrition persists in the ASEAN region

Far too many children are starting life at a disadvantage

Low birthweight is a marker of poor maternal and foetal health and nutrition. Babies born with low birthweight are more likely to die in the first 28 days of life, and those that survive often suffer from stunted growth,[29] lower IQ[30] and an increased risk of adult-onset and chronic conditions such as obesity and diabetes.[31] Seven out of 10 ASEAN Member States report a recent low birthweight prevalence of 10 per cent or more (up to 17 per cent in Lao People's Democratic Republic) (Figure 2).

Figure 2. Low birthweight prevalence



Source: All data was extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include - Brunei Darussalam: Health Information Booklet 2017; Indonesia: Basic Health Research, RISKESDAS 2018; Malaysia: Department of Statistics Malaysia, 2020; Philippines: National Demographic and Health Survey 2017; Singapore: Report on Registration of Births and Deaths 2019; Thailand: Multiple Indicator Cluster Survey, 2019; Cambodia, Lao People's Democratic Republic, Myanmar and Viet Nam: UNICEF/WHO Low birthweight estimates 2019.

Stunting and wasting result from poor nutrition in utero and inadequate nutrient intake and/or infection and disease in early childhood. Children affected by stunting may never attain their optimal linear growth and their brains may never develop to their full cognitive capacity, impacting their school readiness, earning potential as adults and ability to fully participate in and contribute to society. Children suffering from wasting have weak immune systems and face an increased risk of infection, long-term developmental delays and death.

While ASEAN Member States have achieved significant declines in stunting prevalence since 1990,[5,20] stunting still affects 15 million children under 5 in the region. Based on updated prevalence thresholds for stunting, wasting and overweight in children under 5,[32] stunting prevalence is still considered 'very high' in two ASEAN Member States (Cambodia and Lao People's Democratic Republic) 'high' in four (Indonesia, Malaysia, Myanmar and the Philippines) and 'medium' in two (Thailand and Viet Nam). (Figure 3).

More than 4 million children under 5 suffer from wasting in the ASEAN region. No ASEAN Member States report a 'very high' or 'high' wasting prevalence. However, prevalence of wasting is considered 'medium' in seven Member States (Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines and Thailand) and low in Viet Nam (Figure 3).

Singapore does not track national data on stunting and wasting due to its low prevalence and data from Brunei Darussalam were collected prior to 2010 and are thus not presented here.

The COVID-19 pandemic has the potential to increase all forms of malnutrition in young children. More children are becoming malnourished as the pandemic and its containment measures continue to disrupt access to nutritious food and essential services. While there are no estimates yet of the impact of COVID-19 on malnutrition in the ASEAN region, the global prevalence of child wasting in low- and middle-income countries was estimated to rise by 14.3 per cent, contributing to an additional 6.7 million children with wasting worldwide over the first 12 months of the COVID-19 pandemic alone.[33]

Overweight and obesity result when caloric intake from food and beverages exceeds energy requirements. Children affected by overweight are at an increased risk of diet-related NCDs later in life, such as such as type 2 diabetes and cardiovascular disease, which is the leading cause of death worldwide.

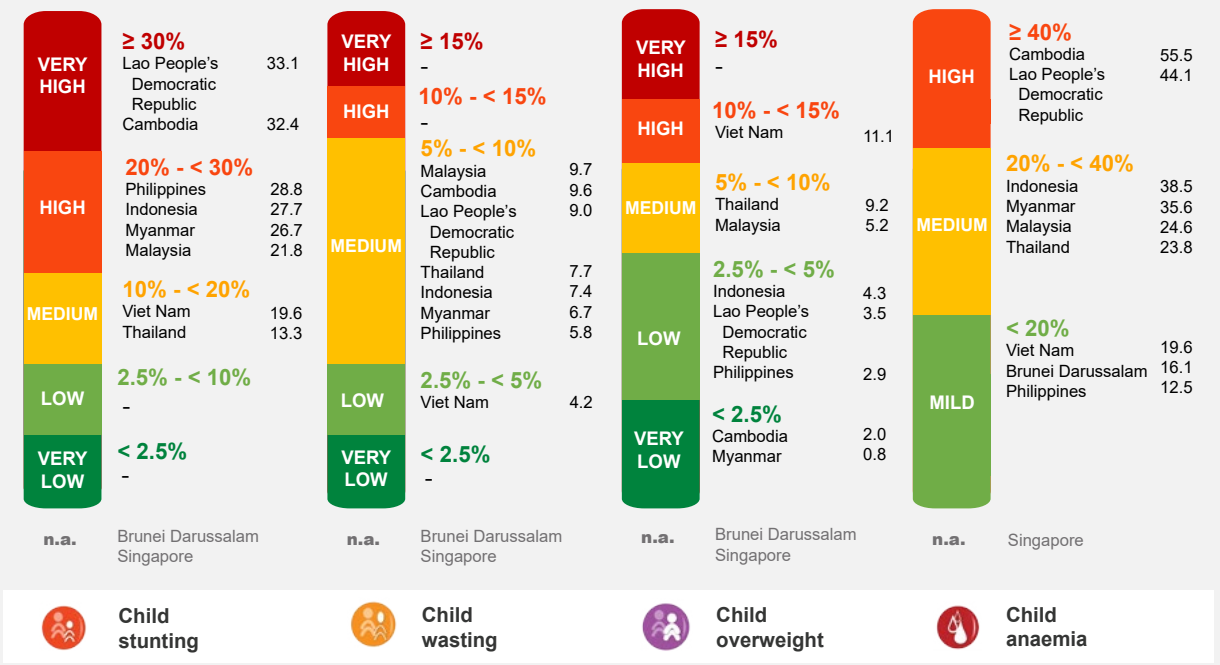
The prevalence of overweight in children under 5 is increasing across age groups, regions and all country-income groups. In the ASEAN region, 3.3 million children under 5 are considered overweight. No ASEAN Member States report a 'very high' overweight prevalence. However, prevalence is considered 'high' in Viet Nam, 'medium' in Malaysia and Thailand and 'low' in three others (Indonesia, Lao People's Democratic Republic and the Philippines). Prevalence is very low (<2.5 per cent) in Cambodia and Myanmar (although both of these Member States have at least 'medium' levels of stunting and wasting) (Figure 3). Singapore does not have official published data on the prevalence of overweight children under 5 currently and data from Brunei Darussalam were collected prior to 2010.

Despite the high levels of malnutrition that still exist across the ASEAN region, ***progress in reducing child malnutrition in ASEAN Member States is possible and happening.*** A UNICEF analysis in select ASEAN Member States with available data found the proportion of children *free* from any form of malnutrition has increased over time. For example, the proportion of children not suffering from stunting, wasting and overweight increased from approximately 40 per cent to approximately 60 per cent in both Cambodia and Lao People's Democratic Republic since 2000. Similarly, in Myanmar, the proportion of children *free* from stunting, wasting or overweight increased from 52 per cent to 64 per cent between 2000 and 2016.[34]

Micronutrient deficiencies or 'hidden hunger' can result from limited access to foods rich in essential vitamins and minerals, or from an overreliance on nutrient-poor, ultra-processed foods and drinks that displace more nutritious foods in diets. Micronutrient deficiencies are often less visible and harder to detect than other forms of malnutrition but can have serious consequences, including impaired brain development, stunted growth and poor immune response in early childhood.

National-level estimates of deficiencies in iron, vitamin A, zinc and iodine in children under 5 (and older populations) in the ASEAN region are largely unavailable. However, the data available indicate that the prevalence of anaemia in children under 5 remains high in several ASEAN Member States – particularly in Cambodia and Lao People's Democratic Republic. Prevalence of anaemia is considered 'moderate' in Indonesia, Malaysia, Myanmar and Thailand, and 'mild' in Brunei Darussalam, the Philippines and Viet Nam, per WHO thresholds (Figure 3).[35] Singapore does not track child anaemia at national level due to its low prevalence.

Figure 3. Levels of malnutrition in children under 5, by threshold level



Note: "n.a." : No data available

Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Brunei Darussalam: WHO Global Health Observatory, 2016; Cambodia: Demographic and Health Survey, 2014; Indonesia: Basic Health Research, 2018 & Indonesia Nutritional Status Survey, 2019; Lao People's Democratic Republic: Lao Social Indicator Survey II, 2017; Malaysia: National Health and Morbidity Survey, 2019 & WHO Global Health Observatory 2019; Myanmar: Myanmar Micronutrient and Food Consumption Survey, 2017-2018; Philippines: 2019 Expanded National Nutrition Surveys; Thailand: Multiple Indicator Cluster Survey, 2019 & SEANUTS 2016; Viet Nam: National General Nutrition Survey 2020

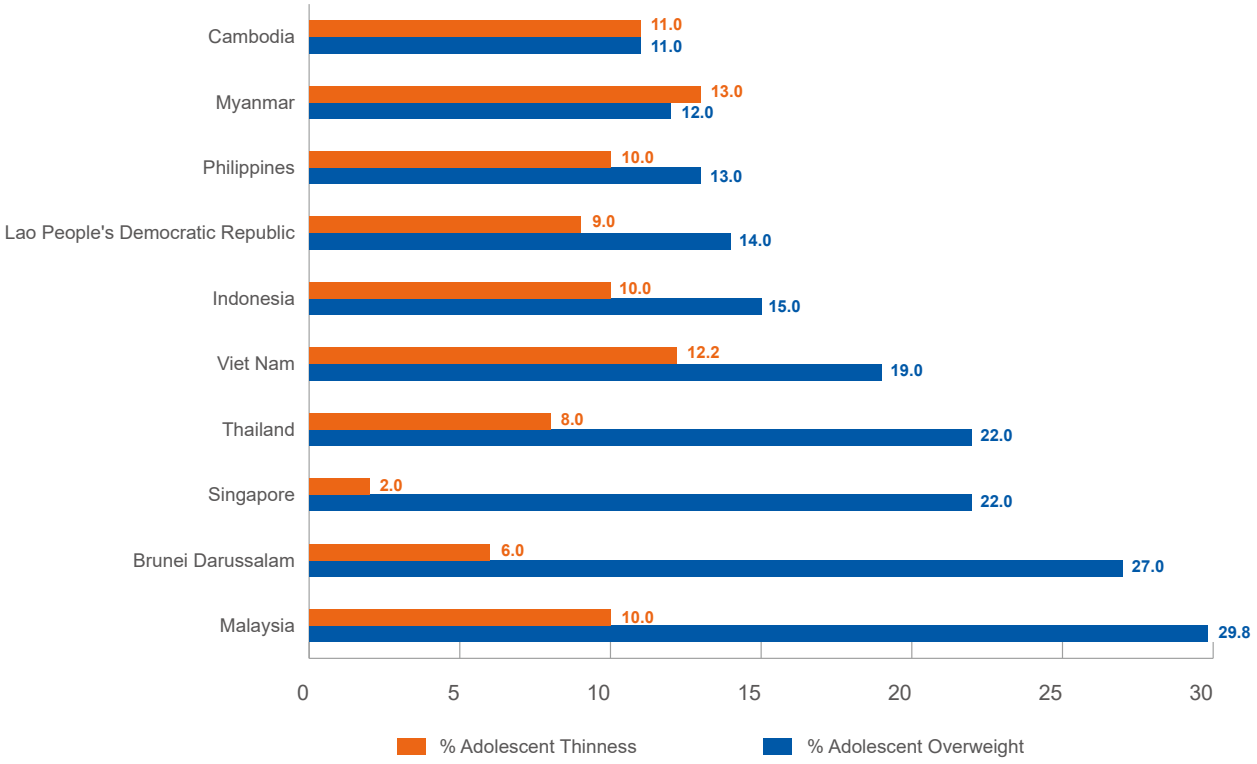
Note: "n.a.": No data available; Child stunting, child wasting and child overweight thresholds are based on the revised 2018 WHO-UNICEF anthropometric prevalence thresholds[32] and child anaemia thresholds are based on the WHO classification of public health significance of anaemia in populations.[35]

In middle childhood and adolescence, undernutrition persists while overweight is on the rise

Despite social and economic gains in the region in recent decades, a significant proportion of children aged 5–19 years are suffering from undernutrition. Prevalence of **thinness**[v] hovers around 10 per cent in nearly all ASEAN Member States (with greater than 17 million adolescents affected) (Figure 4). While some progress has been achieved in reducing the proportion of children suffering from undernutrition, the prevalence of **overweight** is on the rise in school-aged children, with nearly 25 million adolescents affected by overweight in the ASEAN region. The number of children aged 5–19 with overweight and obesity in East Asia and the Pacific tripled between 2000 to 2016.[36] In all but two ASEAN Member States (Cambodia and Myanmar), **the prevalence of overweight in children aged 5–19 years has surpassed the prevalence of thinness.** This shift is most pronounced in Brunei Darussalam, Malaysia, Singapore and Thailand, where >20 per cent of adolescents are overweight and 10 per cent or fewer are thin.

v Percentage of children aged 5–19 years with body mass index (BMI) < -2 SD of the median according to the WHO growth reference for school-age children and adolescents

Figure 4. Prevalence of overweight and thinness in children and adolescents (5–19 years of age)



Source: All data were extracted from the ANSS. Specific sources referenced in the ANSS by each Member State include – Malaysia: National Health and Morbidity Survey, 2019; Philippines: Expanded National Nutrition Survey, 2018-2019; Viet Nam: National General Nutrition Survey 2020; Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Singapore and Thailand: NCD Risk Factor Collaboration (NCD-RisC), based on Worldwide trends in BMI, underweight, overweight and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents and adults. *The Lancet* 2017, 390 (10113): 2627–2642,[36] last updated August 2019.

Note: The figure above only includes data points that match the indicator definitions (see Annex for all indicator definitions). There are, however, national level estimates available for malnutrition in adolescents from ASEAN Member States that are calculated for different age groups. These are noted here for reference: In Cambodia, prevalence of underweight in children aged 13-17 years is 12.8 per cent and prevalence overweight is 3.4 per cent (The Cambodia Global School-based student health survey 2013). In Malaysia, prevalence of thinness among adolescents aged 10-17 years is 6.6 per cent and prevalence of overweight among adolescents aged 10-17 years is 30.4 per cent (National Health and Morbidity Survey, 2017). In Myanmar, among children aged 5-9 years, prevalence of thinness is 14.6 per cent and prevalence of overweight is 3.3 per cent. Among female adolescents aged 10-14 years, prevalence of thinness is 18.8 per cent and prevalence of overweight is 5.2 per cent (Myanmar Micronutrient and Food Consumption Survey, 2017-2018). In the Philippines, prevalence of thinness in children aged 10-19 years was 11.7 per cent and prevalence of overweight in children aged 10-19 years was 9.8 per cent in 2019 (2019 Expanded National Nutrition Survey). In Singapore, the overweight prevalence for children aged 6 to 18 years was 13 per cent in 2018 (per Ministry of Education Singapore).

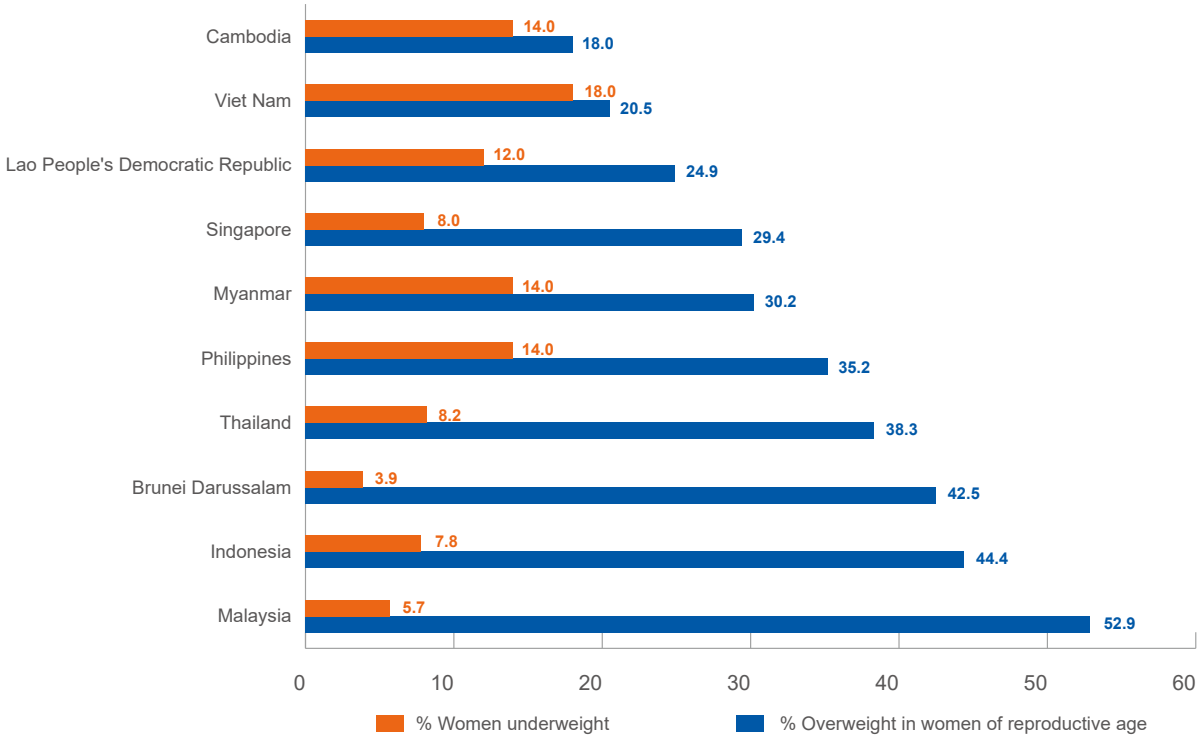
Limited data are available on micronutrient deficiencies for children aged 5–19 years in the ASEAN region. Information on iodine intake in children aged approximately 6–12 years, however, is available for some ASEAN Member States. The median urinary iodine concentrations (UIC) in Malaysia, Myanmar, Thailand and the Philippines (137.5 µg/L, 138.5 µg/L, 157 µg/L and 180 µg/L, respectively)[vi] indicate that there is adequate iodine intake among children in middle childhood and adolescents, per WHO guidelines.[37]

vi All data were extracted from the ANSNS. Specific sources referenced in the ANNS by each Member State include – Malaysia: data for children aged 9-10 years, unpublished data, National iodine deficiency disorders (IDD) Monitoring among School Children Aged 8-10 years old, 2018; Myanmar, data for children 5-9 years, Myanmar Micronutrient and Food Consumption Survey (MMFCS) 2017-2018; Philippines: data for children 6-12 years old, Expanded National Nutrition Survey, 2018; Thailand: data for children 10-14 years old, The 5th Thailand National Health Exam Survey (NHES5), 2016

Overweight and NCDs continue to increase in adulthood

Undernutrition in adult women (18 years and above) persists in all ASEAN Member States: prevalence of **underweight** ranges from 4 per cent in Brunei Darussalam to 18 per cent in Viet Nam. However, the prevalence of overweight among adult women is notably higher. Overweight prevalence in WRA is >30 per cent in six of the 10 Member States, ranging from 30 per cent in Myanmar to 53 per cent in Malaysia (Figure 5). Prevalence of overweight in adults has increased in nearly every ASEAN Member State since 2000,[20] and a separate analyses noted that overweight is no longer a problem exclusive to the wealthy – but rather exists across all income groups.[38]

Figure 5. Prevalence of underweight in women (aged 18+ years, BMI<18.5) and overweight in women of reproductive age (aged 15-49 years, BMI>=25)



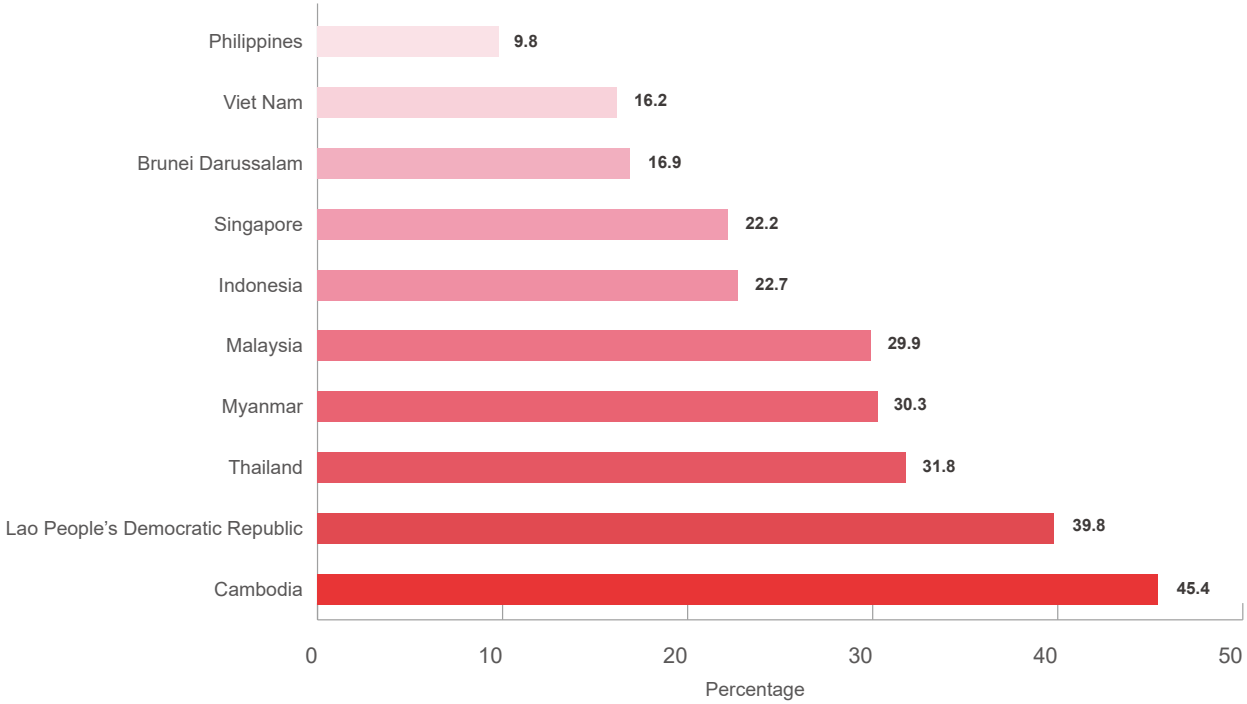
Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State for prevalence of *underweight* include – Brunei Darussalam: STEPS Survey 2015/16; Indonesia: National report on Basic Health Research, RISKESDAS, 2018; Malaysia: National Health and Morbidity Survey, 2019; Thailand: WHO Global Health Observatory, 2016; Cambodia, Lao People's Democratic Republic, Myanmar, Philippines, Singapore and Viet Nam: UNICEF State of the World's Children, 2019. Specific surveys referenced in the ANNS by each Member State for prevalence of *overweight* include – Cambodia: Demographic & Health Survey, 2014; Indonesia: Basic Health Research, RISKESDAS, 2018; Malaysia: National Health and Morbidity Survey, 2019; Philippines: 2018 Expanded National Nutrition Survey; Brunei Darussalam, Lao People's Democratic Republic, Myanmar, Singapore, Thailand and Viet Nam: WHO Global Health Observatory (2016).

Note: The figure above only includes data points that match the indicator definitions (see Annex for all indicator definitions). There are, however, national level estimates available for malnutrition in women from ASEAN Member States that are calculated for different age groups. These are noted here for reference: In Brunei Darussalam, prevalence of overweight and obesity in adult women (18+) is 62.5 per cent (Brunei Darussalam STEPS Survey 2015/16). In Myanmar, prevalence of underweight in WRA (15-49 years) is 14.3 per cent (Myanmar Micronutrient and Food Consumption Survey, 2017-2018). In the Philippines, prevalence of underweight (BMI<18.5) in WRA was 8.0 per cent (2019 FNRI, Expanded National Nutrition Survey).

Prevalence of anaemia remains an issue of public health significance in WRA in the ASEAN region. Prevalence is moderate in Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Singapore and Thailand, and high in Cambodia (Figure 6).[35] Data on iodine intake in adults is sparse in the region. The median UIC in pregnant women in Thailand (153.4 µg/L)[vii] is just above the threshold for 'adequate' intake for pregnant women, per WHO guidelines, while the median UIC pregnant women in Malaysia is 112.7 µg/L,[viii] indicating insufficient intake.[37]

vii Bureau of Nutrition, Department of Health. *Progress Report on IDD Prevention and Control Programme, 2018-2020*, July 2020.
viii Unpublished data. National IDD monitoring among pregnant women aged 15-49 years in Malaysia (µg/l), 2017

Figure 6. Anaemia prevalence in women of reproductive age, by threshold level



Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Cambodia: Demographic and Health Survey, 2014; Indonesia: Basic Health Research (RISKESDAS), 2013; Lao People's Democratic Republic: Multiple Indicator Cluster Survey 2017; Malaysia: National Health and Morbidity Survey, 2019; Myanmar: Myanmar Micronutrient and Food Consumption Survey (MMFCS) 2017-2018; Philippines: 2019 FNRI, Expanded National Nutrition Survey Viet Nam: National General Nutrition Survey 2020; Brunei Darussalam, Indonesia, Singapore and Thailand: WHO Global Health Observatory (2016).

Note: Thresholds are based on the WHO classification of public health significance of anaemia in populations.[35] The figure above only includes data points that match the indicator definitions (see Annex for all indicator definitions). There are, however, national level estimates available for malnutrition in women from ASEAN Member States that are calculated for different age groups. These are noted here for reference: In Thailand, prevalence of anaemia in women aged 15-44 years was 22.6 per cent (The Fifth Thailand Nation Health Exam Survey [NHES 5]).

Other NCDs, such as high blood pressure and diabetes, are also of concern in adults. The prevalence of raised blood pressure[ix] in ASEAN Member States is high, with more than 20 per cent of the adult population affected in all 10 Member State countries.[39,40]

It is estimated that worldwide someone dies every eight seconds from diabetes or its complications and approximately 10 per cent of all global health expenditures are related to diabetes care and treatment.[41] Globally, an estimated 9 per cent of men and 8 per cent of women have diabetes.[14] In ASEAN Member States with data, prevalence of diabetes for all adults ranges from 8 per cent in the Philippines to as high as 17 per cent in Malaysia (nearly double the global prevalence estimate).

The double and triple burden of malnutrition

More and more countries are experiencing a double or triple burden of malnutrition, with the coexistence of high levels of undernutrition, overweight and obesity and/or micronutrient deficiencies. These overlaps can occur at any population level: country, city, community, household or individual. The 2020 Global Nutrition Report investigated national-level coexistence of high levels childhood stunting (≥20 per cent), anaemia in WRA (≥20 per cent) and overweight and obesity in adult women (≥35 per cent). This analysis found that all ASEAN Member States experience at least one of these forms of malnutrition at high levels, with several experiencing at least two or more.[14]

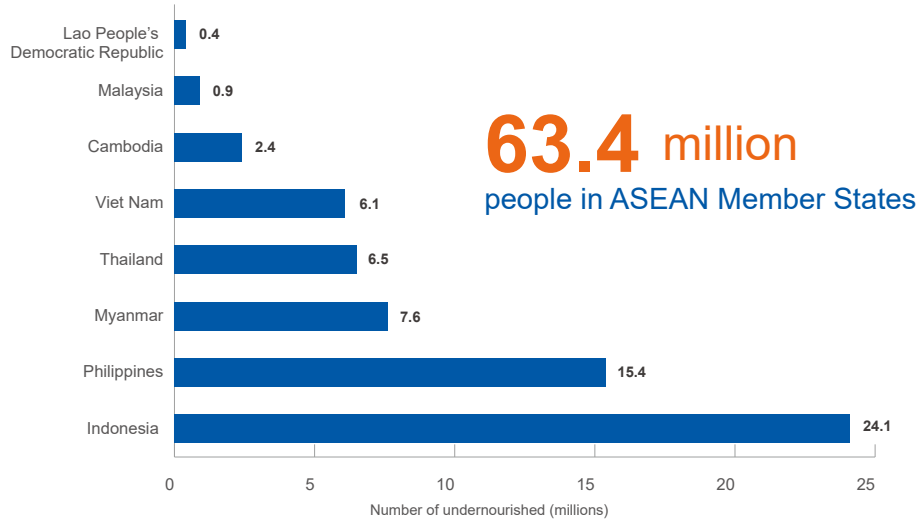
ix Defined as systolic blood pressure ≥ 140 and/or diastolic blood pressure ≥ 90

Prevalence of undernourishment in the ASEAN region has remained stagnant for nearly a decade

Prevalence of undernourishment – part of the monitoring framework for SDG 2, 'zero hunger' – is used to assess hunger in a given population. Undernourished people lack enough dietary energy for a healthy life.[9] Global prevalence of undernourishment decreased between 2005 and 2015, but has remained stagnant between 8.7 and 8.9 since 2015.[9] Prevalence of undernourishment in the ASEAN region decreased from greater than 20 per cent in 2000 to approximately 10 per cent in 2012. However, prevalence has remained flat at around 10 per cent in the ASEAN region ever since.[x]

The ASEAN region is home to 63.4 million undernourished people. The vast majority of them reside in Indonesia (24.1 million) and the Philippines (15.4 million) (Figure 7). The proportion of the population that is undernourished varies across Member States. However, in three countries – Cambodia, Myanmar and the Philippines – more than 10 per cent of the population are not consuming enough dietary energy to live a healthy life. In Indonesia and Thailand, 9 per cent are undernourished. Prevalence is lower in Viet Nam, Lao People's Democratic Republic, Malaysia and Brunei Darussalam, while no data are available for Singapore (Figure 8).

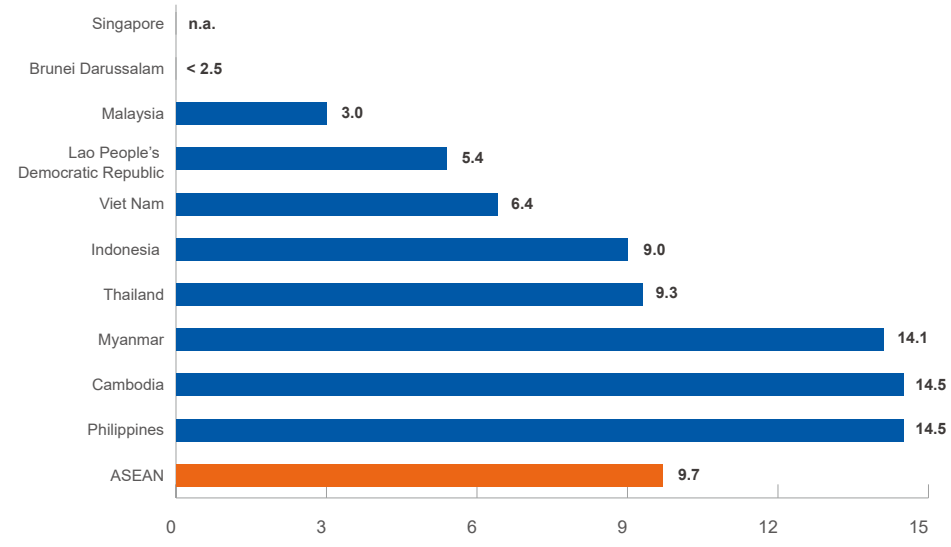
Figure 7. Number of undernourished (millions)



Source: All data were extracted from the ANSS. All Member State estimates were derived from the FAOSTAT for the period 2017-2019.

Note: Member States with no data or data not reported for one or more indicators include Brunei Darussalam and Singapore.

