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2018

Southeast Asian Ministers of Education Organization
Regional Centre for Food and Nutrition
(SEAMEO REC FON)



TOWARDS HEALTHY EATING

A Resource for Food and Nutrition Education
Southeast Asian Context

JUDHIASTUTY FEBRUHARTANTY
HELDA KHUSUN



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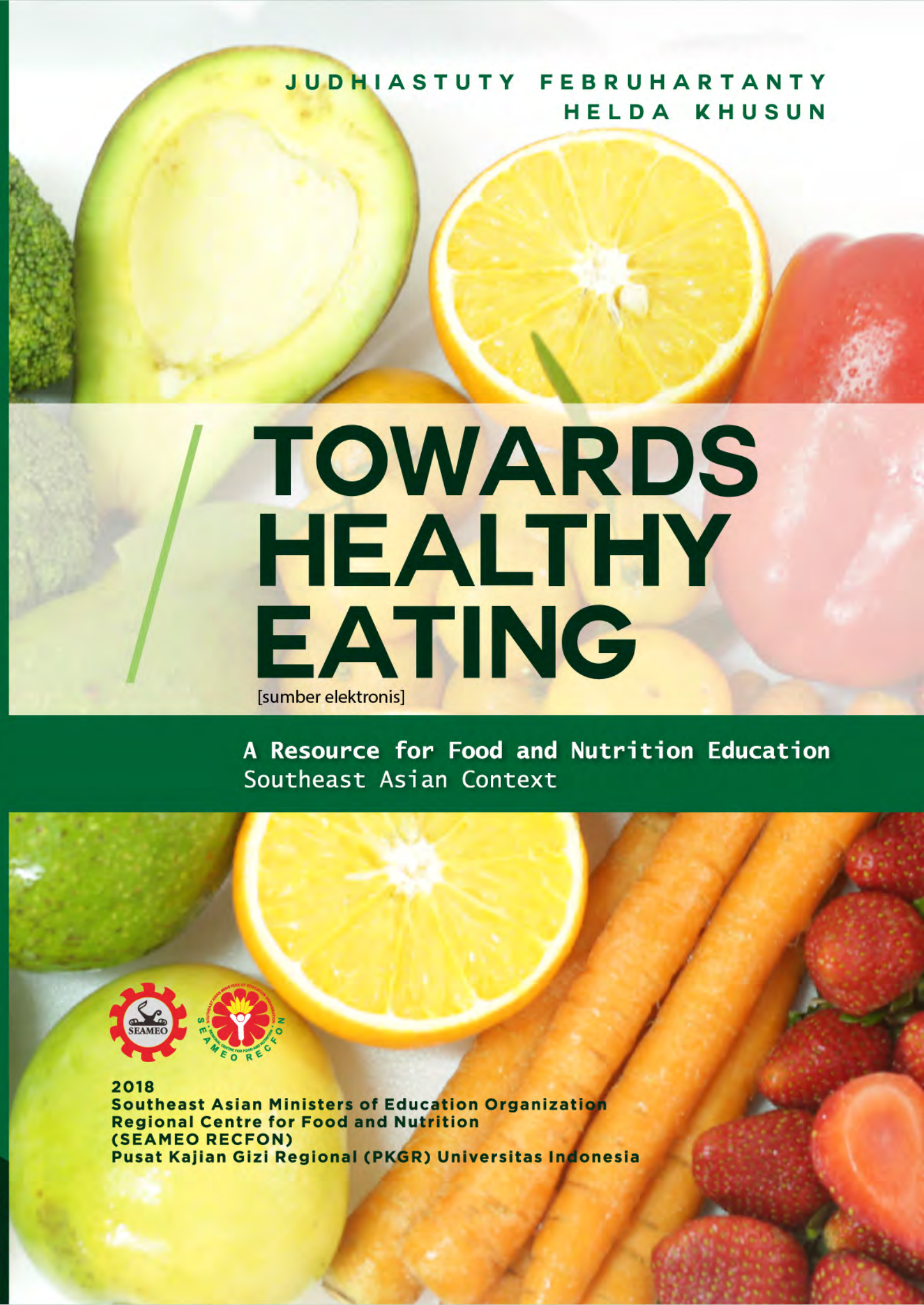
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[sumber elektronis]

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Pusat Kajian Gizi Regional (PKGR) Universitas Indonesia





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This book is intended for anybody who is passionate about food and nutrition, and currently considering or already working in the area of educating people.

This book provides information on the main nutrition problems in major Southeast Asian countries and the prevailing key problem behaviours related to food and eating practices that contribute to the consumption of low-quality diets. Therefore, this book aims to provide ideas for food and nutrition education sessions that can foster the development of healthy eating behaviours of the people.

However, this book does not cover lesson plans for the education session. Educators who use this book are encouraged to plan and develop them accordingly using additional resources. Useful links for educational resources can be found at the end section of this book.

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We thank Dr. Paige van der Pligt from Institute of Physical Activity and Nutrition, Faculty of Health, Deakin University for her comments and inputs to the initial draft of this book.

FOREWORD

The raising problems of the non-communicable diseases associated with the poor-quality diets exposing the population in the Southeast Asian region have called our attention as the Centre dedicating our work on the improvement of food practices and nutrition situation.

Our Centre's contribution in capacity building for professionals who are working in the field of food and nutrition has been held since 1967. Our long-standing commitment to education is heightened with the development of various teaching modules that serve as tools for enhancing our program excellence.

We are proud to publish this book. The book is one of the publications needed as a reference for facilitating the public in achieving healthy eating. We hope that readers will find the book useful and relevant for daily practice.

Enjoy reading and let us practice what we learn from this book.

Jakarta, November 2018



Muchtaruddin Mansyur, MD, PhD
(Director SEAMEO RECFON)

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CHAPTER 1. THE EMERGING WORLD'S ECONOMY

The Southeast Asia (SEA) region consists of Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste, and Vietnam. Although Timor Leste is not yet the formal Association of Southeast Asian Nations (ASEAN) member country, altogether the region houses a quarter of the world's population.



Figure 1.1 The Southeast Asian region map

According to ASEAN Secretariat's info-graphic video published in May 2014, if it were a single country it will be the 7th largest in the world. It is projected to rank as the 4th largest economy by 2050. It is a growing hub of consumer demand as it has the 3rd largest labour force in the world with 67 million households as part of the

consuming class which potentially will double to 125 million by 2025. In addition, collectively the region houses the 2nd largest of Facebook® community. Inter-regional trade as the share of the economy is less than half of the North American Free Trade Agreement (NAFTA) and the European Union (EU). This could deepen significantly with the implementation of the ASEAN Economic Community (AEC). The AEC aims to boost regional trade and production, delivering freer movement of goods, services, skilled labour, and capital. The region is well positioned in the centre of the global trade flows. It is 4th largest exporting region in the world after EU, United States of America (USA), and China. By sharing a common focus on jobs and prosperity, and by creating a seamless regional market and production base, the region could prove to be the case in which the whole actually does exceed the sum of its parts.

Based on The World Bank's newest country income classification in June 2018, Brunei Darussalam and Singapore are categorized as high income countries; Malaysia and Thailand as upper middle income countries; and the remaining as the lower middle income countries (Figure 1.2), suggesting a diverse range of economy in the region.

Brunei Darussalam	High Income
Singapore	High Income
Malaysia	Upper Middle Income
Thailand	Upper Middle Income
Cambodia	Lower Middle Income
Indonesia	Lower Middle Income
Lao PDR	Lower Middle Income
Myanmar	Lower Middle Income
Philippines	Lower Middle Income
Timor-Leste	Lower Middle Income
Vietnam	Lower Middle Income

(source: www.worldbank.org)

Figure 1.2 The 2018 World Bank country income classification

Together the SEA region forms a significant share of the world's market economy due to the size of their population and their emerging middle classes. As the centre of the world's economic gravity shifts eastwards from North America and Europe to India, China, including Southeast Asia, this region also attracts foreign trades that increase the likelihood of imported goods including food products from outside the region to permeate within the localities of the region.

1.1 Nutrition-related Problems and the Burden of Diseases

Reports show that the population's health indicators and nutritional status showed relatively much improvement over the years in the region. Life Expectancy at Birth is increasing from 1990 to 2017, with an increase ranging from 4 to around 20 years, indicating a general improvement in health and livelihood in the region. Moreover, Infant Mortality Rate as indicator of health care improvement, has also decreased substantially from 1965 to 2015 in the region, with highest decrease found in Timor Leste, Cambodia and Lao PDR (Table 1.1)

Nonetheless, the vast gaps in economic and technological development across the SEA countries showed that, in reality, immense inequalities in health burden persist in the region. This can also be shown in the vast difference in life expectancy and infant mortality rate in the region. Table 1.1 showed that life expectancy in 2016 ranged from around 66 in Myanmar and Lao PDR – the same as the average of the world in 2000 – to 82.8 years in Singapore – which is even higher than the current average of life expectancy in the all high income countries combined.

Table 1.1 Life Expectancy and Infant Mortality Rate in ASEAN Countries 1990-2016/17

Country Name	Life Expectancy at Birth (in year)		Infant Mortality Rate (per 1000 Live Birth)	
	1990	2016	1990	2017
Brunei Darussalam	72.9	77.2	10.3	9
Cambodia	53.6	69.0	84.7	25.1
Malaysia	70.7	75.3	14.3	6.7
Singapore	75.3	82.8	6.2	2.2
Philippines	65.3	69.1	40.5	22.2
Vietnam	70.5	76.3	37	16.7
Myanmar	58.7	66.6	81.9	38.5
Lao PDR	53.6	66.7	106.1	48.6
Thailand	70.3	75.3	30.2	8.2
Timor-Leste	48.5	68.9	130.5	40.8

Source: World Bank DataBank (<http://databank.worldbank.org/data/>)

A look at the development performance of the SEA region, ASEAN Secretariat's report on Millennium Development Goals (MDGs) Progress published in 2017 stated that

In the past two decades, the ASEAN region has shown remarkable success in reducing poverty, increasing employment, reducing gender gaps in education and expanding access to information and technology. It has been one of the main concerns of ASEAN to narrow the development gap among its Member States to ensure the benefits of ASEAN integration are equally shared - as disparities among the countries still persist and are more pronounced in some areas. For instance, the better-off ASEAN-6 countries (Brunei, Indonesia, Malaysia, Thailand, Singapore, Philippines) and the less developed CLMV countries (Cambodia, Lao PDR, Myanmar Vietnam), have all adequately achieved the MDGs targets of cutting poverty below the international poverty line and the number of underweight children under five years of age to less than half. However, poverty was still the highest in Cambodia and Lao PDR and the underweight was still the largest in Cambodia, Lao PDR and Myanmar.

ASEAN Statistical Report on Millennium Development Goals 2017; pp 16-17

The differences stated by the above mentioned report was also pronounced in nutritional problems. Overall, the region suffers from both under- and over-nutrition among key population groups such as under-five children, women at reproductive age including the adolescent girls, and adults. Global Nutrition Report states that globally the under-nutrition is slowly remedied, yet the over-nutrition is increasingly rapid affecting people at their productive age.

