

2023 | Southeast Asia Public Health Nutrition Network

# Summary Report

Webinar Series 2/2023 on

Whole grains in Southeast Asia: Health benefits, regulations,  
dietary guidelines and consumption

23 November 2023 | Zoom Online Platform



Partner Societies/Associations:

Supported by Educational Grant from:



Food and Nutrition Society of Indonesia



Nutrition Society of Malaysia



Nutrition Foundation of the Philippines, Inc



Nutrition Association of Thailand under the Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn



Vietnam Nutrition Association



## 1. ABOUT SEA-PHN NETWORK

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Established in June 2014, the Network aims for a more effective implementation of public health nutrition measures to improve nutritional wellbeing of populations in the region. The current 5 members of the Network, which are affiliated with the Federation of Asian Nutrition Societies (FANS) and the International Union of Nutritional Sciences (IUNS) are Food and Nutrition Society of Indonesia (Pergizi Pangan), Nutrition Society of Malaysia (NSM), Nutrition Foundation of the Philippines, Inc. (NFP), Nutrition Association of Thailand (NAT) and Vietnam Nutrition Association (VINUTAS). More details of the Network are available on the Network website: <http://sea-phn.org>.

## 2. WEBINAR BACKGROUND

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Whole grains are valuable sources of nutrients and their roles in reducing risk to chronic diseases are well established. Health authorities have taken note of the scientific evidence and are giving greater emphasis to recommending greater consumption of whole grains. Despite this, whole grains consumption tends to be lower than recommended levels in many countries, including Southeast Asian (SEA) countries. The burden of diet-related non-communicable diseases (NCDs) associated with unhealthy diet and physical inactivity has been on the rise in the region. There is a need to close the gap between whole grain intakes and recommendations as this could potentially reduce the risk of diet-related NCDs. In this regard, understanding health benefits, consumer consumption data, development of actionable dietary guidelines messages and food regulations related to whole grains are important, as these could bring impact to whole grains and wholegrain foods provision, public health policy initiatives, public health messaging around increasing whole grain intake as well as development of innovative wholegrain products.

This webinar was organised by the SEA-PHN Network to:

1. Provide an overview and better understanding on health benefits of whole grains, the status of whole grain regulations, dietary guidelines recommendations and whole grain consumption data across Southeast Asian countries
2. Explore barriers, lesson learned, innovations and strategies to communicate whole grains messaging and consumption
3. Explore multisectoral roles in improving whole grains consumption in SEA countries

The webinar was attended by 298 participants including nutritionists, dietitians, members of academia, researchers, policy makers, public health workers, nutrition graduates and postgraduate students as well as other healthcare professionals. This report summarises the presentations and discussions during the webinar.

### 3. WEBINAR PROGRAMME

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Time	Programme
14:30	<b>Welcome Remarks &amp; Introduction to SEA-PHN</b> Clin Prof Dr Nalinee Chongviriyaphan, Vice-Chairman, SEA-PHN Network
14:40	<b>Keynote Lecture</b> Chairperson: Clin Prof Dr Nalinee Chongviriyaphan, SEA-PHN Network <b>Whole Grains &amp; Health - Scientific and Regulatory Aspects</b> Speaker: Dr Tee E Siong, Chairman, SEA-PHN Network
	<b>Session 1: Country Report on Whole Grains' Health Benefits, Regulations, Dietary Guidelines &amp; Consumption Data in Southeast Asia Countries</b> Chairperson: Dr Kit Phanvijhitsiri, PepsiCo Services Asia Ltd
15:10	<b>Indonesia</b> Speaker: Prof Dr Ir. Hardinsyah Ridwan, Food and Nutrition Society of Indonesia
15:35	<b>Malaysia</b> Speaker: Assoc Prof Dr Koo Hui Chin, Tunku Abdul Rahman University of Management and Technology, Malaysia
16:00	<b>Philippines</b> Speaker: Ms. Josie Platon-Desnacido, Food and Nutrition Research Institute, Philippines
16:25	<b>Vietnam</b> Speaker: Assoc Prof Dr Truong Tuyet Mai, National Institute of Nutrition, Vietnam
16:50	<b>Session 2: Panel Discussion - Breaking Barriers to Whole Grains Consumption</b> Moderator: Dr Tee E Siong, SEA-PHN Network
18:00	End of webinar

*Times indicated are Kuala Lumpur time (GMT +8 hrs)*

## 4. SUMMARY OF PRESENTATIONS

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### Welcome Remarks

***Clin Prof Dr Nalinee Chongviriyaphan, Vice-Chairman, SEA-PHN Network and President of Nutrition Association of Thailand***

Clin Prof Dr Nalinee Chongviriyaphan, Vice-Chairman of SEA-PHN Network gave the opening address and shared with the participants the Network's background and its key activities in promoting public health nutrition in the SEA region. She highlighted that the Network will continue to conduct multi-stakeholder collaborative projects amongst members of the Network and provide more opportunities for interaction among nutritionists to promote public health nutrition in the region. In this regard, continuous support from different stakeholders including nutrition associations, corporate companies, and nutritionists in the region is imperative. She also shared with the participants the 2<sup>nd</sup> Southeast Public Health Nutrition Conference in planning by the Network, which is scheduled to be held in the last quarter of 2024 in Bangkok, Thailand. Updates on the Conference will be made available on the Network website.