Figure 8. Prevalence of undernourishment



x Calculated by FAO Headquarters (based on FAOSTAT data) specifically for ASEAN Member States

3.3 Poor diets are slowing progress to end malnutrition

Poor diets are the leading cause of mortality and morbidity worldwide, exceeding other global health challenges such as tobacco smoking. Diets are so strongly linked to health outcomes that dietary improvements could potentially prevent one in every five deaths globally.[42]

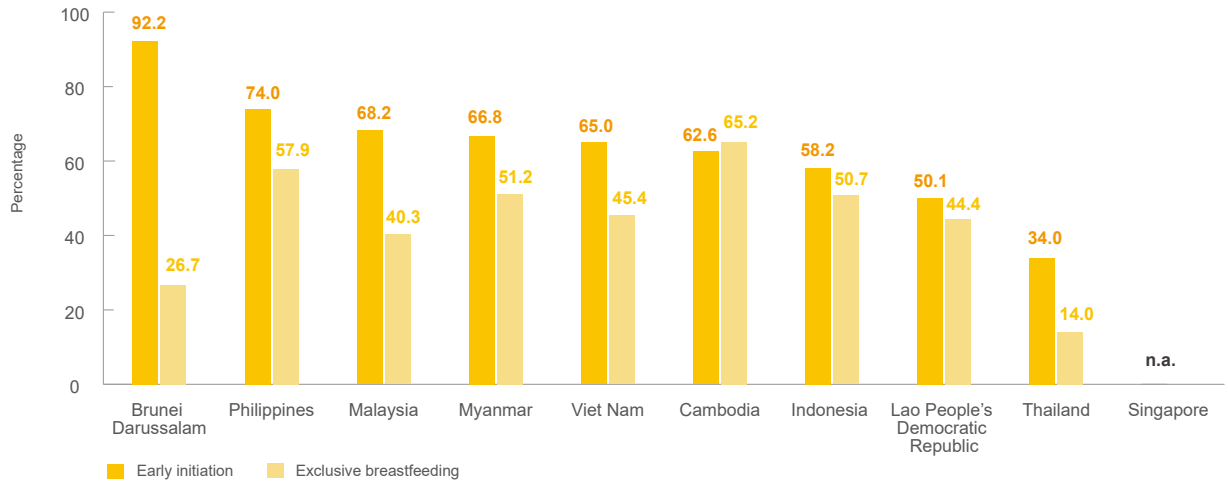
The data presented in this section make clear that diets remain suboptimal in the ASEAN region for all age groups. The COVID-19 pandemic has further exacerbated the preexisting crisis of diets: more families are struggling to afford a healthy diet and many are relying on inexpensive, nutrient-poor, heavily processed foods.[43]

Early childhood

While diet quality is important at all stages of life, the way that infants and young children are fed before age 2 has a lifelong impact on their survival, growth and development. Breastfeeding gives infants the healthiest start in life, providing essential energy, nutrients and antibodies and offering critical protection from disease and death. Early initiation of breastfeeding (within the first hour of life) is critical to newborn survival, yet the practice varies widely in the ASEAN region. In Brunei Darussalam, early initiation of breastfeeding is nearly universal (92 per cent), while Thailand reports that only a third of newborns benefit from this life-saving practice (Figure 9).

Breastmilk alone provides all the vital nutrients infants need for the first six months of life. Yet rates of exclusive breastfeeding in the first six months vary between ASEAN Member States. Four Member States have already reached the global nutrition target of >50 per cent of children exclusively breastfed (Cambodia, Indonesia, Myanmar and the Philippines), while exclusive breastfeeding remains low in Brunei Darussalam (27 per cent) and Thailand (14 per cent) (Figure 9).

Figure 9. Proportion of newborns put to the breast within 1 hour of birth (early initiation) and exclusively breastfed for the first 6 months of life



Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State for early initiation of breastfeeding include – Brunei Darussalam: National Health and Nutritional Status Survey, 2013; Cambodia: Demographic and Health Survey, 2014; Malaysia: Over or Under: Double Burden of Child Malnutrition in Malaysia : A Landscape Analysis Report based on the National Health and Morbidity Survey (NHMS), 2016; Thailand: Multiple Indicator Cluster Survey, 2016; Viet Nam: National General Nutrition Survey 2020; Indonesia, Lao People's Democratic Republic and Myanmar: UNICEF State of the World's Children, 2019. Specific surveys referenced in the ANNS by each Member State for exclusive breastfeeding include – Brunei Darussalam: National Health and Nutritional Status Survey, 2013; Cambodia: Demographic and Health Survey, 2014; Indonesia: Demographic and Health Survey, 2017; Lao People's Democratic Republic: Lao Social Indicator Survey II, 2017; Malaysia: Over or Under: Double Burden of Child Malnutrition in Malaysia : A Landscape Analysis Report based on the National Health and Morbidity Survey (NHMS), 2016; Myanmar: Demographic and Health Survey, 2015-16; Philippines: 2018 Expanded National Nutrition Survey; Thailand: Multiple Indicator Cluster Survey, 2019; Viet Nam: National General Nutrition Survey 2020.

Note: n.a., Data not available. Based on Singapore's National Breastfeeding Survey conducted in 2011, 99 per cent of the new mothers attempted to breastfeed their babies and 50 per cent of newborns were exclusively breastfed when leaving the hospital. At 6 months of age, 42 per cent of infants were receiving any breastmilk and 1 per cent were exclusively breastfed.

By the time infants reach 6 months of age, breastmilk alone is no longer sufficient to meet their energy and nutrient requirements.[44,45] To keep up with these demands, young children need to be introduced to their first solid foods (complementary foods) at 6 months of age while continuing to breastfeed. Table 2 presents the most recent estimates for seven complementary feeding indicators in each ASEAN Member State. The values presented in Table 2 are based on the most recent indicator definitions for infant and young child feeding.[46]

The majority of children in ASEAN Member States are consuming solid, semi-solid or soft foods at the recommended time, between 6–8 months of age. Similarly, more than half of children in all Member States with data are consuming at least the minimum recommended number of meals or snacks per day. The proportion of children aged 6-23 months consuming the minimum recommended number of food groups per day (dietary diversity), however, varies widely: from only 21 per cent in Myanmar to 75 per cent in Thailand.

Indicators of diet quality – any consumption of fruits or vegetables and any consumption of eggs of flesh food – are encouraging: >50 per cent of children aged 6-23 months are consuming fruit or vegetables in all but one Member State (Myanmar) and >=50 per cent of children aged 6-23 months in all Member States are consuming eggs or flesh foods. Continued breastfeeding during the second year of life also makes an important contribution to child diets;[xi] however, in five Member States (Brunei Darussalam, Lao People's Democratic Republic, Malaysia, Thailand and Viet Nam) fewer than 50 per cent of children are benefiting from this practice.

Table 2. Complementary feeding practices in children 6–23 months of age

ASEAN Member State	Introduction to solid, semi-solid or soft foods	Minimum meal frequency	Minimum dietary diversity	Minimum acceptable diet	Any fruits or vegetables	Eggs or flesh foods	Continued breastfeeding 12-23 months
Brunei Darussalam	95.1%	n.a.	n.a.	n.a.	n.a.	n.a.	31.6%
Cambodia	81.6%	72.2%	40.4%	30.4%	64.7%	81.7%	58.0%
Indonesia	85.5%	71.7%	53.9%	40.3%	82.2%	71.3%	67.3%
Lao People's Democratic Republic	86.7%	69.9%	35.7%	26.5%	63.8%	79.0%	43.0%
Malaysia	41.5%	92.8%	53.1%	54.4%	87.5%	90.3%	44.1%
Myanmar	75.0%	57.6%	21.3%	15.9%	44.2%	58.5%	78.5%
Philippines	84.4%	n.a.	n.a.	n.a.	n.a.	n.a.	59.6%
Singapore	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Thailand	91.7%	87.1%	74.5%	66.3%	86.1%	90.0%	24.5%
Viet Nam	85.9%	75.0%	52.2%	42.2%	100.0%	50.2%	26.0%

Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Brunei Darussalam: National Health and Nutritional Status Survey (NHANSS), 2013; Cambodia: Demographic and Health Survey, 2014; Indonesia: Demographic and Health Survey, 2017; Lao People's Democratic Republic: Lao Social Indicator Survey II, 2017; Malaysia: National Health and Morbidity Survey, 2016; Myanmar: Demographic and Health Survey, 2015-2016; Philippines: Demographic and Health Survey, 2008 and 2017; Singapore: no data; Thailand: Multiple Indicator Cluster Survey 2019; Viet Nam: National General Nutrition Survey 2020 and & National Nutrition Surveillance Network, 2015.

Note: n.a., Data not available. Many of the values in Table 2 were reanalysed by UNICEF to reflect the recently updated definitions for complementary feeding indicators[47,48] published in 2021.[46] As a result, they may differ slightly from previous indicator estimates printed in older reports. The Philippines collected data on minimum meal frequency (92.2 per cent), minimum dietary diversity (20.1 per cent) and minimum acceptable diet (9.9 per cent) in the 2019 Expanded National Nutrition Survey, however these estimates are based on the old indicator definitions. Further, the only data available for animal-source food consumption (75.2 per cent) and zero fruit or vegetable consumption (21.8 per cent) is from the 2008 DHS and thus too old to present in this report.

xi Between the ages of 12 and 23 months, it is estimated that children still receive 35-40 per cent of their energy needs from breastmilk, which is also a good source of essential fatty acids and micronutrients. The nutritional benefit of continued breastfeeding is most evident during child illness, when decreased child appetite may prevent children from consuming adequate quantities of foods but does not usually affect breastmilk intake.[1]

While indicators were recently developed to assess unhealthy dietary practices in young children – including consumption of unhealthy snacks and drinks high in sugar, salt and fat –,[46] there are not yet enough data to calculate regional or national estimates on the proportion of young children consuming these foods and beverages. Findings from small-scale surveys in some ASEAN Member States, however, indicate that cookies, chips, sweet drinks and other sugary and salty packaged foods are taking an increasingly prominent place in children's diets. For example, in the Lao People's Democratic Republic, 45 per cent of young children had eaten a processed, packaged snack food in the day preceding a survey[10,49] and evidence from Bangdug City, Indonesia suggests that consumption of processed snack foods starts as soon as young children are introduced to solid foods: 47 per cent of children aged between 6 months and 1 year were found to already be consuming snack foods, including sweet biscuits and savoury snacks.[50]

Middle childhood and adolescence

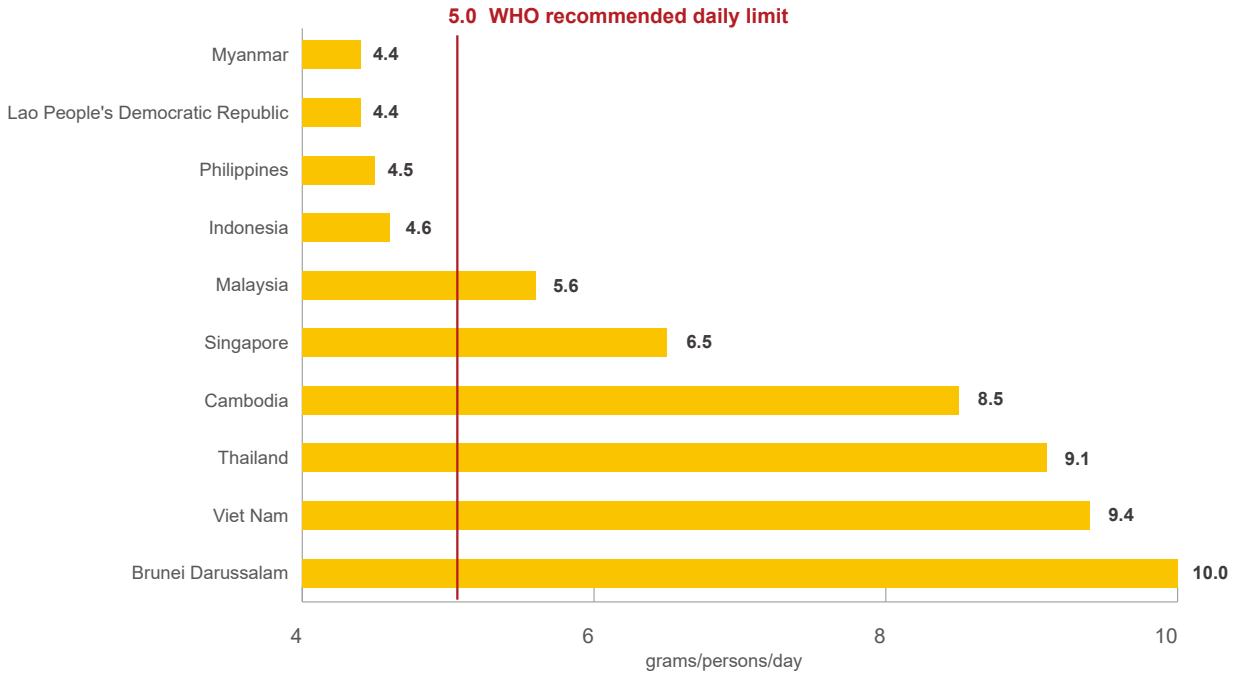
Limited data are available to shed light on the diets of children and adolescents. However, what is available indicates that adolescents are not consuming enough nutritious foods and consuming too many unhealthy foods. In several ASEAN Member States, more than 40 per cent of adolescents aged 12-15 years consumed at least one fast food meal per week.[51]

Adulthood

Adults are not consuming enough nutritious foods to fully benefit from the protection they offer against illness and death. An analysis by the 2020 Global Nutrition Report found that per capita intake of several protective dietary factors in many ASEAN Member states is below the theoretical minimum risk of exposure level (TMREL) – an estimate of the optimal dietary intake required to minimize risk from all causes of death (combined). Further, intake of vegetables, legumes, milk, polyunsaturated fat and omega 3 fatty acids in the most Member States is below global estimated intake. The 2020 Global Nutrition Report analysis also found that consumption of harmful dietary factors, such as processed meat, SSBs, trans-fatty acids and sodium are all well above the TMREL in most Member States.

High salt (sodium) intake increases blood pressure, a major risk factor for cardiovascular disease and stroke, is a leading dietary risk factor for death and illness worldwide and is the leading risk factor for death in east Asia and high-income Asia Pacific countries.[52] As seen in Figure 10, daily salt intake is above the WHO recommendation of no more than 5 grams per day[53] in Brunei Darussalam, Cambodia, Malaysia, Singapore, Thailand and Viet Nam.

Figure 10. Estimated intake of salt per day (grams /persons) in adults (18+ years)



Source: All data was extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Brunei Darussalam: Health Information Booklet, Ministry of Health, 2017; Cambodia: 2016 STEP Survey; Malaysia: Malaysian Community Salt Survey-MyCoss, 2019; Thailand: Estimated dietary sodium intake in Thailand: A nation-wide population survey with 24-hour urine collections, Worawan Chailimpamontree et al; Viet Nam: STEPS 2015; Indonesia, Lao People's Democratic Republic, Myanmar, Philippines, Singapore: Global Nutrition Report, 2020.

Note: The figure above only includes data points that match the indicator definitions (see Annex for all indicator definitions). There are, however, national level estimates available for intake from ASEAN Member States that are calculated for different populations. For example, in Myanmar, estimated intake of salt per day in adult men aged 15-49 years is 6.6g (Myanmar Micronutrient and Food Consumption Survey 2017-2018).

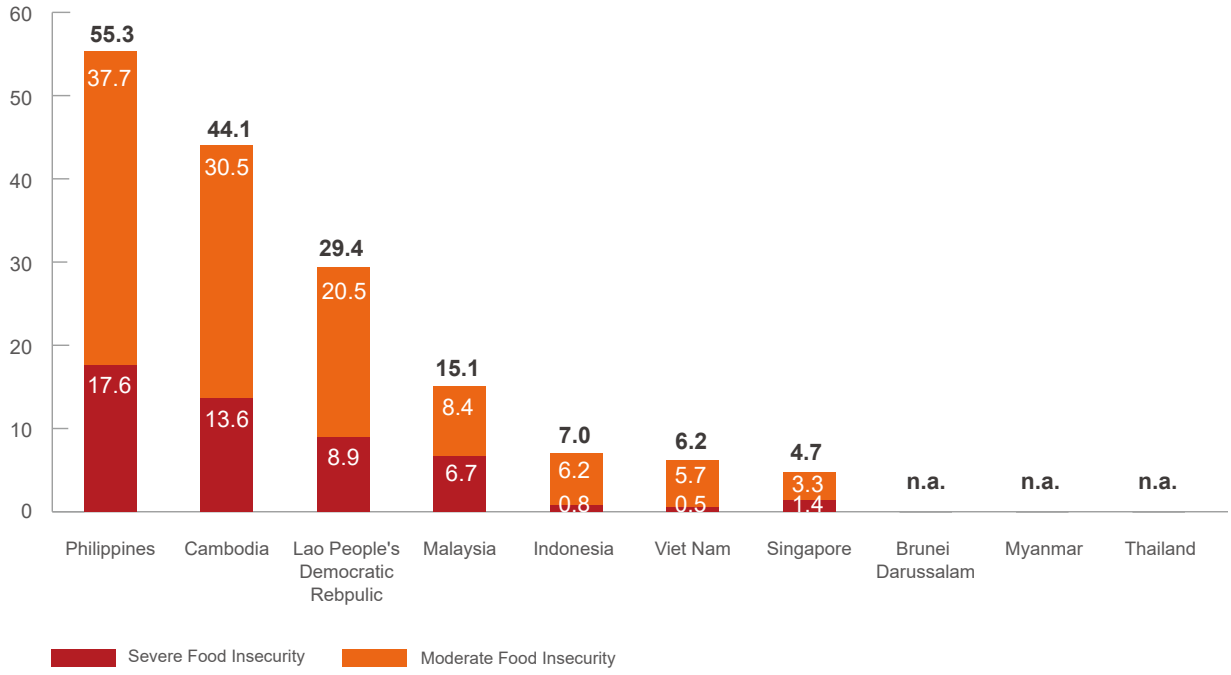
Food insecurity

An estimated 25.9 per cent of the global population – approximately 2 billion people – suffer from moderate to severe levels of **food insecurity**, with prevalence steadily increasing since 2014.[9] The lack of consistent access to food due to persistent food insecurity diminishes dietary quality, disrupts normal eating patterns and can have short- and long-term negative consequences on nutritional status, health and well-being.

Food insecurity exists to some degree in all ASEAN Member States (where data allow for investigation). Nearly half of the total population of Cambodia (44.1 per cent) and over half of the total population of the Philippines (55.3 per cent) experience moderate or severe food insecurity, with approximately 15 per cent of the total population of these Member States experiencing severe food insecurity. Prevalence of moderate or severe food insecurity is approximately 15 per cent in Malaysia, 7 per cent in Indonesia, 6 per cent in Viet Nam and 5 per cent in Singapore. Estimates of food insecurity are not available for Brunei Darussalam, Myanmar and Thailand (Figure 11). In Brunei Darussalam a separate estimate of food insecurity from 2010–2011 estimated that only 7.4 per cent of the population had run out of food and could not afford to buy more at some point in the 12 months prior to the survey.[54]

Food insecurity does not affect all people in the same manner. Further efforts are required to examine how different population groups, particularly the most vulnerable, are affected.

Figure 11. Prevalence of food insecurity in ASEAN Member States



Source: All data were extracted from the ANSS. All Member State estimates were derived from the FAOSTAT for the period 2017–2019 with the exception of the data for Lao People's Democratic Republic which is for the period 2018-2020.

Note: n.a., Data not available.

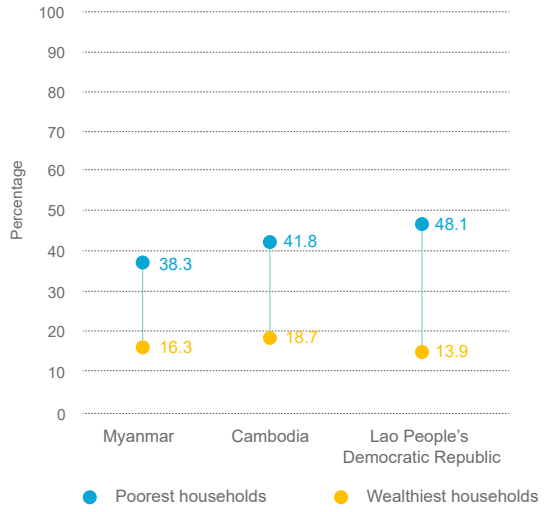
3.4 Malnutrition does not affect all populations equally

Deeper analysis of malnutrition data reveals inequalities in the burden of malnutrition and diet quality between different population groups in the ASEAN region. Children residing in the poorest households, for example, experience higher rates of stunting and wasting than their wealthier counterparts. This holds true both at the global level and within ASEAN Member States (among countries with available disaggregated data; see Figure 12). Stunting and wasting prevalence is also frequently higher in children residing in rural areas compared with urban areas. However, it is worth noting that the urban poor are often left out of large-scale household surveys. There is evidence that large disparities exist in the prevalence of malnutrition within urban areas in the ASEAN region, with the poorest households most at risk of stunting and wasting.[xii] As urbanization increases in ASEAN Member States, greater attention is needed to identify those in greatest need *within* urban settings.

For overweight prevalence, the distribution is often reversed, with children in urban and wealthier households more affected by overweight than their rural and poorer counterparts. However, the magnitude of difference between the groups is small. Little difference is seen in stunting, wasting or overweight by gender – both at the global level and within ASEAN Member States with available disaggregated data.

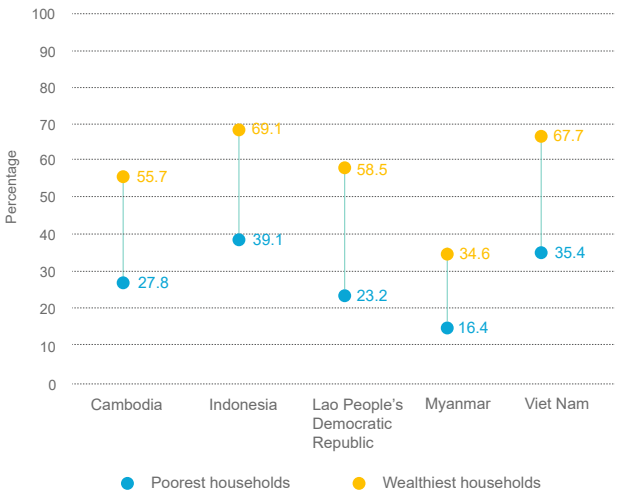
xii Status and Determinants of Food Insecurity and Undernutrition in Peri-Urban Yangon: SDFU Myanmar 2018 (report not yet published)

Figure 12. Prevalence of stunting in children under 5, by wealth quintile



Note: Data were reanalysed by UNICEF headquarters. Original data from Cambodia Demographic and Health Survey 2014; Lao Social Indicator Survey II 2017; Myanmar Demographic and Health Survey 2015–2016

Figure 13. Proportion of children 6–23 months of age consuming a minimally diverse diet, by wealth quintile



Note: Data were reanalysed by UNICEF headquarters to fit the new definition for minimum dietary diversity (consumption of ≥ 5 food groups). Original data from Cambodia Demographic and Health Survey 2014; Indonesia Demographic and Health Survey 2017; Lao Social Indicator Survey II 2017; Myanmar Demographic and Health Survey 2015–2016; Viet Nam Multiple Indicator Cluster Survey 2014.

Inequities in diet quality are also visible within the ASEAN region. As seen in Figure 13, children residing in the wealthiest households in countries with data are more likely to consume a minimally diverse diet than children from the poorest households. It is important to note, however, that *even* in the wealthiest households, in countries with available disaggregated data, approximately a third or more of children aged 6–23 months are still not receiving the minimum number of recommended food groups. In other words, **wealth does not always equal healthy diets.**

Other services, such as social and behaviour change communication are required to ensure that children from all wealth groups – even the richest – know what, when and how to feed their children and have the resources they need to overcome barriers to enacting the changes they wish to see in their children's diets.

The full extent of the impact of COVID-19 on malnutrition and diets is not yet known, as the virus is still circulating around the world. However, evidence suggests there will be a large deterioration in food security and nutritional status, especially for the most vulnerable populations, as the result of lost livelihoods and interruptions to key services. Lockdowns, school closures and other containment measures carry important consequences for child and adolescent diets – such as disruptions to school meals, barriers to obtaining fresh and nutritious foods and an overreliance on nutrient-poor processed foods. These changes to diets and lifestyles in the context of the pandemic are being felt today in children's immediate environments and are likely to have enduring consequences across the life course.

4

TRACKING PROGRESS ON NUTRITION POLICIES AND PROGRAMMES IN ASEAN MEMBER STATES

4 Tracking progress on nutrition policies and programmes in ASEAN Member States

► This chapter summarizes the status of nutrition policies and programmes and their performance (where possible). Updates are presented by 1) actions along the life course; 2) enabling factors; and 3) special circumstances.

Information presented in this chapter was derived from the ANSS. Data drawn from other sources are referenced accordingly. Relevant case studies from ASEAN Member States are also included to illustrate specific initiatives, achievements or milestones reached over the last five years.

4.1 Actions along the life course

4.1.1 Protecting the nutrition of mothers and babies

Headline achievements

- National antenatal care policies are increasingly in line with updated WHO guidance: Seven ASEAN Member States report updating their national ANC policies, strategies or guidelines to align them with the 2016 WHO recommendations on antenatal care for a positive pregnancy experience.
- All mothers attending antenatal care in the ASEAN region receive counselling on healthy eating: Counselling on healthy eating during pregnancy is a core component of ANC in all ASEAN Member States.
- Coverage of at least four antenatal care visits is high across ASEAN Member States: Seven Member States report greater than 70 per cent coverage, with three reporting 90 per cent or greater coverage.

A good start in life begins in the womb

Good maternal nutrition is critical for women's own health and well-being and that of their children. During pregnancy, all forms of malnutrition – including underweight and overweight and obesity – can carry negative consequences for the mother and newborn, including intrauterine growth retardation and low birthweight.

At the ASEAN *regional level*, the development of an ASEAN Guidance and Minimum Standards for Maternal Nutrition was included in the Strategic Framework and Action Plan for Nutrition 2018–2030. Led by Indonesia, this work is underway and will be completed in 2022.

At the *national level*, ASEAN Member States are working to integrate nutrition services within ANC, expand the coverage of maternal nutrition interventions and improve the quality of care.

► **Improving the quality of antenatal care:** Quality ANC can reduce maternal and perinatal morbidity and mortality both directly, through detection and treatment of pregnancy-related complications, and indirectly, through the identification of women and girls at increased risk of developing complications during labour and childbirth. In 2016, WHO issued new recommendations to improve the quality of ANC to reduce the risk of stillbirths and pregnancy complications and give women a positive pregnancy experience.[55] To date, seven ASEAN Member States (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar and Viet Nam) have revised their *national ANC policies, standards or guidelines* to meet the updated 2016 WHO recommendations. The 2016 WHO recommendations also call for a minimum of eight recommended ANC contacts during pregnancy to reduce perinatal mortality and improve women's experience of care. Only five Member States, however, have increased the number of recommended ANC visits to eight (Brunei Darussalam, Lao People's Democratic Republic, Malaysia, Myanmar and Singapore). Thailand currently mandates five ANC visits and is in the process of determining whether an increase in the recommended number is required.

Other essential elements of maternal health, including weight gain monitoring during ANC, nutrition counselling and promotion, and community-based interventions to better reach pregnant women are implemented in the majority of ASEAN Member States (Table 3).

Table 3. Snapshot of current antenatal care recommendations and components

ASEAN Member State	Revised ANC policies, standards or guidelines to meet the 2016 WHO recommendations	Antenatal care model with a minimum of eight contacts	Weight gain monitoring and tracking and/or mid-upper arm circumference measurement during all ANC visits	Nutrition counselling and promotion, including healthy eating and keeping physically active during pregnancy	Community-based interventions to improve communication and support for pregnant women
Brunei Darussalam	✓	✓	✓	✓	✓
Cambodia	✓	X	X	✓	✓
Indonesia	✓	X	✓	✓	✓
Lao People's Democratic Republic	✓	✓	✓	✓	✓
Malaysia	✓	✓	✓	✓	✓
Myanmar	✓	✓	✓	✓	✓
Philippines	X	X	✓	✓	✓
Singapore	X	✓	✓	✓	✓
Thailand	X	X	✓	✓	✓
Viet Nam	✓	X	✓	✓	✓

Source: Member State reported availability of policies and programmes relevant to maternal nutrition was collected explicitly for this report.
Note: Indonesia's revised ANC standard is currently under development. The ANC model with a minimum of eight contacts has already launched.

Micronutrient supplementation is key to ensuring that mothers and their children receive adequate nutrition during pregnancy. The 2016 WHO updated ANC guidelines recommend daily oral iron and folic acid (IFA) supplementation (with 30 mg to 60 mg of elemental iron and 400 µg [0.4 mg] folic acid) for pregnant women to prevent maternal anaemia, puerperal sepsis, low birthweight and preterm birth.[55] All ASEAN Member States reported that daily IFA supplementation is represented in national policies and/or clinical guidelines. Daily calcium supplementation (1.5–2.0 g oral elemental calcium) is also recommended for pregnant women to reduce the risk of pre-eclampsia, particularly in populations with low dietary calcium intake.[55] Calcium supplements are provided to pregnant women in Indonesia, Lao People's Democratic Republic, the Philippines, Singapore and Thailand (Table 4).

The WHO ANC guidelines note that use of multiple micronutrient supplements (MMS) containing IFA during pregnancy may reduce the risk of low birthweight. The guidelines recommend the use of MMS during pregnancy in the context of rigorous operations research.[56] Seven ASEAN Member States report that daily provision of MMS during pregnancy is included in national policies and/or clinical guidelines (Brunei Darussalam, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Viet Nam).

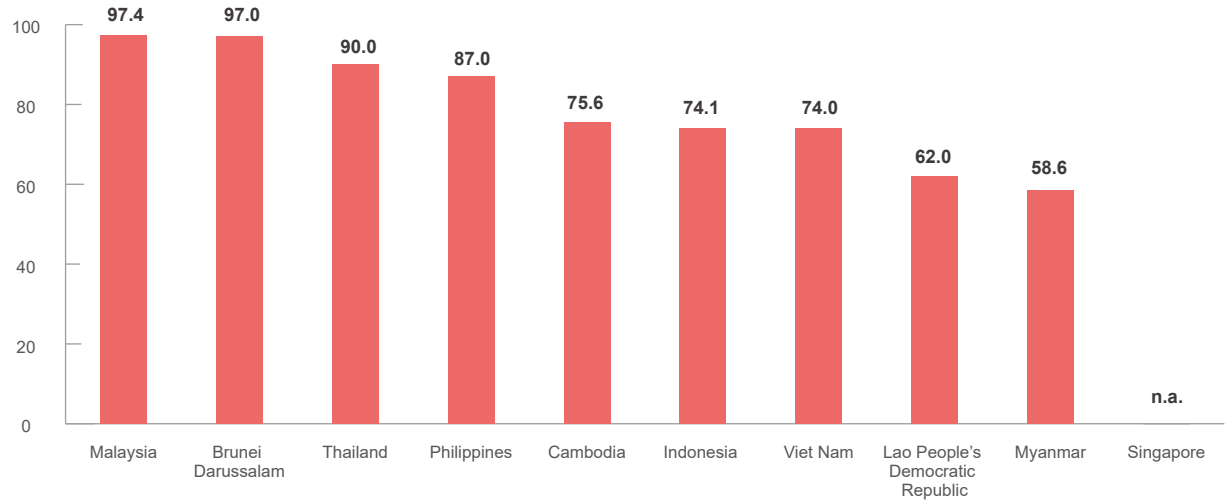
Table 4. Micronutrient supplementation during pregnancy

ASEAN Member State	Daily provision of 30–60 mg iron and 0.4 mg folic acid through IFA for pregnant women	Daily provision of MMS containing 30–69 mg iron and 04 mg folic acid for pregnant women	Provision of daily calcium supplementation with 1.5–2.0 g oral elemental calcium
Brunei Darussalam	✓	✓	X
Cambodia	✓	X	X
Indonesia	✓	✓	✓
Lao People's Democratic Republic	✓	X	✓
Malaysia	✓	✓	X
Myanmar	✓	✓	X
Philippines	✓	X	✓
Singapore	✓	✓	✓
Thailand	✓	✓	✓
Viet Nam	✓	✓	X

Source: Member State reported availability of policies and programmes relevant to maternal nutrition was collected explicitly for this report.