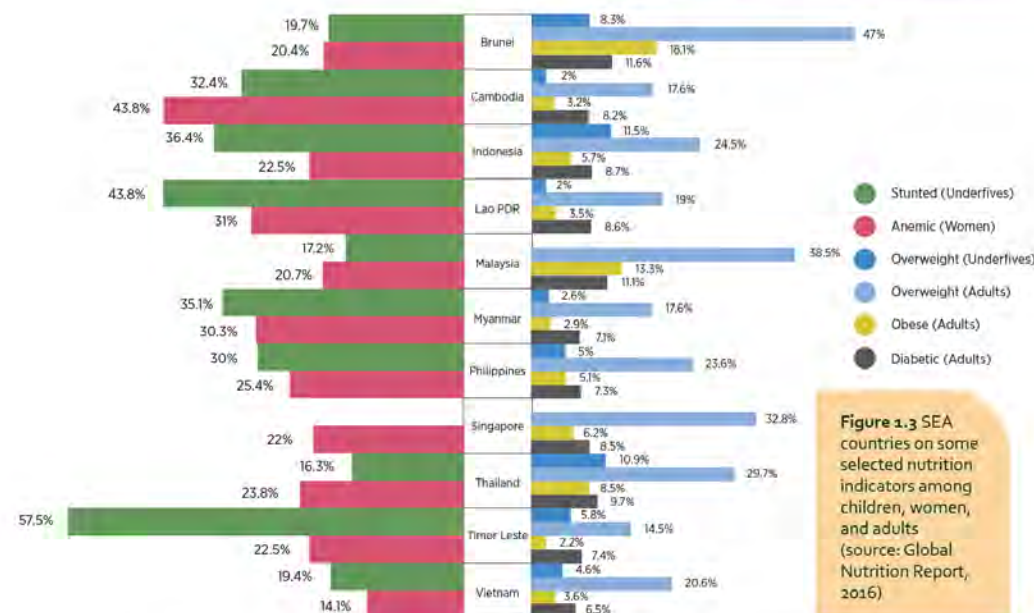


Figure 1.3 SEA countries on some selected nutrition indicators among children, women, and adults (source: Global Nutrition Report, 2016)

Figure 1.3 shows how countries in the SEA region manifest the nutrition problems. The trend in the region shows that whilst Timor Leste, Cambodia, and Lao PDR are facing serious problems in terms of under-nutrition among young children and women respectively, Indonesia and Thailand are on the rise for childhood obesity, compounded by Brunei and Malaysia for adult obesity and diabetes. As per individual country, majority of the SEA countries are also facing the so-called 'double burden of malnutrition'. Philippines and Indonesia for instance, suffer from a high prevalence of both under-nutrition and over-nutrition.

The differences in nutritional problems were then reflected in the burden of diseases in the SEA Countries. The 2016 Global Burden of Disease (BOD) indicated by cause of premature death showed that communicable diseases and maternal/neonatal problems still dominated the BOD of Cambodia, Myanmar, Lao PDR, while in Brunei, Malaysia, Singapore and Thailand it was dominated by chronic non-communicable diseases. Indonesia, Vietnam and The Philippines pattern of BOD were in between ((GBD 2016 Mortality and Cause of Death Collaborators, 2017).

The Global Nutrition Report also articulates the position of ASEAN's achievement in comparison with other region as shown in Figure 1.4 below. The ASEAN Member States (AMS) are either ahead, or in line with, the other countries in the Asia-Pacific region on most of the MDGs goals. They are, however, lagging behind both in reducing the incidence of tuberculosis and in reducing deforestation. The AMS are also reducing the gender disparities in primary schools at a slower pace, but catching up in secondary and tertiary schools. As with other countries in the region, the AMS are early achievers in reducing poverty, ahead of the rest of the broader region in reducing the prevalence of underweight children, under-five and infant mortality as well as improving access to safe drinking water and improving basic sanitation.

Asia-Pacific MDGs Progress Chart

Goal	1	2	3			4		5	6	7				
	\$1.25 per day poverty	Underweight children	Primary enrolment	Gender primary	Gender secondary	Gender tertiary	Under-5 mortality	Infant mortality	Maternal mortality	Skilled birth attendance	TB incidence	Forest cover	Safe drinking water	Basic sanitation
ASEAN														
ASEAN-6														
CLMV														
Asia-Pacific														
Excluding China and India														
South Asia														
Pacific Island														
North and Central Asia														
Asia-Pacific LDCs														

Early Achiever On-track Slow Regressing/No progress

● Early Achiever → on-track ● Slow → Regressing/No progress

Figure 1.4 Comparison of ASEAN with other regions on MDGs progress (source: ASEAN Secretariat, 2017*)

Notes: ASEAN figures are based on ASEAN stats' estimates. Data, except for the ASEAN figures, were taken from "Making it happen – Technology, finance and statistics for sustainable development in Asia and the Pacific, Asia-Pacific regional MDGs report 2014/15", prepared by UN ESCAP, ADB and UNDP in 2015.

This is all to say, that the SEA region is somehow in the right track to reduce the nutrition and development challenges, but the pace of the improvement needs to increase in order to save millions of its population.

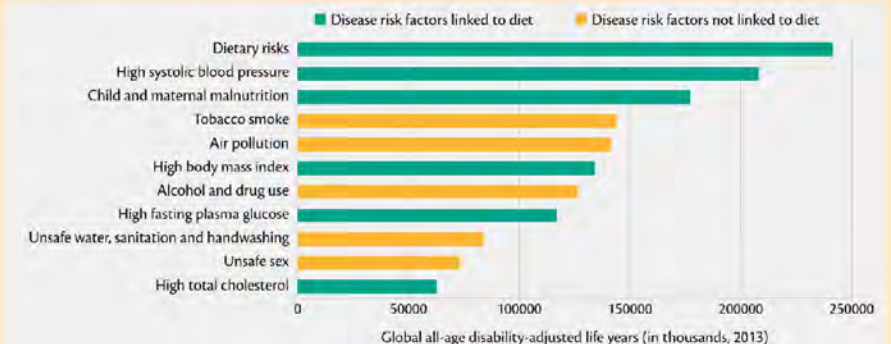
Box 1.1 Adolescent nutrition

In 2012, there were 1.2 billion adolescents in the world – defined as young people between the ages of 10 and 19 years. The vast majority of adolescents (90%) live in low- or middle-income countries. In some countries, as many as half of all adolescents are stunted (Black et al, 2013), which means their physical and cognitive development has been restricted because of inadequate nutrition. During the past decade, birth rates have declined globally while child survival has increased. Hence, there are more adolescents and young people today than ever before (Blum et al, 2012). As more children survive into the second decade of their lives, it is paramount that their specific nutrition needs are addressed.

Source: Save the Children Fund (2015)

Generally, nutritional problems are known to be driven by two main direct causes that include: 1) poor diets and 2) illnesses. The third significant cause is caring practice which directly could cause nutrition problem or indirectly through lack of

care provision to support good quality diet and good health state. However, a recent global analysis found that diet quality is an area that requires far greater attention as it is responsible for a number of diseases as shown in Figure 1.5.



Source: Global Burden of Disease Study 2013 Collaborators (2015), Figure 5

Note: The graph shows global disability-adjusted life years (DALYs) attributed to level 2 risk factors in 2013 for both sexes combined.

Figure 1.5 Six of the top 11 risk factors driving the global burden of disease are related to diet (source: Global Panel on Agriculture and Food Systems for Nutrition, 2016)

Malnutrition (which means both under and over-nutrition) associated with diets that are not nutritious or safe represents the number one risk factor in the global burden of disease. Other risk factors such as high blood pressure, child-maternal malnutrition, high body mass index, high fasting plasma glucose, and high total cholesterol are also diet-related. These low-quality diets contain insufficient calories, vitamins and minerals or contain too many calories, saturated fats, salt and sugar.

There have been many evidences that our diet patterns have changed from what our grandparents used to eating in the past to the current ones characterized by foods low in vegetables and fruits, grains, nuts, seeds, but high in sugars, salt, fats, as well as highly processed. Huge numbers of people worldwide have diets that are deficient in adequacy, diversity and balance. The present dietary pattern also contributes to the increase number of people suffering from non-communicable diseases such as heart diseases, diabetes, cancers, and many others. This phenomenon is well-known as Nutrition Transition. Modernization and urbanization are often identified as two most prominent drivers of Nutrition Transition taking place in developing countries like the ones in the SEA region.

1.2 Some Problem Behaviours on Food-related Practices

All the nutrition problems discussed in the earlier section are linked mostly with poor-quality of diets. The poor diets are the manifestation forms of some less favorable practices related to food habits and behaviours. Compilation of various studies globally as well as in the SEA region reveals food and eating practices that may contribute to intake of low quality diets (Box 1.2 and Table 1.2)

Box 1.2 Low quality diets practices



Practice	Brunei 2014	Indonesia 2015	Myanmar 2016	Thailand 2015	Timor Leste 2015
Consumed carbonated soft drinks on a regular basis ^a	46.4%	28%	44.9%	56.1%	43.2%
Often ^b dined at fast food restaurants	-	12.6%	-	54.7%	27.2%
Always having breakfast	-	35%	-	-	-
Regular ^c fruit consumption	-	35.7%	-	41%	18.9%
Regular ^d vegetable consumption	-	28.6%	-	32.5%	18.6%

^a at least once per day ^b 3 or more days in the last 7 days ^c 2 or more times a day ^d 3 or more times a day

Sources: http://www.who.int/ncds/surveillance/gshs/Brunei_Darussalam_2014_FactSheet.pdf; http://www.who.int/ncds/surveillance/gshs/GSHS_2015_Indonesia_Report_Bahasa.pdf; http://www.who.int/ncds/surveillance/gshs/Myanmar_2016_GSHS_FactSheet.pdf; http://origin.who.int/ncds/surveillance/gshs/Thailand-GSHS-2015_Report.pdf; http://apps.searo.who.int/PDS_DOCS/B5402.pdf

Table 1.2 Dietary practices of the students aged 13-17 years. Specifically addresses the prevailing dietary practices done by students aged 13-17 years old in some selected SEA countries based on Global School-based Student Health Survey (GSHS). Apparently, a relatively high proportion of these adolescents are exposed to sweet beverages.

1.3 Digital and Social Platforms for E-commerce on Foods

The role of digital and social media platforms in today's era cannot be ignored no more in terms of their influence to healthy eating. As explained in Box 1.4, a great number of people are now exposed to e-commerce in the food sector.

E-commerce is a growing industry that is also impacting the SEA region. A report on e-commerce in Indonesia (Austrade, 2018), but may also be valid for other countries in SEA region mentioned that the growth of e-commerce over the last five years has been primarily driven by four structural changes in the industry.

- the increase in smartphone penetration made possible by the availability of low-cost devices
- an emerging middle class with a larger portion of disposable income
- foreign direct investment in e-commerce platforms by leading Chinese and Western firms, specifically via significant joint venture or partner relationship
- the accelerating evolution of payments infrastructure that is enabling customers without bank accounts (unbanked consumers) to make online purchases



Box 1.3 Our relationship with food is changing

Weber Shandwick's *Asia Pacific Food Forward Trends Report II* (2014) examines the driving forces behind this relationship shift. They focus on four key markets in the region: Australia, China, Singapore and South Korea with the aim to understand a more effective means of consumer engagement in the sector of food industry. Four trends emerged from the study.