### Keynote Lecture

#### **Whole Grains & Health: Scientific & Regulatory Aspects**

***Dr Tee E Siong, Chairman of SEA-PHN Network, President of Nutrition Society of Malaysia***

Dr Tee started his presentation with an overview of the definition of whole grain, highlighted that there is no global definition of whole grain and wholegrain foods by related internationally recognised standards such as Codex Alimentarius. He pointed out that there is however a generally accepted definition which describes whole grain as consisting of the intact, ground, cracked or flaked caryopsis, whose principal anatomical components—the starchy endosperm, germ, and bran—are present in the same relative proportions as they exist in the intact caryopsis. He then stated a few examples of whole grains and how they are compared to refined grains and emphasised that each section of the whole grain kernel houses important health-promoting nutrients.

Presenting the association between the consumption of whole grains and health outcomes, Dr Tee highlighted that studies have consistently provided evidence on the intake of whole grains and reduced risk of multiple non-communicable diseases as well as all causes of mortality, and that low intake of whole grains have been the leading dietary risk factors for death in many countries worldwide. Sharing the findings from several countries, the potential benefits of healthcare cost savings following the increased whole grain intakes and health gains were also discussed. The current evidences have suggested the opportunity to communicate the need for dietary change, to swap refined grains for whole grains.

He then shared that recommendations to increase whole grains consumption are part of key messages of dietary guidelines around the world, including in some South East Asian countries:

- i. Indonesia: Eat a variety of staple foods, highlighting that whole grains such as corn, brown rice, and black rice are high in fibre

- ii. Malaysia: Eat adequate amounts of rice, other cereals, whole grain cereal-based products and tubers; choose  $\geq \frac{1}{2}$  of cereals and cereal-based products from whole grains
- iii. Philippines: The “Pinggang Pinoy” emphasises choosing whole grains as preferred energy-providing food items
- iv. Singapore: Eat sufficient amount of grain, especially whole grains

Despite the whole grains intake recommendations in dietary guidelines, there were insufficient whole grains consumption data in most countries and there remains a wide gap between recommendations and actual intake. Taste, poor availability, cost, and lack of knowledge were among the barriers identified for low whole grains consumption.

Dr Tee also shared the regulatory frameworks governing whole grains and wholegrain foods in ASEAN countries. A few ASEAN countries such as Indonesia, Malaysia, and Singapore have clear regulations on whole grains, wholegrain foods and whole grains related claims. It was highlighted that while there is general consensus for defining a whole grain, significant variation exists in defining a wholegrain food, as well as the criteria for related claims. The potential use of nutrient profiling and front-of-pack labelling to help identify wholegrain products and increase whole grains consumption were also discussed. Malaysia and Singapore are among the two countries in the region that have included the requirement for the minimum amount of whole grains as criteria for front-of-pack labelling for certain categories of foods.

Dr Tee concluded his presentation with several recommendations to address the low consumption of whole grains:

- Greater recognition of whole grains through public health policy and action
- Enact clear regulations defining whole grains and % of whole grains required, and labelling requirements
- Implement a variety of consumer education programmes
- Include clear and direct messages in dietary guidelines
- Multi-sectoral collaboration among public-private sectors to facilitate the implementation of interventions and programmes
- More consumer-centred studies to understand beliefs and attitudes towards whole grains as well as to identify solutions to support individuals towards increasing whole grains intake

## **Session 1 – Country Report on Whole Grains’ Health Benefits, Regulations, Dietary Guidelines & Consumption Data in Southeast Asia Countries**

### **Presentation 1**

#### **Whole Grains’ Health Benefits, Regulation, Dietary Guidelines, And Consumption in Indonesia**

***Prof Dr Ir. Hardinsyah Ridwan, President of Food and Nutrition Society of Indonesia***

Prof Dr Hardinsyah started his presentation by sharing that there is no formal legal definition of whole grains in Indonesia. The definition of whole grain by Whole Grains Council (2004) and USDA (2006) are among the two main references used by the country’s experts for whole grain regulation related

discussion. Similar to most countries in the region, Indonesia is facing the challenges of lack of whole grains intake data in the national food consumption data set. In general, the consumption of whole grains in Indonesia is region-specific in which consumers tend to consume whole grains that are naturally produced in their geographical area (i.e. sorghum in East Nusa Tenggara; corn in middle and eastern part of Indonesia; oats and wheat in urban areas and western part of Indonesia). The data on food expenditures of Indonesians from 2020 to 2022 indicated that there has been a decreasing trend in the money spent on cereals including whole grains. It was also highlighted that Indonesians are not consuming enough dietary fibre, which can be obtained from whole grains, legumes and vegetables.

Prof Dr Hardinsyah then shared that there is no clinical study in Indonesia on health benefits of whole grains. However, he highlighted the strong evidence from meta-analysis of foreign countries on the health benefits of whole grains in decreasing the risk of coronary heart diseases.