► **Coverage of antenatal care:** While policies and guidance are often in place to reflect several recommended ANC practices and micronutrient supplementation, in practice, the coverage of these services requires improvement in several Member States. The proportion of pregnant women attending four ANC visits (the previous WHO recommendation) varies throughout the ASEAN region, but is high in several Member States. More than 70 per cent of women attended at least four ANC visits during their last pregnancy in Cambodia, Indonesia, the Philippines and Viet Nam, and 90 per cent or more women attended at least four visits in Brunei Darussalam, Malaysia and Thailand. Only one Member State reported data on the percentage of women who attended the recommended eight ANC visits: in Thailand, 66 per cent of women who gave birth in the last two years received at least eight ANC visits during pregnancy (Figure 14). While Singapore does not track ANC coverage at the national level, high quality ANC is generally accessible to most Singaporeans through both the public and private sector, and financial assistance is available for those who have difficulty affording the services. Data on services received during ANC visits are scarce and inconsistent between

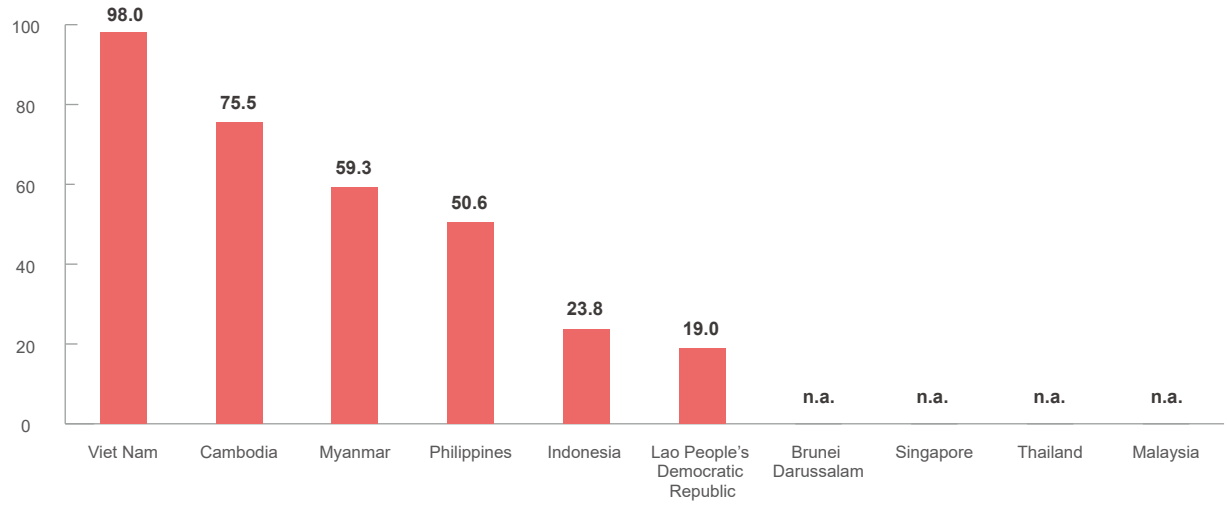
Figure 14. Percentage of women (aged 15–49 years) who attended ANC at least four times during their last pregnancy



Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Brunei Darussalam: Maternal Health administrative data; Cambodia: Demographic and Health Survey, 2014; Indonesia: Indonesia: Basic Health Research (RISKESDAS), 2018; Lao People's Democratic Republic: Multiple Indicator Cluster Survey, 2017; Malaysia: National Health and Morbidity Survey, 2016; Myanmar: Demographic and Health Survey, 2015–2016; Philippines: Demographic and Health Survey, 2017; Thailand: Multiple Indicator Cluster Survey, 2019; Viet Nam: Multiple Indicator Cluster Survey, 2013–2014.
Note: N.A., no data available

ASEAN Member States. Only three Member States have data on the percentage of pregnant women who had their weight and blood pressure monitored during their first ANC visit: Brunei Darussalam (100 per cent), Thailand (97 per cent) and Lao People's Democratic Republic (29 per cent). In Myanmar, 91 per cent of women had their blood pressure measured during ANC. Only two Member States have data on the percentage of pregnant women who received IFA supplementation or MMS in the first 12 weeks of pregnancy: Brunei Darussalam (75 per cent) and Thailand (76 per cent). Data are more readily available on the percentage of women who consumed either iron tablets or syrup for >90 days during pregnancy. There is wide variation in this indicator between Member States, with 98 per cent achievement in Viet Nam compared with only 19 per cent in Lao People's Democratic Republic (Figure 15). While no data are available for Malaysia, iron folate supplementation is given as prophylaxis treatment during all ANC visits.

Figure 15. Percentages of women with a birth in the past five years who took iron tablets or syrup for 90+ days during pregnancy



Source: All data were extracted from the ANSS. Specific surveys referenced in the ANSS by each Member State include – Cambodia: Demographic and Health Survey, 2014; Indonesia: Indonesia Basic Health Research (RISKESDAS), 2018; Lao People's Democratic Republic: Multiple Indicator Cluster Survey, 2017; Myanmar: Demographic and Health Survey, 2015–2016; Philippines: Demographic and Health Survey, 2017; Viet Nam: National Nutrition Survey, 2016.
Note: N.A., no data available

It is also essential to improve nutrition before pregnancy by focusing on adolescent girls as well as non-pregnant women. However, data on the percentage of menstruating adolescent girls (aged 10–18 years) and non-pregnant women (aged 15–49 years) who receive iron supplementation is only available in Indonesia, with 23 per cent coverage reported.

What does this mean for ASEAN Member States?

National ANC policies, strategies and guidance documents need to be updated to align with the 2016 WHO recommendations in *all* ASEAN Member States. Increased efforts are also required to strengthen the quality of services provided during ANC to ensure mothers are fully benefitting from recommended services. Currently, there are large data gaps on ANC, particularly around the services provided during visits. Data are needed to help assess and monitor service implementation and quality. Measuring the receipt and content of nutrition counselling and provision of targeted counselling for special concerns (e.g., inappropriate weight gain, gestational diabetes) are particularly important. Further, operations research for MMS in countries where low birthweight is a concern should be encouraged.

© IDRC/Vietnam National Institute of Nutritionn/ 2018/ Bartay

Focus 1

Piloting an antenatal breastfeeding workshop for first-time parents in Brunei Darussalam

Promoting, supporting and protecting breastfeeding is the single most important, cost-effective, public health intervention in preventing childhood mortality and morbidity. Adherence to recommended breastfeeding practices reduces the risk of NCDs later in life, including cardiovascular disease, chronic respiratory disease, diabetes and cancers during adolescence and adulthood.[57,58] In recognition of the powerful impact of optimal breastfeeding, the Government of Brunei Darussalam has supported the introduction of mandatory and fully paid maternity leave of 105 days (since 2011), provision of free breast pumps to all new mothers (since 2018) and policies to encourage provision of dedicated nursing rooms in government buildings and shopping centres.

While exclusive breastfeeding rates in Brunei Darussalam have improved in recent years, more than half of infants still do not benefit from this life-saving practice. In recognition of the contribution of optimal maternal and child health to the health and well-being of society, the Government of Brunei Darussalam, led by the Ministry of Health, committed to scale-up and sustain efforts to protect, promote and support breastfeeding. Further, improving national exclusive and continued breastfeeding rates is crucial in supporting *Wawasan 2035 National Vision*.

As part of the 2019 World Breastfeeding Week, the Maternal, Infant and Young Child Nutrition Taskforce of the Ministry of Health piloted a half-day antenatal breastfeeding workshop for first-time parents. The objectives of the workshop were: 1) to empower first-time parents with evidence-based, unbiased information on the benefits of breastfeeding; and 2) to increase exclusive and continued breastfeeding rates among first-time mothers. A total of 26 first-time mothers attended one of two half-day workshops held in September 2019. Nearly all mothers were also joined by their husbands. The workshop included sessions on the importance of early initiation of breastfeeding; the benefits of breastfeeding during the first two years of life; how to recognize hunger and feeding cues in infants; milk expression and storage; and practice assistance on effective positioning and attachment. In addition, group discussions were held on the role of fathers in supporting breastfeeding, as well as question and answer sessions.

Analysis of questionnaires administered immediately following the workshop found that the vast majority of participants would recommend the workshops to others and felt the topic areas were very relevant for their breastfeeding knowledge. Some participants also reported that the workshop could have been longer in duration, to allow participants to better grasp the concepts presented. Some quantitative analysis was conducted to assess breastfeeding duration of attendees in the first six months post-partum. Some evidence indicated that those who attended the workshops practised exclusive breastfeeding at a higher rate throughout the six-month period than those who did not attend. However, more robust research is required to establish confidence in these results. A proposal for a randomized controlled trial is currently being developed to assess the effectiveness of the breastfeeding workshop together with an improved post-partum supportive intervention for first-time parents.

Focus 2

Combating iodine deficiency disorder in pregnancy in Thailand

Iodine deficiency disorders (IDD) have severe consequences, including growth and cognitive impairment, goitre and death.[59] Thailand launched its first National IDD Elimination Programme in 1989. The Ministry of Health, together with collaborating agencies, spearheaded the implementation of proven strategies to prevent and control IDD, with a focus on universal salt iodization (USI). These included regular monitoring of iodine levels in iodized salt at all points in the supply chain and surveillance and annual monitoring of UIC levels in a sample of pregnant women in each province.

Efforts to scale up USI have been largely successful, with household coverage of adequately iodized salt greater than 80 per cent and an estimated 77 per cent of food products available in markets containing iodized salt. In a number of remote, rural areas where iodized salt coverage remains suboptimal, iodized drinking water is provided to children across more than 700 schools (by adding drops of concentrated iodine solution to drinking water) to help meet the daily iodine requirements for school-age children. Further, in recognition of the higher daily iodine requirements of pregnant and lactating women – and the severe consequences of deficiency in utero and early infancy – the Ministry of Public Health emphasized the need to provide iodine supplements to all pregnant and lactating women. In 2010, the National Health Security Office declared that triferdine – a locally produced supplement containing iodine 0.15 mg, folic acid 0.4 mg and iron 60.81 mg – would be added to the National List of Essential Medicines, with the benefits package for all pregnant and lactating women (until six months post-partum).

The proportion of pregnant women receiving triferdine increased from 46 per cent in 2013 to 79 per cent in 2020.[60] In 2015, the national median UIC in pregnant women was 147 µg/L, indicating insufficient iodine intake, per WHO criteria for assessing iodine nutrition in pregnant women.[37] By 2019, national median UIC in pregnant women had increased to 153 µg/L, above the WHO threshold for adequate iodine intake. Progress was not achieved equally across all provinces, however, with provinces in the east seeing greater improvement in median UIC over time than those in the north. In 2018, the Bureau of Nutrition, Department of Health, Ministry of Public Health, conducted a more formal research study in collaboration with UNICEF on the impact of triferdine on the nutritional status of pregnant women. These results also indicated that pregnant women had significantly higher urinary iodine levels after taking the supplement, showing that triferdine played an important role in promoting optimal iodine nutrition in pregnancy in Thailand.

The Bureau of Nutrition, Ministry of Public Health, successfully advocated for inclusion of maternal triferdine in national policy and programmes. Key factors for success in implementation and impact include high levels of political commitment to the sustainable elimination of IDD, established government subcommittees to monitor and enforce policies and programmes, integration of triferdine into antenatal and postpartum visits and continued IDD surveillance in high-risk groups.

To ensure the sustainable elimination of IDD in the future, the Ministry of Public Health aims to 1) build health literacy and self-awareness about IDD across all age groups, but especially in pregnant women; 2) continue IDD surveillance and monitoring of the median UIC of high-risk groups; 3) achieve universal coverage of triferdine for pregnant and lactating women; and 4) increase iodized salt coverage in food/processed foods and the quality of production, distribution and consumption in households.

Focus 3

Multiple micronutrient supplementation for pregnant women in Myanmar

In the early 2000s, nearly two-thirds (71 per cent) of pregnant women in Myanmar were suffering from anaemia.[61] Early efforts to tackle the high levels of anaemia included distribution of IFA tablets to all pregnant women through the 'Iron Deficiency Anaemia Control Programme', initially launched in 1980. The programme achieved some success, with prevalence of anaemia in pregnant women declining from 71 per cent to 57 per cent between 2003 and 2016, and IFA supplementation coverage reaching an impressive 87 per cent.[61-63]

In recognition of the likely coexistence of multiple micronutrient deficiencies among vulnerable populations, including pregnant women, the National Nutrition Center of the Ministry of Health and Sports decided to replace IFA tablet distribution with MMS in 2016. In the early phase of MMS implementation, there were initially shortages of MMS supplies due to limited government budget and domestic production capacity to fill early demand. Tracking programme performance was also difficult due to lack of relevant indicators in the national routine health management information system.

Despite initial challenges, the shift to MMS has been successful. The supplements have been provided by the Government and by donation via the Kirk Humanitarian Foundation in 2019. These donated supplies complement an increasing supply of locally procured MMS.

Between 2016 and 2018, anaemia prevalence in pregnant women declined from 57 per cent to 40 per cent in Myanmar, with coverage of MMS distribution to pregnant women remaining high at 75 per cent.[63]

The Ministry of Health and Sports plans to build on the early MMS successes to ensure that all pregnant women in Myanmar benefit from the programme and achieve positive pregnancy and perinatal outcomes. The Multisectoral National Plan of Action on Nutrition 2018/19–2022/23 includes the goal 'to reduce all forms of malnutrition in mothers, children and adolescent girls'; and a key activity to achieve this outcome is provision of MMS to all pregnant women in the country. The National Nutrition Center also finalized the Maternal, Infant and Child Nutrition Implementation Plan 2021–2025, which includes MMS and maternal dietary diversification as key interventions for pregnant women. Moving forward, focus will also go towards increasing Government contribution for MMS procurement to ensure programme sustainability. This includes building a stronger monitoring system to track coverage and conducting a survey or assessment of compliance to understand the rate of adherence to MMS during pregnancy and improve programme implementation.

4.1.2 Nourishing a new generation in early childhood

Headline achievements

- Governments are strengthening national legislation to protect, promote and support breastfeeding: Two ASEAN Member States have recently improved overall compliance with the International Code of Marketing of Breast-milk Substitutes (the Code).
- Maternity protection legislation is in place in all ASEAN Member States: Eight Member States now have legislation meeting or exceeding the International Labour Organization (ILO) standard of at least 98 days of maternity leave.
- Paternity leave legislation is now in place in nine ASEAN Member States: Paternity leave enables fathers to assist mothers in recovering from childbirth and establishing early breastfeeding and care practices, while sharing in family-related responsibilities.

Better diets for children from the earliest days of life

The prevention of undernutrition, micronutrient deficiencies and overweight in infants and young children is essential for individual, community and national development. Policies, strategies, legislation and programmes designed to prevent malnutrition in children under five include those that: protect, promote and support breastfeeding starting at birth; promote age-appropriate complementary foods and responsive feeding practices from 6-23 months of age; promote the use of adequate foods and feeding practices for children aged 24–59 months; protect against inappropriate marketing of unhealthy foods to children (under 18 years of age); and support the use of micronutrient supplements where nutrient-poor diets and micronutrient deficiencies are common. Improving maternal diets and care are also critical to prevent low birthweight and other risk factors that may predispose young children to multiple forms of malnutrition.

Several *regional level* activities related to early childhood nutrition were included in the ASEAN Strategic Framework and Action Plan 2018–2030. Progress on many of these activities is underway. For example:

- Development of guidelines and minimum standards for the protection, promotion, and support of breastfeeding and complementary feeding, including the implementation of the Code and relevant WHA Resolutions.
- Development of guidelines and training package for the prevention and management of overweight/obesity among children in health facilities.

At the *national level*, ASEAN Member States are implementing policies and programmes to protect, promote and support breastfeeding and good nutrition in early life.

► **Evidence-based interventions to improve child nutrition:** Improving infant and young child nutrition requires countries to deliver evidence-based interventions at scale, with quality and equity. Programmes with a strong evidence base include supportive practices at the time of birth (specifically, immediate and prolonged skin-to-skin contact, non-separation and rooming-in), counselling on infant and young child feeding, the Ten Steps to Successful Breastfeeding, growth monitoring and micronutrient interventions. All ASEAN Member States employ national-level interventions to provide counselling on optimal breastfeeding and complementary feeding and all have national or subnational growth monitoring and promotion programmes in place (Table 5). National vitamin A supplementation (VAS) programmes are implemented in six Member States and micronutrient powders (MNPs) are delivered to young children in four (however, the scale of MNP programmes vary, with only Myanmar and the Philippines having national programmes).[xiii] Zinc supplementation for treatment of diarrhoea is available on a national scale in Cambodia, Indonesia,

xiii In populations where the prevalence of anaemia in children under 2 years of age or under 5 years of age is 20 per cent or higher, point-of-use fortification of complementary foods with iron-containing micronutrient powders in infants and young children aged 6–23 months is recommended.

Malaysia, Myanmar and the Philippines. Iron supplementation for children under 2 is implemented on a national scale in Malaysia, Myanmar, the Philippines and Thailand (note that in Malaysia, while national in scale, supplementation is targeted to undernourished children) (Table 5). In Singapore, micronutrient supplements are available for children who require them.

Table 5. Snapshot of early childhood nutrition interventions and their scale in ASEAN Member States

ASEAN Member State	Counselling on breastfeeding	Counselling on complementary feeding	Growth monitoring and promotion	Vitamin A supplementation	Micronutrient powder distribution	Zinc supplementation for diarrhoea	Iron supplementation (for children under 2)
Brunei Darussalam	✓	✓	✓	X	X	X	X
Cambodia	✓	✓	✓	✓	X	✓	X
Indonesia	✓	✓	✓	✓	✓	✓	X
Lao People's Democratic Republic	✓	✓	✓	✓	X	X	X
Malaysia	✓	✓	✓	X	X	✓	✓
Myanmar	✓	✓	✓	✓	✓	✓	✓
Philippines	✓	✓	✓	✓	✓	✓	✓
Singapore	✓	✓	✓	X	X	X	X
Thailand	✓	✓	✓	X	X	X	✓
Viet Nam	✓	✓	✓	✓	✓	X	X

National in scale Subnational in scale Pilot in scale Scale of programme unknown

Source: Member State reported availability of policies and programmes relevant to early childhood nutrition was collected explicitly for this report.

While each ASEAN Member State delivers a (varied) package of proven interventions, the quality of programme implementation is often suboptimal. For example, while five ASEAN Member States report national zinc supplementation programmes to treat diarrhoea in young children, the percentage of children under 5 that receive zinc treatment remains low (e.g., only 8.4 per cent in Myanmar). It is recommended that children aged 6–59 months receive two high-dose supplements of vitamin A each year. National two-dose VAS coverage of >80 per cent is indicative of a successful programme. However, two-dose VAS coverage for children under 5 is at or above 80 per cent in only two Member States: Viet Nam (99 per cent) and Myanmar (83.0 per cent).

► **Polices, legislation and initiatives to protect child nutrition:** Seven ASEAN Member States have developed national *strategies for infant and young child feeding* (Table 6). In Indonesia, a national strategy document does not yet exist, but national infant and young child feeding guidelines for the country have been published. The *prevention of child overweight and obesity* – a growing issue in ASEAN – is reflected in the nutrition policies of all Member States.

All but three Member States have (to varying degrees) adopted *mandatory* legal measures with provisions to implement the Code and subsequent relevant WHA resolutions. All Member States have some form of maternity protection legislation in place that mandates paid maternity leave following childbirth and all have *Baby-friendly Hospital Initiative* (BFHI) programmes in place to protect, promote and support breastfeeding. Specific ASEAN Member State achievements on maternity protection, the Code and BFHI are discussed in more detail below.

Table 6. Snapshot of policies, strategies and initiatives that support early childhood nutrition

ASEAN Member State	Infant and young child feeding strategy	Mandatory regulations in line with the Code	Maternity protection legislation	Prevention of childhood overweight and obesity represented in policy	Baby-friendly Hospital Initiative
Brunei Darussalam	✓	X	✓	✓	✓
Cambodia	✓	✓	✓	✓	✓
Indonesia	X	✓	✓	✓	✓
Lao People's Democratic Republic	✓	✓	✓	✓	✓
Malaysia	✓	X	✓	✓	✓
Myanmar	✓	✓	✓	✓	✓
Philippines	✓	✓	✓	✓	✓
Singapore	✓	X	✓	✓	✓
Thailand	X	✓	✓	✓	✓
Viet Nam	X	✓	✓	✓	✓

Source: Member State reported availability of policies and programmes relevant to early childhood nutrition was collected explicitly for this report.

Maternity protection and family-friendly policies: Policies that protect, promote and support maternal and child nutrition include paid maternity leave and other family-friendly policies, such as paid paternity leave, breastfeeding breaks, dedicated nursing spaces, childcare in the workplace and the inclusion of maternity and paternity benefits in national legislation.

Paid maternity leave helps protect, promote and support breastfeeding during the first six months of a child's life. The International Labour Organization (ILO) Convention No. 183 calls for no less than 14 weeks (98 days) of leave for mothers of infants and the provision of at least two-thirds of their previous earnings. An accompanying ILO convention (Recommendation No. 191) calls for countries to endeavour to extend the period of maternity leave to at least 18 weeks.[64] All ASEAN Member States have maternity protection legislation in place. However, not all have legislation that meets the minimum ILO recommendation of at least 14 weeks (98 days) of leave. Currently, eight of the 10 Member States meet or exceed the ILO standard of at least 98 days of maternal leave (Table 7). Only one country – Viet Nam – has extended leave to at least 18 weeks (and has in fact aligned its leave time with the recommended six-month exclusive breastfeeding period). The length of mandated leave in Cambodia and Malaysia still falls short of the minimum ILO recommendation at 90 days and 60 days, respectively (in Malaysia, leave is 90 days in the public sector). Cambodia is also the only ASEAN Member State that does not guarantee full pay (100 per cent of an employee's previous earnings) during leave.

Two Member States extended their mandated leave in recent years: the Philippines and Thailand. In February 2019, the **Philippines** enacted a new law to extend the duration of maternity leave from 60 to 105 days (*the 105-Day Expanded Maternity Leave Law*), guaranteeing 105 days of paid leave to all working mothers in the government and the private sector. The new law states that an additional 15 days are available for single mothers and that seven of these days are transferable to fathers. Further, the law explicitly covers women working in the informal sector. In **Thailand**, in 2019, a new labour law (Labour Protection Act [No. 7]) was approved, increasing the length of paid maternity leave from 90 to 98 days. The new labour law not only aligns with the minimum ILO recommendations, but also dictates that leave can be split into two periods: prenatal (to allow for leave before birth, including time off for prenatal doctor visits) and postnatal.

Upon return to work, provision of nursing breaks during work hours are important to support working mothers to continue breastfeeding. Only six member states mandate the provision of nursing breaks for working mothers with infants. In **Viet Nam**, new mothers receive 60 minutes per day for breastfeeding breaks following their return from six months of paid maternity leave.

Paternity leave enables fathers to assist mothers in recovery from childbirth and help them establish early breastfeeding and care practices, while sharing in family-related responsibilities. Currently, there is no ILO standard dealing specifically with paternity leave. However, several Member States have recognized the importance of separate leave measures for fathers. National legislation that includes the provision of leave for fathers exists in nine ASEAN Member States, with leave provisions ranging from 2 days to 15 days (Table 7).

Table 7. Maternity protection and other family-friendly policies

ASEAN Member State	Maternity leave protection		Provision of nursing breaks upon return to work	Paternity leave protection		
	Length	Payment		Policy	Length	Payment
Brunei Darussalam	105 days	Full	Yes	No	N/A	N/A
Cambodia	90 days	Partial (50%)	Yes	Yes	1 day	Full
Indonesia	14 weeks	Full	Yes	Yes	2 days	Full (public sector)
Lao People's Democratic Republic	105 days	Full	Yes	Yes	7 days	Full (public sector)
Malaysia	*Private sector:* 60 days (option to extend beyond 60 days) *Public sector:* 90 days	*Private sector:* Full for first 60 days; no pay for additional 60 days *Public sector:* Full	Yes, nursing breaks can be arranged between employees and employers	Yes	7 days	Full (public sector)
Myanmar	6 months for public sector	For government officials, full payment.	No	Yes	15 days	For government officials, full payment.
Philippines	105 days, option to extend for further 30 days	Full for first 105 days; no pay for additional 30 days	Unknown	Yes	14 days	Full pay (but 7 days of payment are deducted from the 105 days of paid maternal leave)
Singapore	16 weeks (if a child is a Singapore citizen and other criteria)	Full	Yes, nursing breaks can be arranged between employees and employers	Yes (if a child is a Singapore citizen and other criteria)	14 days	Full
Thailand	98 days	Full pay for first 45 days by employer; 50 per cent pay in the second half by social security	No	Yes	15 days (public sector only)	Full
Viet Nam	180 days (6 months)	Full	Mother allowed 60 minutes breastfeeding break per day when child is under 12 months of age	Yes	5 to 14 days (depending on mode of birth)	Full

Source: Member State reported availability of policies and programmes relevant to early childhood nutrition was collected explicitly for this report.

International Code of Marketing of Breastmilk Substitutes: Aggressive and inappropriate marketing of breastmilk substitutes (BMS) – including follow-on formula and growing-up milks – and limited enforcement of national laws on the marketing of BMS have contributed to declines in breastfeeding rates and to a significant proportion of sugar consumption early in life. Adoption, implementation and strengthening of the Code through enactment and enforcement of robust national legal measures aligned with the Code are essential to ensuring that parents and other caregivers are protected from inappropriate and misleading information. Currently, seven out of the 10 Member States have enacted some mandatory legal measures with provisions to implement the Code (Table 8).

Recent efforts to strengthen legal measures in Lao People's Democratic Republic and Thailand have improved overall alignment with the Code in ASEAN region. **Lao People's Democratic Republic** adopted a new legal measure to regulate the marketing of BMS in 2019. The decree, "On Food Products and Feeding Equipment for Infants and Toddlers", covers infant formula as well as follow-on formula, 'growing-up' milks, and complementary foods for children up to 36 months of age, following the recommendations of WHA resolution 69.9.[65] **Thailand** passed the Marketing Control on Food for Infants and Young Children Act (Milk Code) in 2017. The Milk Code restricts marketing of food for infants and young children by prohibiting the advertising of products for infants up to 12 months of age (i.e., infant and follow-on formulas and complementary foods), prohibiting cross-promotion, and introducing new labelling requirements for both formulas and complementary foods.[66]

Despite recent progress in enacting legislation, the laws in six Member States are only 'moderately' aligned with the Code. The Philippines is the only Member State with a law that is 'substantially aligned'. The remaining three Member States – Brunei Darussalam, Malaysia and Singapore – currently have no binding legal measures to implement the Code;[67] however, some voluntary measures are in place. For example, Brunei Darussalam has 'The Code of Practice for Health Workers on Ending Inappropriate Marketing of Foods and Related Products for Infants and Young Children (0-5 years)' which acts as a code of ethics for health care professionals/workers in both government and private health facilities. Non-compliance of this Code by health care professionals' results in workers receiving a warning letter from the Ministry of Health. Malaysia has implemented 'The Code of Ethics for the Marketing of Infant Foods and Related Products' since 1979 (the document was updated August 2010). In the case of violation or non-compliance with this Code, disciplinary actions/penalties are levied by a Disciplinary Committee. In Singapore, the food industry, distributors and retailers have an ethical obligation to comply with the Sale of Infant Foods Ethics Committee Singapore Code, which is aligned with the Code to protect and promote breastfeeding as well as ensure the proper and safe use of breast milk substitutes. As of September 2020, Singapore now prohibits the health and nutrition claim, and idealisation of infant formula milk; and mandates a statement on formula milk on the superiority of breastfeeding.

Further efforts are required to ensure that Member States have comprehensive and robust legal and regulatory frameworks to prohibit all forms of promotion of BMS and protect families from inappropriate and misleading information on infant and young child feeding practices.

Table 8. Legal status of the Code in ASEAN Member States, including categorization of measures

ASEAN Member State	Legal status of the Code	Total points out of 100	Year
Philippines	●	85	1986
Cambodia	●	51	2005, 2007
Indonesia	●	50	2012, 2013
Lao People's Democratic Republic*	●	64*	2019
Myanmar *	●	74*	2014
Thailand*	●	68*	2017
Viet Nam	●	73	2014
Brunei Darussalam	●	-	-
Malaysia	●	-	-
Singapore	●	-	-

● Substantially aligned with the Code ● Moderately aligned with the Code ● No legal measures

Source: Marketing of Breastmilk Substitutes: National implementation of the international code, status report 2020[67]
Note: * Means that a complaint has been filed with World Health Organization and score is currently under review.

Baby-friendly Hospital Initiative: The BFHI helps maternity facilities support breastfeeding through implementation of the Ten Steps to Successful Breastfeeding. There is substantial evidence from a range of contexts that the Ten Steps are effective for improving breastfeeding rates; however, global coverage remains low. As such, updated operational guidance on the BFHI published by UNICEF and WHO in 2018 highlights the need to integrate the Ten Steps into the existing health care system to facilitate scale-up.

All ASEAN Member States report having a BFHI programme; however, the percentage of facilities designated as baby-friendly remains low. Only an estimated 10 per cent of births worldwide, 11 per cent of births in the Western Pacific[xiv] and 3 per cent of births in Southeast Asia[xv] occur in a baby-friendly facility.[68] WHO estimates that coverage of BFHI (the percentage of births occurring in facilities that are designated as baby-friendly) in ASEAN is low.[68] However, some national analyses indicate there has been recent progress: 21 hospitals in Myanmar are BFHI-certified, and all hospitals in Singapore are BFHI-certified (except two private hospitals). The remaining two private hospitals have committed to being accredited.

In alignment with WHO and UNICEF recommendations, some Member States have recently taken steps to integrate the Ten Steps to Successful Breastfeeding into national quality assurance systems. For example, the Center of Excellence for Breastfeeding initiative in **Viet Nam** uses performance-based measures to achieve consistent breastfeeding counselling, immediate and prolonged skin-to-skin contact, early initiation of breastfeeding, rooming-in, and adherence to national legislation for the implementation of the Code. The initiative builds upon the country's existing legal framework and integration of the Ten Steps into national hospital standards (Decision No. 6858 [2016]) and provides a full package of tools for assessment, monitoring and communication. As of March 2021, 59 hospitals have signed up to the initiative. **Lao People's Democratic Republic** and **Cambodia** have also been working on integrating aspects of the Ten Steps into national hospital and newborn care quality standards.[69]

xiv Including Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia, Mongolia, New Zealand, Niue, Palau, the Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tuvalu, Vanuatu and Viet Nam.

xv Including Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, the Maldives, Myanmar, Sri Lanka, Thailand and Timor-Leste.

What does this mean for ASEAN Member States?