Frequency and sophistication of home cooking

- 40% Singaporeans as compared to 76% Australian eat home cooked meals most days.
- Most Singaporeans would use a health concern for the reason of home cooking, whilst Australians predominantly would like to stay within the budget.

Impact of social media on knowledge, insight and cooking habits

- 74% Koreans as opposed to 41% Australians turn to blogs and online sources for new recipes.
- 64% Chinese vs 29% Australians engage in frequent posting of their food experiences in social media.



Slow but steady adoption of online shopping in the grocery sector

- 77% Chinese and 63% Koreans as opposed to 33% Singaporeans and 28% Australians purchase food or drinks online.
- 76% Chinese admit to say their online food purchasing has increased in the past year.
- Type of foods bought online (ranked 1 and 2): Australians - snacks and canned goods, restaurant/fast foods; Chinese - snacks and canned goods, dairy and meat; Koreans - snacks and canned goods, beverages; Singaporeans - restaurant/fast foods; snacks and canned goods

Emerging scrutiny over the influence of celebrity endorsements

- 73% Chinese are more likely to buy a product or visit a restaurant that is endorsed by a celebrity chef or ambassador
- However, majority of respondents in these markets use word-of-mouth from a friend or family member when choosing a new food product or service.



Source: Weber Shandwick (2014)



CHAPTER 2. FOOD AND NUTRITION LITERACY

2.1 Food Consumption and Food Habits

Food is extensively used in social intercourse as a means of cultural identify, to show prestige and status, expressing friendship and respect, celebration and festival, a weapon to humiliate rivals, parts of sacrificial and sacramental rituals. Food consumption is a basic component of all human societies. It is an integral part of the culture of a community, religion, and nation. Food is a relative concept. On a global level, it appears that humans eat everything that is not immediately toxic. However, as we look closer at various cultures we find that there is considerable cultural variation in diet. What is considered edible in one culture may not be for another culture. Insects, for instance, are considered edible in several parts of Southeast Asia, as well as Mexico and tropical Africa and but they would be considered appalling by other cultures.

It is important to realize that individual food behaviour may differ from what is a generally accepted behaviour within a larger population. And also, drivers of individual and population habits differ. These bring us to the primary question of what are food habits. Food habits are the ways in which a community chooses, consumes, and makes use of available food in response to social, cultural, health, environmental, and economic pressures. Food habits come into being and are

maintained because they are effective, practical and meaningful behaviours in a particular culture (den Hartog et al., 2006).

Analysis of food habits is very useful, for it allows us to see that our own food practices and preferences are quite as exotic and strange, in the eyes of others, as they are in ours. Food is often used as a way of defining one's own group; whether a nation, community or society.

The interrelationship of food habits with components of cultural behaviour and environmental forces emphasize the lack of relevance of treating nutritional needs as the prime element of food choices and food habits. People do not think of food in terms of energy and nutrients. What individuals within a community consume is basically determined by two interrelated factors:

- What foods are available: this is affected by geographical factors such as climate, soil conditions, lowlands, highlands, rural, urban, food production, food processing and transport capacity. This is also affected by socio-economic developments, access to cash for goods, and both long and short term environmental changes.
- Socio-cultural influences on diet: this includes cultural legacy of previous generations. Culture will further determine attitudes toward food regarding what to eat and not to eat, and with whom, where, and when to eat. This is further affected by a community's or household's ability to access to food that will determine an individual's actual food intake.

The process of helping people to change their food habits (i.e. to conform the healthy eating lifestyle) in order to improve their nutrition and health well-being must begin with an understanding on their culture, to recognize the good in it, and to know the reason behind its development. Where dietary changes are introduced there is the probability that other social aspects of life will also be affected.

The following Figure 2.1 layouts the complexities of influences on diets and eating behaviours. It can go as individual as preferences, to more environmental such as norms shaped by the food industry and the media. Understanding the multilayer drivers of how people deal with foods within their cultural context, helps design better educational programs.

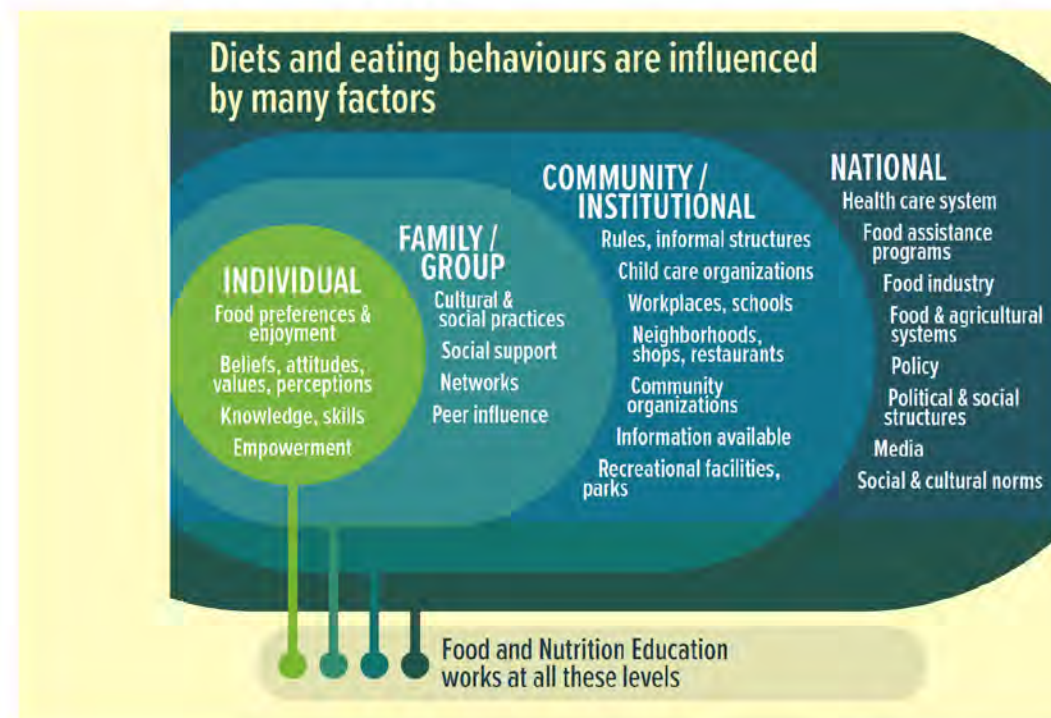


Figure 2.1 Multilayer influences on diets and eating behaviours (source: <http://www.fao.org/nutrition/education/en/>)

2.2 Education on Food and Nutrition Issues

The aim of food and nutrition education is to build healthy food-related practices and understanding in communities, groups and individuals. Therefore, food and nutrition education goes far beyond the dissemination of information. It comprises

a combination of evidence-based and behaviourally focused educational strategies, which involve the active participation of all relevant actors and are reinforced by an enabling environment.

Isobel Contento in her 2008 review paper outlines three essential phases or components in food and nutrition education.

- 1 A motivational phase**
where the goal is to increase awareness and enhance motivation of the intended audience. Here the focus is on *why to make* changes.
- 2 An action phase**
where the goal is to facilitate the ability to take action. Here the focus is on *how to make* changes.
- 3 An environmental component**
where nutrition educators work with policymakers and others to promote environmental supports for action. Here the focus is on *how to sustain* changes.

Pick a better snack

Box 2.1 Pick A Better Snack Campaign, a case study from USA

A needs analysis found that people are very aware that there are benefits to taking action – eating lots of fruits and vegetables – but believe that the barriers are high. So the campaign focuses on decreasing barriers with the simple message that eating fruits and vegetables is easy. A picture of a banana is accompanied by the message, “Peel. Eat. How easy is that!” The picture of an apple states, “Wash. Eat. How easy is that!” The venues for the messages are posters, bill-boards, classroom activities, and newspaper articles. These messages are designed to change beliefs about barriers and hence improve attitudes. They also enhance people’s sense of control, thus increasing their self-efficacy.

Source: Contento, 2008

Thus, food and nutrition education should involve a wide array of strategies to foster more holistic and sustained results. The strategies may include but not limited to the following:

- ✓ Building on people's desires to be healthy, know more about diets, and eat good food
- ✓ Understanding people's needs and what influences their diets
- ✓ Carrying out realistic and participatory educational activities
- ✓ Aiming at small, appealing, do-able improvements in what people perceive and do
- ✓ Engaging all people who can help or hinder dietary changes
- ✓ Including all relevant sectors and strengthening their capacities
- ✓ Influencing decision makers to implement policies which promote healthy diets
- ✓ Advocating for improvements in the food environment to enable healthy food choices

Box 2.2 Results of food and nutrition education initiatives

consumers Understand their dietary needs, recognize popular misinformation and make healthier food choices	families Prepare nutritious food safely and hygienically Plan and shop for healthy meals that are within their budget	governments Work to integrate food and nutrition education into national policies
parents Gain new knowledge and skills to give their children a good start in life	people Enjoy cooking and eating healthier foods	communities make better use of their traditional and local foods
schools Know how to provide healthier meals and snacks for their students	food producers Are supported to produce and market healthier foods	policy makers Understand the need to regulate harmful food advertising to children

Source: <http://www.fao.org/nutrition/education/en/>

2.3 Food-based Dietary Guidelines (FBDG) in SEA Countries

Globalization, urbanization, changes in lifestyle and in the food supply have resulted in a shift in dietary habits and diminished roles of traditional food cultures. These changes - coupled with increased availability and marketing of products of low nutritional value - highlight the need for consistent, simple and practical dietary guidance to enable populations to select healthy diets, prevent disease and to guide countries in food, health and agriculture policy development.

Food-based dietary guidelines (FGDB) - also known as dietary guidelines - are intended to establish a basis for public food and nutrition, health and agricultural policies and nutrition education programs to foster healthy eating habits and lifestyles. They provide advice on foods, food groups and dietary patterns to provide the required nutrients to the general public to promote overall health and prevent chronic diseases. They embody national nutrition recommendations and express the principles of nutrition education in terms of food.