Recent successful efforts in several Member States to protect, promote and support breastfeeding should be celebrated. However, legislation alone is insufficient to protect children from the harmful marketing of BMS, especially when weaknesses and challenges in implementation of the Code persist, and monitoring and enforcement efforts are often non-existent. This includes Code violations at retail points of sale (including e-commerce platforms) which are not reported through monitoring mechanisms, and in the health care system (including conflicts of interest with health professionals). Safeguards against conflicts of interest are required by both the Code and the BFHI. More work is also needed to ensure that mothers and families feel equipped and supported to breastfeed and nurture their babies. One critical step is to further accelerate efforts to integrate the Ten Steps to Successful Breastfeeding into health care systems to facilitate scale-up and ensure that all mothers can give birth in a baby-friendly hospital that supports breastfeeding.

While recent achievements have been made to protect breastfeeding, greater attention and prioritization are required to improve the quality of young children's diets during the complementary feeding period. This includes the adoption of policies to protect children from the marketing of unhealthy foods; counselling and support to improve feeding practices; the development of national nutrient standards for processed complementary foods, as outlined in WHA resolution 69.9; and measures to make nutritious and safe foods available and affordable to families.

4.1.3 Ensuring life-saving care for children with wasting

Headline achievements

- Wasting is integrated into child health policies: In Member States working on the treatment of wasting, wasting is now represented in national maternal and child health policies.
- Treatment protocols for severe wasting have been updated: Member States working on wasting have adopted updated protocols for treatment in line with the most recent WHO recommendations.

No wasted lives

As noted in Chapter 3, most ASEAN Member States are not on track to achieve the WHA target of 5 per cent wasting by 2025. While targeted reductions in wasting prevalence have yet to be achieved, significant strides have been made to improve policies, guidance and programmes to identify and treat child wasting in the ASEAN region.

At the *regional level*, the development of an ASEAN Guidance on Minimum Requirements for Integrated Management of Acute Malnutrition (IMAM) was included in the Strategic Framework and Action Plan. Led by Cambodia and co-lead by the Philippines and Lao People's Democratic Republic, this work is underway and will be completed in 2021. Further, an e-learning course for wasting and a pre-service training toolkit are being developed for Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, the Philippines and Viet Nam. Investigation into integration of wasting indicators in health management information systems is also ongoing in three Member States.

At the *national level*, six ASEAN Member States have programmes focusing on wasting: Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, the Philippines and Viet Nam. No wasting programmes exist in Brunei Darussalam, Malaysia, Singapore or Thailand.

► **Polices, strategies, guidelines and supply:** There has been progress over the past five years in ensuring that the treatment of wasting is reflected in national health policies and strategies. The six ASEAN Member States focused on wasting report that wasting is now represented in *national maternal and child health policies* (Table 9). These countries have also adopted *updated protocols for treatment of severe acute malnutrition (SAM)* in line with the most recent WHO recommendations. In all ASEAN Member States with treatment of wasting programmes, treatment is included in the basic essential health services package and is provided free-of-charge (Table 9).

Integration of management of wasting into *pre-service curriculum* for health professions, however, remains poor throughout ASEAN: only Lao People's Democratic Republic and Malaysia have included management of wasting in pre-service curricula for doctors and nurses, and only Lao People's Democratic Republic and Viet Nam have included it in pre-service curricula for community health workers. Many of the achievements on policy representation, updated guidance and pre-service curricula integration have occurred in recent years. **Indonesia** updated and endorsed its treatment of SAM protocols in December 2018. **Lao People's Democratic Republic** – in close collaboration with the Ministries of Agriculture and Education – updated its IMAM guidelines and integrated IMAM into nursing programmes and paediatric residence programmes.

Ready-to-use-therapeutic food (RUTF) – a key component in the treatment of severe wasting – should be included on national essential medicines lists to ensure *sustainable supply* and availability. However, RUTF is only on the essential medicines list in one country of the region: Cambodia. Local production and/or government procurement and distribution of RUTF are also rare in the region. However, the Government of the **Philippines** recently allocated funding to purchase RUTF, and **Cambodia** launched an innovative local RUTF made with fish powder instead of milk.

Table 9. Snapshot of policies, guidelines, supply and monitoring related to the treatment of severe acute malnutrition

ASEAN Member State	Treatment of SAM programme	SAM in national maternal and child nutrition/ health policy or strategy	National guideline / protocol for SAM treatment updated and endorsed	SAM included in the basic essential health services package	Treatment for SAM is free	Data on SAM in the health management information system for reporting	RUTF is on the essential medicines list	Government procurement and distribution of RUTF
Cambodia	✓	✓	✓	✓	✓	X	✓	✓
Indonesia	✓	✓	✓	✓	✓	✓	X	X
Lao People's Democratic Republic	✓	✓	✓	✓	✓	✓	X	X
Myanmar	✓	✓	✓	✓	✓	X	X	X
Philippines	✓	✓	✓	✓	✓	✓	X	✓
Viet Nam	✓	✓	✓	✓	✓	✓	X	X

Source: Member State reported availability of policies and programmes relevant to wasting was collected explicitly for this report.

► **Programmes and activities:** Much of the policy progress achieved in recent years has been driven in part by commitments outlined and agreed at regional consultations on the management of severe wasting. In 2015, several ASEAN Member States (Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, the Philippines and Viet Nam) convened and made commitments to address severe wasting via policy, programme, service delivery and supply-related improvements. A second consultative meeting to assess progress towards these commitments was held in June 2019.

Progress achieved to date on policies, guidelines and the supply of RUTF, however, has unfortunately not translated into increased availability of services to prevent and treat wasting. The coverage of treatment

services for severe wasting remains low; in fact, it is declining, while the burden of wasting is increasing. In 2018, approximately 78,000 children affected by wasting received treatment, a decline from 104,000 children in 2017. Progress on Member State commitments for case detection, training of frontline health workers on treatment of wasting and monitoring and data collection have been slow across all ASEAN Member States.

What does this mean for ASEAN Member States?

Member States are at different stages of integrating services for the treatment of wasting into primary health care – and some have made significant progress. However, continued support and commitment are required to sustain these achievements. While policies have been strengthened in many Member States, greater efforts are needed to ensure that RUTF is included within the essential medicines lists of all ASEAN Member States. Further, the treatment of wasting must be better integrated within the pre-service curriculum and training for health professionals. Focus on the prevention of wasting through improved maternal nutrition and early childhood nutrition interventions should also be prioritized.

4.1.4 Improving nutrition in school-age children

Headline achievements

- The importance of physical activity during childhood is recognized in policy: All ASEAN Member States have a national school policy on physical activity and/or physical education
- Member States are using schools as a platform to prevent and treat malnutrition in children and adolescents: Micronutrient supplementation, school feeding programmes, school gardens and physical education are implemented in schools in several Member States

Linking the right to nutrition with the right to learn

Good nutrition during middle childhood and adolescence provides lifelong benefits, such as improved school enrolment, attendance, educational achievement, cognition and a chance to break the cycle of intergenerational malnutrition. However, the diets of children and adolescents are often threatened by the marketing of foods high in fats, sugar and/or salt; the desire to fit in with peers; and school food environments that promote unhealthy diets and lifestyles and lead to overweight. Limited access to nutritious, affordable and safe foods during middle childhood and adolescence can also increase the risk of underweight and micronutrient deficiencies.

Improving the policy and food environment within (and beyond) schools is critical to protect children's nutrition during this period of life. This includes implementing and strengthening policies, standards and services that improve the availability of nutritious, safe and affordable foods and free and safe drinking water in schools. In addition, policies are needed to protect children under age 18 from the marketing of unhealthy foods and beverages, including in schools. Food labelling and regulatory incentives or disincentives are also essential.

At the ASEAN *regional level*, the development of Comprehensive Guidelines on a School Nutrition Package was included in the ASEAN Strategic Framework and Action Plan for Nutrition 2018–2030 and work is currently underway, led by Indonesia and Viet Nam. Other relevant activities in the Strategic Framework and Action Plan include the integration of nutrition within the ASEAN Work Plan on Education (under the purview of SOMED) and a review of national early childhood care and development policies, strategies and programmes that focus on pre-primary and school-age children in ASEAN Member States (under the purview of SOMSWD).

► **Guiding and protecting the diets of children in middle childhood and adolescence:** *National school policies on physical activity and/or physical education* are in place in all Member States. These policies can help encourage sufficient physical activity, an essential part of a healthy lifestyle. Nine ASEAN Member States include *nutrition education in the in-service training for teachers*, equipping teachers to provide their students with information on the importance of healthy diets and physical education (Table 10).

Standards on the marketing of food and non-alcoholic beverages and on the foods and beverages available in schools exist in seven Member States (Brunei Darussalam, Cambodia, Malaysia, Myanmar, the Philippines, Singapore and Thailand). In the **Philippines**, ordinances have been implemented in various cities and municipalities to control the marketing and sale of unhealthy foods in and around schools.

Several ASEAN Member States have *standards or rules on the foods and beverages available* in schools. **Cambodia** introduced 'Food-Based Dietary Guidelines for School-Aged Children in Cambodia' in 2017. In **Singapore**, under the Healthy Meals in Pre-Schools Programme and the Healthy Meals in Schools Programme, pre-schools and schools are encouraged to provide healthier meals. In collaboration with the Ministry of Education, pre-schools and schools are required to serve meals with reduced fat, salt and sugar, that use healthier oils and that incorporate food from the four main groups, such as brown rice and whole meal bread, meat and alternative protein sources, vegetables and fruits. The goal is for students to meet their nutritional needs and cultivate healthier eating habits. In addition, students are encouraged to drink water and only lower-sugar beverages are permitted for sale in mainstream schools. In **Malaysia**, the Guide for Healthy School Canteen Management, developed by the Ministry of Education, is mandatory in public schools. The Guide categorizes food items into those which may be sold, those which are not encouraged to be sold and those whose sale is prohibited in school canteens. Prohibited food includes sweets, preserved food and foods and beverages containing alcohol.[70]

► **Actions to improve the school food and beverage environment:** Schools can be used as a platform to target children and adolescents with interventions designed to prevent or treat malnutrition. Micronutrient supplementation is delivered through schools in seven ASEAN Member States, and a further nine use schools to monitor child growth (Table 11). These actions, as well as school feeding programmes and school gardens, can help improve nutritional status and food security. In **Brunei Darussalam**, the National School Feeding Programme provides free mid-morning snacks with fresh fruit offered to all Government primary schools students. In **Singapore**, assistance is provided to lower-income families. For example, the Straits Times School Pocket Money Fund and Ministry of Education provide school meal subsidies to benefit students from low-income families.

Physical education is key to ensuring that children and adolescents learn and practice healthy lifestyles. All Member States include physical education in the school curriculum. Initiatives that aim to reduce availability of unhealthy foods in schools are less common in the ASEAN region. Only Malaysia, the Philippines and Thailand report a ban on vending machines in schools (Table 11).

Table 10. Snapshot of policies, training and standards to improve school nutrition

ASEAN Member State	National school policy on physical activity and/or physical education	Nutrition education in the in-service teachers training curricula	Standards for marketing of food and non-alcoholic beverages	Standards or rules for foods and beverages available in schools
Brunei Darussalam	✓	✓	✓	✓
Cambodia	✓	✓	X	✓
Indonesia	✓	✓	✓	X
Lao People's Democratic Republic	✓	✓	✓	X
Malaysia	✓	✓	✓	✓
Myanmar	✓	✓	X	✓
Philippines	✓	X	✓	✓
Singapore	✓	✓	✓	✓
Thailand	✓	✓	✓	✓
Viet Nam	✓	✓	X	X

Source: Member State reported availability of policies and programmes relevant to school nutrition was collected explicitly for this report.

Table 11. Snapshot of programmes and initiatives to improve nutrition in schools

ASEAN Member State	Micronutrient supplementation (e.g., iron supplementation)	Monitoring of children's growth in schools	Provision of school meals/ school feeding programmes	School gardens	Physical education in school curriculum	Ban on vending machines in schools	Safe drinking water available free-of-charge in schools	Adequate sanitation and hygiene facilities in schools
Brunei Darussalam	X	✓	✓	✓	✓	X	✓	✓
Cambodia	✓	✓	✓	✓	✓	X	✓	✓
Indonesia	✓	✓	X	✓	✓	X	X	X
Lao People's Democratic Republic	✓	X	✓	✓	✓	X	✓	✓
Malaysia	X	✓	✓	✓	✓	✓	✓	✓
Myanmar	✓	✓	✓	✓	✓	X	✓	✓
Philippines	✓	✓	✓	✓	✓	✓	✓	✓
Singapore	X	✓	X	X	✓	X	✓	✓
Thailand	✓	✓	✓	✓	✓	✓	✓	✓
Viet Nam	✓	✓	✓	✓	✓	X	✓	✓

Source: Member State reported availability of policies and programmes relevant to school nutrition was collected explicitly for this report.
Note: Not all programmes or initiatives are national in scale. Some are targeted or subnational. A check mark (✓) indicates it is implemented to some degree.

What does this mean for ASEAN Member States?

Schools represent a safe environment for children and adolescents to learn and practice healthy lifestyles. Ensuring a continued commitment to and investment in school health and nutrition activities at the national level requires a policy framework to support these efforts in a sustainable manner. Nutritious school meals, micronutrient supplements, school gardens and nutrition education can improve nutrition among girls and boys, break the intergenerational cycle of malnutrition and incentivize girls to attend school longer. ASEAN Members States are continuing to make strides in employing these initiatives within schools. Despite progress, however, schools remain underutilized in promoting and protecting healthy diets.

Persistent undernutrition and growing overweight and obesity among children and adolescents should compel governments to leverage the education system to better integrate health and nutrition education into school curricula, provide safe and nutritious school meals and reduce the availability of unhealthy foods and beverages. This must also include protection of children and adolescents from marketing by the food and beverage industry.

Focus 4

Weekly iron folic acid supplementation for school-age girls and women of reproductive age in Lao People's Democratic Republic

Over a third of women in Lao People's Democratic Republic are married before age 18. The adolescent birth rate is also high and nearly 50 per cent of WRA are anaemic. These factors, among others, contribute to a high maternal mortality rate in the country (357 per 100,000 live births).

To improve the nutritional status of adolescents, and thus maternal health outcomes, weekly IFA supplementation of adolescent girls was identified as an activity to reduce anaemia in the National Nutrition Strategy and Plan of Action for Nutrition. Following an operational trial of weekly IFA supplementation in Sekong province in 2007, supplementation was scaled to five northern provinces with the support of WHO and the Ministry of Health.

IFA was distributed by teachers to girls in secondary schools each week, and also to WRA by Village Health Volunteers. Education materials, including posters and leaflets, on the causes and negative impacts of anaemia, were developed and widely distributed in the programme provinces.

An evaluation of the weekly IFA supplementation, including a pre-programme baseline and a follow-up six months after implementation, was conducted to assess programme impact. The study included both adolescent girls in secondary school (aged 12–18 years) and WRA. Results indicated that following implementation of weekly IFA supplementation, the prevalence of anaemia declined from 28 per cent to 12 per cent in adolescent girls, and from 33 per cent to 14 per cent in WRA. The evaluation also found increased knowledge of the causes of anaemia and how to prevent it, including awareness of the importance of iron-rich foods. Overall, access to health services in the provinces was found to be low. Adherence to the weekly IFA supplements was found to be higher in adolescent girls than in the WRA in the community.

Integration of nutrition services such as IFA supplements into maternal and child health services is predicted to further increase the accessibility of weekly IFA tablets, as well as other adolescent and maternal health interventions such as family planning and counselling on the side effects of micronutrition supplements. Weekly IFA supplementation will be integrated as an activity in the next five-year National Nutrition Action Plan for Nutrition (2020–2025), with a focus on high-risk areas and increasing coverage. Additionally, a social and behaviour change communication package on integrated maternal and child health and nutrition will be expanded nationwide, helping to better educate adolescents and WRA about the importance of IFA supplementation and other health interventions.

4.1.5 Preventing overweight, obesity and NCDs

Headline achievements

- All ASEAN Member States have an operational policy, strategy or action plan to reduce physical inactivity: Recognition of the contribution of physical inactivity to overweight and NCDs is represented in national policies throughout the ASEAN region.

Towards healthier weights and brighter futures

The ASEAN region is facing a nutrition transition, as described in Chapter 2, driven in part by diet and lifestyle changes resulting from globalization of food systems, rapid urbanization, economic growth and inequities. While the prevalence of undernutrition and micronutrient deficiencies remain high in the region, overweight and NCDs are also increasing (as discussed in Chapter 3).

Non-communicable diseases contribute to 62 per cent of all deaths (8.5 million each year) in Southeast Asia (including Timor Leste) – making NCDs a leading cause of mortality. Cardiovascular diseases, diabetes, cancers and chronic respiratory diseases contribute to more than 80 per cent of NCD-related premature deaths.

The estimated cost of inaction on NCDs alone in low- and middle-income countries is US$7 trillion between 2011 and 2025.[71-73] The combined direct economic losses from cardiovascular disease and diabetes in Myanmar, Indonesia, Philippines, Thailand and Viet Nam between 2006 and 2015 were estimated at US$7 billion.[73-75] Key NCD and overweight and obesity risk factors include unhealthy diets and insufficient physical activity.

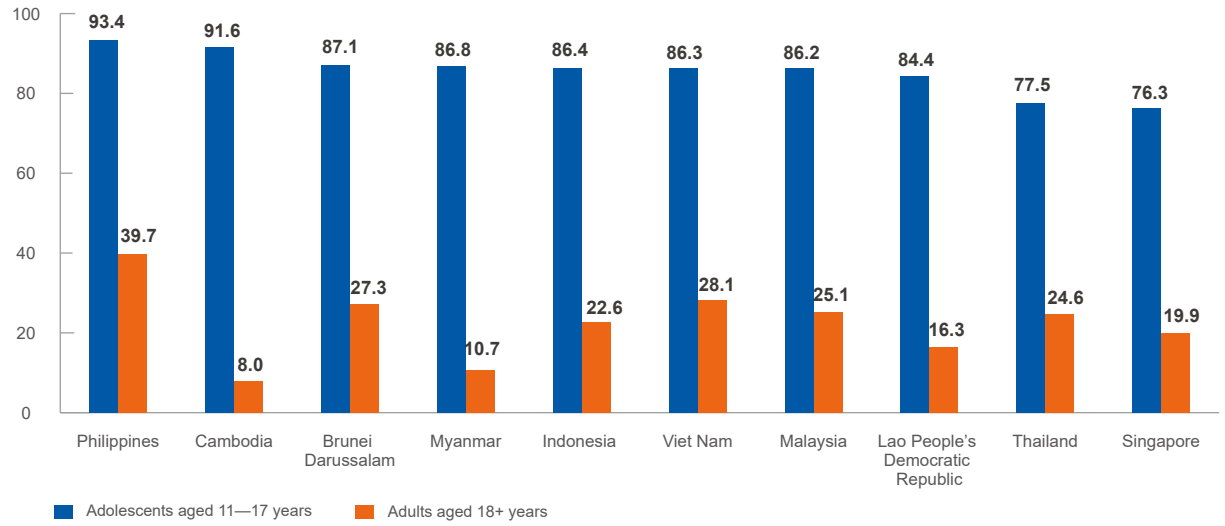
The prevalence of insufficient physical activity is high in several ASEAN Member States. In adolescents aged 11–17 years, prevalence of insufficient physical activity (defined as less than 60 minutes of moderate to vigorous intensity activity daily) is extremely high, ranging from 76 per cent in Singapore to 93 per cent in the Philippines. For adults, prevalence of insufficient physical activity (defined as less than 150 minutes of moderate intensity physical activity per week or less than 75 minutes of vigorous intensity per week) is greater than 20 per cent in all Member states except Cambodia, Lao People's Democratic Republic, Myanmar and Singapore (Figure 16).

All ASEAN Member States have an operational multisectoral national NCD policy, strategy or action plan that covers multiple NCDs and their risk factors (Table 12). Prevention and treatment of diabetes – which affects more than 10 per cent of adults in several Member States – is reflected in the national policies of all Member States. In 2016, **Singapore** declared a 'war on diabetes', a whole-of-government initiative to combat diabetes risk factors through supportive health promoting policies, programmes, environmental nudges and mass public education.

To combat high levels of physical inactivity, all ASEAN Member States have an operational policy, strategy or action plan to reduce physical inactivity. A further nine Member States implemented physical activity public awareness campaigns.

Other relevant policies to reduce overweight and NCDs include those that aim to promote healthy food environments, such as policies to reduce salt and trans-fatty acids and financial tools to incentivize or disincentivize consumption of unhealthy foods and beverages. These policies and activities are covered in detail in section 4.2.4 of this report.

Figure 16. Prevalence of insufficient physical activity among adolescents (aged 11–17 years) and adults (18+ years)



Source: All data were extracted from the ANSS. Specific sources referenced in the ANSS by each Member State for adolescent insufficient physical activity include: Cambodia: 2016 STEP Survey; Malaysia: National Health and Morbidity Survey 2019 and WHO Global Health Observatory 2016; Singapore: National Population Health Survey, 2019 and WHO Global Health Observatory 2016; Viet Nam: 2015 STEPS survey; Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, the Philippines and Thailand: WHO Global Health Observatory 2016.

Note: The figure above only includes data points that match these indicator definitions. There are, however, national level estimates available for insufficient physical activity from ASEAN Member States that are calculated for different age groups. These are noted here for reference: In Cambodia, prevalence of insufficient physical activity among adolescents aged 13–17 years is 27.1 per cent (Cambodia STEPS Survey 2016). In Malaysia, prevalence of insufficient physical activity among children aged 10–17 years is 55.4 per cent (NHMS, Adolescent Nutrition Survey, 2017). In the Philippines, prevalence of insufficient physical activity among adolescents aged 10–17 years is 84.6 per cent and prevalence among adults aged 20–59 years is 37.1 per cent (FNR 2019, Expanded National Nutrition Survey).

Table 12. Snapshot of policies and coordination mechanisms to reduce overweight and NCDs

ASEAN Member State	Existence of an operational, multisectoral national NCD policy, strategy or action plan that integrates several NCDs and their risk factors[a]	Prevention and treatment of diabetes represented in national policies[b]	National coordination mechanism to oversee, develop and implement the policy or strategy for diet and physical activity (NCDs) [b]	Existence of operational policy, strategy or action plan to reduce physical inactivity[a]	Implementation of physical activity public awareness programme[a]
Brunei Darussalam	✓	✓	✓	✓	✓
Cambodia	✓	✓	✓	✓	✓
Indonesia	✓	✓	✓	✓	✓
Lao People's Democratic Republic	✓	✓	✓	✓	X
Malaysia	✓	✓	✓	✓	✓
Myanmar	✓	✓	✓	✓	✓
Philippines	✓	✓	✓	✓	✓
Singapore	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓	✓
Viet Nam	✓	✓	X	✓	✓

Note: [a]Sourced from WHO Global Health Observatory database on NCDs and verified by Member States; [b] or collected explicitly for this report.

What does this mean for ASEAN Member States?

Overweight and obesity and NCDs can be combated, in part, by implementing double duty actions: interventions, programmes and policies that have the potential to simultaneously reduce the risk of both undernutrition (including wasting, stunting, underweight and micronutrient deficiency or insufficiency) and overweight or diet-related NCDs. Double-duty actions can be based on actions already in place to address one form of malnutrition that have the potential to address multiple forms simultaneously. For example, the management of overweight and obesity may be introduced as part of primary health care, where services are already well established to support those suffering from undernutrition. Existing nutrition actions can also be retrofitted to address both undernutrition and overweight and obesity simultaneously.

In addition, greater efforts are needed to encourage the adoption of healthier lifestyles. To incentivize and promote healthy lifestyles, Member States may consider introducing health promotion programmes in schools, workplaces and public/private spaces (e.g., overweight and NCD risk factor awareness), implementing legislation to reduce risk factors (e.g., policies to reduce salt intake and trans-fatty acid content in food) and providing physical and social environments that allow people to practice healthy habits (e.g., increasing green, open and safe spaces in cities; reducing air pollution or incentives linked to health insurance schemes).

Legislation is also required to improve the food environment, by utilizing fiscal instruments such as taxation to incentivize or disincentivize production and consumption of unhealthy foods, adopting regulations to protect consumers (especially children under 18) from food and beverage marketing and requiring front-of-pack labelling to equip consumers with the information they need to make informed choices when buying food. Actions to improve the food environment are discussed later in this report in section 4.2.4.

Focus 5

Tackling overweight and NCDs in Cambodia

Unhealthy dietary habits – such as excess salt, sugar and alcohol consumption – coupled with physical inactivity increase the risk of overweight and NCDs such as hypertension and diabetes. In Cambodia, recent evidence indicates that dietary habits are poor: average daily salt intake in adults is 8.5 g, exceeding the WHO recommendation of 5 g; more than 50 per cent of adults consume fewer than five servings of fruits and/or vegetables each day; 36 per cent of adults frequently consume processed foods high in salt; and insufficient physical activity is prevalent in both male and female adults. As a result, the prevalence of overweight and NCDs in Cambodia are high: 19 per cent of adults are overweight and 3 per cent are obese; 14 per cent of adults have raised blood pressure; 10 per cent have elevated blood glucose; and 45 per cent have elevated cholesterol levels.[76]

To tackle the growing trend of overweight and NCDs, the Cambodia National Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013–2020 was developed to focus on reducing population exposure to common risk factors. Further, the National Multisectoral Action Plan for the Prevention and Control of Non-communicable diseases 2018–2027 was adopted to maintain focus on reduction of NCD risk factors. Included in the National Multisectoral Action Plan for the Prevention and Control of Non-communicable diseases 2018–2027 are activities for reformulation of foods and beverages to reduce the content of saturated fatty acids, trans-fatty acids, sugar and sodium, as well as activities to limit saturated fatty acids and virtually eliminate industrially produced trans-fats.

The Action Plan extends beyond policy activities, employing communication strategies to increase consumer awareness. The Ministry of Education Youth and Sport have also been integrating education on overweight and NCDs and their risk factors into school health training curriculum for grades 7, 8, 9, 11 and 12. In addition, many information, education and communications materials related to NCDs have been developed for the general public, and television spots have been produced on SSBs to educate to the public of their potential to increase overweight and obesity. The Action Plan also calls for implementation of physical activity public awareness programmes.

4.2 Enabling factors

4.2.1 Creating an enabling environment for nutrition

Headline achievements

- Adoption of the ASEAN Leaders Declaration on Ending All Forms of Malnutrition: The adoption of the Declaration represents the highest level of regional political commitment to address malnutrition to date. It bolsters investments in nutrition, fosters ownership and promotes accountability for action.
- Nutrition coordination mechanisms are in place and operational in all ASEAN Member States: Strong coordination mechanisms for nutrition guide effective action and help governments and partners align national policies, programmes and activities.
- There is strong commitment across ASEAN Member States to monitor progress towards global maternal, infant and young child nutrition targets: Nearly all Member States have included targets related to stunting, wasting, low birthweight and anaemia in WRA in their national nutrition policies.

Good nutrition does not happen by chance

Deliberate priorities, policies, infrastructure and dedicated resources for nutrition are essential to effectively implement nutrition programmes at scale. These building blocks help create an enabling environment within which governments and partners can work to ensure that essential services and nutritious, safe and affordable diets are available to everyone. This section briefly discusses the status of national nutrition mechanisms, financing and targets in the ASEAN region and Member States. Policies, legislation and mechanisms specific to various programmes or topic areas within nutrition (i.e., breastfeeding, NCDs or wasting) are detailed in other sections in this report.

At the *regional level*, the adoption of the 2017 ASEAN Leaders Declaration on Ending All Forms of Malnutrition represents the region's highest level of political commitment to address malnutrition to date. This regional recognition stemmed in part from the acknowledgement that the consequences of poor nutrition extend beyond the health and development of individuals: the persistent (and in some instances, increasing) levels of malnutrition and poor diet quality are also a detriment to national social and economic well-being. This regional commitment to prioritize nutrition helps Member State governments justify investment in nutrition at the national level and accelerate progress towards global nutrition targets.

At the *national level*, the enabling environment for nutrition is strong. ASEAN Member States have made significant strides in strengthening policy frameworks, coordination and budgeting for nutrition.

► **Nutrition representation in national development strategies:** Malnutrition undermines economic growth and perpetuates poverty. Recognition of nutrition as central to national development can help ASEAN Member States realize economic and social goals. All ASEAN Member States have recognized nutrition in their national development strategies (Table 13).

► **Infrastructure for coordination and alignment with stakeholders:** Coordination mechanisms bring together committed stakeholders to align activities and improve the effectiveness, efficiency and timeliness of national nutrition programmes. All ASEAN Member States have a national nutrition coordination mechanism in place. It is unclear, however, how many of these mechanisms include sectors outside of health and nutrition (Table 13).

► **Budgeting for nutrition:** Effective *planning and budgeting* for nutrition at scale requires political commitment and financial investments. Costed implementation plans for nutrition are an essential step in the process of mobilizing resources. All ASEAN Member States report having costed implementation plans for nutrition strategies and/or plans of action (Table 13).

Budget and expenditure analyses are critical to understanding whether current investments in interventions to improve nutrition are sufficient and how financing may have changed over time. However, analysing nutrition budget data is uniquely challenging: nutrition funding is frequently integrated into larger accounting headings (e.g., health spending) and is often spread across multiple ministries or agencies. As a result, little is known about whether and how governments are financing their efforts to improve nutrition. Seven ASEAN Member States report having specific budget lines and financial targets for nutrition in national plans (Table 13).

► **Alignment of national targets with global goals:** Goals and targets help countries align their actions around the issues that matter and prioritize resources to tackle them. *National nutrition targets* signal government recognition of the importance of specific nutrition outcomes or dietary practices and catalyse policy and programme design, implementation and subsequent investment of resources. Without a commitment to monitor progress towards specific nutrition or diet-related outcomes, there is limited incentive to invest or accountability to act.

In addition to regional commitment to achieve the six MIYCN and four diet-related NCD global targets, related targets are largely present in national policies of ASEAN Member States. The vast majority of Member States have included targets for child stunting, child wasting, exclusive breastfeeding, low birthweight and anaemia in WRA in their national policies (Table 14).

Diet-related NCD targets for diabetes and raised blood pressure are less frequently represented in policies across the ASEAN region. Only seven Member States have included targets related to raised blood pressure.

Table 13. Nutrition representation, coordination mechanisms and financing

ASEAN Member State	Nutrition represented in national development strategies	National nutrition coordination mechanism (multisectoral or nutrition sector specific)	Costed implementation plans for nutrition	Budget lines and financial targets for nutrition
Brunei Darussalam	✓	✓	✓	X
Cambodia	✓	✓	✓	X
Indonesia	✓	✓	✓	✓
Lao People's Democratic Republic	✓	✓	✓	✓
Malaysia	✓	✓	✓	✓
Myanmar	✓	✓	✓	✓
Philippines	✓	✓	✓	✓
Singapore	✓	✓	✓	✓
Thailand	✓	✓	✓	✓
Viet Nam	✓	✓	✓	X

Source: Member State reported availability of policies and programmes relevant to enabling environments was collected explicitly for this report.

Table 14. Inclusion of targets related to the global nutrition targets in national policies

ASEAN Member State	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	# included
Child stunting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Child overweight	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	9
Child wasting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Exclusive breastfeeding	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	9
Low birthweight	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	9
Anaemia in WRA	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	9
Salt/sodium intake	✓	✓	✓	X	✓	✓	X	✓	✓	✓	8
Overweight in adults	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	9
Diabetes	✓	✓	✓	✓	✓	✓	X	✓	✓	X	8
Raised blood pressure	✓	✓	✓	✓	✓	✓	X	X	✓	X	7

Source: Member State reported availability of policies and programmes relevant to enabling environments was collected explicitly for this report.

What does this mean for ASEAN Member States?