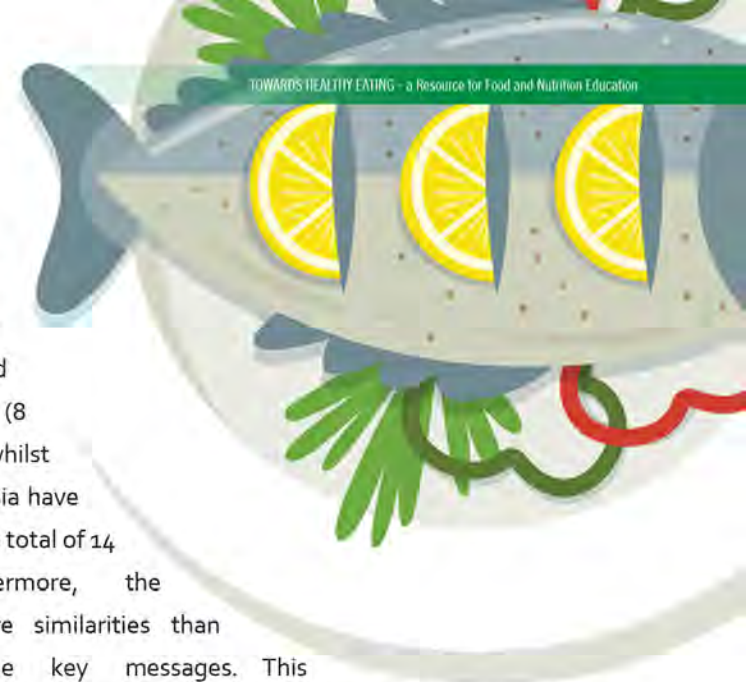
Two decades ago, a joint FAO/WHO Consultation was organized to provide guidance in the preparation and use of FBDGs that are adapted to nutrition situation, food availability, culinary cultures and eating habits of the respective countries. Countries are also encouraged to review and update their national dietary guidelines periodically. This is to ensure greater relevance of the key messages to the prevailing nutrition situation and consumer understanding (WHO, 1998).

Public Health Nutrition (SEA-PHN) Network in 2016 published their review on the key messages of officially published FBDGs in Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam (Tee et al., 2016).

Table 2.1 shows the main results of the analysis presented in the report. Of the

total 17 key messages analysed based on the six FBDGs, Singapore has the least key messages addressed to their population (8 messages in total), whilst Indonesia and Malaysia have the most messages (a total of 14 messages). Furthermore, the analysis found more similarities than differences in the key messages. This

demonstrates how the countries in the region share similarities in terms of background, socio-demographic profiles, cultural heritage and dietary patterns. A specific message on eating a variety of foods is covered in all six FBDGs because of growing scientific evidence that there is no single food that contain the most complete nutrients. Therefore, recommendation for food diversity increases the food consumption of meeting most nutrients. Increase consumption of fruits and vegetables, and decrease the sugar, salt, and fats/oils intakes are also addressed in the six FBDGs due to the emerging increase prevalence of chronic and non-communicable diseases in the region that are highly contributed by diets low in dietary fibre from the fruits and vegetable, and high in sugar, salt, fats/oils. Maintenance of healthy body weight is also highlighted in all six FBDGs as this simple measure has been proven to contribute to the prevention of various non-communicable diseases related to over-nutrition which are also alarming nutritional problems in the region.



Topic	Indonesia (14/17)	Malaysia (14/17)	Philippines (12/17)	Singapore (8/17)	Thailand (11/17)	Vietnam (13/17)
1 Variety of foods	✓	✓	✓	✓	✓	✓
2 Fruits & vegetables	✓	✓	✓	✓	✓	✓
3 Salt	✓	✓	✓	✓	✓	✓
4 Fats & oil	✓	✓	✓	✓	✓	✓
5 Sugar	✓	✓	✓	✓	✓	✓
6 Healthy body weight	✓	✓	✓	✓	✓	✓
7 Fish, lean meat, poultry, eggs, beans or nuts	✓	✓	✓	X	✓	✓
8 Cereals & grains	✓	✓	X	✓	✓	X
9 Milk & milk products	X	✓	✓	X	✓	✓
10 Physical activity	✓	✓	✓	X	X	✓
11 Food safety	X	✓	✓	X	✓	✓
12 Alcohol	X	X	✓	✓	✓	✓
13 Water	✓	✓	X	X	X	✓
14 Breastfeeding	X	✓	✓	X	X	✓
15 Food and nutrition labels	✓	✓	X	X	X	X
16 Breakfast	✓	X	X	X	X	X
17 Personal hygiene	✓	X	X	X	X	X

Notes. The numbers in parentheses in the row header indicate number of topics present in the FBDG of each country. The ticks and crosses in the table indicate the presence or absence respectively of each topic in the country FBDG

Table 2.1 Key messages identified in the FBDGs of the six countries in SEA region (source: Tee et al., 2016)

However, some key differences were found on the use of 3 key messages by only 1-2 countries i.e., eat breakfast regularly (Indonesia), read food and nutrition labels (Indonesia and Malaysia), and the importance of personal hygiene (Indonesia), as well as on the absence of the following messages in some countries' FBDGs i.e., alcohol in Indonesia and Malaysia, milk and dairy products in Indonesia and Singapore, cereals and grains in Philippines and Vietnam, food safety in Indonesia and Singapore. These country-specific messages are mostly driven by the population's eating pattern, religious background, and the national food and nutrition policies. For instance, the absence of the recommendation for milk and dairy product consumption in Indonesia and Singapore is because both countries regard milk and dairy products as part of foods high in protein or as alternative foods containing protein. Furthermore, as countries populated predominantly by

Muslims, alcohol consumption is disregarded in Indonesia and Malaysia. Food safety is absent in Indonesian FBDG because it is covered under the importance of hygiene practice, and in Singapore because of the country high standard on the matter in daily basis.

Further analysis by SEA-PHN was also conducted on pictorial food guides and food plates used by the six countries. All six countries adopted different pictorial food guides (Figures 2.2 – 2.7). Indonesia uses a culinary icon called *Tumpeng*, a cone-shaped rice dish, while Thailand uses an inverted food pyramid. The food pyramid is also used by Malaysia, Philippines, Singapore, and Vietnam. While differing in their visual presentations and some details, the six pictorial food guides highlight similar essential attributes (Florentino et al., 2016).



Figure 2.2 Indonesia Tumpeng Gizi Seimbang



Figure 2.3 Malaysian Food Pyramid 2010

Daily Nutritional Guide Pyramid for Filipino Adults (20-39 years old)



Figure 2.4 Daily Nutritional Guide Pyramid for Filipino Adults

Figure 2.5 Singapore's Healthy Diet Pyramid 2009



NUTRITION FLAG

HEALTHY EATING FOR THAIS



For good health, eat a variety of foods in appropriate amounts

Figure 2.6 Nutrition Flag Healthy Eating for Thais

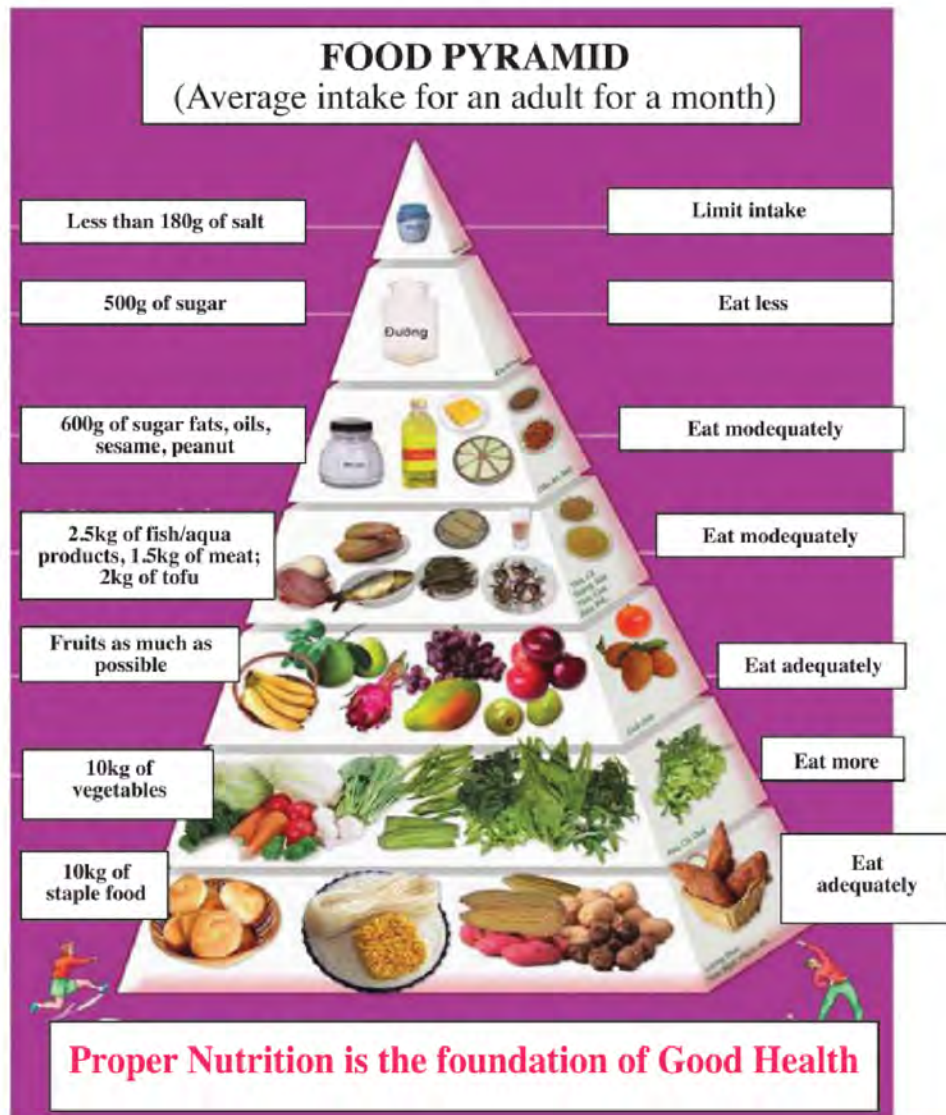


Figure 2.7 Vietnam Food Guide Pyramid

In addition, Indonesia, Philippines and Singapore adapted the food plate as additional visual guide per serving per meal (Figures 2.8 – 2.10). Similar characteristics of the food plates include the basic concept of imparting the message of balance and proportionality among the major food groups. Additional highlights include messages on drinking enough water, personal hygiene and increasing physical activity (Florentino et al., 2016). Food plate is designed to further translate the food guide/pyramid into easier visualization that helps people to picture what and how much foods should be put on the plate and consume at each meal time. In summary, these pictorial guides aim to serve as simple nutrition education tools in encouraging the population to adopt healthy eating habits.



PINGGANG PINOY™

Healthy food plate for Filipino adults



Figure 2.9 Healthy Food Plate for Filipino adults, 2014



Figure 2.10 My Healthy Plate of Singapore, 2014

Box 2.3

How is the compliance towards the FBDGs?

Indonesia

A review on 13 studies in several Indonesian areas concluded that food consumption was characterized by medium to low diversity among the underfives, but in adults, it varied widely (Usfar and Fahmida, 2011). A national survey found that over 90% of Indonesians aged above 10 years old consumed less vegetables than recommended (NIHRD, 2013). A recent analysis on nation-wide data in 2014 estimates around 30% of Indonesians is exposed to above daily limit consumption of sugar, salt, and fats/oils (Atmarita et al., 2016).

Malaysia

The prevalence of overweight (9.8 %) and obesity (11.8 %) was higher than that of thinness (5.4 %) and stunting (8.4 %) among children aged 6-12 years old. Almost half had vitamin D insufficiency, more than one-third did not achieve the adequacy of energy, calcium and vitamin D (Poh et al, 2013).

Thailand

A trend analysis from 1960 to 2009 found that while a reduction in the intake of complex carbohydrates from rice, tubers, dried nuts and pulses exists, the Thai people are increasing their consumption of sugar. The current energy contributions from macronutrients are 55%, 16% and 28% from carbohydrates, protein and fat, respectively. Daily consumption of fruit and vegetables is relatively low. Sodium intake is over two times the limit for healthy consumption, while the amount of potassium consumed is less than half of what is recommended (partly due to low fruit and vegetable intake). Milk consumption has decreased slightly (Tontisirin et al., 2013).

REMEMBER:

One must be aware that FBDG and the same way for Food Plate are developed for healthy people (mostly on the basis of adult target group) for maintaining their healthy condition. Most countries in the SEA region have their own additional nutritional messages in their respective FBDG addressed for specific target groups such as infant and young children, adolescent girls, pregnant women, and elderly.

In addition, food recommendations for people with illnesses will require different messages that are mostly very personalized and disease-specific; therefore only authorized health professionals will be able to cover and convey such recommendations.

2.4 The Everyday Practicalities Associated with Healthy Eating

Consistent diet quality can be difficult to achieve. Food and eating are part of everyday life and hence respond to, and are challenged by, daily changes in individual, household, community, national and global environments. Maintenance of diet quality requires regular revision and adaptation of food habits in response to these changes. "Food literacy" has emerged as a term to describe the everyday practicalities associated with navigating the food system and using it in order to ensure a regular food intake that is consistent with nutrition recommendations.

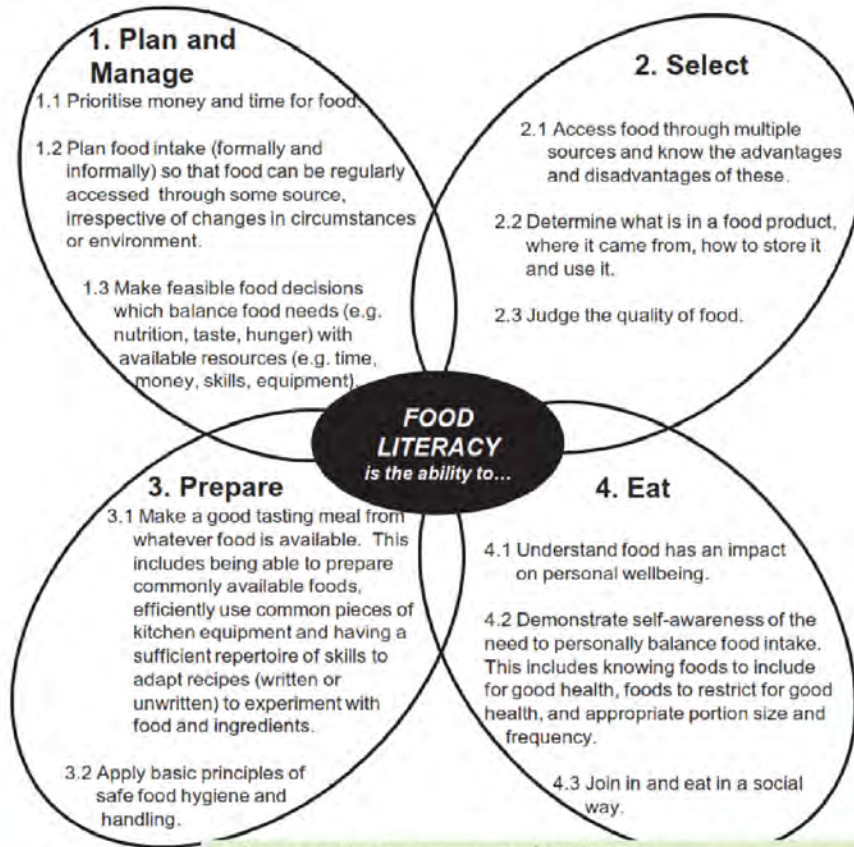


Figure 2.11 The key components of Food Literacy (source: Vigden and Gallegos, 2014)

Although many versions worldwide on defining the components of food literacy have developed, Vigden and Gallegos (2014) introduced the key components of food literacy that are practical and highly relevant to our routine engagement with foods. The components as shown in Figure 2.11 are identified based on series of exploration with lay people as well as professionals dealing with food and nutrition. Four main domains in food literacy include 1) planning and management; 2) selection; 3) preparation; and 4) eating.

Food literacy is highly contextual. That is, the nature of each component and its importance relative to other components is contextually driven. Determinants of this context are many and include the social determinants of health. It is also revealed that it is unlikely that an individual would demonstrate all components of food literacy simultaneously or all of the time. That is, all components may not always be present in every individual but each is an important piece of framework strengthening one's relationship with food. Conversely, when a component is missing, the relationship with food will be weaker and less able to respond to change (Vigden and Gallegos, 2014).

2.5 Education Setting: School and Home

Food and nutrition education needs a venue. School is considered a natural setting for food and nutrition education as:

- ✓ Food-related habits in children are being developed
- ✓ Schools have a wide reach, during a constant period of time
- ✓ The effects can be spread to families and communities
- ✓ Schools offer opportunities to practice healthy food-related practices
- ✓ They have qualified teaching staff
- ✓ They can link food and nutrition education with other subjects (e.g. math, science, language, religion, arts)

School also offers a range of scenarios, players, and opportunities for observation and practice: the classroom, the playground, the canteen, the school garden, the school meals and the cooks, the kitchen or outdoor cooking facilities, water and sanitation facilities and all the community locations and people (parents, neighbors, farmers, food vendors at the school gates, shops, kiosks, markets, etc.).



Students often become the agents of change for the families and their surrounding as they are curious to find a context and setting to practice and apply what they have learned from schools. Therefore, home and family members play equally important roles for lifelong education.

Parents and other adult family members are key actors to facilitate the development of good eating habits at home through provision of health-pro home food environment, family healthy eating goal setting, and regular role modeling. By doing so, children are exposed with consistent healthy eating messages and have venue for applying good nutritional practices.



CHAPTER 3.

EATING WELL

This chapter offers a range of topics that educators may want to pick up to start designing an education session. The topics are selected based on some key problems found in the food and eating practices addressed in Chapter 1, also they cover some food skills discussed under food literacy addressed in Chapter 2. The topics are about developing healthy eating habits with which they are not only benefiting for the health but also are linked with reducing food waste and promotion of food sustainability.

Educators are encouraged to first understand the psycho-demographic profiles of the intended target audiences prior to selecting a topic and choosing an educational approach. The topics covered in this chapter are mainly targeting the adults including adolescents who are in the stage of developing their sense of independence. But, above all, the topics offered here are meant for all of us who deal and engage with foods in our daily routine.



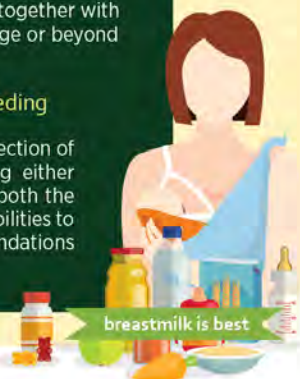
Box 3.1. Healthy eating habit starts early

World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend the following feeding recommendations for infants and young children:

- early initiation of breastfeeding within 1 hour of birth;
- exclusive breastfeeding for the first 6 months of life; and
- introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond

Source: <http://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>

The feeding recommendations increase the protection of the infants and young children from becoming either under-nourished or over-nourished. Parents – both the mothers and the fathers – share mutual responsibilities to ensure full compliance to the feeding recommendations for the health benefit of the children.



3.1 Safety First

Food must be safely prepared for achieving its nutritional benefits to the body after consumption. Foods that are not safe may contain physical, chemical, and/or microbiological hazards that potentially lead to food-borne illnesses. Their symptoms vary from fever, abdominal cramps, nausea, sweating, to diarrhoea and vomiting.

What are these hazards? Physical hazards are when you find non-food items in your food such as paper clip, plastic or paper cut, even a strand of hair. While physical hazards may be noticeable; chemical and microbiological hazards are less visible. However, if you are alert, you can actually feel that the food does not taste as “normal” when too much chemicals are added or when pathogens are present.

World Health Organization (WHO) has developed a global food hygiene message with five key steps that promote health. The message explains safe food handling and preparation practices. Food can become contaminated with dangerous microorganisms at any point before consumption. Following simple food hygiene steps can prevent most foodborne illnesses.

DO YOU KNOW?

Following the Five Keys not only prevents illness from eating contaminated food but also contributes to the prevention of diseases caused by handling infected animals, such as avian flu.

Five keys to safer food

Keep clean

- Wash your hands before handling food and often during food preparation
- Wash your hands after going to the toilet
- Wash and sanitize all surfaces and equipment used for food preparation
- Protect kitchen areas and food from insects, pests and other animals

Separate raw and cooked

- Separate raw meat, poultry and seafood from other foods
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods
- Store food in containers to avoid contact between raw and prepared foods

Cook thoroughly

- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer
- Reheat cooked food thoroughly

To learn more about the Five Keys to Safer Food and potential collaborations, contact:
Françoise Fontannaz
Department of Food Safety and Zoonoses
E-mail: fontannazf@who.int

Keep food at safe temperatures

- Do not leave cooked food at room temperature for more than 2 hours
- Refrigerate promptly all cooked and perishable food (preferably below 5°C)
- Keep cooked food piping hot (more than 60°C) prior to serving
- Do not store food too long even in the refrigerator
- Do not thaw frozen food at room temperature

Use safe water and raw materials

- Use safe water or treat it to make it safe
- Select fresh and wholesome foods
- Choose foods processed for safety, such as pasteurized milk
- Wash fruits and vegetables, especially if eaten raw
- Do not use food beyond its expiry date

3.2 My Plate

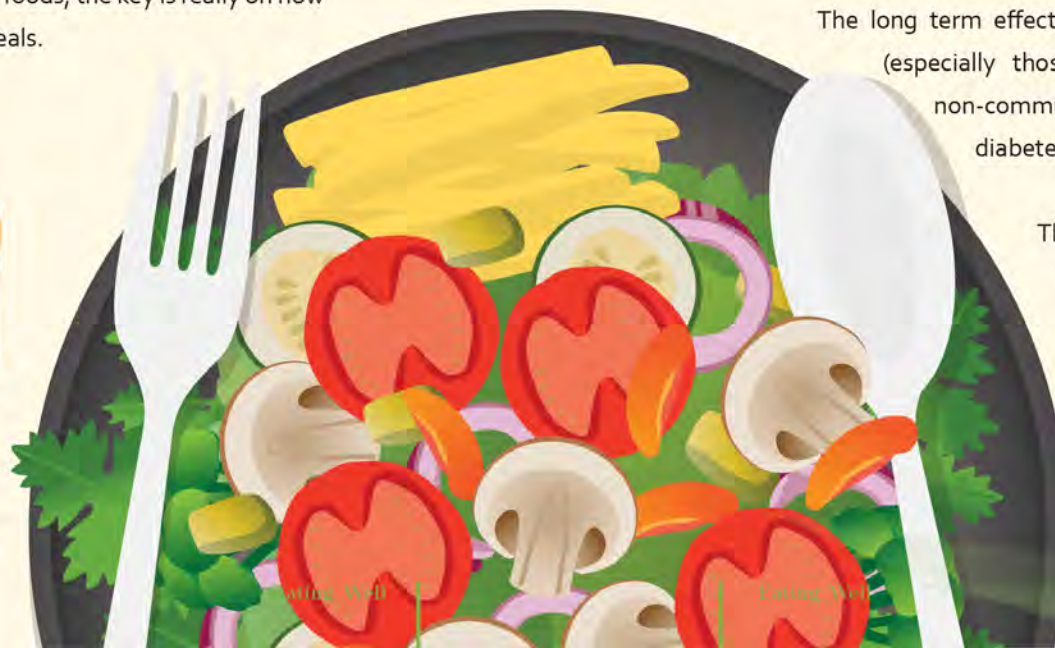
Most food guides in SEA countries are accompanied with additional message that translates the recommendations into portion size per day. And some countries use a pictorial food plate to guide the population on the food consumed per meal. The food plate usually shows the recommended fractions of various food groups on the plate for each meal.