Important progress has been made in establishing nutrition coordination mechanisms and costed plans for nutrition activities. However, more information is needed on how nutrition commitments translate into spending. In some Member States, dedicated budget lines for nutrition – including for key nutrition programmes or interventions (e.g., infant and young child feeding) – are still needed to track the impact of investments, improve accountability and bridge the gap between intent and action.

Targets on adult diabetes and elevated blood pressure are absent from national policies in some ASEAN Member States. The lack of diet-related NCD targets in national policies is particularly worrisome given that more effort is required in the majority of ASEAN Member States to achieve global NCD goals (as discussed in Chapter 3). Inclusion of targets aligned with global goals in national policies and strategies may help amplify efforts in underperforming programme areas.

4.2.2 Leveraging data for decision- making

Headline achievements

- A regional nutrition surveillance system is in place to facilitate the use of up-to-date information for programme monitoring and decision-making: The ASEAN Nutrition Surveillance System helps the ASEAN region and Member States track progress towards national, regional and global goals.

What gets measured gets done

Monitoring the status and performance of nutrition plans, policies, programmes and performance is essential to assess progress against targets. Inclusion of nutrition and food security indicators in national information systems and the development of national and regional nutrition and food security surveillance systems helps policymakers and programme managers make informed decisions to improve programmes and achieve intended outcomes. Conversely, the absence of nutrition and food security indicators and surveillance systems may hinder investment and limit accountability for progress towards national and global goals.

At the *regional level*, the development of the ANSS to help monitor nutrition progress in the region is an ASEAN Health Sector priority, as described in the Health Cluster 1 Work Programme 2016–2020 and the ASEAN Strategic Framework and Action Plan for Nutrition 2018–2030. The ANSS is envisioned to track indicators relevant to progress towards the SDGs, WHA and NCD targets and act as a key tool to monitor implementation of the ASEAN Leaders Declaration on Ending All Forms of Malnutrition.

Launched in 2021, the ANSS facilitates the use of up-to-date information in programme monitoring and decision-making in ASEAN Member States and the overall ASEAN community. Each ASEAN Member State is expected to share data through the ANSS to the ASEAN Secretariat on an annual basis so that it can reflect the most up-to-date state of food security and nutrition in the region and account for recent updates in global and regional data sources. The ANSS is hosted on an online platform so the data are easily accessible, and dashboards visualizing data and trends across Member States are available for use.

What does this mean for ASEAN Member States?

The launching of the ANSS will help facilitate regular monitoring of key policy and programme outcomes and progress towards global goals. More work is needed, however, to strengthen nutrition and food security indicators and information systems in ASEAN Member States to align with ASEAN indicators and improve the evidence base on priority programme areas. A landscape mapping of the current structure of nutrition indicators in national health management information systems, including gaps and opportunities, is currently being undertaken in four ASEAN Member States. These results will help guide where targeted investments are needed to strengthen national level data on nutrition outcomes, policies and programmes to help guide decision-making.

4.2.3 Engaging across sectors

Headline achievements

- Nutrition has been prioritized through multisectoral efforts at the highest level: The ASEAN Leaders Declaration on Ending All Forms of Malnutrition and the ASEAN Strategic Framework and Action Plan on Nutrition were developed in collaboration with health, education, social welfare and food and agriculture sectors, and implementation of subsequent activities are similarly undertaken with consultation across sectors.

Working together to overcome the multiple drivers of malnutrition

To effectively address the key drivers of malnutrition, it is essential to acknowledge and engage with the multitude of systems and sectors that influence what, when and how people eat. Intersectoral action and accountability are paramount to help families overcome the economic, social and political barriers they face to accessing enough nutritious food.

At the *regional level*, recent achievements in prioritizing and advancing nutrition are the result of multisectoral efforts. The ASEAN Leaders Declaration on Ending All Forms of Malnutrition and the ASEAN Strategic Framework and Action Plan on Nutrition 2018–2030 were developed in collaboration with multiple sectors, including: health, education, social welfare and food and agriculture. The activities within the ASEAN Strategic Framework and Action Plan for Nutrition were also purposefully aligned with programmes and work plans from relevant non-health sectors, including:

- ASEAN Integrated Food Security Framework and Strategic Plan of Action on Food Security in the ASEAN Region 2015–2020;
- Strategic Framework on Social Welfare and Development 2016–2020;
- Regional Framework and Action Plan to Implement the ASEAN Declaration on Strengthening Social Protection; and
- ASEAN Work Plan on Education 2016–2020.

The Philippines and ASEAN Health Cluster 1 have worked to assist non-health sectors to ensure that their work plan activities are nutrition-sensitive. Further, non-health sectors have also proposed nutrition-sensitive indicators to include for tracking.

What does this mean for ASEAN Member States?

The recognition of the need for a multisectoral approach at the highest level is a laudable achievement. This commitment to engage with the partners across the ASEAN food and agriculture, health, water and sanitation, education and social welfare sectors will help tackle the persistent drivers of malnutrition and make all relevant sectors better equipped and more accountable for supporting good nutrition across the life cycle.

4.2.4 Building better food systems

Headline achievements

- Declaration on Reformulation and Production of Healthy Food and Beverage Options to be adopted by ASEAN Leaders: Adoption will further enhance the ASEAN region's collective commitment in addressing obesity and diet-related NCDs.
- All ASEAN Member States have developed national food-based dietary guidelines: Context-specific national dietary guidelines will help empower consumers to make informed decisions on what, when and how to feed themselves and their families.
- Economic tools to influence food consumption and food quality have been adopted in several ASEAN Member States: Taxes have been introduced to discourage the consumption of sugar-sweetened beverages and incentivize food manufacturers to improve the nutritional quality of their products.
- Several ASEAN Member States have mandatory or voluntary legislation for fortification of salt, wheat flour, oil and/or rice: Fortification of staple foods and condiments is an efficient, evidence-based and cost-effective nutrition intervention to prevent micronutrient deficiencies at the population level.

From agricultural production to food consumption, the food system comprises the policies, services and actors necessary to ensure a population's access to nutritious, safe, affordable and sustainable diets. Food environments comprise the foods available to people in their surroundings as they go about their everyday lives, and the nutritional quality, safety, price, convenience, labelling and promotion of these foods. Food environments therefore serve as the link between food systems and diets.[12]

To make healthy diets a reality for all, governments need to adopt policies, guidance and regulations designed to protect and inform consumers, improve the availability, affordability and safety of nutritious foods in the food supply, and support 'double duty' actions that contribute simultaneously to preventing undernutrition, overweight and NCDs. The first half of this sections summarizes activities related to improving the environment within which consumers make food choices, and the second half of this section focuses on the availability, affordability, nutritional quality and safety of foods in ASEAN Member states.

Legislation to protect and inform food choices

This section summarizes the status of policies, guidance and regulations designed to safeguard against overconsumption of unhealthy foods and beverages and provide clear guidelines on what constitutes a healthy diet in a given context.

At the *regional level*, under the umbrella of prevention and control of NCDs, the ASEAN Health Sector has spearheaded several initiatives to improve the food environment, including:

- *Declaration on Reformulation and Production of Healthy Food and Beverage Options*: Led by Indonesia, a situation analysis was conducted between 2019 and 2020 on the current unhealthy dietary consumption among ASEAN countries and the potential for fortification, reformulation and production of healthier food and beverages to achieve maximal health potential in the ASEAN region. The Declaration also addresses front-of-pack labelling and fiscal measures. The Declaration will be adopted in 2021.

- *Framework for Fiscal Measures on Sweet Beverages to Promote Health in ASEAN Member States*: Led by Malaysia, the framework development is completed with implementation envisaged from 2021 onwards.

Further, a *Guidelines and minimum standards on the marketing of food and non-alcoholic beverages to children* is currently being developed to help Member States design, strengthen and enforce policies to protect children from the impact of marketing, led by Thailand, the Philippines and Singapore.

These regional achievements will help enable Member States to take similar actions at the *national level*. Currently, there is still wide variation among ASEAN Member States in the adoption of guidelines and safeguards to protect healthy diets.

► **Policies to improve the nutritional quality of the food supply:** As noted in Chapter 3, one of the global diet-related NCD targets is to reduce *salt/sodium intake* by 30 per cent. Salt consumption is at or above the recommended daily intake limit in several ASEAN Member States. Reducing salt intake to recommended levels could prevent an estimated 2.5 million deaths every year.[77]

Policy actions to reduce the salt/sodium content in food products can help accelerate reductions in intake. Currently, eight ASEAN Member States have policies in place to reduce salt consumption (Table 15). Some Member States have specific salt reduction strategies, including **Malaysia** (Salt Reduction Strategy 2015–2020) and **Thailand (**Salt and Sodium Reduction Policy 2016–2025). Further, Singapore adopts a gradual sodium reduction approach by focusing on public education to increase awareness on excess sodium intake and encouraging consumers to choose food products lower in sodium with the 'healthier choice symbol', a visual guide to identifying healthier food options. Singapore also promotes the reformulation of products to lower sodium content via a grant scheme.

Industrially produced *trans-fatty acids* – first introduced into the food supply in the early 20th century as a replacement for butter – are often present in baked and fried foods and snacks. The intake of trans-fatty acids can raise levels of LDL-cholesterol (bad cholesterol) and lower HDL-cholesterol (good cholesterol), increasing the risk of cardiovascular disease. In 2018, WHO called on governments to eliminate industrially produced trans-fatty acids from the global food supply to accelerate the reduction of NCDs. While legislation has proven effective in reducing or eliminating industrially produced trans-fatty acids in high-income countries in Europe and the Americas, only four ASEAN Member States have policies in place to eliminate industrially produced trans-fatty acids (Cambodia, Malaysia, Singapore and Thailand) (Table 15).

Other policy instruments designed to promote healthy diets include mandatory or voluntary *reformulation programmes to reduce the content of saturated fatty acids, trans-fatty acids, sugars and sodium in foods*. Six ASEAN Member States (Brunei Darussalam, Cambodia, Indonesia, Malaysia, Singapore and Thailand) have voluntary or mandatory reformulation programmes.

In **Malaysia**, as part of the Salt Reduction Strategy, an initiative was established in 2015 to reformulate high-salt content processed foods, with the goal of reformulating five products each year. As of 2018, a total of 53 products had been reformulated to reduce salt content. In **Singapore**, the Health Promotion Board works with beverage manufacturers to reduce the amount of sugar in beverages. In 2017, seven beverage manufacturers voluntarily pledged to reduce the sugar content in their products to a maximum of 12 per cent by 2020. By early 2020, four out of seven pledgees had met the pledge by reducing the sugar levels of their higher-sugar beverages or by removing such drinks from the market, and the remaining three were on track to reformulate their products. The Health Promotion Board will be conducting checks to ensure pledges have been met. By taking the lead in reformulating their products, these players will have an advantage in obtaining better grades for their products. On trans-fatty acids, Singapore added an amendment (Regulation 78) to its Food Regulations in 2012, which set a mandatory 2 per cent limit on trans-fatty acids in pre-packaged edible fats and oils for sale or for use as an ingredient in the preparation of food. This has been replaced by a ban on partially hydrogenated oils, the main source of artificial trans-fatty acids, which came into effect on 1 June 2021. In **Thailand**, a voluntary policy to reduce the size of sugar packets from 6 grams to 4 grams was introduced in 2015.[70]

► **Economic tools to influence food consumption and food quality:** Fiscal instruments – such as taxation of energy-dense foods and beverages of minimal nutritional value – can be used to influence food choices and food product formulation. *Taxes and subsidies* can be introduced to discourage the consumption of foods and beverages high in fat, sugar or salt, or incentivize food manufacturers to improve the nutritional quality of their products. In an effort to address the high (and increasing) levels of overweight and obesity in the ASEAN region, four Member States have introduced taxes on SSBs. **Brunei Darussalam** and **Thailand** adopted a sugar tax on certain soft drinks and juices in 2017, followed by the **Philippines** in 2018 and **Malaysia** in 2019.[78] Implementation of a sugar tax in Malaysia is detailed in Focus 6. Other fiscal instruments, such as subsidies for healthy foods or taxes on other food categories, are currently being explored in Brunei Darussalam, where the SSB tax may be expanded to cover other unhealthy foods and beverages.

► **Protecting against the influence of marketing:** Development of *policies protecting against the inappropriate promotion of commercially produced foods and beverages marketed for children* is an essential action for all ASEAN Member States. This includes protection against marketing for children up to age 18, as well as for infants and young children aged 6–36 months, in alignment with the 2016 WHO guidance. While six Member States noted that *policies to reduce marketing of unhealthy foods to children are in place*, implementation of the actions required to actually regulate marketing targeted to children and their caregivers is not yet a reality in all Member States.

Table 15. Snapshot of policies and economic tools that promote healthy food environments

ASEAN Member State	Policy to reduce salt consumption	Policy to limit saturated fatty acids and virtually eliminate industrially produced trans-fats	Reformulation to reduce the content of saturated fatty acids, trans-fatty acids, sugars and sodium	Policy to reduce the impact on children of marketing of unhealthy foods and beverages	Sugar-sweetened beverage tax	Other fiscal measures
Brunei Darussalam	✓	X	✓	✓	✓	✓
Cambodia	✓	✓	✓	X	X	X
Indonesia	✓	X	✓	X	X	X
Lao People's Democratic Republic	X	X	X	X	X	X
Malaysia	✓	✓	✓	✓	✓	X
Myanmar	✓	X	X	✓	X	X
Philippines	X	X	X	X	✓	X
Singapore	✓	✓	✓	✓	X	X
Thailand	✓	✓	✓	✓	✓	X
Viet Nam	✓	X	X	✓	X	X

Source: Member State reported availability of policies and programmes relevant to food, the food environment and food systems was collected explicitly for this report.

► **Nutrition label standards and regulations on use of claims:** People who want to eat well look at food labels to choose healthier options. Nutrient lists and interpretive labels can help guide consumer choices and create incentives for food manufacturers to reformulate their products. Eight ASEAN Member States encourage producers and/or retailers to provide a *list of the nutrient content* of pre-packaged food products. (Table 16). No ASEAN Member States, however, require trans-fatty acid content to be included on nutrient labels. In Singapore, this is because a ban on partially hydrogenated oil (a major source of trans-fatty acid) came into effect in June 2021 and there is no longer a need to declare trans-fatty acid content on nutrient labels.

Front-of-pack labelling on pre-packaged foods can help discourage the consumption of products high in unhealthy fats, sugars or salt. Information on front-of-pack labels may include the product's energy value, salt/sodium content, total sugars, endorsement logos, colour coding or traffic light systems. Currently, seven ASEAN Member States report implementing some form of voluntary or mandatory front-of-pack labelling. *Clearly visible interpretive labels and warning labels* on the 'front-pack' of food are currently available or in the pipeline in seven Member States: Brunei Darussalam, Cambodia, Indonesia, Malaysia, the Philippines, Singapore and Thailand (Table 16).

In **Brunei Darussalam**, the Ministry of Health introduced a 'healthier choice symbol' in 2017. Products bearing the logo indicate that they meet a set of nutrient criteria. Food and beverage manufacturers who wish to use this symbol on their products must acquire a food analysis report from an accredited food testing laboratory and submit an application to the Healthier Choice Committee. In **Malaysia**, the Minister of Health launched a 'healthier choice logo' in 2017 to help consumers quickly identify healthier products and foster informed food choices. Packaged foods and beverages can be awarded the healthier choice logo if they meet the nutrient criteria specified by the Ministry of Health. As of May 2020, there were 47 healthier choice logo categories under the nine food groups. In the **Philippines**, the Food and Drug Administration set out guidelines in 2012 for a voluntary front-of-pack label for processed and pre-packaged foods. The label must appear on the lower right-hand portion of the product and outline the amount of energy per serving of food, and the percentage of the calorie value based on the recommended energy and nutrient intakes. Producers must submit their labels for approval before they can be displayed.[70]

Measures to regulate or guide nutrition and health claims are essential to protect consumers from misleading marketing and food labels. Seven ASEAN Member States regulate nutrition and health claims on packaged foods, including Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam (Table 16). In **Indonesia**, the Control of Claims on Processed Food Labelling and Advertisements establishes rules on the use of specified nutrient content claims (i.e., levels of fat or a low-fat claim). In **Malaysia**, the 2010 Malaysian Guide to Nutrition Labelling and Claims established rules on the use of nutrient content claims and nutrient comparative claims (e.g., comparison between an old and new product formulation). The guide also prohibits the use of false and misleading claims on labels – especially those that relate to dietary guidance, eating habits and nutritional properties of food – and forbids any disease risk reduction claims.[70] Lastly, beginning in June 2022, **Singapore** will introduce advertising prohibitions for beverages that are high in sugar and saturated fat as part of efforts to reduce the influence of advertising on consumer choice and encourage the selection of healthier beverages.

Table 16. Snapshot of nutrition labelling and measures to guide health claims on food

ASEAN Member State	Nutrient lists on packaged foods	Front-of-pack labelling	Clearly visible 'interpretive' labels and warning labels	Measures to regulate or guide nutrition and health claims
Brunei Darussalam	✓	✓	✓	✓
Cambodia	X	X	✓	X
Indonesia	✓	✓	✓	✓
Lao People's Democratic Republic	X	X	X	X
Malaysia	✓	✓	✓	✓
Myanmar	✓	✓	X	X
Philippines	✓	X	✓	✓
Singapore	✓	✓	✓	✓
Thailand	✓	✓	✓	✓
Viet Nam	✓	✓	X	✓

Source: Member State reported availability of policies and programmes relevant to food, the food environment and food systems was collected explicitly for this report.

► **Increasing public awareness on healthy eating**: Increasing the public's awareness of what constitutes a healthy diet empowers consumers to make informed decisions on what, when and how to feed themselves and their families. Governments can use *food- and nutrient-based dietary guidelines* as tools to guide nutrition, health, agriculture and education policies to foster healthy eating habits and lifestyles. National guidelines provide insight into optimal dietary practices and food choices tailored to the specific geographic, economic and cultural context.

All ASEAN Member States have developed food-based dietary guidelines and a further seven have also developed nutrient-based dietary guidelines (Table 17). **Thailand** developed a 'Food-based dietary guideline for Thai' for the general population over age 6 in 1996, a 'Food-based dietary guideline for infants and young children in Thailand' in 2010 and 'Food-based dietary guidelines for the elderly' in 2016. Further, the country is in the process of developing 'Food-based dietary guidelines for six groups'. In 2013, **Viet Nam** published a revised '10 Tips on Proper Nutrition, 2013– 2020', which is aimed at the general population. The guidance document uses a pyramid divided into food group layers to illustrate recommended levels of consumption. **Indonesia**, **Malaysia** and the **Philippines** also use pyramid-style illustrations to help people choose a balanced diet.[70]

Table 17. Snapshot of guidelines and activities to increase public awareness on healthy eating

ASEAN Member State	Food-based dietary guidelines	Nutrient-based dietary guidelines	Communication strategies for social and behaviour change to improve nutrition
Brunei Darussalam	✓	✓	✓
Cambodia	✓	X	✓
Indonesia	✓	✓	✓
Lao People's Democratic Republic	✓	X	✓
Malaysia	✓	✓	✓
Myanmar	✓	X	✓
Philippines	✓	✓	✓
Singapore	✓	✓	✓
Thailand	✓	✓	✓
Viet Nam	✓	✓	X

Source: Member State reported availability of policies and programmes relevant to food, the food environment and food systems was collected explicitly for this report.

Towards a world where nutritious foods are available, affordable and safe for everyone

This section summarizes the status of policies and activities related to the availability, affordability and safety of nutritious foods in the food supply, including fortified foods.

Several *regional-level* activities related to food and agriculture were included in the ASEAN Strategic Framework and Action Plan 2018–2030 that aimed to diversify the food supply and improve sustainability. These include:

- Develop a policy guide on crop diversification, with consideration of national food-based dietary guidelines and food consumption patterns
- Promote integrated and climate-smart farming systems
- Strengthen linkages and networking between Food Security Information Systems and Nutrition Surveillance Systems

Progress on several of these activities is well underway while others will be undertaken over the next five years.

The ASEAN health, agriculture and economic sectors have all also incorporated food safety into their respective work programmes and also collaborate to ensure that food safety concerns are tackled and coordinated at the regional level. An ASEAN Food Safety Policy was developed in 2016 and provides direction to relevant ASEAN Sectoral Bodies and ASEAN Member States with the goal of protecting the health of ASEAN consumers. The agreed principles of the ASEAN Food Safety Policy have facilitated the development of a robust regulatory and monitoring framework for the region, including the ASEAN Risk Assessment Center for Food Safety, the ASEAN Food Safety Regulatory Framework and the ASEAN Rapid Alert System for Food and Feed. The Rapid Alert System for Food and Feed helps protect consumers against food safety hazards by enabling recalls of any products found to be a health risk in markets.

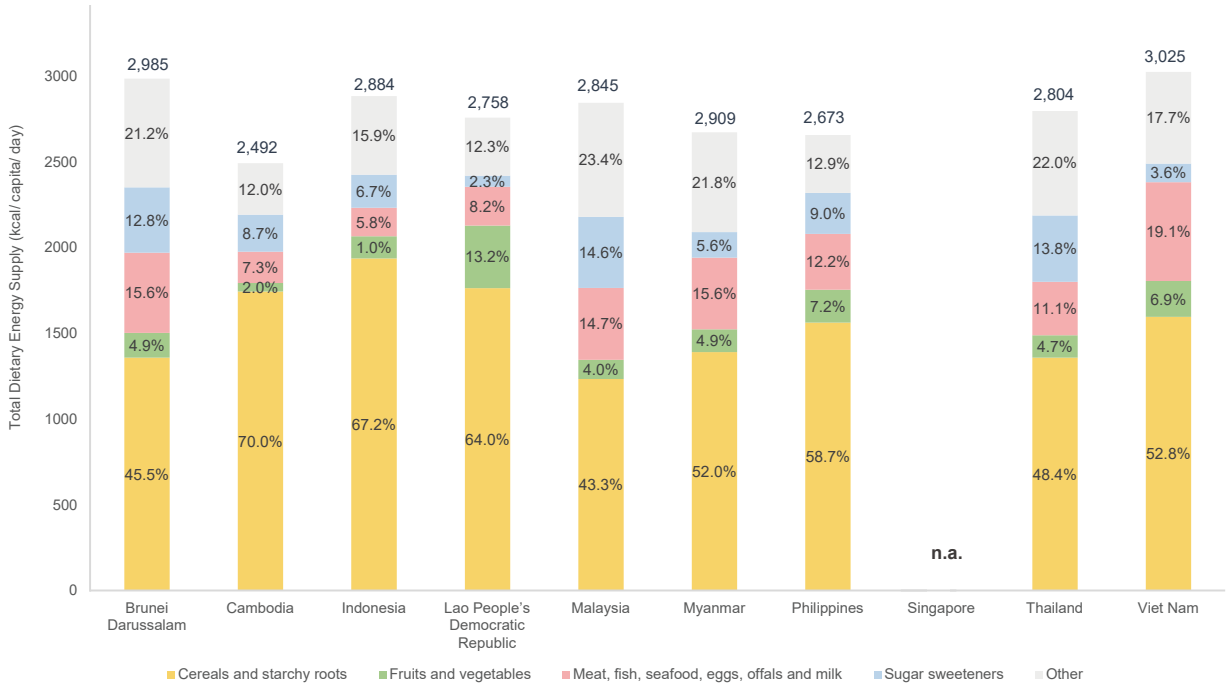
At the *national level*, the availability and affordability of nutritious foods remains a challenge within ASEAN Member States.

► **Protection from unsafe foods:** All ASEAN Member States have addressed *food safety* in their national policies, strategies or plans of action. This is important because food contamination – whether from the environment or from microorganisms – has dire implications for health, particularly in infants, young children, the elderly and the sick. Consumption of unsafe foods and subsequent diarrhoea may contribute to stunting in children through chronic gut inflammation – referred to as environmental enteropathy – which is associated with malabsorption of nutrients.

► **Ensuring enough nutritious foods are available for consumers:** The *availability of nutritious foods* in the food supply is limited in several ASEAN Member States, where the food supply is dominated by starchy foods (e.g., rice). Between 43 and 70 per cent of the dietary energy available in the food supplies of ASEAN Member States is derived from starchy foods (Figure 17). Fruits and vegetables only constitute 1 to 13 per cent of the dietary energy in the food supply, while animal-source foods (meat, seafood, eggs, milk and offals) constitute between 6 and 19 per cent. This imbalance in the food supply means that the population relies heavily on carbohydrates, without sufficient nutrient-rich foods.

As noted in Chapter 2, approximately 24 per cent of people in the ASEAN region consume inadequate amounts of key vitamins and minerals due to limited micronutrient density in the food supply.[8] As non-starchy foods (which are typically more nutrient-dense) increase in availability, food systems become more capable of meeting population-level nutrient needs. Sugar and sweeteners constitute a notable proportion of the dietary energy available in the food supply, ranging from 2 per cent in Lao People's Democratic Republic to 15 per cent in Malaysia.

Figure 17. Proportion of dietary energy available in the food supply derived from various food groups



Source: Calculated using total dietary energy supply (kcal/capita/day) data from FAOSTAT. Brunei Darussalam data are for 2013; Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Viet Nam and Thailand data are from 2018.

Note: n.a., Data not available.

When the food system fails to deliver enough nutritious foods, biofortification (breeding crops to increase their nutritional value) or fortification of staple foods with micronutrients can help increase nutrient availability in the food supply. Only one Member State (Indonesia) reported having a biofortification programme. However, as noted below, food fortification has been successfully implemented in the majority of Member States.

► **Increasing the nutritional quality of staple foods:** Fortification of staple foods and condiments is recognized as an efficient, evidence-based and cost-effective nutrition intervention to prevent micronutrient deficiencies at a population level. Fortification does not require people to change their eating habits nor does it require a substantial government budget.[79] The Copenhagen Consensus Centre ranked micronutrient fortification as the third priority cost-effective intervention to tackle 10 of the world's most pressing problems.[80]

The importance of mandatory fortification of staple foods was re-emphasized during the current global COVID-19 pandemic. Proper nutrition is critical for building a strong immune system and helping the body fight off disease and infection. Fortified foods provide essential vitamins and minerals for vulnerable populations. Several ASEAN Member States have mandatory or voluntary legislation for fortification of salt, wheat flour, oil and/or rice (Table 18). ASEAN populations benefited from the continued availability of fortified staple foods during COVID-19-related lockdowns in 2020, particularly given the reduced availability of nutritious perishable foods.

Iodization of salt is mandatory in eight ASEAN Member States: the latest Member State to make salt iodization mandatory was Malaysia in 2019. Brunei Darussalam and Singapore have voluntary salt iodization only. Compared to other regions in the world, countries in Asia, including ASEAN Member States, have the highest proportion of households using iodized salt. This is mainly a result of mandatory legislation, under national food laws, in most Member States. Other important factors for successful implementation of salt iodization (and fortification of other foods) include official commitment and capacity to enforce national legislation and the industry's structure and capacity to adequately fortify.[81]

Wheat flour fortification has been mandatory in Indonesia, the Philippines and Viet Nam since 2016, while Cambodia and the Philippines have voluntary programmes to fortify condiments such as fish sauce and soy sauce. Malaysia is implementing partial wheat flour fortification with a focus on subsidized wheat flour. In Thailand, condiments must either be made with iodized salt or have iodine added. Rice fortification (with iron) is mandatory in the Philippines, but there is no mandatory legislation on rice fortification in any other Member State (despite high levels of rice consumption in the ASEAN region). Despite lack of national legislation on rice fortification, fortified rice is provided in school feeding programmes in Cambodia and as part of a workplace benefit programme in Singapore. Lao People's Democratic Republic is also in the process of drafting voluntary rice fortification standards.

The existence of mandatory fortification legislation, however, does not guarantee successful reduction of micronutrient deficiencies. Data on the quality and compliance of foods at production, import and/or market level and the proportion of households with fortified food, indicate that significant proportions of foods that are supposed to be fortified, are not – or they are not fortified according to national standards.

There are also untapped opportunities to mandate fortification of staple foods that are centrally processed and eaten in sufficient amounts to contribute significantly to nutrient intake. Wheat flour is centrally processed in almost all ASEAN countries but is not always eaten in sufficient quantities to have a nutritional impact. On the other hand, rice is eaten in sufficient quantities in all ASEAN countries, but it is probably only centrally processed to the extent that it is fortifiable in countries such as Brunei Darussalam and Singapore. In Indonesia, Malaysia, Thailand and Viet Nam, centrally processed rice would predominantly penetrate urban areas.

Table 18. Status of fortification legislation

ASEAN Member State	Salt iodization	Wheat flour fortification	Rice fortification	Oil fortification	Condiment fortification
Brunei Darussalam	●	●	●	●	●
Cambodia	●	●	●	●	●
Indonesia	●	●	●	●	●
Lao People's Democratic Republic	●	●	●	●	●
Malaysia	●	●	●	●	●
Myanmar	●	●	●	●	●
Philippines	●	●	●	●	●
Singapore	●	●	●	●	●
Thailand	●	●	●	●	●
Viet Nam	●	●	●	●	●

● Mandatory ● Voluntary ● No legislation

Source: Member State reported availability of policies and programmes relevant to food, the food environment and food systems collected explicitly for this report.

► **Making nutritious foods affordable for all:** *Food affordability* is a major barrier to consuming nutritionally-adequate diets. An alarming 46 per cent of the population in the ASEAN region (325 million people) cannot afford a healthy diet (Table 19). There is wide variation between ASEAN Member States (with available data) in the proportion and number of people unable to afford either a nationally adequate or healthy diet; however, more than 60 per cent of the population in Indonesia, Lao People's Democratic Republic, Myanmar and the Philippines cannot afford a healthy diet. The pandemic has led to a further rise in unemployment and income losses affecting affordability and access to nutritious food among vulnerable households.

One of the key drivers of affordability of a healthy diet is the cost of fruits and vegetables, as well as protein-rich foods (plant- and animal-source foods). These foods contribute substantially more to the cost of a healthy diet than starchy staples and fats. The high price of nutritious foods is closely linked to child malnutrition: Indeed, countries where healthy diets are the most unaffordable also report a higher prevalence of child stunting.[20]

Table 19. Proportion and number of people unable to afford an energy-sufficient, nutrient-adequate or healthy diet

ASEAN Member State	Energy sufficient diet		Nutrient adequate diet		Healthy diet	
	%	No.(millions)	%	No.(millions)	%	No.(millions)
Indonesia	1.1	2.9	34	90	68.8	182
Lao People's Democratic Republic	0.5	<0.1	51.2	3.6	83.3	5.8
Malaysia	<0.1	<0.1	0.1	<0.1	1	0.3
Myanmar	<0.2	<0.1	17.7	9.5	60.9	32.5
Philippines	<0.3	2.7	30.6	32.1	63	66.3
Thailand	<0.4	<0.1	1.8	1.2	19.5	13.5
Viet Nam	<0.5	0.5	9.5	9	26.6	25.2

Source: 2020 Asia and the Pacific Regional Overview of Food Security and Nutrition[20]
Note: Energy-sufficient diet: This diet provides adequate calories for energy balance for work each day. This is achieved using only the basic starchy staple for a given country (e.g., maize, wheat or rice only); *Nutrient adequate diet:* This diet not only provides adequate calories (per the energy-sufficient diet above), but also relevant nutrient intake values of 23 macro- and micronutrients through a balanced mix of carbohydrates, protein, fat, essential vitamins and minerals within the upper and lower bounds needed to prevent deficiencies and avoid toxicity; *Healthy diet:* This diet provides adequate calories and nutrients (per the energy-sufficient and nutrient adequate diets above), but also includes a more diverse intake of foods from several different food groups. This diet is intended to meet all nutrient intake requirements and to help prevent malnutrition in all its forms, including diet-related NCDs.