For example, My Healthy Plate of Singapore suggests one meal that consists of a half plate of vegetables and fruits, and a quarter plate each of rice or bread and meat or other protein source foods. Other countries have slightly different fractions of the foods visualized on the plate. However, essentially the main messages are to cover **balance** food fractions and to cover **diverse** food groups.

This way, the plate will consist of a menu that covers staples, proteins, and vegetables to obtain balance nutrients such as calories, protein, fats, vitamins, minerals, and dietary fibre. These nutrients are the basic fuels needed for our body to grow and develop. Thus, to provide our body with all the fuel we need, we must consume a variety of foods. Because, there is no single food that provides the most complete nutrients. If you believe in power foods, the key is really on how you balance them on your plate for your meals.

REMEMBER!

Consume a variety of foods. Because, there is no single food that provides the most complete nutrients.



3.3 Fresh Foods

There are many aspects to fresh food and they depend on

- Space: where does the food come from?
- Time: how long since the foods was harvested?
- Composition: what is in the food? chemicals, dirt, bacteria, waxes?

Nevertheless, let us simplify. Fresh food may be described as food with minimal processes, low use of salt, sugar, and potentially other materials for preserving it, and minimal use of cooking method.

So, if you are thinking fresh foods look like the tomatoes freshly picked from your garden; that is very fresh. The challenge is we do not always have the luxury to access those very fresh foods. Food technology helps sustain the shelf-life of fresh foods such as vegetables and fruits that are not in season or green products that have to be transported from rather faraway places or even imported from other countries. The technology may include additives, preservatives, including some cooking methods. In the process, salt and/or sugar may be added to the food.

The long term effect of the increase consumption of salt and sugar (especially those we are not aware of) is related to some non-communicable diseases such as heart problems and diabetes.

Thus, when you go for grocery shopping in a supermarket and/or traditional market, you may wish to keep in mind the aforementioned simpler definition of fresh foods.

best tips

If you aim to improve your eating habits by consuming more fresh foods, try to reduce your shopping on package foods or foods that have an expired date on.

If you think you were getting dietary fibre from the package fruit juice, think also how much sugar was added to it. Swap package fruit juice with fruit juice you make yourself at home. If you feel creative, mix some vegetables with your fruit juice, and nail the experiment of taste as well as improvement of your dietary fibre intake!

SHARE YOUR IDEAS!

Aiming to stock more fresh foods in your refrigerator helps you in many ways, for instance:

- ☒ plan food preparation that you can manage with the time you have
- ☒ facilitate routine cleaning up of your refrigerator
- ☒ minimize food waste

What else can fresh food stock help in your household?

3.4 Fruits and Vegetables

Most vitamin and mineral contents are found in fruits and vegetables, plus they are the only sources for dietary fibres. However, worldwide, consumption of these two commodities are low.

The motives for lack of fruits and vegetables consumption are not identical. However, evidences have masked the reasons why these food commodities are rarely present or present not in an amount recommended in many of the global population across all age groups.

- Lack of fruit consumption is associated with price related factor.
- Fewer vegetable consumption is driven by the less appealing taste.

DO YOU KNOW?

Studies reveal that gardening increases children's preference towards vegetables. School garden is a pivotal strategy to engage young children with developing a sense of likeness towards what they plant, increasing their nutrition knowledge and finally consumption of some vegetables.



best tips

Affordability - Do weekly shopping for giving more value to your money spent for fruits and vegetables. This allows you to buy more varied type of fruits and veggies to minimize boredom, also to buy them in the amount that last before they got rotten and useless. This tip goes along with minimizing your food wastes.

Improved taste - Be creative when presenting vegetable dish in your meal. Simply mixing vegetables with any animal meat or seafood of your choice will improve the appealing factor of the vegetables. This way also, you get both vegetables and animal proteins in one scoop. Refer to a variety of local salads for more ideas in the next page.

Early introduction - Young children needs an early introduction to fruits and vegetables. When they are still exclusively breastfed, the nursing mothers should always include fruits and vegetables in their meals as their nutrient properties will be transferred to the babies through breastmilk. When the children start their solids, it is highly recommended that fruits and vegetables are included in their complementary feedings.

3.5 The Must-try Local Salads

Most vitamin and mineral contents are found in fruits and vegetables, plus they are the only sources for dietary fibres. However, worldwide, consumption of these two commodities are low.

The motives for lack of fruits and vegetables consumption are not identical. However, evidences have masked the reasons why these food commodities are rarely present or present not in an amount recommended in many of the global population across all age groups.

Cambodia



This salad called *Plear Sach Ko* uses the thinly sliced beef (and sometimes tripe) that is cured with *prahok*, an umami fish paste made by grinding and salting mudfish and then left to ferment in large clay jars anywhere from 20 days to three years. These strong flavours are offset by tossing in bean sprouts and long beans with sliced shallots, herbs like mint, lemongrass and basil with bird's eye chili and a good squeeze of lime.

Gado-gado is steamed vegetable salad with a rich peanut sauce dressing. It comes garnished with halved boiled eggs and traditional Indonesian *krupuk* crackers. Although the vegetables used vary by region, the key here is the sauce—made from freshly crushed peanuts mixed with sweet palm sugar, salt, garlic, chillies, tamarind and lime. It's best eaten with rice or sliced rice cake called *lontong*, and makes a whole meal in itself.



Indonesia

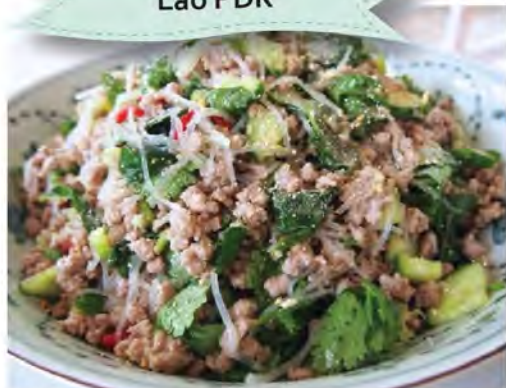


The Javanese *urap* (also known as *urap*) consists of steamed vegetables like bean sprouts, cabbage, water spinach and long beans. This is topped with a dressing of shredded coconut seasoned with turmeric, ginger, shallots, chillies and tamarind juice.

Karedok of West Java Sundanese tradition is savoured raw salad and often comprises of bean sprouts, long beans, cabbage, cucumber as well as basil which gives it herbal kick. The dressing comes in the form of a mildly peanut sauce made with ground roasted peanuts, fermented shrimp paste, chillies, tamarind and palm sugar.



Lao PDR



It's hard to pin down *larb's* exact geographical origins. After all, this dish is enjoyed in a region that stretches from North Thailand to Lao PDR. Two differing versions exist; the *larb* of northern Thailand uses dried spices like cloves, cumin, long pepper and star anise while the Lao variety uses *padaek* (a Laotian fish sauce made from freshwater fish) and fresh herbs. Despite the difference in

flavour, the common thread they share is in the use of minced meat and often enjoyed with glutinous rice with a side of fresh vegetables.

Malaysia

Kerabu mangga, mango salad with anchovy, is a light, refreshing and curiously pungent meal starter in a mainstay of both Malay and Peranakan cuisine. One famous recipe calls for finely sliced, barely ripe green mango served with cucumber and bean sprouts and doused in a tangy sauce of lime juice, sugar, chilies, and a hit of grilled shrimp paste.



Hivana is one of the most well-known food items from the Kadazan Dusun community of Sabah and Sarawak where chunks of tropical fish (often mackerel) is cured in vinegar or citrus like calamansi along with shallots, grated ginger and chillies. While the fish is at times enjoyed without any greens, those looking to increase its nutritional profile can add sliced bitter melon. A similar dish known as *kinilaw* is also enjoyed further East in the Philippines.

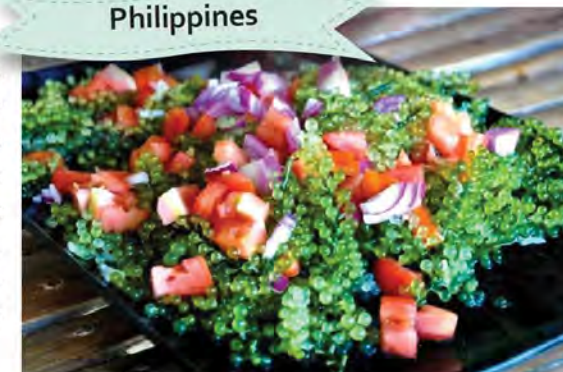


Myanmar



Myanmar's tea leaf salad – also known by its local name of *laphet thoke* – is a bitter and strangely addictive snack. The salad, made from fermented Assam tea leaves packed into concrete cases kept underground for months or even years, is regularly enjoyed as an afternoon snack or after-dinner treat. It's served slathered in lime and fish sauce with split peas, peanuts, fried garlic and sunflower seeds for a refreshing and iconic end to the perfect Myanmar meal.

Philippines



Ensaladang lato salad incorporates *Lato*, a type of seaweed otherwise known as green caviar or sea grapes for its tiny globular appearance. The ingredient is found off the coasts of the Indo-Pacific and is favored for its succulent texture. It is blended with chopped raw shallots, fresh tomatoes, and a dressing of fish sauce or *bagoong* (fish paste) and vinegar.

Thailand



Green papaya salad called *Som Tam* in Thai is a spicy, refreshing salad made from shredded unripe papaya, added with raw long bean and cherry tomatoes and dressed with ground peanuts. The key flavour of this salad is in the tangy sauce of lime juice, sugar, chilies, and a hit of grilled fermented shrimp paste. This salad is also a famous starter in Cambodia, Lao, and Vietnam carrying the local name in each country.

Batar da'an means “boiled corn” in Tetum, one of the two official languages of Timor-Leste, along with Portuguese. It is mix boil of squash or pumpkin, corn and mung beans which is traditionally served with rice.

Timor Leste



Vietnam



This banana blossom salad known as *gỏi*, or *nom* if you are in Northern Vietnam comes in a myriad of combinations. Some of the more popular options range from the *gỏi bắp chuối* (in the picture above) where the fleshy white insides of banana blossoms are tossed with shallots, garlic and meat options like pork and shrimp. Another popular dish is the *gỏi gà*, or chicken and cabbage salad. Here, shredded poached chicken is mixed with finely sliced cabbage, carrots, cucumbers, and dressed with a sauce made of chicken broth and fish sauce lightly sweetened with a touch of palm sugar.

Sources of information and photos:

<https://www.amazon.com/Healthy-Salads-Southeast-Vatcharin-Bhumichitr/dp/0834804980>

<http://sea-globe.com/southeast-asias-must-try-salads/>

<https://guide.michelin.com/sg/travel/7-tasty-healthy-southeast-asian-salads/news>

https://en.wikipedia.org/wiki/Green_papaya_salad

<https://www.196flavors.com/east-timor-batar-da-an/>

SHARE YOUR EXPERIENCE!

1) Which of the local salad from another country have you tried?

2) Have you tried to make your own any of these salads? Did you prepare exactly like what the recipe tells you or did you do some modifications?



3.6 Bring Your Own

Bring your own meal for breakfast and/or lunch is considered the most efficient thing to do.

- ✓ First, it saves your time to travel and be on the queue for getting your food.
- ✓ Second, financial analysts suggest that this habit can save your monthly expenses on food and gas for your vehicle by at least 100 USD a month.
- ✓ From a health point of view, this habit helps you control what will come into your body in terms of additional sugar, salt, fat, and also some potential pathogens.

DO YOU KNOW?

7 Secrets of People Who Bring Their Lunch to Work Every Day

They plan the prep

You have three choices: prep and package your midday meals over the weekend so you can just grab-and-go every weekday morning; make your lunch every evening; or get up a little earlier and do it all in the morning. The choice is yours, and entirely depends on your personality.

They love leftovers

Eating the same thing for lunch that you had for dinner last night can get really old, really fast. That's why people who bring their lunches to work know how to dress up their leftovers. Reinventing your leftovers tricks your tastebuds into believing you're having a totally new meal, minus all the extra prep.

They have basic recipes that go beyond sandwiches

You can probably rattle off a bunch of basic sandwich recipes: turkey and Swiss on multigrain; tuna salad and arugula on rye; chicken breast and mustard on a whole-wheat bun. No-brainer recipes for other types of food will help keep your midday meal from getting repetitive.

They eat away from their desks

Perhaps the chance to leave your workspace for a break is part of the reason why you're grabbing takeout for lunch every day. You need that break during the day to de-stress and give yourself a breather. Plus, eating while working is a mindless habit that can make you overeat. Take a break in the office kitchenette, or on nice days, bring it outside.

They're part of a lunch club

Divide and conquer workday lunch with a co-worker (or a few of them) who brown-bags it. On Monday, bring two servings of lunch to share; then it's her turn on Tuesday. Just make sure your colleague is reliable and motivated—you'll be stuck grabbing takeout if your colleague forgets your food.

They treat themselves

Pack a small treat with your lunch, like a few squares of dark chocolate. Small pieces work well and it will be less tempting to hit up the vending machines for a candy bar or snack later on.

They plan for a freebie day (or two)

It's a mistake to assume you'll eat a packed lunch 100% of the time. Inevitably, your friend will ask you to meet for eating out, or you'll have to take a client out for food, or you are having a full-board workshop at work. And that's okay! Aiming to bring lunch two to four times per week is acceptable, depending on what your circumstances are at work. Just like everything else in life, your lunch break requires a little flexibility.

Source: <https://www.health.com/nutrition/bring-lunch-work>

3.7 Great Breakfast to Start Your Day

Why have breakfast?

- ✓ Breakfast really is the most important meal of the day!
- ✓ Breakfast breaks your overnight fast
- ✓ Breakfast refuels your energy stores (glycogen)
- ✓ Breakfast kick starts the metabolism
- ✓ Breakfast provides us with the energy to keep us going throughout the day

Benefits of regular breakfast

- ✓ Improves your energy levels
- ✓ Improves metabolism
- ✓ Provides many beneficial nutrients (compared to no breakfast)
- ✓ Reduces your chance of over-consuming high caloric foods later in the day
- ✓ Stabilises your blood sugar levels
- ✓ Improves memory and concentration

Creating a breakfast routine

- ✓ Set your alarm for 10 minutes earlier to fit in breakfast at home
- ✓ Take public transport? Take a portable breakfast option to eat on the way to work
- ✓ Make some 'easy to grab' breakfasts on the weekend such as carrot muffins, banana cake, vegetarian lasagna, bread pudding, or other local breakfast treats
- ✓ If it is allowed, keep some breakfast options at work to enjoy once you arrive
- ✓ Make a breakfast club at work

Healthy breakfast options

- ✓ Rice and meat curry with some fresh vegetables (small portion)
- ✓ *Nasi lemak* with boiled egg and some fresh or steamed vegetables (small portion)
- ✓ Congee/porridge with egg and some steamed vegetables
- ✓ Noodle soup with some meat and vegetables (small portion)
- ✓ Boiled eggs with wholegrain toast
- ✓ Wholegrain cereals with reduced fat milk
- ✓ Sliced fruits
- ✓ Oat porridge with fresh fruit
- ✓ Fresh fruit and yoghurt
- ✓ Vegetable smoothies

Adapted from: <http://www.nutritionaustralia.org/national/resource/breakfast>

3.8 Eating Out Smart

Eating out instead of cooking at home continues to increase as a factor impacting our diet. We face a large variety of food options and food establishments when choosing to eat out, from fine-dining restaurants to street hawkers.

DO YOU KNOW?

Street Food Consumption

A study on eating out behaviour in some selected SEA countries found that 53.3%, 51.5%, and 35.7% of the study participants from Vietnam, Indonesia, and Singapore respectively admitted to have purchased foods from a street vendor. About 30% of them bought foods (majority considered the purchased foods as snacks) on a weekly basis. Mostly said practicality and affordability as the reasons for the practice.

Source: APFNC, 2016 (unpublished report)



Why do we eat out?

Here are some of the reasons people give for eating out:

- because either too busy or lazy
- because do not want to or cannot cook
- to eat what you would not normally cook for yourself
- to relax and enjoy yourself and not do any dishes
- to get out and eat in an entirely different atmosphere
- to try something new
- the food is amazing
- eating out with friends or family is a source of comfort and entertainment
- it is a good way to feed a large visiting family

However, while eating out is a great way to enjoy an evening on the odd occasion, when it becomes 'the norm' and you find yourself eating out two, three or more times a week, then it is no longer a healthy treat and could lead to a bad habit. The things that make eating out a great experience are best enjoyed in moderation, and if you are constantly eating in various different locations then you will find that it has more negative effects on your life than you would probably realize.

What potential problems are we exposed to by eating out?

- **Food safety** – You are not sure about how the food is prepared and the hygiene of the food handlers. This expose the food to potential pathogens.
- **Nutrient poor foods** – You do not know what has gone into the food. The use of poor quality food ingredients and added salt or sugar or bad fats may involve with the food you order.
- **Food waste** – Imagine if you do not like the food you order.
- **Order more foods than needed** – This would happen pretty much when you place your order while you are hungry and lured with the so-inviting menu book (which is intentionally made to do the temptation).
- **It costs you** – Have you made the calculation of your monthly food expenses?

But as said earlier, eating out can be a great way to spend time relaxing with family and friends. After all, eating also has a social function which is needed for our overall wellbeing. So, **what is the smart way to eat out?** Here are some tips to consider:

- ✓ Food diversity – always consider to balance the meal, apply "My Plate" to make the food balance into practice
- ✓ Tasting new foods – while balance meal is the guide, making yourself tasting various kinds of food helps to gather all necessary nutrients needed for your body
- ✓ Consider greens in your order – make vegetables the must-have basic component of your food order
- ✓ Be in control of the sugar, salt, and fats added in your order – always make the food seller alert of how you want the food you order, after all the customer is the king
- ✓ Mind the portion – as you cannot really control the portion, food sharing is an acceptable practice in many cultures
- ✓ Look for a good quality protein source, not the one dressed to have stronger taste by adding salt, sugar, or fats
- ✓ Be a wise user of online food deliver apps - with the massive use of food apps in today's era, the above tips may also be considered when you make your online food order.

SHARE YOUR PLAN!

- 1) How would you apply the above tips when considering options for eating out?

- 2) Which of the above tips work for you when eating out?

3.9 Make Your Own

It is not enough to simply purchase the right foods; it is also necessary to prepare and cook them in healthy ways. One of the main determinants of providing the family with a healthy diet is being able to turn what is purchased into healthy meals.

Cooking is part of life skills we must attain as at any point of our life, we will be engaged in acquiring food to survive. Thus, learning some basic cooking is essential.

Making your own meals may involve some simple cooking techniques.

- ✓ Preparing a sandwich, for instance, may not need to involve the use of kitchen stove if you use all fresh ingredients. What you need is to be creative in arranging a stack of nutritious stuffs in between of your wholegrain toast.
- ✓ Playing around with some ingredients for your home-made salad dressing tossed in your creative vegie mix salad of the day could be a stress-releasing kitchen work.
- ✓ Turning ingredients stored in your fridge into a signature dish for a weekend family lunch routine at home may serve as an educational experience for keeping family traditions.

DO YOU KNOW?

- Parents across all locations and demographics indicate that giving children more chances to learn to cook is key in supporting their children to eat better.
- Cooking is one of the life skills needed by everyone, girls and boys.
- Cooking involves science and art too!

Benefits of making your own meals:

- ✓ Save money and time
- ✓ Encourage the use of healthier ingredients
- ✓ Avoid food allergies and sensitivities
- ✓ Being alert with portion control
- ✓ Bring family together
- ✓ Cooking is one form of relaxing

3.10 Snacking to the Next Level



Snacking is not always bad. It is needed to response to hunger cues. As body is using the food we eat as fuel, after a few hours, it requires additional fuel. That is how snacking can be part of our healthy diet provided that it involves healthier snack foods.

DO YOU KNOW?

In three to four decades ago meals made up about 85% of adult's calorie intake and snacks contributed 15%. Fast-forward to today, adults and adolescents consume about 75% of calories from meals and 25% from snacks.


best tips

Plan ahead – If you tend to need a mid-morning and/or mid-afternoon snack to satisfy your hunger until the next meal then planning ahead may help you to make sure these snacks are healthy and that overall your diet is nicely balanced.

Watch for added sugar, salt, and fat (SSF) – Always read the label of your packaged snacks, or use your taste bud to develop a sense of tolerable limit to minimize your exposure to SSF.

Portion control – To help maintain a healthy, balanced diet, consider the portion size of your snack. If you occasionally choose chocolate, crisps or biscuits try to split and pack a small portion out, like two squares of dark chocolate, two biscuits, a handful of crisps. Remember you can eat larger portions of fruit and veg as a snack!

Breakfast counts – People who skip breakfast, or do breakfast too early in the morning tend to snack more frequent to satisfy the hunger cues.

Stock healthier snack options – This helps create healthier food environment around you.