Food price data from several ASEAN Member States was used to calculate the proportion of households within a country that are unable to afford a nutrient adequate diet in their local environment. Affordability of nutritious foods can also vary widely within a country – driven by variations in food price and food availability, ecological system, livelihood, as well as differing economic status of regional populations. For example, unaffordability ranged from 12 per cent to 66 per cent in Cambodia, from 17 per cent to 95 per cent in Lao People's Democratic Republic and from 48 to 83 per cent in Myanmar. In the 'breadbasket' region of Myanmar, Ayeyarwady – where most of the rice and other crops are produced and sold – the cost of a nutrient adequate diet was 10-25 per cent lower than in more remote regions of the country where transport, storage and retail are required to ensure foods are available.[9]

Efforts to improve the affordability of healthy diets have been sparse in the ASEAN region. To date, the majority of efforts undertaken to improve access to foods and nutritious foods have largely been undertaken through social protection schemes. These efforts are discussed in the next section of this chapter. Some Member States, however, have made concerted efforts to better understand their food system gaps and begin taking action. For example, the government of **Indonesia** released a Presidential Regulation in 2020 on the National Mid-term Development Plan, which includes a national programme priority of increasing the availability, accessibility and quality of food. One of its priority activities is improving national food systems and food governance by strengthening the food logistics system, sustainable food system management and management of urban food systems. In 2018, Indonesia conducted modelling on the future of Indonesian food consumption. The modelling examined factors related to food consumption and food demands trends, and analysed food policy scenarios for the medium-term (2020–2025) and long-term (2025–2045) development plans. Indonesia also conducted an analysis of the food system in 2019–2020, which reviewed food policy, analysed the food security and nutrition situation, identified the gap between policy and implementation and recommended steps towards a more resilient, affordable and healthy food system.

What does this mean for ASEAN Member States?

Several ASEAN Member States have adopted or implemented policies, legislation or guidance over the last decade to help ensure consumers are better equipped to choose healthier options and improve the quality of food products available for purchase. These efforts are laudable in their achievements and ambition. However, many rely on voluntary actions by the food industry – rather than mandatory legislation – to improve food environments. Experience suggests that voluntary measures will not be effective in controlling the rapid rise in sales and marketing of unhealthy foods and drinks. Rather, mandatory legislation to incentivize food producers to improve food quality and regulate and improve the information available to consumers so they can make informed decisions is necessary to help achieve national and global targets around healthy diets and reduction of overweight, obesity and NCDs. Improving the nutrition literacy of the general population so individuals can accurately interpret nutrition labels is also a critical step in empowering consumers to make informed choices.

The consumption of energy-sufficient diets is not enough to secure optimal health and nutrition. Building better food systems requires policies, initiatives and schemes that increase the availability of nutritious foods, make them affordable to all, and ensure their safety. Linking the nutrition agenda with the agriculture sector to encourage production and diversification of crops, and strengthening the supply chain for these commodities, can also help improve the availability of foods needed for healthy diets. Efforts to increase the use of indigenous and local crop varieties may help agricultural biodiversity. While all ASEAN Member States have some form of voluntary or mandatory fortification legislation, advocacy is needed to establish food fortification programmes where there is untapped potential in the ASEAN region (e.g., rice). Further, it is essential that food fortification programmes are effectively monitored and evaluated. Enforcement of legislation and sustainability of the programme are most successful when monitoring is undertaken as part of the routine food control systems.

Focus 6

Malaysia sugar-sweetened beverage tax

Malaysia has some of the highest rates of overweight and NCDs in Southeast Asia, with 50 per cent of adults affected by overweight or obesity, 18 per cent suffering from diabetes and 30 per cent suffering from hypertension.[82] The high (and increasing) levels of overweight, obesity and NCDs are linked not only to consumption of high-energy, high-fat foods, but also to high levels of sugar consumption. Excessive intake of SSBs, including carbonated drinks, are a key source of sugar intake. Approximately 56 per cent of adults in Malaysia consume sugar every day,[83] and 36 per cent of Malaysian students consume at least one soft carbonated drink each day.[84]

To promote healthy diets and raise awareness of the dangers of high-sugar intake, the Malaysian Ministry of Health and non-governmental organization partners have implemented education and advocacy campaigns and activities within health facilities, schools, National Service Centres and through mass and social media over the last several decades. However, these 'soft' approaches alone were not facilitating enough reduction in sugar intake. As such, the Ministry of Health began to explore fiscal measures, such as taxation, to reduce and disincentivize high-sugar content in SSBs and discourage their consumption by consumers.

The Ministry of Health proposed a potential tax on SSBs in 2014, and collaborated alongside the Ministry of Finance, Royal Malaysia Custom Department, Ministry of International trade and Industry, academic institutions and beverage companies for several years to identify ideal mechanisms for tax implementation. An SSB tax was officially launched in July, 2019. Rather than tax the consumer at the point-of-purchase, the SSB tax was designed to drive reformulation of the products available for consumption in the country. An excise duty was imposed on non-alcoholic, ready-to-drink beverages that contained sugar exceeding five grams per 100 millilitres (ml), fruit and vegetables juices that contained more than 12 grams per 100 ml and flavoured UHT milk products that contained more than 7 grams per 100 ml. Licensed importers of SSBs were required to produce a letter of undertaking and submit laboratory reports to ensure the total content of their drinks did not exceed the thresholds allowed. Manufacturers whose drinks contained sugar above threshold levels (or importers who failed to submit required paperwork) were mandated to pay duties (about US$0.10 per litre of beverage).

The full impact of the SSB tax will not be investigated until later in 2021. However, a total of 225 SSB products from 43 companies have already been reformulated to contain less sugar. Further, early evidence from studies on the price elasticity of SSBs found that following an 8 per cent increase in SSB prices (resulting from the excise tax), SSB consumption decreased by 9 per cent.

While early data are promising, the SSB tax alone cannot achieve the national goals of reducing sugar intake by 50 per cent and seeing no increase in the prevalence of overweight and obesity. The Ministry of Health plans to advocate for expanding the SSB tax to other categories of foods that are high in sugar, fat and sodium. This includes advocating for expansion of the tax on pre-mix ('3 in 1') drinks. The Government of Malaysia is also exploring how to maintain (and build upon) the success achieved by the SSB tax and work towards tackling the inappropriate marketing of unhealthy foods and beverages, particularly in and around schools.

Focus 7

Improving nutrition and making healthier options more available in the informal food sector in Singapore

Increasingly, NCDs such as cardiovascular diseases and diabetes are among the top causes of death and morbidity in Singapore.[85] Intake of unhealthy foods is a key modifiable risk factor linked to the continued and increasing burden of disease. To improve diet quality and reduce excessive calorie intake among the population, Singapore is working across the whole-of-government and with the private sector to 1) increase the supply of healthier foods across the value chain (from healthier ingredients to cooked foods); and 2) increase demand through education and ground promotion efforts.

To achieve the first goal, the Singapore Health Promotion Board has worked to improve the availability of healthier food options both at point-of-purchase and within the food supply chain. Hawker centres and coffee shops represent an important part of the informal food sector in Singapore, and are some of the most affordable dining options for the local population.[86] In order to improve access to healthier food options to all Singaporeans, the Health Promotion Board partners with local hawkers and coffee shop operators through the Healthier Dining Programme to offer lower-calorie options (500 calories or less) and/or healthier ingredients (such as whole grains and healthier cooking oil) as part of their permanent core menu offerings. As of March 2020, half of all hawker and coffeeshop stalls were serving at least one healthier option on their menus.

The Health Promotion Board also adopted an upstream approach and partnered with food industry actors to reformulate key staples and ingredients available in the food supply by providing grants for activities such as marketing and publicity, product development, packing and certification and trade promotion. The reformulation efforts included reducing saturated fat content in cooking oil, improving the quality and variety of carbohydrates (e.g., staples such as rice and noodles), reducing sugar content in beverages and banning trans-fatty acids in oils and fats. As of March 2020, 57 suppliers across six ingredient categories have reformulated their products to healthier options and more than 200 of these products are being sold at participating stalls across Singapore.

To increase consumer demand for the healthier options available, the Health Promotion Board ramped up ongoing education and ground promotion efforts to make choosing healthier meals in the informal food setting more attractive to consumers. Some of the ground activities in informal food settings featured free samples of healthier food and ‘sure-win spin’ that provided consumers rewards for purchasing healthier meals. Media and food critics were also engaged to feature food stalls that provide healthier options, with the intention of generating awareness and consumer acceptance.

Some of the success factors in Singapore’s strategic approach to improve nutrition in key food settings are the close engagement with the food industry to reformulate ingredients and food products, strong ground outreach to build connections with food operators and comprehensive measures taken across the demand and supply side to tackle different parts of the food ecosystem. Having strong political support, a clear mandate and long-term funding to tackle risk factors associated with NCDs also facilitated the implementation of ground efforts. Moving forward, the Health Promotion Board hopes to increase advocacy efforts with food operators on the benefits of healthier ingredients and strengthen data collection on dietary habits and data-use to inform decisions and programme design.

Focus 8

Local acceptability and production of fortified complementary foods in Viet Nam

The economy in rural Viet Nam is predominantly based on agricultural food production. However, rural regions of the country with high agricultural productivity also report the highest levels of childhood malnutrition. High agricultural yield does not always result in healthy diets or adequate food security. For example, an analysis using linear programming models to assess how well locally available foods could meet the nutrient needs of young children in rural Lào Cai province found that without fortification, the foods currently available were not sufficient to meet micronutrient needs.[87] Fortification of complementary foods can help fill nutrient gaps where food insecurity or limited availability of nutritious foods are barriers.[88]

To improve the diets of young children, a small-scale local food production facility was established in Lào Cai to produce fortified complementary foods (FCF). Fortification and food safety protocols, however, can make local production difficult in rural areas. Improper food production can result in unsafe foods and consumption of foodborne pathogens by vulnerable young children. Procedures and certifications are required to help mitigate contamination during production. To meet Viet Nam's Ministry of Health standards for FCF, the small-scale food processing facility in Lào Cai complied with Good Manufacturing Practice, sound Sanitation Standard Operating Procedures, a Master Sanitation Schedule and Pre-Operational Inspection Program, and finally a Hazard Analysis Critical Control Points (HACCP).[89] The completed production facility was HACCP-certified with a production capacity of 12 tons/month for FCFs.[88]

A fortified instant-rice porridge and four types of vegetable powder FCFs where developed, including pumpkins, carrots, mushrooms and "sweet leaf", a local Vietnamese crop. The raw materials were purchased from local farm co-operatives to facilitate their access to markets. To determine the acceptability of the FCF products among the local population, a pseudo-blinded acceptability trial among caregivers of preschool children was carried out in November 2016. All locally produced FCFs were found to be acceptable by caregivers, with a high-level of satisfaction for consistency, fat content and saltiness.[88]

Between December and May 2018, the production facility made 86,270 private and public sales of FCFs. The facility produced FCF for both the Viet Nam Ministry of Health and a local commercial businesswoman. For publicly-run school feeding programmes, these FCFs reached 1,698 children under 2 years of age and 2,550 children in 10 kindergartens, totalling 2,784 kg of FCFs.[88]

Decentralization of the production of FCFs can increase use of and demand for local crops and allow for tailored taste profiles to suit local preferences. Setting up a decentralized small-scale production facility in Lào Cai supported local crop demand. Further, through the HACCP approaches and protocols, producing locally FCF can be a viable option for nutrition-based interventions for increasing local market availability of FCF. This type of intervention can be targeted to areas where food fortification for infants and young children may be necessary while food systems increase their capacity to produce enough safe, affordable nutritious complementary foods.[88]

4.2.5 Protecting the nutrition rights of the most vulnerable

Headline achievements

- Social protection schemes have shown potential in improving diets and nutrition in ASEAN Member States: Several Member States have designed social protection schemes with nutrition outcomes in mind, extending their benefits beyond the reduction of poverty and food insecurity towards helping more families access nutritious foods and essential services that are otherwise unaffordable or inaccessible to them.

Nutritious diets for all, leaving no one behind

The ASEAN region has seen some of the most rapid economic growth in the world in recent decades. Economic growth can provide a substantial boost to food security and nutrition – provided that the poor share in that growth. However, income inequality has increased in Asia over the last 25 years.[18]

Social protection schemes are designed to support the poorest and most vulnerable at scale through the distribution of food, cash, credit and grants, as well as public work, education and health programmes. While these schemes may have success in fighting poverty and reducing food insecurity, this does not necessarily translate to reductions in malnutrition or improvements in the quality of foods consumed. However, social protection schemes that are designed with nutrition in mind can improve nutrition for the most vulnerable by increasing household resources and knowledge of nutritious foods, hygiene and appropriate feeding practices.

Scaling up social protection programmes during shocks and emergencies can support continued access to food. Such services are particularly relevant in the context of the COVID-19 crisis, which is expected to push half a billion people into poverty,[90] while increased food insecurity is projected to result in between 56 and 120 million more undernourished people in 2020 alone.[43] Examples of how Member States capitalized on existing social protection infrastructure to respond to the COVID-19 pandemic are discussed later in this report.

Several *regional-level* activities related to social welfare were included in the ASEAN Strategic Framework and Action Plan 2018–2030. Progress on several of these activities is well underway, such as:

- Developing social protection policies and strategies that will mainstream productive social protection in support of nutrition objectives through agriculture production and processing.
- Conducting a study on vulnerable and marginalized groups in ASEAN Member States to identify the most needy populations.
- Conducting a study on social protection for people with disabilities in times of climate change-related crises, disasters and other environmental changes (i.e., social welfare, social legislations, etc.).

At the *national* level, eight ASEAN Member States report having either a national or subnational government implemented nutrition-sensitive social assistance programme in place.[xvi] Specific programmes in the Philippines, Indonesia, Myanmar and Thailand are detailed below. However, there are notable social protection schemes designed to improve diets and reduce malnutrition across the ASEAN region: brief summaries of these can be found in Table 20.

xvi Based on Member State responses on the availability of policies and programmes relevant to social protection, collected specifically for this report.

Table 20. Snapshot of social protection schemes that aim to improve nutrition

ASEAN Member State	Name of social protection programme	Enrollment criteria	Benefit specifics (e.g., food basket)	Scale
Brunei Darussalam	Program Harapan	1. Based on economic, social and cultural data for secondary schools 2. Primary schools with a high percentage of students receiving welfare benefits within the selected secondary school (in no. 1 above) catchment area	Each student from selected primary and secondary schools receives food provisions as follows: - five selected secondary schools (3,429 students in 2020) received breakfast each school-day at 7:00. -Only one secondary school received lunch for 'O' Level students who attended extra classes in the afternoon. - 20 selected primary schools (4,380 students in 2020) received 200 ml dairy drinks each school-day at 7:00.	National (selected government schools)
	Program Anak Harapan	Recommendations from Department of Schools and Department of Administration and Services, Ministry of Education, on the extension of Program Harapan	- 22 selected primary schools (2,175 students in 2020) received either dairy milk, food or lunch. - 5 of 22 selected schools received breakfast every day at 7:00. - 6 of 22 selected schools received dairy milk every day at 7:00. - 11 of 22 selected schools received lunch every day at 12:00.	National (Selected government schools)
Cambodia	Cash Transfer for Pregnant Women and Children under 2 years of age	Pregnant women from families with an 'ID Poor card' (through Cambodia's poverty identification and registration system)	Pregnant women receive cash support in three stages: 1) Cash support of 40,000 riels (10 US$) up to four times when they come for ANC visits; 2) after delivery in a health facility, new mothers are given an additional one-time payment of 200,000 riels (50 US$); 3) mothers are given 40,000 riels up to 10 times each for post-delivery check-ups for themselves and their babies until their children are 2 years old	Nationwide
	The Health Equity Fund	People belonging to households that have been classified as poor under the ID Poor Programme of the Ministry of Planning	Supports access to health services free at the point-of-use to the eligible population across the whole of Cambodia. The medical services and non-medical benefits to be provided to targeted eligible populations are defined in the Ministry of Health National Guidelines for the Benefit Package and Provider Payment Mechanism of the Health Equity Fund	Missing data
	School Feeding Programme	Poor families and stunting in children	Provides nutritious school meals to pre- and primary- school children. Daily on-site cooked breakfast using a standard nutritionally optimized WFP food ration of rice. The breakfast includes canned fish, vitamin A-fortified vegetable oil, yellow split peas and iodized salt.	Provinces with high rate of ID
Indonesia	Program Keluarga Harapan	Families with a pregnant mother, children under 5 and school-age children	Cash transfer	National
	Bantuan Pangan Non Tunai	Families with a low socioeconomic status	Food basket through e-warong	National
	Supplementary feeding programme for pregnant mothers	Pregnant mothers with chronic energy deficiency	High calorie-protein biscuit	National

ASEAN Member State	Name of social protection programme	Enrollment criteria	Benefit specifics (e.g., food basket)	Scale
Lao People's Democratic Republic	Social Security System for Government Employees	Government employees	Health care	National
	Social Security System for Enterprise Employees	Enterprise employees	Health care	National
	Health Insurance Policy for Informal Sector Population	Informal sector population	Health care	National
Malaysia	The Rehabilitation Programme for Undernourished Children	Children aged 6 months to 6 years from poor and extremely poor families	Children who meet the criteria are given basic food supply, treatment and health education	National
	The Community Feeding Programme	Targeted to children aged 6 months to 6 years from the Orang Asli, a marginalized group.	RUTF given three times per week and supplementary food that consists of carbohydrate sources, such as biscuits; and protein sources, such as chicken, multivitamin and milk, provided five times per week.	Implemented in selected remote areas in Perak, Pahang and Kelantan
Myanmar	Maternal and Child Cash Transfer	Mothers with children under 2 years of age	Cash, health and nutrition education	Large-scale (but not national)
Philippines	Pantawid Pamilyang Pilipino Program	1. Residents of the poorest municipalities 2. Households whose economic condition is equal to or below the provincial poverty threshold 3. Households with children 0–18 years old and/or a pregnant woman 4. Households that agree to meet conditions specified in the programme: -Pregnant women must avail themselves of pre- and postnatal care, and be attended during childbirth by a trained professional. -Parents or guardians must attend the family development sessions, which include topics on responsible parenting, health, and nutrition. -Children aged 0–5 years must receive regular preventive health check-ups and vaccines. -Children aged 6–14 years must receive deworming pills twice a year. -Child beneficiaries aged 3– 18 years must enroll in school and maintain an attendance of at least 85 per cent of class days every month	Health grant: P500 per household every month, or a total of P6,000 every year Education grant: P300 per child every month for 10 months or a total of P3,000 every year (a household may register a maximum of three children for the programme) Households with three children may receive P1,400 every month, or a total of P15,000 every year for five years, from the two types of cash grants.	National

ASEAN Member State	Name of social protection programme	Enrollment criteria	Benefit specifics (e.g., food basket)	Scale
Philippines	Sustainable Livelihood Program	1. At least 18 years of age, however, for Micro-enterprise Development track, the eligible individual or walk-in client may be at least 16 years old. 2. Included in the Listahanan and tagged as poor or assessed as poor through the administration of Household Assessment Form or SLF Means Test 3. Issued Certificate of Eligibility as a proof that the referred individual or walk-in client underwent the required process as specified in the guidelines	- Seed Capital Fund – maximum of P15,000 per eligible individual representing a household - Employment Assistance Fund – maximum of P5,000 per eligible individual representing a household	National
Singapore	ComCare assistance	Low-income families with difficulties meeting their basic living expenses	ComCare assistance package is customized to the circumstances and needs of the client. This can include a cash assistance quantum for daily living expenses, which includes provision for food. Clients with urgent needs may be offered interim assistance such as cash and supermarket vouchers, and connected to community-based support such as food rations and free cooked food.	ComCare assistance
	Meals on Wheels	Home-bound elderly unable to buy and prepare their own meals without a caregiver to help	Daily meals delivery	National
Thailand	The Child Support Grant	Mother and father are Thai nationals and the child was born during or after October 2015; each child will be cared for until 36 months of age	Care services	National
Viet Nam	Programme for support of rapid and sustainable poverty reduction	Categorized as poor according to Government definition.	Cash, rice	61 poor districts

In the **Philippines**, Pantawid Pamilyang Pilipino Programme (or 4Ps) is a poverty reduction and social development programme that provides conditional cash grants to poor households contingent upon verifiable actions – generally minimum investment in children's education or health. The cash benefit and the conditionalities of the programme are designed to incentivize use of essential health and nutrition services and ensure families have sufficient resources to secure adequate food and other essentials. The most recent evaluation of 4Ps found a positive impact on use of prenatal health care and average per capita food expenditure. The average per capita food expenditure of 4P beneficiaries was 5.4 per cent higher compared to non-beneficiary households, with an 11 per cent increase in rural areas alone. In addition, beneficiary children were 8 to 10 percentage points more likely to be fed vegetables compared with non-beneficiary children. Beneficiary children in rural areas also experienced a positive impact on consumption of protein-rich foods.[91]

In **Indonesia**, the Keluarga Harapan Programme (PKH) – the first conditional cash transfer programme in the country – seeks to improve human capital by providing cash transfers conditional on households accessing specified health and education services. Evaluations of PKH, however, found that programme beneficiaries did not achieve any gains in household food security[92] as the level of PKH's benefit did not keep up with inflation even though it was adjusted three times over a nine-year period.[93] An evaluation did find that beneficiary children aged 18–60 months were more likely to consume milk and eggs.

The Maternal and Child Cash Transfer (MCCT) programme in **Myanmar** and the Child Support Grant (CSG) programme in **Thailand** both specifically target pregnant women and families with young children in an effort to improve nutrition in the first 1,000 days of life. The MCCT programme provides regular cash transfers to pregnant women and mothers of children under 2 years of age to enhance their purchasing power to improve their dietary diversity and increase access to health care. Originally, the CSG provided unconditional cash transfers to poor and near-poor households with a child less than 1 year of age. In 2016, the CSG unconditional cash transfers were modified to be available for poor and near-poor households with a child less than 3 years of age and the cash transfer amount increased.

What does this mean for ASEAN Member States?

Social protection schemes can provide a crucial safety net for maintaining or improving the diets of the most vulnerable children and families. If programmes are targeted and the benefits are developed with nutrition in mind, the impact of social protection schemes can extend beyond poverty and food insecurity reduction and help more families access nutritious foods and essential services that are otherwise unaffordable or inaccessible to them. Some ASEAN countries have made important progress in bridging inequities in access to nutritious food through targeted grants and cash transfers to marginalized families. The lessons learned from these experiences can be used to further refine programmes and improve their reach, while serving as a guide for other countries in the region. Strengthening and investing in overall social protection systems can also make programmes more shock-responsive, especially in countries where social protection coverage remains low.

4.2.6 Improving water, sanitation and hygiene (WASH) for good nutrition

Headline achievements

- Access to safe drinking water and improved sanitation and hygiene facilities in ASEAN Member States is improving: More people have access to at least basic water, sanitation and hygiene than they did two decades ago.

Safe food, clean water and healthy environments

Water, sanitation and hygiene are major underlying determinants of malnutrition. Inadequate food hygiene, as well as use of unsafe drinking water in food preparation, account for a significant proportion of diarrhoeal disease among infants and young children in low-income countries. Poor hygiene and unsafe drinking water can also cause diarrhoea and food poisoning in pregnant women, which can have an adverse impact on birth outcomes. Keeping food free from faecal contamination is essential to limit faecal-oral disease transmission, as good food hygiene practices reduce the risk of diarrhoea. While many factors influence foodborne contamination, poor environmental hygiene due to lack of sanitation, use of contaminated water to wash serving utensils, and lack of handwashing prior to cooking and feeding are critical determinants.

The water and sanitation system comprises the policies, programmes, services and actors needed to ensure a population's access to safe drinking water and safe sanitation and hygiene services.

Strengthening national systems to deliver safe drinking water, end open defecation and support the safe disposal of faecal waste – including through community-led approaches to total sanitation – helps individuals and children stay healthy and free of disease.

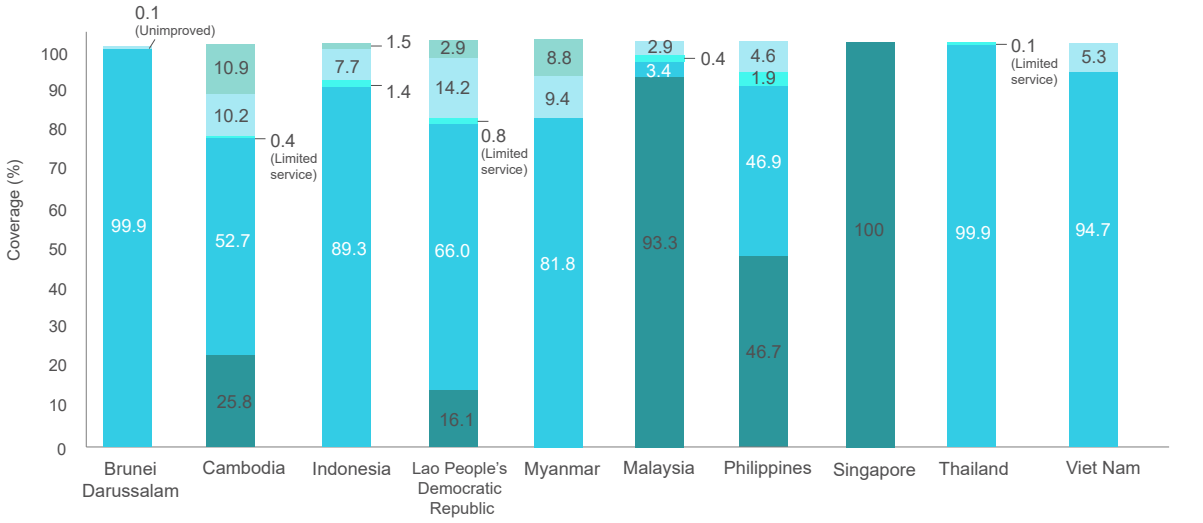
While the region as a whole has made great strides in improving WASH over the last two decades, there is still some variation in quality between ASEAN Member States.[19] For example, while 100 per cent of people in Singapore have access to safely managed drinking water, approximately 20 per cent of the population in Cambodia, Lao People's Democratic Republic and Myanmar still only have access to unimproved (and thus risky) sources (Figure 18).

Access to safely managed sanitation is even more variable, with approximately 20 per cent of the populations of Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar and the Philippines lacking access to even basic sanitation services. Open defecation is still practised by 32 per cent of the population in Cambodia and 21 per cent in Lao People's Democratic Republic (Figure 19). Access to hygiene facilities is critical for safe food preparation. However, in most Member States with available data, approximately 20 per cent or more of the population does not have a handwashing facility with soap and water in their household (Figure 20).

What does this mean for ASEAN Member States?

Safe and palatable drinking water is an essential component of good diets, while safe sanitation and hygiene services protect against disease and nutrient losses. The proportion of the population benefiting from these services has increased over the last two decades in the ASEAN region, but there are still a significant number of people who are at risk of disease. Advocacy is needed for integration of nutrition into WASH policies, strategies and programmes that aim to improve access to safe drinking water, sanitation services and handwashing facilities − in households, communities and schools. Nutrition programmes should also support social and behaviour change communication to promote practices to improve safe water management, storage and use; adoption of safe sanitation practices; and hygienic food handling and handwashing with soap.

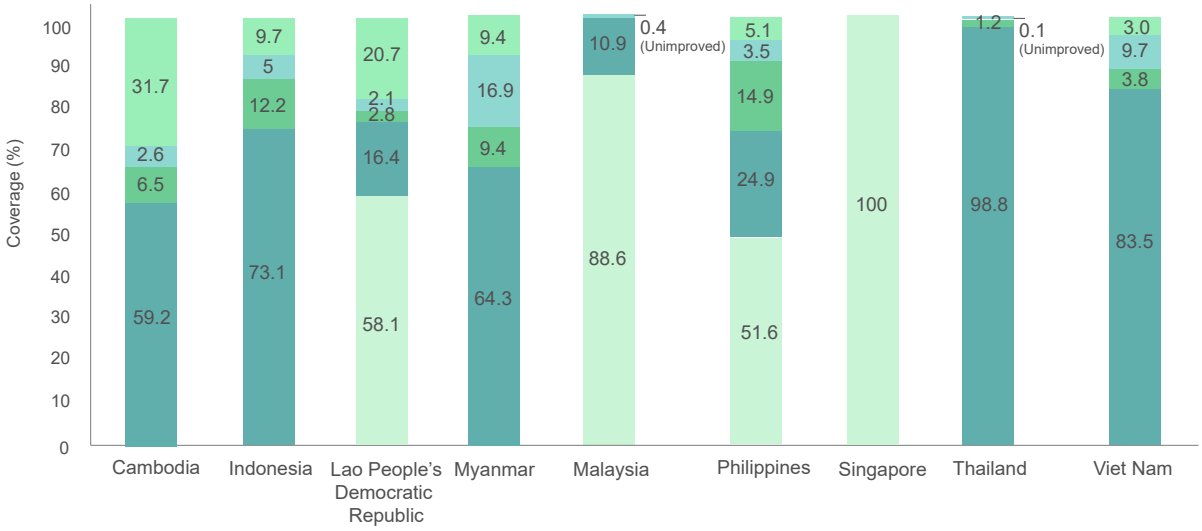
Figure 18. Drinking water coverage, by service level



Source: WHO and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene.

Note: Safely managed: Drinking water from an improved water source that is located on premises, available when needed and free from fecal matter and priority chemical contamination*; Basic:* Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip, including queuing; *Limited:* Drinking water from an improved source for which collection time exceeds 30 minutes for a roundtrip, including queuing; *Unimproved:* Drinking water from an unprotected dug well or unprotected spring; *Surface water:* Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal.

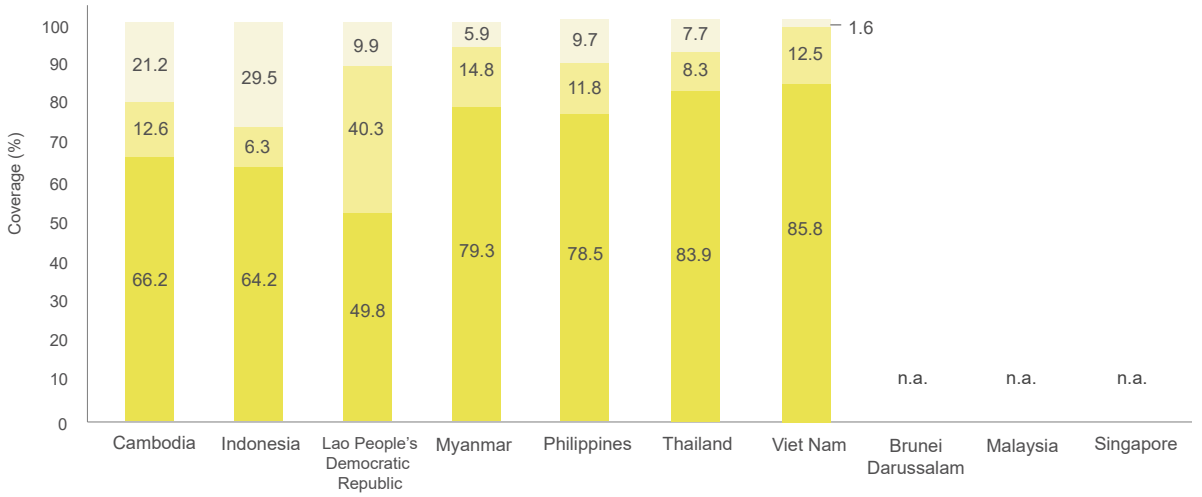
Figure 19. Sanitation service coverage, by service level



Source: WHO and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene.

Note: Safely managed: Use of improved facilities that are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site; *Basic:* Use of improved facilities that are not shared with other households; *Limited:* Use of improved facilities shared between two or more households; *Unimproved:* Use of pit latrines without a slab or platform, hanging latrines or bucket latrines; *Open defecation:* Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste.

Figure 20. Handwashing facility coverage, by service level



Source: WHO and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene.

Note: Basic: Availability of a handwashing facility on premises with soap and water; *Limited:* Availability of a handwashing facility on premises without soap and water; *No facility:* No handwashing facility on premises; n.a., No data available

4.3 Special circumstances

4.3.1 Preparing and responding to nutrition in emergencies

Headline achievements

- Completion of the ASEAN regional training on nutrition in emergencies: The regional training produced a pool of national nutrition in emergencies experts to support preparedness and response in ASEAN Member States.
- National government buy-in to address nutrition in emergencies and develop concrete action plans: Multiple ASEAN Member States have taken steps to improve national capacity through training and other efforts.

Strengthening national capacity and systems to save lives

Asia is one of the world's most disaster-prone regions. To strengthen local government and health system capacities to prepare for and respond to emergencies, the ASEAN Strategic Framework and Action Plan on Nutrition 2018–2030 included an activity for training on nutrition in emergencies (NiE). In 2018, a regional NiE training was conducted in Indonesia and attended by technical experts on nutrition and/or disaster health management from nine Member States. This pool of experts was also envisaged to contribute to enhancing NiE preparedness and response planning, trainings and exercises at the regional level in ASEAN. The effort to scale up NiE preparedness and response capacity at the regional level is aligned with the ASEAN Health Sector's priority in strengthening disaster health management, guided by the ASEAN Leaders' Declaration on Disaster Health Management. Further, this effort was intended to contribute to the ASEAN Declaration on One ASEAN One Response.

The regional NiE training also aimed to develop a pool of national NiE experts who could support NiE preparedness and response in-country and in other ASEAN Member States (constituting a national/regional response team), act as NiE 'trainers-of-trainers' and strengthen health systems and existing service delivery platforms to deliver routine nutrition services.

Since the initial NiE regional training, some ASEAN Member States have taken steps to improve national capacity: Indonesia developed a national NiE training curriculum, conducted national and subnational trainings and is developing an in-service training guidance (see Focus 10). The Philippines has fully developed and institutionalized NiE within its national systems and has an NiE department overseeing emergency preparedness and response actions. National training is planned but has not yet taken place in Myanmar and Malaysia.

What does this mean for ASEAN Member States?

The regional and subsequent national-level NiE trainings represent significant strides in capacitating ASEAN Member States to respond in times of disaster. Further work is required, however, to integrate NiE response within national disaster and response plans. Sectoral coordination with National Disaster Management bodies is needed to ensure that nutrition is well considered and integrated across sectors (for nutrition-sensitive considerations). Capacity development on NiE at national and subnational level should also be prioritized.

Focus 9

Learning from the Central Sulawesi tsunami disaster in Indonesia

In September 2018, a devastating earthquake struck the Central Sulawesi province of Indonesia. Registering 7.4 on the Richter scale, the earthquake triggered a tsunami and liquefaction. An estimated 2,081 people lost their lives and an additional 4,438 were injured. Hundreds of thousands were also displaced, including vulnerable pregnant women, breastfeeding mothers, infants, children under 5 and people with disabilities.

The emergency revealed critical gaps in the NiE response capacity in Indonesia. Informed by this experience, just two months after the earthquake, the Ministry of Health made a policy decision to strengthen national capacity for NiE response, officially launching an NiE capacity building initiative. These efforts were further informed by an 'after-action' review of the Central Sulawesi disaster, conducted in April 2019.

As part of the NiE capacity building initiative, a national NiE training curriculum was developed specifically for the Indonesian context. The curriculum incorporated lessons learned from gaps in the response to the 2018 earthquake, including marked lack of capacity within the health workforce to support optimal infant and young child feeding and treat children with SAM during emergencies. To address these, and other, nutrition-specific shortcomings, the training curriculum was purposefully aligned with national policies on IMAM and infant and young child feeding.

The first national-level NiE training using the new curriculum took place in April 2019. National Standard Operating Procedures were developed as outputs from the training for different areas of NiE, including infant and young child feeding, micronutrient deficiencies and IMAM. The curriculum was further revised and adapted in July 2019, a facilitators guide was developed and a cadre of trainers-of-trainers were identified. Two subnational trainings were held in September 2019 using the updated curriculum, with 50 participants covering 12 of the most disaster-prone provinces in the country. At the end of the training, each province presented a tentative province-specific response plan to all participants for feedback on further improvement.

Since the Ministry of Health first made the commitment to strengthen national NiE capacity, the Government has doubled its disaster budget and the Ministry of Health has allocated a budget specifically to support the rollout of the training in the districts of each of the trained provinces. There is also now a national plan for scale-up for eight essential nutrition interventions to be delivered through the health system as part of the global financing facility to reduce stunting, some of which is expected to support the rollout of NiE preparedness plans.[94]

4.3.2 Prioritizing nutrition in COVID-19 response

Headline achievements

- Governments throughout the ASEAN region recognized the potential negative impact of the COVID-19 pandemic on nutrition, and took action: Nearly all ASEAN Member States included nutrition as a focus area in their COVID-19 response plans and employed communication activities to reinforce the importance of a healthy diet, particularly for infants and young children.
- Social protection schemes were adapted to protect food security and address increasing inequities resulting from the pandemic and its containment measures: Several ASEAN Member States adapted the targeting or benefits of existing social protection schemes to ensure the most vulnerable had the resources needed for healthy diets.

A pledge to prevent a pandemic legacy of hunger and malnutrition

While the full extent of the COVID-19 pandemic's impact on diets and malnutrition in the ASEAN region is still emerging, the pandemic and its containment measures have worsened existing challenges to the affordability, accessibility and quality of food available across Member States. Governments throughout the ASEAN region recognized the potential negative impact of the pandemic on diets and essential services and designed their responses to prioritize the protection of nutrition.

► **Recognizing nutrition in response plans:** Nearly all ASEAN Member States included nutrition as a focus area in national COVID-19 response plans, employed communication campaigns to promote healthy diets and collected data to help understand the pandemic's impact on dietary practices and food security (Table 21). In the early months of the pandemic, the **Viet Nam** Ministry of Health developed and released guidelines for nutrition in vulnerable populations during COVID-19, including the elderly, pregnant women and children; launched a communication campaign using leaflets, video and radio to re-emphasize the importance of breastfeeding and provide nutrition advice for parents of infants and young children under age 2; and partnered with the National Institute of Nutrition to conduct a rapid assessment of the impact of COVID-19 on household food security and the dietary patterns of infants and young child nutrition.[95]

In **Singapore**, a 'Stay Well to Stay Strong' one-stop health portal and mobile application was created to enable Singaporeans to access useful tips and information on how to practice good hygiene, eat well, stay physically active, stay smoke-free and maintain mental well-being. **Cambodia**, **Indonesia** and **Malaysia** also collected data specific to the impact of COVID-19 on nutrition to help inform policy and programme response. As noted in section 4.2.4, affordability of health foods was a barrier to good nutrition even before COVID-19, and the impact of the pandemic on household income and food supply chains only amplified the problem. In **Malaysia**, efforts were made to monitor the market price of food commodities to ensure that food remained affordable during the pandemic. No actions were taken in Brunei Darusslaam as there were no locally transmitted cases of COVID-19 detected between May 2020 and early 2021. Health and nutrition services were not adversely affected in the country.

► **Holding food and beverage companies to account:** Some food and beverage companies leveraged panic over lockdowns and early uncertainty around the safe continuation of breastfeeding to market and distribute unhealthy foods.[96] There were multiple examples of companies donating unhealthy foods in Indonesia, Cambodia and the Philippines during the pandemic.[xvii] Some infant formula companies offered free samples to people via social media promotion and QR codes and donated their product to hospitals and individuals, violating the International Code of Marketing of Breast-milk Substitutes. ASEAN Member States worked hard to hold companies accountable for violations of the Code and related protective legislation. For example, the Government of **Cambodia** found that four separate companies repeatedly promoted breastmilk substitutes early in the pandemic, in violation of the Code and Cambodian Sub-Decree 133 on the Marketing of Products for Infant and Young Child Feeding, and subsequently imposed monetary

xvii Examples provided by UNICEF Country Offices

penalties. In the **Philippines**, two major global and local fast food companies donated meal 'care packages' to frontline health workers and communities while clearly displaying their corporate logos and marketing their brands. In each of these cases, the government worked with partners to halt the donations.

► **Establishing safety nets for the most vulnerable:** Inequities related to employment, income, gender and food security increased during the COVID-19 pandemic. Scaling up or adapting social protection schemes during shocks and emergencies can help ensure continued access to food and services for families hit hardest. Existing social protection programmes designed to support the most vulnerable were adapted to protect and promote healthy diets during COVID-19 in several ASEAN Member States. In **Indonesia**, for example, the Affordable Food Programme (Sembako Murah) allocated extra funding to help 15 million low-income households buy staple foods using e-food vouchers (benefit value increased by 33 per cent per household) and the flagship Child Cash Transfer programme (Keluarga Harapan) expanded its coverage from 9.2 to 10 million families, doubled benefits between April and June 2020, and shifted to monthly rather than quarterly beneficiary payment schedules to help ensure mothers had regular access to funds to purchase fresh foods and maintain healthy diets.

Table 21. Government response to protect nutrition during the COVID-19 pandemic

ASEAN Member State	Nutrition included as a focus area in the national COVID-19 response plan	Communication campaigns used to directly promote safe and healthy diets in the context of COVID-19	Data collection efforts to understand the impact of COVID-19 on nutrition status, food security, consumption patterns, purchasing behaviours or market access	Adaption of social protection programmes to protect or support healthy diets during COVID-19
Brunei Darussalam	X	X	X	X
Cambodia	✓	✓	✓	✓
Indonesia	✓	✓	✓	✓
Lao People's Democratic Republic	✓	X	X	X
Malaysia	✓	✓	✓	✓
Myanmar	✓	✓	✓	✓
Philippines	✓	✓	✓	✓
Singapore	X	✓	X	X
Thailand	✓	✓	X	X
Viet Nam	✓	✓	✓	✓

Source: Member State reported availability of policies and programmes relevant to COVID-19 response extracted from the ANSS.

What does this mean for ASEAN Member States?

In response to one of the greatest health crises of our time, the ASEAN community rightly recognized the potential negative impact that the pandemic and its containment measures could have on the food security and nutrition of the population. Nearly all ASEAN Member States prioritized nutrition in their response plans, designed activities to reinforce the importance of a healthy diet and collected data so the impact was well understood. Social protection schemes were also utilized to expand benefits and ensure the most vulnerable households had the resources required to continue to feed their families. These achievements should be acknowledged and celebrated. At the same time, efforts to better equip systems to respond to shocks and emergencies and protect nutrition need to continue beyond the COVID-19 pandemic to ensure that all relevant systems are prepared for future shocks. Investment in and improvement of the quality of existing social protection schemes can also improve the shock-responsiveness of the overall social protection system.

Focus 10

Local Government response to malnutrition during the COVID-19 pandemic in the Philippines

The Philippines has achieved positive economic gains in recent years. Underemployment decreased from 16 to 14 per cent between 2018 and 2019 and poverty incidence dropped from 24 to 17 per cent over the same time period. Yet, malnutrition and food insecurity persist: the 2019 National Nutrition Survey found that 29 per cent of children under 5 are stunted, 6 per cent are wasted and 3 per cent are overweight. Further, 44 per cent of households experience moderate to severe food insecurity.

The onset of the COVID-19 pandemic and its associated economic downturn and mobility restrictions in 2020 disrupted health and social services and resulted in shortfalls in the food supply chain, threatening to worsen existing food and nutrition security concerns and eliminate recent economic and health gains. In response to the pandemic's threat to nutrition and food security, the Government provided guidance to local implementors to ensure continuity of nutrition service delivery. The Department of Health issued DOH Memorandum Circular 2020-2037 Interim Guidelines for the Delivery of Nutrition Service in the Context of the COVID-19 Pandemic, outlining the various adjustments in delivering nutrition (including micronutrient supplementation, infant and young child feeding programmes, management of acute malnutrition, growth monitoring and promotion and promotion of healthy diets and hygiene and food safety). The National Nutrition Cluster likewise issued advisories to promote proper nutrition during quarantine and as well as address various myths and fallacies related to nutrition and COVID-19. Other government agencies with nutrition-related services also issued guidance and services for nutrition-related programmes such as the Department of Social Welfare and Development's Supplementary Feeding Programme in child development centres and the Department of Agriculture's promotion of household food production and mobile markets.

While the national level agencies and entities launched efforts to combat the deterioration of nutrition services, the response was also led in part by the local government units. Notable local government initiatives included *Nutritious Family Food Packs:* provision of food packs to families. Supply constraints for rice and canned goods for the packs were overcome by including fresh produce such as vegetables, root crops, eggs and chicken. This modification to include fresh foods in the food pack promoted the use of locally available foods and increased demand for fresh foods (which had declined during the pandemic). *Community kitchens* were also implemented by some local governments to provide hot meals to underprivileged families, undernourished children, pregnant mothers and frontline workers. A *Market on Wheels* initiative – mobile or "pop-up" markets in various locations – were set up by some local governments so constituents did not need to travel far to the markets and to promote the purchase of locally produced items.

Despite the unprecedented impact of the COVID-19 pandemic, national and local-level efforts to adapt the health system helped maintain nutrition service delivery. These and other initiatives to increase food access and to disseminate educational information helped to mitigate some the worst impacts of the COVID-19 crisis and protect the progress that had been achieved in recent years.

5

CHALLENGES AND OPPORTUNITIES

5 Challenges and opportunities

► Despite economic growth and improvements in health and nutrition indicators in recent years, the burden of maternal and child malnutrition remains high and diets remain suboptimal for far too many. Further, the COVID-19 pandemic has exposed weaknesses within the food system and other systems and highlighted the urgent need for better food environments that enable children and their families to have a healthy diet.

This chapter summarizes the systemic challenges that continue to constrain improvements in nutrition and adequate delivery of nutrition services, and highlights opportunities for progress.

Inequality

Malnutrition and its drivers do not affect all populations equally. Collectively, ASEAN Member States have seen some of the most rapid economic growth in the world in recent decades. While economic growth can provide a substantial boost to food security and nutrition, the poorest populations have not benefited equally from that growth. Indeed, income inequality has increased in Asia over the last 25 years.[18] Within ASEAN Member States, the poorest, least educated and those in rural areas share a greater burden of malnutrition and consume poorer quality diets than their wealthier, better educated and urban counterparts. Inequities exist not only in the share of the burden of malnutrition but also within the delivery of nutrition-specific and nutrition-sensitive interventions, with some areas and groups experiencing higher coverage of essential interventions and services than others. Existing disparities in malnutrition, diet quality and income also intensified in many ASEAN Member States following the onset of the COVID-19 pandemic.

Recognizing and promoting equity should be a fundamental component of any nutrition policy design, implementation, monitoring and evaluation in ASEAN Member States. Resource allocation for nutrition should target those who are most vulnerable or often missed in programming. Social protection schemes can help mitigate poverty and other barriers to improved nutrition by subsidizing household incomes and increasing access to and uptake of essential services. Systematic and continuous collection of disaggregated data – considering wealth, education, location, ethnicity, gender and disability, among other factors – is also necessary to help improve understanding of nutrition inequalities in ASEAN Member States and inform policies and priority-setting.

Financing

Progress towards nutrition targets will remain limited if governments do not commit to providing sufficient funds. While it is encouraging that several Member States have developed costed implementation plans for nutrition and some have incorporated dedicated nutrition budget lines, overall financing for nutrition in the ASEAN region still may not be sufficient to overcome current levels of malnutrition. An analysis of budget allocations for nutrition (both within and outside the health system) in four ASEAN Member States found

that expenditure on nutrition programmes constitutes a very small proportion of total government expenditure: between 0 and 2.5 per cent in Indonesia, Lao People's Democratic Republic and Viet Nam and 9 per cent in the Philippines.[97]

Achieving global nutrition targets for *all* will require more domestic financing and development assistance. Member States should carry out costing exercises for all plans and activities, leveraging both traditional and non-traditional financing mechanisms. Low budget priority may be a result of limited awareness on the economic case of investing in nutrition among financial decision-makers. Advocacy efforts should be carried out to encourage donors to increase spending on nutrition and to mobilize governments to strongly increase allocation of domestic resources to all sectors involved. Adequate, timely and predictable funding is key to ensure the effective delivery of nutrition interventions.

Price and availability of nutritious foods

Today, there is enough food being produced globally to meet the *energy* needs of all people, however, the same cannot be said for the availability of the *nutrient-rich* foods needed for a healthy diet.[43] Limited availability and affordability of nutrient-rich foods in ASEAN Member States means that families rely more on carbohydrate-rich staples for their meals and less on nutrient-rich fruits, vegetables and animal-source foods. The 2020 State of Food Security and Nutrition in the World report noted an association between the affordability of a healthy diet and nutritional outcomes: the more unaffordable a healthy diet in a given context, the greater the prevalence of child stunting.[9]

Production and supply chain problems constrain food availability, particularly for fresh and nutritious foods, and efforts to strengthen national food supply chains are therefore needed. When nutritious foods are unavailable, mass fortification of foods or condiments such as grains, salt and oil can be used to boost the availability of nutrients in the food supply chain. Enforcement of food fortification programmes should be integrated within existing food control systems and combined with advocacy to establish food fortification programmes where there is untapped potential in the ASEAN region (e.g., rice). To make nutritious foods more affordable, economic tools that subsidize food prices or social protection schemes that provide cash, food or food vouchers should be employed to help families overcome financial barriers.

Food security and nutrition surveillance system

Leveraging data for programme monitoring and decision-making is key. In addition to monitoring nutrition activities and outcomes, it is important to routinely monitor other indicators of food security at household level. While it is clear that affordability is a key issue for families in accessing the diets they wish to see for themselves and their children, data on the affordability of healthy diets is unavailable due to lack of information on household food expenditures. In addition, there is a lack of regular food security and nutrition information from localized areas (hotspots), different population groups and vulnerable people (i.e., migrants, urban poor, informal sector workers) and from different periods during the year (seasonality). National and/or subnational food security and nutrition surveillance systems can help bridge this information gap and better equip decision-makers with the information needed to make an impact on nutrition.

Food industry

Families have the right to accurate information about what, when, and how to feed themselves and their children. Yet not enough is being done to protect children and their families from misleading claims on unhealthy foods. The food and beverage industry and its marketing practices have a tremendous impact on the population's diet and consumption patterns (both positive and negative). Products are often deceptively marketed, with labels touting false health benefits or claims that they are suitable for infants and young children.[17,98] At the same time, the food industry's widespread promotion of BMS (such as infant formula, follow-up formula and 'growing-up' milks) and unhealthy commercially produced snack products marketed

as suitable for children[99] are influencing the social perception and use of these products.[100,101] Conversely, economic tools such as taxes, controls on the marketing of unhealthy foods, and front-of-pack labelling, can have a positive influence on the food industry and consumers by creating incentives for certain healthy products and behaviours and disincentives for unhealthy ones. However, legislation needs to be mandatory to provide a level playing field for the food and beverage industry players.

To improve the food environment in the ASEAN region, the governments need to engage with the food industry, guide them with policies and standards, and when necessary, hold them to account. Priority should be placed on implementation of regulatory frameworks and initiatives, including: the Code; the WHO *Guidance on Ending the Inappropriate Promotion of Foods for Infants and Young Children*; recommendations on the marketing of foods and non-alcoholic beverages to children; reformulation of processed foods including portion sizes; adoption of front-of-pack nutrition labelling requirements that identify foods that are high in salt, sugar and fats; and adoption of health-related food taxes, such as increased taxes on sugary and sweet beverages and 'junk food' and subsidies for healthy foods. All regulatory frameworks need to be accompanied by monitoring and enforcement measures that are free from commercial influence and conflicts of interest.

Gender inequality

Gender inequality harms mothers and children and makes them more vulnerable to malnutrition.[102-104] In most settings, mothers are considered primary caregivers, responsible for the feeding and care of infants, children and other adults in the household. There are deeply embedded social norms around childcare, cooking and feeding and gendered divisions of labour – i.e., the allocation of different work, roles and responsibilities to women and men within the household and the labour market. However, too often, power dynamics and patriarchal norms within communities and households prevent mothers from making decisions on what and how to feed their families. Gender power dynamics also hamper a mother's ability to seek health and nutrition services for herself and her children.[105] Less than half of women in Cambodia, Indonesia, Myanmar and the Philippines report being able to make decisions about health care on their own.[10]

In contrast, women's agency and empowerment can positively influence household spending on food and its allocation within the family, with benefits for improved diets and nutrition status.[106] In the same way, mothers' autonomy over health care-related decisions improves child nutrition outcomes. When women are afforded higher social status, they have better nutrition themselves and provide higher quality care to their children. One study across 96 countries found that gender inequality was a greater predictor of low birthweight than a country's GDP. In poor countries, an improvement in the gender equality index (a measure of inequalities related to reproductive health, empowerment and labour participation) from the 90th to the 50th centile would decrease child stunting by 10 per cent and childhood mortality by 54 per cent. These countries would effectively need to become middle-income countries to see the same improvements in nutrition from economic growth alone.[107]

Systems approach

A systems approach to nutrition recognizes that no single system can address the multiple drivers of malnutrition today. To drive faster progress in addressing malnutrition, a systems approach is needed to ensure that all key systems responsible for better diets and better nutrition are more accountable and better equipped to support good nutrition across the life cycle. Improving nutrition requires a *food system* that produces a range of nutritious foods that are available, accessible and affordable and disincentivizes consumption of nutrient-poor foods through taxation, marketing restrictions and front-of-pack labelling; a *health system* with well-trained staff to provide both preventive and curative health and nutrition services at all stages of life; a *water and sanitation* system that provides free and safe drinking water and safe sanitation services to improve utilization of nutrients from foods consumed; an *education* system that fosters nutrition literacy and operates as a delivery platform for nutrition services; and a *social protection* system that reduces inequalities by ensuring access to nutritious foods and other services for the most vulnerable.[108]

As noted in this report, recent regional coordination across sectors to develop the ASEAN Strategic Framework and Action Plan for Nutrition 2018–2030 and other key regional frameworks and initiatives is laudable and an encouraging first step towards addressing all drivers of malnutrition. Multisectoral coordination is needed within ASEAN Member States to drive national recognition that non-health systems also have a responsibility and role to play in improving diets. To achieve the 2030 Agenda for Sustainable Development, ASEAN Member State nutrition programming must acknowledge all responsible systems in all policy, programme and monitoring system design and implementation.

Putting children at the centre of programming to improve diets

Far too often the unique nutritional needs of infants and young children are not explicitly considered in efforts to improve diets and the systems that shape them. Between the ages of 6 months and 2 years, children have greater nutrient needs per kilogram of body weight than at any other time in life.[109] Yet, the importance of complementary feeding is not adequately reflected in national policies, plans, programmes and monitoring systems.

One reason for this might be uneven priorities. While efforts to improve breastfeeding – through advocacy, policies, programmes and investments – have dominated the child nutrition sphere for decades, fewer policies, programmes and resources have been targeted to the period beginning at 6 months of age when children start to consume their first solid foods. Young children's diets have not been sufficiently prioritized, and in turn, greater investments are needed to improve them.

The call for increased attention to complementary feeding is not an argument for a diversion of resources from breastfeeding to first foods; but rather, an argument that targeted investments and prioritization matter deeply. Young children's unique nutritional needs should be centred in health and non-health sector initiatives to improve diet quality. It is not just parents, but also governments, who have primary responsibility for making nutritious, safe and affordable foods available to children and their families.

6

THE WAY FORWARD

6 The way forward

The ASEAN Food and Nutrition Security Report 2021 recommends a specific set of actions to accelerate momentum towards ASEAN's vision of ending all forms of malnutrition. Recommended actions are organized in this chapter by the Strategic Thrusts outlined in the ASEAN Strategic Framework and Action Plan for Nutrition 2018–2030. Given the diversity of economic, social, health, political and cultural contexts within the ASEAN region, the actions noted here should be adopted and prioritized based on the particular needs and gaps within each ASEAN Member State.

► **Strategic Thrust 1:** Accelerate the evidence-based multisectoral actions to end all forms of malnutrition particularly among the most vulnerable, poor and disadvantaged groups [Scaling up nutrition service delivery].

1. **Maternal nutrition:** *Integrate nutrition actions specified in the 2016 WHO ANC guidelines into health and community-based systems including:*

    - Scale national delivery of MMS during pregnancy with routine measurement of coverage.
    - Expand the delivery of context-specific nutrition counselling for pregnant and lactating women through ANC, community-based structures and innovative channels such as social media, telecommunication and online.
    - Provide a minimum of eight ANC contacts with weight gain monitoring and targeted counselling provided at each visit. Provide linkages to social protection programmes for food insecure populations.
    - Scale national mandatory food fortification programmes such as salt iodization and fortification of staples with iron, folic acid, and other micronutrients to address micronutrient malnutrition.

2. **Early childhood nutrition:** *Improve access to and consumption of nutritious, safe, affordable and sustainable diets and essential services for young children.*

    - Strengthen the regulation of marketing and promotion of foods for infants and young children.
        - o Develop national standards for the composition and nutrient content of commercial complementary food products and identify maximum levels of sugar, salt, unhealthy fats and minimum levels of micronutrients and protein.
        - o Legislate mandatory front-of-pack warning labels for commercial complementary food products to inform caregivers of the nutritional quality of packaged foods for their young children.
        - o Use applicable digital technology to facilitate monitoring and reporting violations of the International Code of Marketing of Breastmilk Substitutes and continue to advocate for effective enforcement.
    - Rapidly scale up, with quality, the interventions with evidence of impact in the first 1000 days of life.
        - o Provide six counselling contact points on exclusive and continued breastfeeding and age-appropriate complementary feeding to caregivers during the first two years of their child's life using education-based approaches and promoting the consumption of specific nutrient-rich foods, such as eggs.
        - o Scale the provision of micronutrient supplementation to address considerable micronutrient deficiencies in young children using MNPs, iron supplementation and VAS.

3. **Wasting:** *Accelerate progress in prevention and treatment of wasting in the ASEAN region*

    - Set national wasting targets and monitor progress in achieving the SDG targets on wasting.
    - Include prevention and treatment of wasting in national stunting reduction plans.
    - Adopt new approaches for streamlining acute malnutrition treatment under a unified protocol and integrate wasting prevention and treatment programmes into health systems.
    - Strengthen availability of national data on wasting, including by integrating a minimum number of severe wasting indicators into national health information systems.

4. **Nutrition of school-age children:** *Create healthy environments for school-age children and adolescents to learn and practice healthy eating and physical activity.*

    - Provide nutritious meals that meet 30 per cent of children's nutrient requirements though the school.
    - Deliver micronutrient supplementation and deworming medication for school-age children and adolescents through the school platform.
    - Regulate the marketing of unhealthy food and non-alcoholic drinks in and around school premises.

5. **Prevention of overweight, obesity and NCDs:** *Protect children from harmful marketing of unhealthy processed foods.*

    - Develop and implement front-of-pack nutrition labelling requirements, including those that identify foods that are high in salt, sugar and unhealthy fats.
    - Regulate marketing to children by implementing the Guidance on Ending the Inappropriate Promotion of Foods for Infants and Young Children (WHA resolution 69.9) and recommendations on the marketing of foods and non-alcoholic beverages to children.
    - Adopt fiscal instruments (such as taxes or subsidies) that are suitable to local context and that create incentives for behaviours associated with improved health outcomes

► **Strategic Thrust 2:** Intensify efforts to engage with relevant sectors and stakeholders to address the multi-causality of all forms of malnutrition [Ensuring policy support and coherence among sectors]

- Develop social protection programmes targeting young children and pregnant women to increase access to and availability of nutritious and safe food.
- Mainstream nutrition into sectoral activities to strengthen nutrition linkages.
- Ensure nutrition goals and targets are reflected in actions by health, food, water and sanitation, and social protection systems.
- Generate evidence on emerging multisectoral themes in nutrition, including: urban nutrition, inequities in nutrition service delivery and utilization, and the food system and food environment.

► **Strategic Thrust 3:** Increase public, multisectoral investments and level of cooperation to improve nutrition and ensure healthy diets [Resource mobilization]

- Prioritize the expansion of proven nutrition interventions within financing commitments, as detailed in the various ASEAN nutrition guidelines and minimum standards.
- Increase domestic investments in nutrition by governments.

► **Strategic Thrust 4:** Strengthen human and institutional capacities in multisectoral planning and evaluation, policy analysis and advocacy, health and nutrition research, nutrition surveillance and service delivery [Capacity-building for nutrition stakeholders]

- Strengthen capacities of health care providers and health volunteers to detect and treat severe wasting as a routine primary health care service.
- Assess training needs for the implementation and rollout of the various ASEAN nutrition guidelines and minimum standards and conduct regional capacity building activities as needed.

► **Strategic Thrust 5:** Monitor progress of the ASEAN Strategic Framework and Action Plan for Nutrition [Monitoring and evaluation through the ASEAN Nutrition Surveillance System]

- Reliable, routine data on nutrition status and intervention performance is required so that Member States can calibrate actions consistently and continuously to ensure programmes are achieving their intended objectives.
  - o Collect disaggregated data wherever possible to identify population groups most in need of support and ensure the most vulnerable households and communities are not left behind.
  - o Monitor the implementation and use of the ASEAN Nutrition Surveillance System and the various ASEAN nutrition guidelines and minimum standards.

REFERENCES

References

1. PAHO. Guiding principles for complementary feeding of the breastfed child. Washington, D.C.: Pan American Health Organization; 2003.

2. Stewart CP, Iannotti L, Dewey KG, Michaelsen KF, Onyango AW. Contextualising complementary feeding in a broader framework for stunting prevention. Matern Child Nutr. 2013;9 Suppl 2:27-45. doi:10.1111/mcn.12088

3. Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. Lancet. 2013;382(9890):427-451. doi:10.1016/S0140-6736(13)60937-X

4. ASEAN, UNICEF. Regional Report on Nutrition Security in ASEAN, Volume 1. Bangkok: UNICEF; 2016.

5. ASEAN, UNICEF, WHO. Regional Report on Nutrition Security in ASEAN, Volume 2. Bangkok: UNICEF; 2016.

6. ASEAN Secretariat. ASEAN Key Figures 2020. Jakarta: 2020.

7. WHO. WHO Estimates of the Global Burden of Foodborne Diseases. Foodborne Disease Burden Epidemiology Reference Group 2007-2015. Geneva: 2015.

8. Beal T, Massiot E, Arsenault JE, Smith MR, Hijmans RJ. Global trends in dietary micronutrient supplies and estimated prevalence of inadequate intakes. PLoS One. 2017;12(4):e0175554. doi:10.1371/journal.pone.0175554

9. FAO, IFAD, UNICEF, WFP, WHO. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome: FAO;2020.

10. UNICEF. Regional Report on Maternal Nutrition and Complementary Feeding. Bangkok: UNICEF East Asia and the Pacific; 2020.

11. United Nations, Department of Economic and Social Affairs, Population Division. World Urbanization Prospects: The 2018 Revision, Online Edition. 2018.

12. Turner C, Aggarwal A, Walls H, et al. Concepts and critical perspectives for food environment research: A global framework with implications for action in low- and middle-income countries. Global Food Security. 2018;18:93-101. doi:https://doi.org/10.1016/j.gfs.2018.08.003

13. GAIN, JHU. The Food Systems Dashboard. Global Alliance for Improved Nutrition (GAIN) and Johns Hopkins University (JHU). https://www.foodsystemsdashboard.org. Published 2020. Accessed 01 January, 2021.