SNACK SWAPS! Here are some snacks swap ideas to help you swap those foods high in fat, salt and/or sugars for healthier alternatives:

Fried crisps	for	Home-made baked fruits and vegetables crisps with a drizzle of olive oil (low in salt and fat) OR Plain popcorn sprinkled with chilli powder
Fritters	for	Home-made fritters with some added vegetables cooked with much less oil (not deep-fried)
Confectionary (sweets or chocolate)	for	Pineapple pieces, orange segments OR handful of low-sugar breakfast cereals
Ice cream	for	Plain unsweetened low-fat yoghurt blended with frozen berries and mint OR Home-made fruit sorbet (no sugar added)
Biscuits	for	Small handful nuts and seeds
Cake	for	Low-sugar cereal bar OR Home-made low-fat spinach quiche

Adapted from: <https://www.nutrition.org.uk/healthyliving/helpingyoueatwell/snacking.html>

3.11 Food Waste

There is an increased international attention on the impact that food production and consumption have on the environment. With an estimated population of approx. 9 billion people by 2050 and continuing degradation of the planet's resources, the need to produce more food in a sustainable way is more important than ever.

On the one hand, some current practices of food production are putting the natural environment under stress and contributing to climate change. On the other hand, consumption patterns are often unhealthy and unfair: over consumption and food waste coexist with under-nutrition. A shift to more sustainable food systems and diets is needed to protect people's health and that of the planet while ensuring food and nutrition security and the biodiversity of natural resources.

Food waste or food loss is food that is discarded or lost uneaten. Why is food wasted? Here are some of the reasons:

- ✓ We cook too much food.
- ✓ We do not know how to use leftovers.
- ✓ We do not check the cupboard or the refrigerator before going shopping.
- ✓ Food is mistakenly thrown out before the Used By/Best Before date.
- ✓ Buying takeaways at the last minute instead of cooking the food we have at home.
- ✓ We buy too much because we do not stick to the shopping list.
- ✓ We often shop when we are hungry so we buy more food than we need.

DO YOU KNOW?

Food Waste Facts

- 1 We are over 7 billion people on this planet, of which 925 million are starving. Yet we annually lose and waste 1.3 billion tons of food – or enough to feed 3 billion people.
- 2 Roughly one third of the food produced in the world for human consumption every year – approximately 1.3 billion tonnes – gets lost or wasted.
- 3 Fruits and vegetables, plus roots and tubers have the highest wastage rates of any food.
- 4 In developing countries 40% of losses occur at post-harvest and processing levels while in industrialized countries more than 40% of losses happen at retail and consumer levels.
- 5 At retail level, large quantities of food are wasted due to quality standards that over-emphasize appearance.
- 6 Per capita waste by consumers is between 95-115 kg a year in Europe and North America, while consumers in sub-Saharan Africa, south and south-eastern Asia, each throw away 6-11 kg a year.

Source: <http://www.fao.org/save-food/resources/keyfindings/en/>



Before food preparation:

- ✓ Manage your food stock. Weekly shopping helps controlling what food you have at home, your time availability for cooking, your cooking mood's ups and downs
- ✓ Buy the food stuff that has been trimmed or cleaned. This helps you use the most of the food parts in your cooking.

Food on the plate:

- ✓ Scoop the amount of food that you can finish
- ✓ Finish the food on your plate
- ✓ Share a plate of food
- ✓ Save the leftover food for the next meal
- ✓ If you feel creative, re-cook in different ways the leftover food

SHARE YOUR IDEAS!

- 1) Write your ways to reduce your own food waste.
- 2) What is your experience with turning the leftover food into a new dish?



3.12 Healthier Home Food Environment

Home is one of the venues where healthy eating will potentially be practiced provided that it is conducive for such practice to take place.

Research shows that the perceived ability to exert some level of control over the family and their eating is positively associated with better food purchasing practices and better food transformation practices (i.e. through cooking). Being able to exert control is also reinforced by having a good level of confidence in both cooking and nutrition.

The use of simple tools such as shopping lists encourages food providers (i.e. parents) to be more aware of what they purchase and promotes some degree of resistance to impulse purchases of unhealthy foods and treats.



REMEMBER!

Shopping list helps reduce impulse purchases of unhealthy and unnecessary foods.



for parents:

- ✓ Role model the healthy eating.
- ✓ Provide healthier choice of foods at home.
- ✓ Allocate manageable food rules.
- ✓ Encourage a family dinner together as a weekly food routine.
- ✓ Involve family members in today's menu cooked at home.

SHARE YOUR IDEAS!

- What healthier food choice would you stock at home?
- How do you find assigning fixed meal time works for your family members?
- What is your family members' snacking behaviour?
- How many times in a week would you have a family dinner?
- What is(are) your family favourite food(s) they like to cook at home?



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USEFUL EDUCATIONAL RESOURCES

#MakanBener #LindungiAnak, Ministry of Health, Helen Keller International & Gerakan Kesehatan Ibu dan Anak, INDONESIA

#MakanBener (Eat Right!) is a campaign to protect children (#LindungiAnak) from long-term health risks caused by unhealthy eating habit. The video discussed common misperception on healthy eating and child feeding such as: What food should parents watch out? Is the old jargon “4 healthy food groups plus milk” still the perfect combination for healthy meal? How much does food and diet during early childhood affects growth and intelligence? What should the right food be on your plate? Can processed, manufactured and fast foods be considered healthy if the ingredients are natural, as the ads claim? Who should act to protect children from unhealthy foods and make sure children can eat right?

Video with English subtitle is available in <http://bit.ly/videomakanbener>

This video campaign is a collaboration of:

- The Ministry of Health, Republic of Indonesia
- Hellen Keller International Indonesia
- ARCH Project – Evidence-based Infant and Young Child Feeding
- Gerakan Kesehatan Ibu dan Anak (Maternal and Child Health Civil Society Movement)
- Dr. Tan & Remanlay Institute
- Sentra Laktasi Indonesia
- Asosiasi Ibu Menyusui Indonesia
- Ayah ASI
- Wahana Visi Indonesia

MySihat: Malaysian Health Promotion Board, MALAYSIA

Malaysian Health Promotion Board (MySihat) is a statutory body placed under the Ministry of Health. It was established in June 2006 by the Act of Parliament (Act 651) which was officially gazetted on 1 April 2007. It is governed by an independent body consisting of representatives from relevant Ministries, NGOs, and professionals who possess expertise relevant to health promotion. The main objective of the

Board is to set and develop the health promotion agenda across different sectors and settings particularly with the active participation of the Non-Governmental Organisations (NGOs). The role of the Board is to promote the adoption of healthy lifestyles and healthy environment through various settings and sectors. The core service is to empower Non-Governmental Organizations (NGOs) through training and provision of grants or other financial assistance to support programmes and activities in health promotion.

<http://www.mysihat.gov.my/index.php/en/our-services>

Health Promotion Board, SINGAPORE

The Health Promotion Board (HPB) is a government organisation committed to promoting healthy living in Singapore. HPB is a credible and authoritative source of evidence-based health information that seeks to empower the Singapore public with knowledge and skills to take ownership of their health and live a healthy lifestyle.

Learn their various health promotion programs related to healthy eating in different settings here:

<https://www.hpb.gov.sg/>

Thai Health Promotion Foundation, THAILAND

Thai Health Promotion Foundation (ThaiHealth) is an autonomous state agency established by Health Promotion Foundation Act (2001). It acts as an innovative enabler with the mission to inspire, motivate, coordinate, and empower individuals and organizations in all sectors for the enhancement of health promotive capability as well as healthy society and environment. ThaiHealth aspires to create social impacts and improve the quality of lives among all people in Thailand. Currently, there are 15 master plans that ThaiHealth has endorsed as its strategic plans for health promotion, which are proactively and strategically executed through its partners nationwide.

<http://en.thaihealth.or.th/>

Food and Agriculture Organization of the United Nations (FAO)

Their activities involve:

- Promoting lifelong healthy eating habits
- Going beyond the classroom: involving the whole school, families and the community
- Establishing school "learning" gardens: linking classroom lessons with practice
- Developing national guidelines for better diets and nutrition
- Creating environments that support good nutrition and healthful food choices

They provide some links for resources on 1) professional training in nutrition education, 2) nutrition and healthy eating, 3) school food and nutrition, 4) food-based dietary guidelines, 5) infant and young child feeding.

Click <http://www.fao.org/nutrition/education/en/> for more resources.

Healthy Eating Advisory Service, Department of Health, Victoria, AUSTRALIA

It is under the state government of Victoria, Australia. The Healthy Eating Advisory Service helps organisations provide and promote healthier foods and drinks to improve the health of all Victorians, Australia. They provide resources for early childhood, school, workplaces, recreation parks, food outlets, as well as food industry.

Click <https://heas.health.vic.gov.au/early-childhood-services/>

[healthy-curriculum-activities/healthy-eating-games-and-activities](https://heas.health.vic.gov.au/early-childhood-services/healthy-curriculum-activities/healthy-eating-games-and-activities) for exploring more.

The Stephanie Alexander Kitchen Garden Foundation, AUSTRALIA

The foundation is an initiative founded by a chef and cook book writer, Stephanie Alexander, who envisions seeing children form positive food habits for life through pleasurable food education using garden and cooking as their main educational strategies. The foundation offers professional development, educational resources and membership.

Learn more, here: <https://www.kitchengardenfoundation.org.au/>

Phenomenom, AUSTRALIA

Phenomenom is a fresh approach to food literacy and nutrition education, featuring videos and PDF resources, designed to slip more serves of vegetables into every classroom. The project is launched in May 2018 and works around providing the children with "exposures". It is handled by a not-for-profit organization that is supported by HortInnovation and focused around providing teachers who have existing skills and resources with ready-to-use teaching tools. Using YouTube® channel as the main platform for accessing the educational resources tied into the Australian curriculum, they currently target grades 3-6. For more information and accessing the resources, visit phenomenom.com.au

Jamie Oliver Foundation, UK and AUSTRALIA

The essential learning from the Foundation is that fresh, healthy food is a basic right for the people. Sharing about cooking and culinary education using simple ingredients is the major food education offered by the foundation for all age targets. For further inspiration, visit:

<https://www.jamieoliver.com/news-and-features/features/author/jamieoliverfoodfoundation/>

For more of what the Foundation does in Australia through partnership with a local independent not for profit organization, visit: <https://www.jamiesministryoffood.com.au/the-good-foundation>

British Nutrition Foundation, UK

If you are looking for nutrition information for your school work why not visit their education website "Food - a fact of life" which provides resources about healthy eating, cooking, food and farming for children and young people. Click here for further exploration: <http://www.foodafactoflife.org.uk/>

For a range of good tips around healthy living that includes eating well, active lifestyle, healthy aging and many more, click here <https://www.nutrition.org.uk/healthyliving.html>

Action for Healthy Kids, USA

This organization is based in USA and works to mobilize school professionals, families and communities to take actions that lead to healthy eating, physical activity and healthier schools where kids thrive.

Visit the following link for more tools for school and do some adjustments for use in your setting:

<http://www.actionforhealthykids.org/tools-for-schools/find-challenges/classroom-challenges/1212-nutrition-education>