14. Development Initiatives. Global Nutrition Report: Action on equity to end malnutrition. Bristol, UK2020.

15. Steyn NP, McHiza Z, Hill J, et al. Nutritional contribution of street foods to the diet of people in developing countries: a systematic review. Public Health Nutr. 2014;17(6):1363-1374. doi:10.1017/S1368980013001158

16. Kelly B, King L, Jamiyan B, et al. Density of outdoor food and beverage advertising around schools in Ulaanbaatar (Mongolia) and Manila (The Philippines) and implications for policy. Critical Public Health. 2015;25(3):280-290. doi:10.1080/09581596.2014.940850

17. Kelly B, Hebden L, King L, et al. Children's exposure to food advertising on free-to-air television: an Asia-Pacific perspective. Health Promot Int. 2016;31(1):144-152. doi:10.1093/heapro/dau055

18. FAO, UNICEF, WFP, WHO. Placing Nutrition at the Centre of Social Protection. Asia and the Pacific Regional Overview of Food Security and Nutrition 2019. Bangkok: FAO;2019.

19. WHO, UNICEF. Joint Monitoring Programme for Water Supply, Sanitation and Hygiene https://washdata.org. Accessed January 15, 2021.

20. FAO, UNICEF, WFP, WHO. Asia and the Pacific Regional Overview of Food Security and Nutrition 2020: Maternal and child diets at the heart of improving nutrition. Bangkok: FAO; 2021.

21. White JM, Begin F, Kumapley R, Murray C, Krasevec J. Complementary feeding practices: Current global and regional estimates. Matern Child Nutr. 2017;13 Suppl 2. doi:10.1111/mcn.12505

22. UNICEF. The State of the World's Children 2019. Children, Food and Nutrition: Growing well in a changing world. New York: UNICEF; 2019.

23. ADB. Food security in Asia and the Pacific. Mandaluyong City: Asian Development Bank ;2013

24. Hewitson B., Janetos A.C., Carter T.R., et al. Regional context. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press; 2014:1133-1197.

25. Morgan PJ, Trinh LQ. Impacts of COVID-19 on households in ASEAN countries and their implications for human capital development. Asian Development Bank Institute;2021.

26. Neo P. 'Serious consequences': ASEAN COVID-19 lockdowns heighten food supply fears. FoodNavigator-Asia. 01 April, 2020.

27. WHO. Comprehensive implementation plan on maternal, infant and young child nutrition. Geneva: World Health Organization (WHO); 2014.

28. WHO. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva: World Health Organization (WHO); 2013.

29. Christian P, Lee SE, Donahue Angel M, et al. Risk of childhood undernutrition related to small-for-gestational age and preterm birth in low- and middle-income countries. Int J Epidemiol. 2013;42(5):1340-1355. doi:10.1093/ije/dyt109

30. Gu H, Wang L, Liu L, et al. A gradient relationship between low birth weight and IQ: A meta-analysis. Sci Rep. 2017;7(1):18035. doi:10.1038/s41598-017-18234-9

31. Jornayvaz FR, Vollenweider P, Bochud M, Mooser V, Waeber G, Marques-Vidal P. Low birth weight leads to obesity, diabetes and increased leptin levels in adults: the CoLaus study. Cardiovasc Diabetol. 2016;15:73. doi:10.1186/s12933-016-0389-2

32. de Onis M, Borghi E, Arimond M, et al. Prevalence thresholds for wasting, overweight and stunting in children under 5 years. Public Health Nutr. 2019;22(1):175-179. doi:10.1017/S1368980018002434

33. Headey D, Heidkamp R, Osendarp S, et al. Impacts of COVID-19 on childhood malnutrition and nutrition-related mortality. Lancet. 2020;396(10250):519-521. doi:10.1016/S0140-6736(20)31647-0

34. UNICEF. UNICEF Data: Malnutrition. https://data.unicef.org/topic/nutrition/malnutrition/. Accessed 04 January 2021.

35. WHO. Haemoglobin concentrations for the diagnosis of anaemia and assessment of severity. Vitamin and Mineral Nutrition Information System Geneva: World Health Organization; 2011.

36. Collaboration NCDRF. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. Lancet. 2017;390(10113):2627-2642. doi:10.1016/S0140-6736(17)32129-3

37. WHO. Urinary iodine concentrations for determining iodine status in populations. World Health Organizaiton; 2013.

38. ADB. Wealthy But Unhealthy: Overweight and Obesity in Asia and the Pacific: Trends, Costs, and Policies for Better Health. Manila: Asian Development Bank;2018.

39. WHO. Global status report on noncommunicable diseases Geneva: World Health Organization;2014.

40. Ministry of Health Singapore. Singapore National Population Health Survey. 2017.

41. IDF. IDF diabetes atlas (9th edn). Brussels: International Diabetes Federation; 2019.

42. G. B. D. Diet Collaborators. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet. 2019;393(10184):1958-1972. doi:10.1016/S0140-6736(19)30041-8

43. FAO, IFAD, UNICEF, WFP, WHO. The State of Food Security and Nutrition in the World 2020: Transforming food systems for affordable healthy diets Rome: Food and Agriculture Organization; 2020.

44. PAHO. Guiding principles for complementary feeding of the breastfed child. Washington, D.C.: Pan American Health Organization; 2003.

45. WHO. Complementary feeding of young children in developing countries: A review of current scientific knowledge.: World Health Organization; 1998.

46. WHO, UNICEF. Indicators for assessing infant and young child feeding practices: definitions and measurement methods. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF);2021.

47. UNICEF, WHO, FANTA/FHI 360, USAID. Meeting report on considering, refining, and extending the World Health Organization infant and young child feeding indicators. 2017.

48. WHO, UNICEF. Meeting Report: Inter-agency technical consultation on infant and young child feeding indicators. World Health Organization, United Nations Childrens Fund (UNICEF);2018.

49. Ministry of Agriculture and Forestry. Lao PDR Risk and Vulnerability Survey 2012/13 Analysis Report. 2013.

50. Green M, Hadihardjono DN, Pries AM, Izwardy D, Zehner E, Huffman SL. High proportions of children under 3 years of age consume commercially produced snack foods and sugar-sweetened beverages in Bandung City, Indonesia. Maternal & Child Nutrition. 2019;15(S4):e12764. doi:10.1111/mcn.12764

51. Li L, Sun N, Zhang L, et al. Fast food consumption among young adolescents aged 12-15 years in 54 low- and middle-income countries. Glob Health Action. 2020;13(1):1795438. doi:10.1080/16549716.2020.1795438

52. Collaborators GBDD. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet. 2019;393(10184):1958-1972. doi:10.1016/S0140-6736(19)30041-8

53. WHO. Guideline: Sodium intake for adults and children. Geneva: World Health Organization; 2012.

54. Ministry of Health Brunei Darussalam. The 2nd National Health and Nutritonal Status Survey (NHANSS), Phase 2: 5-75 years old. 2014.

55. WHO. WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: World Health Organization; 2016.

56. WHO. WHO antenatal care recommendations for a positive pregnancy experience. Nutritional interventions update: Multiple micronutrient supplements during pregnancy. Geneva: World Health Organization; 2020.

57. Bernardo H, Cesar V, WHO. Long-term effects of breastfeeding: a systematic review. World Health Organization; 2013.

58. Kelishadi R, Farajian S. The protective effects of breastfeeding on chronic non-communicable diseases in adulthood: A review of evidence. Adv Biomed Res. 2014;3:3. doi:10.4103/2277-9175.124629

59. Zimmermann MB. Iodine deficiency. Endocr Rev. 2009;30(4):376-408. doi:10.1210/er.2009-0011

60. Health Data Center, Ministry of Health, Thailand.

61. National Nutrition Centre, Department of Public, Ministry of Health,. National Hemoglobin Survey in Myanmar (Unpublished results). 2003.

62. MoHS, ICF. Myanmar Demographic and Health Survey (2015-16): Final Report. 2017.

63. National Nutrition Centre, Department of Public, Ministry of Health,. Myanmar Micronutrient and Food Consumption Survey (MMFCS 2017-2018): Interim Report. Nay Pyi Taw: National Nutrition Centre; 2019.

64. ILO. Maternity and paternity at work: Law and practice across the world. Geneva: International Labour Organziation; 2014.

65. Alive & Thrive. A&T Monthly Updates: Southeast Asia, February 2020.

66. Access to Nutrition Index. Marketing of breast-milk substitutes, Thailand 2018. Access to Nutrition Foundation (ATNF).

67. WHO. Marketing of breast-milk substitutes: National implementation of the international code, Status report 2020. Geneva: World Health Organization; 2020.

68. WHO. National Implementation of the Baby-friendly Hospital Initiative, 2017. Geneva: World Health Organization; 2017.

69. Centers of Excellence for Breastfeeding, Alive & Thrive, Irish Aid. Center of Excellence for Breastfeeding Initiative in Viet Nam: Frequently Asked Questions 2020.

70. World Cancer Research Fund. NOURISHING Database. https://policydatabase.wcrf.org/. Accessed January 15, 2021.

71. World Economic Forum, WHO. From burden to “best buys”: reducing the economic impact of NCDs in low- and middle-income countries.: World Economic Forum and World Health Organization; 2011.

72. Bloom D.E., Cafiero E.T., Jané-Llopis E., et al. The Global Economic Burden of Noncommunicable Diseases. Geneva: World Economic Forum; 2011.

73. Castillo-Carandang NT, Buenaventura RD, Chia YC, et al. Moving Towards Optimized Noncommunicable Disease Management in the ASEAN Region: Recommendations from a Review and Multidisciplinary Expert Panel. Risk Manag Healthc Policy. 2020;13:803-819. doi:10.2147/RMHP.S256165

74. Abegunde DO, Mathers CD, Adam T, Ortegon M, Strong K. The burden and costs of chronic diseases in low-income and middle-income countries. Lancet. 2007;370(9603):1929-1938. doi:10.1016/S0140-6736(07)61696-1

75. Dans A, Ng N, Varghese C, Tai ES, Firestone R, Bonita R. The rise of chronic non-communicable diseases in southeast Asia: time for action. Lancet. 2011;377(9766):680-689. doi:10.1016/S0140-6736(10)61506-1

76. Cambodia TUoHS. Prevalence of Non-Communicable Disease Risk Factors in Cambodia (STEPS Survey 2016). 2018.

77. WHO. Global NCD target: reduce salt intake. Geneva: World Health Organization; 2016.

78. Iwamoto K. Southeast Asian sugar taxes: Bitter pills for better health. NIKKEI Asia. 12 March 2019, 2019.

79. WHO, FAO. Guidelines on food fortification with micronutrients. Geneva and Rome: World Health Organization and Food and Agriculture Organization; 2006.

80. Horton S, Mannar V, Wesley A. Best Practice Paper Food Fortification with Iron and Iodine 2008.

81. Codling K, Rudert C, Begin F, Pena-Rosas JP. The legislative framework for salt iodization in Asia and the Pacific and its impact on programme implementation. Public Health Nutr. 2017;20(16):3008-3018. doi:10.1017/S1368980017001689

82. IKU, IHSR, IHBR. National Health and Morbidity Survey 2019: Fact Sheet. Shah Alam, Selangor: Institute for Public Health (IKU), Institute for Health Systems Research (IHSR), Institute for Health Behavioural Research (IHBR);2020.

83. National Health and Morbidity Survey 2014: Malaysian Adult NutritionSurvey (MANS) Vol. II : Survey Findings. Kuala Lumpur: Institute for Public Health (IPH).

84. Institute for Public Health. National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseses, Risk Factors & Other Health Problems. 2015.

85. Ministry of Health Singapore, Institute for Health Metrics and Evaluation. The Burden of Disease in Singapore, 1990 – 2017: An overview of the Global Burden of Disease Study 2017 results. Seattle, WA: IHME;2 019.

86. Naidoo N, van Dam RM, Ng S, et al. Determinants of eating at local and western fast-food venues in an urban Asian population: a mixed methods approach. Int J Behav Nutr Phys Act. 2017;14(1):69. doi:10.1186/s12966-017-0515-x

87. Vitta BS, Dewey KG. Identifying micronutrient gaps in the diets of breastfed 6-11 month old infants in Bangladesh, Ethiopia and Viet Nam using linear programming. Washington DC: Alive & Thrive; 2012.

88. Brown M, Do Thi BH, Huỳnh NP, et al. Local Acceptability and HACCP Production of Fortified Complimentary Foods in Lao Cai, Vietnam. Unpublished.

89. Blakistone B, Corby J, DeVlieger D, Flick G. Hazard Analysis and Critical Control Point. 2011.

90. Oxfam. Dignity not destitution: an 'economic rescue plan for all' to tackle the coronavirus crisis and rebuild a more equal world. 2020.

91. PIDS. Pantawid Pamilyang Pilipino Program Third Wave Impact Evaluation (IE Wave 3): Regression Discontinuity Report Manila: Philippine Institute for Development Studies;2020.

92. World Bank. Program Keluarga Harapan: Main Findings from the Impact Evaluation of Indonesia's Pilot Household Conditional Cash Transfer Program. Jakarta: The World Bank; 2011.

93. World Bank. Indonesia Social Assistance Public Expenditure Review Update: Towards a Comprehensive, Integrated, and Effective Social Assistance System in Indonesia. Washington DC: World Bank Group; 2017.

94. Mutunga M, Abla C, Rutishauser-Perera A, Sukotjo S. Building national capacities for emergency nutrition preparedness and response in East Asia and the Pacific. In. Field Exchange. Vol Issue 622020.

95. Huynh P, Vu D. A robust, organized and effective response to COVID-19 saved lives in Viet Nam. https://scalingupnutrition.org/news/a-robust-organized-and-effective-response-to-covid-19-saved-lives-in-viet-nam/. Published 2020. Accessed August 18, 2020.

96. Collin J, Ralston R, Hill SE, Westerman L. Signalling Virtue, Promoting Harm: Unhealthy commodity industries and COVID-19. NCD Alliance, SPECTRUM; 2020.

97. Development Initiatives. Global Nutrition Report 2017: Nourishing the SDGs. Bristol, UK: Development Initiatives;2017.

98. Kelly B, Vandevijvere S, Ng S, et al. Global benchmarking of children's exposure to television advertising of unhealthy foods and beverages across 22 countries. Obes Rev. 2019;20 Suppl 2:116-128. doi:10.1111/obr.12840

99. Champeny M, Pereira C, Sweet L, et al. Point-of-sale promotion of breastmilk substitutes and commercially produced complementary foods in Cambodia, Nepal, Senegal and Tanzania. Maternal & child nutrition. 2016;12 Suppl 2:126-139. doi:10.1111/mcn.12272

100. Piwoz EG, Huffman SL. The Impact of Marketing of Breast-Milk Substitutes on WHO-Recommended Breastfeeding Practices. Food Nutr Bull. 2015;36(4):373-386. doi:10.1177/0379572115602174

101. Pries AM, Huffman SL, Champeny M, et al. Consumption of commercially produced snack foods and sugar-sweetened beverages during the complementary feeding period in four African and Asian urban contexts. Maternal & child nutrition. 2017;13 Suppl 2. doi:10.1111/mcn.12412

102. Bhalotra S, Rawlings SB. Intergenerational persistence in health in developing countries: The penalty of gender inequality? Journal of Public Economics. 2011;95(3):286-299. doi:https://doi.org/10.1016/j.jpubeco.2010.10.016

103. Shroff M, Griffiths P, Adair L, Suchindran C, Bentley M. Maternal autonomy is inversely related to child stunting in Andhra Pradesh, India. Maternal & child nutrition. 2009;5(1):64-74. doi:10.1111/j.1740-8709.2008.00161.x

104. Smith L, Ramakrishnan U, Ndiaye A, Haddad L, Martorell R. The importance of women's status for child nutrition in developing countries. Washington, DC: International Food Policy Research Institute (IFPRI);2003.

105. Muraya KW, Jones C, Berkley JA, Molyneux S. "If it's issues to do with nutrition...I can decide...": gendered decision-making in joining community-based child nutrition interventions within rural coastal Kenya. Health Policy Plan. 2017;32(suppl_5):v31-v39. doi:10.1093/heapol/czx032

106. Jones R, Haardorfer R, Ramakrishnan U, Yount KM, Miedema S, Girard AW. Women's empowerment and child nutrition: The role of intrinsic agency. SSM Popul Health. 2019;9:100475. doi:10.1016/j.ssmph.2019.100475

107. Marphatia AA, Cole TJ, Grijalva-Eternod C, Wells JCK. Associations of gender inequality with child malnutrition and mortality across 96 countries. Glob Health Epidemiol Genom. 2016;1:e6. doi:10.1017/gheg.2016.1

108. UNICEF. UNICEF Nutrition Strategy 2020–2030: Nutrition, for Every Child. New York: UNICEF;2020.

109. Dewey KG. The challenge of meeting nutrient needs of infants and young children during the period of complementary feeding: an evolutionary perspective. J Nutr. 2013;143(12):2050-2054. doi:10.3945/jn.113.182527

ANNEX

Annex

Indicator definitions

Low birthweight	Percentage of live births that weigh less than 2,500 grams in a given time period.
Stunting in children under 5 years of age	Percentage of under-fives falling below minus 2 standard deviations (moderate and severe) from the median height-for-age of the reference population.
Wasting in children under 5 years of age	Percentage of children under 5 years of age falling below -2 standard deviations (moderate and severe) from the median weight-for-height of the reference population.
Severe wasting in children under 5 years of age	Percentage of children under 5 years of age falling below -3 standard deviations (severe) from the median weight-for-height of the reference population.
Underweight in children under 5 years of age	Percentage of under-fives falling below minus 2 standard deviations (moderate and severe) from the median weight-for-age of the reference population.
Overweight in children under 5 years of age	Percentage of children under 5 years of age falling above 2 standard deviations (moderate and severe) from the median weight-for-height of the reference population.
Wasting and stunting in children under 5 years of age	Percentage of children under 5 years of age who are both wasted and stunted (children under 5 falling below -2 standard deviations from the median weight-for-height and falling below -2 standard deviations from the median height-for-age of the reference population).
Stunting and overweight in children under 5 years of age	Percentage of children under 5 years of age who are both stunted and overweight (children under 5 falling below -2 standard deviations from the median height-for-age and falling at or above +2 standard deviations from the median weight-for-height of the reference population).
Children under 5 years of age free from wasting, stunting and overweight	Percentage of children under 5 years of age who neither overweight, nor stunted, nor wasted (children under 5 falling between -2 and +2 standard deviations from the median weight-for-height and falling at or above -2 standard deviations from the median height-for-age of the reference population).
Thinness among children aged 5–19 years	Percentage of children aged 5–19 years with a BMI less than 2 standard deviations below the median, according to the WHO references for school-age children and adolescents.
Overweight among children aged 5–19 years	Percentage of children aged 5–19 years with a BMI > 1 standard deviations above the median, according to the WHO references for school-age children and adolescents.
Underweight among women	Percentage of women aged 18 years and older with a BMI less than 18.5 kg/m2.
Overweight and obesity among women of reproductive age	Percentage of women aged 15–49 years of age with a BMI of 25 kg/m2 or higher.
Overweight and obesity among all adults	Percentage of men and women aged 18 and older with a BMI of 25 kg/m2 or higher.
Overweight and obesity among adult men	Percentage of men aged 18 and older with a BMI of 25 kg/m2 or higher.
Overweight and obesity among adult women	Percentage of women aged 18 and older with a BMI of 25 kg/m2 or higher.

Anaemia in children aged 6–59 months	Percentage of children aged 6−59 months with a haemoglobin concentration of less than 110 g/L, adjusted for altitude.
Anaemia in women of reproductive age	Percentage of women aged 15−49 years with a haemoglobin concentration less than 120 g/L for non-pregnant women and lactating women, and less than 110 g/L for pregnant women, adjusted for altitude and smoking.
Anaemia in pregnant women	Percentage of pregnant women aged 15−49 years with a haemoglobin concentration less than 110 g/L, adjusted for altitude and smoking.
Anaemia in non-pregnant women	Percentage of non-pregnant women aged 15−49 years with a haemoglobin concentration less than 120 g/L, adjusted for altitude and smoking.
Median urinary iodine concentration in children 6–12 years of age	Median urinary iodine concentration in children 6–12 years of age (adequate is considered 100-299 µg/l).
Median urinary iodine concentration in pregnant women	Median urinary iodine concentration in pregnant women (adequate is considered 150-299 µg/l).
Vitamin A deficiency in children under 5	Percentage of children aged 6-59 months with a serum or plasma retinol < 0.70 µmol/l.
Early initiation of breastfeeding	Percentage of children born in the last 24 months who were put to the breast within one hour of birth.
Prelacteal feeding	Per cent of breastfed newborns receiving liquids or foods other than breastmilk in the first three days of life.
Exclusive breastfeeding under 6 months of age	Percentage of infants 0–5 months of age who were fed exclusively with breastmilk during the previous day. * Exclusive breastfeeding is defined as breastfeeding with no other food or drink, not even water. Breastfeeding by a wet nurse, feeding of expressed breastmilk, and feeding of donor human milk all count as being fed breast milk. Prescribed medicines, oral rehydration solution, vitamins and minerals are not counted as fluids or foods. However, herbal fluids and similar traditional medicines are counted as fluids, and infants who consume these are not exclusively breastfed.
Predominant breastfeeding	Percentage of infants 0–5 months of age who received breastmilk as the predominant source of nourishment during the previous day. * Predominant breastfeeding is defined as no food, animal milk or formula but consumption of breastmilk, water, water-based drinks (sweetened or flavoured water, teas, infusions, etc.), fruit juice, oral rehydration salts; drop and syrup forms of vitamins, minerals, and medicines.
Continued breastfeeding in children aged 12–23 months	Percentage of children 12–23 months of age who were fed breastmilk during the previous day.
Continued breastfeeding at 1 year of age	Percentage of children 12–15 months of age who were fed breastmilk during the previous day.
Continued breastfeeding at 2 years of age	Percentage of children 20–23 months of age who were fed breastmilk during the previous day.
Introduction of solid, semi-solid or soft foods at 6–8 months of age	Percentage of infants 6–8 months of age who consumed solid, semi-solid or soft foods during the previous day.
Minimum dietary diversity at 6–23 months of age	Percentage of children 6–23 months of age who consumed foods and beverages from at least five out of eight defined food groups during the previous day. *The eight food groups are: (i) breastmilk; (ii) grains, roots and tubers; (iii) legumes and nuts; (iv) dairy products (infant formula, milk, yogurt, cheese); (v) flesh foods (meat, fish, poultry and liver/organ meats); (vi) eggs; (vii) vitamin-A rich fruits and vegetables; (viii) other fruits and vegetables.

Minimum meal frequency at 6–23 months of age	Percentage of children 6–23 months of age who consumed solid, semi-solid or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more during the previous day. *Minimum is defined as: two times solid, semi-solid or soft foods for breastfed infants 6–8 months of age; three times solid, semi-solid or soft foods for breastfed children 9–23 months of age; and four times solid, semi-solid or soft foods and/or milk feeds for non-breastfed children 6–23 months of age.
Minimum acceptable diet at 6–23 months of age	Percentage of children 6–23 months of age who consumed a minimum acceptable diet during the previous day. *Breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day AND non-breastfed children 6–23 months of age who received at least two milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day.
Egg and/or flesh food consumption at 6–23 months of age	Percentage of children 6–23 months of age who consumed egg and/or flesh food during the previous day. *This indicator is based on consumption of flesh foods (meat, fish, poultry, and liver/organ meats) and eggs. Children are counted if either food group has been consumed.
Zero vegetable or fruit consumption at 6–23 months of age	Percentage of children 6–23 months of age who did not consume any vegetables or fruits during the previous day. * This indicator is based on consumption of vitamin A-rich fruits and vegetables and other fruits and vegetables described in the minimum dietary diversity indicator. Children are counted if there was no consumption of either food group. Plantains, starchy roots and tubers (such as white potatoes, yams and cassava) do not count for this indicator.
Insufficient physical activity in children aged 11–17 years	Percentage of children aged 11–17 years attaining less than 60 minutes of moderate- to vigorous-intensity activity daily.
Insufficient physical activity in adults aged 18 years and older	Percentage of adults aged 18 years and older attaining less than 150 minutes of moderate-intensity physical activity per week, or less than 75 minutes of vigorous-intensity physical activity per week, or equivalent.
Raised blood pressure in adults aged 18 years and older	Percentage of adults aged 18 years and older with systolic blood pressure ≥ 140 OR diastolic blood pressure ≥ 90).
Salt intake in adults	Estimated intake of salt (sodium chloride) per day in grams in adults aged 18 years and older.
Raised blood glucose/diabetes	Percentage of adults aged 18 years and older with a fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose.
Antenatal care (at least four visits)	Percentage of women aged 15–49 years with a live birth that received antenatal care four or more times in a given time period.
Antenatal care (at least eight visits)	Percentage of women aged 15–49 years with a live birth that received antenatal care eight or more times in a given time period.
Weight and blood pressure monitored during antenatal care	Percentage of pregnant women aged 15–49 with a live birth in the previous two years who had weight and blood pressure monitored during their first antenatal visit.
C-section	Percentage of births by caesarean section among all live births in a given time period.

Iron tablets or syrup for 90+ days during pregnancy	Women with a birth in the past 5 years who took iron tablets or syrup for 90+ days.
Institutional delivery	Percentage of women aged 15–49 years who gave birth in a health facility.
Receipt of iron tablets or syrup during antenatal care	Women with a birth in the past three years who received iron tablets or syrup in antenatal care.
Receipt of iron folic acid or multiple micronutrient supplements in first trimester of pregnancy	Percentage of pregnant women who received iron folic acid supplementation or multiple micronutrient supplementation in the first 12 weeks of pregnancy.
Skilled birth attendant	Percentage of births from mothers aged 15–49 years attended by skilled health personnel (typically a doctor, nurse or midwife).
Two-dose vitamin A supplementation coverage in children aged 6–59 months	Proportion of 6–59-month-olds receiving two high-dose vitamin A supplements in a calendar year (lower of semester 1 and semester 2 coverage).
Deworming coverage in children aged 1 to 5 years	Percentage of children 12–59 months of age who received deworming (400 mg albendazole or 500 mg mebendazole) in the previous 6 months.
Management of diarrhoea	Percentage of children under 5 years of age with diarrhoea receiving zinc treatment.
Households consuming salt with iodine	Percentage of households consuming salt with any iodine (>0 ppm).
Women aged 20–24 years who gave birth before age 18	Women aged 20–24 years who gave birth before age 18.
Birth rate for adolescent girls aged 15–19 years	Number of births per 1,000 adolescent girls aged 15–19 years.
Child marriage before age 15	Child marriage – Percentage of women aged 20–24 years who were first married or in union before they were 15 years old.
Child marriage before age 18	Percentage of women aged 20–24 years who were first married or in union before they were 18 years old.
Maternal mortality ratio	Number of deaths of women from pregnancy-related causes per 100,000 live births during the same time period.
Safely managed drinking water	Drinking water from an improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination.
Basic drinking water	Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing.
Limited drinking water	Drinking water from an improved source for which collection time exceeds 30 minutes for a roundtrip including queuing.
Unimproved drinking water	Drinking water from an unprotected dug well or unprotected spring.
Surface water (drinking water)	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal.
Safely managed sanitation	Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site.
Basic sanitation	Use of improved facilities which are not shared with other households.
Limited sanitation	Use of improved facilities shared between two or more households.
Unimproved sanitation	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines.
Open defecation	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste.

Basic hygiene facilities	Availability of a handwashing facility on premises with soap and water.
Limited hygiene facilities	Availability of a handwashing facility on premises without soap and water.
No hygiene facility	No handwashing facility on premises.
Undernourishment	Proportion of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life. It is expressed as a percentage.
Moderate to severe food insecurity	Prevalence of moderate or severe food insecurity based on Food Insecurity Experience Scale (FIES).
Severe food insecurity	Prevalence of severe food insecurity based on FIES.
Food inflation rate	Food inflation - base-year is rescaled to 2010, National consumer price index (CPI) by COICOP, percentage change from previous year (%), Food and non-alcoholic beverages.
General inflation rate	General inflation - base-year is rescaled to 2010, National CPI by COICOP, percentage change from previous year (%), General - Individual consumption expenditure of households.
Total dietary energy in the food supply	Total Dietary Energy Supply in the food supply (kcal/capita/day) for specific food groups.
National fruit and vegetable availability	National fruit and vegetable availability in grams/capita. Food supply quantity (kg/capita/year).
Fewer than five servings of fruits and vegetables in adults	Percentage of adults aged 18 years and older of persons consuming less than five total servings (400 grams) of fruit and vegetables per day.
Annual GDP growth rate	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
GDP per capita, PPP	GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the country plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
Gini coefficient	Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus, a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Poverty rates below $1.90/day	Percentage of the population living on less than $1.90 a day at 2011 international prices. The 'international poverty line' is currently set at $1.90 a day at 2011 international prices.
Poverty rates below $3.20/day	Percentage of the population living on less than $3.20 a day at 2011 international prices.
Poverty gap ratio	The poverty gap ratio is the mean shortfall of the total population from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line.
Life expectancy at birth	Number of years newborn children would live if subject to the mortality risks prevailing for the cross-section of population at the time of their birth.
Life expectancy at birth (female)	Number of years newborn female children would live if subject to the mortality risks prevailing for the cross-section of population at the time of their birth.
Life expectancy at birth (male)	Number of years newborn male children would live if subject to the mortality risks prevailing for the cross section of population at the time of their birth.
Income share – bottom 20 per cent of households	Percentage of income received by the 20 per cent of households with the lowest income (2010-2018).
Income share – bottom 40 per cent of households	Percentage of income received by the 40 per cent of households with the lowest income (2010–2018).
Income share – top 20 per cent of households	Percentage of income received by the 20 per cent of households with the highest income (2010–2018).
Neonatal mortality rate	Probability of dying during the first 28 days of life, expressed per 1,000 live births.
Infant mortality rate	Probability of dying between birth and exactly 1 year of age, expressed per 1,000 live births.
Under-five mortality rate	Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births.
Population growth rate (2010–2018)	Average rate of growth of the population. It is calculated as ln(Pt/P0)/t where t is the length of the period. It is expressed as a percentage.
Population growth rate (2018–2030)	Average rate of growth of the population. It is calculated as ln(Pt/P0)/t where t is the length of the period. It is expressed as a percentage.
Proportion of urban population	Urban population as a percentage of the total population.
Unemployment rate	Unemployment, total (% of total labour force) (modelled International Labour Organization estimate): Unemployment refers to the share of the labour force that is without work but available for and seeking employment.

one vision
one identity
one community

ASEAN Secretariat
Community Relations Division (CRD)
70A Jalan Sisingamangaraja
Jakarta 12110, Indonesia
Phone: (62 21) 724-3372, 726-2991
Fax: (62 21) 739-8234, 724-3504
E-mail: public@asean.org
www.asean.org

unicef
for every child

United Nations Children's Fund
UNICEF East Asia and Regional Office (EAPRO)
19 Phra Atit Road,
Bangkok 10200, Thailand
https://www.unicef.org/eapro
Email: asiapacificinfo@unicef.org

WFP
World Food Programme

World Food Programme
Regional Bureau for Asia and Pacific
7th floor, Wave Place Building; 55, Wireless Road, Pathumwan
Bangkok 10330, Thailand
https://www.wfp.org/
Email: wfp.bangkok@wfp.org

ISBN 978-623-6945-74-2 (no.jil.lengkap)
9 786236 945742

ISBN 978-623-6945-75-9 (jil.1)
9 786236 945759