In relation to the whole grain regulations and guidelines in Indonesia, the National Agency of Drug and Food Control (BPOM) provides the guidelines on wholegrain product claims in which products claiming to contain whole grains should have at least 25% content of whole grains. The dietary guidelines of the Indonesia regulated by the Ministry of Health, on the other hand, contains no specific wordings for whole grains intake recommendation, but implicitly promote the consumption of whole grains. In this regard, Prof Dr Hardinsyah emphasised the need and importance of promoting whole grains consumption explicitly in Indonesia, particularly in view of the increasing prevalence of obesity, as well as the high prevalence of diet-related deaths such as stroke, coronary heart diseases and diabetes in Indonesia.

In concluding his presentation, Prof Dr Hardinsyah highlighted the growing opportunities to promote whole grains consumption in Indonesia as related global study has shown that the younger generations in Indonesia are trying to eat healthier and buying more sustainable foods.

## **Presentation 2**

### **Whole grains in Malaysia: Health benefits, regulations, dietary guidelines and consumption** ***Assoc Prof Dr Koo Hui Chin, Tunku Abdul Rahman University of Management and Technology, Malaysia***

Prof Dr Koo introduced the definition of whole grain and the minimum requirement for whole grain and wholegrain product claims as stipulated under the Malaysian Food Regulation (Amendment No. 4, 2020); these include:

1. Wheat flour, rice flour, rice, and grains shall contain 100% whole grain ingredients
2. Bread:  $\geq 60\%$  whole grain ingredients
3. Other whole grain products: 25% whole grain ingredients or 8 g per serving for other products
4. The word 'wholegrain' or 'whole meal' and the percent of the wholegrain or whole meal shall be written in the label in not less than 4-point lettering
5. The whole grain ingredients should ideally be listed as the first or second item in the list.

The most commonly consumed whole grains in Malaysia include brown rice, wheat, corn, oats, barley, and millet. Recognising the difficulties of the consumers in identifying whole grains/wholegrain foods as

well as the lack of wholegrain foods database, Dr Koo and colleagues developed and validated a whole grains food frequency questionnaire for Malaysian children.

Dr. Koo then presented several findings from local studies on the health benefits of whole grain consumption:

- Meta-analysis on the benefits of brown rice diet on glycaemic control showed that while brown rice has no effect on HbA1c level, it increases the amount of high-density lipoprotein and lowers body weight, suggested that longer term studies are needed to evaluate the benefits of brown rice diet.
- Whole grain rice (UKM red rice) facilitated the desirable gluco-metabolic responses as compared to white rice.
- The Great-Child Trial™, a quasi-experimental dietary intervention among overweight & obese children indicated that whole grains consumption reduced the body fats percentage and increased the nutrients intake of children in the intervention group.
- Schoolchildren who consumed higher whole grains tend to reduce fat intake.

In terms of recommendations in dietary guidelines, it was highlighted that the country's latest dietary guidelines (2020) recommending 3-5 servings of cereals, cereal-based products and tubers daily with half or more of cereals and cereal-based products should be chosen from whole grains. Despite the recommendations, the whole grains intake among Malaysians remain low. The barriers and facilitators to whole grains consumption among Malaysian population were discussed; among the barriers identified include the perceived cost, sensory aspects, and the lack of awareness whereas the facilitators to improve whole grains consumption include accessibility of whole grains, peer encouragement, cost reduction, product labelling improvement, etc.

In concluding her presentation, Prof Dr Koo presented the Malaysia's Whole Grain Recipe Cookbook which is one of the initiatives taken to promote and improve whole grains consumption among Malaysians.

### **Presentation 3**

#### **Whole Grains Consumption in the Philippines**

***Ms Josie Platon-Desnacido, Science Research Specialist II, Department of Science and Technology - Food and Nutrition Research Institute, Philippines***

Ms Josie presented the current status of the whole grain-related recommendations and health claims in the Philippines, stating that the Philippines has no existing regulations related to the definitions, labelling requirements, content claims, and health claims for whole grains and wholegrain foods. However, the health benefits of whole grains were emphasised and the country has been promoting a healthy diet that emphasises regular intake of whole grains.

The healthy eating messages pertaining to whole grains are included in the National Guidelines for Filipinos to encourage Filipinos to choose wholegrain foods over processed grain products. In addition,

the “Pinggang Pinoy” healthy food plate for Filipinos ~~adults~~ encourages the intake of whole grains as preferred energy providing food items with a clear message of ‘Choose whole grains like brown rice, corn, whole wheat bread, and oatmeal which contain more fibre and nutrients than refined grains and are linked to lower risk of heart disease, diabetes, and other health problems’. The World Health Organization Representative Office for the Philippines also promotes the consumption of whole grains with the message ‘Eat legumes such as lentils and beans and whole grains such as unprocessed maize, millet, oats, wheat, and brown rice’. Other initiatives for whole grains consumption promotion in the Philippines include the BE RICEPONSIBLE campaign of the Department of Agriculture, which aims to encourage the public to be responsible by not wasting rice, eating brown rice and rice mixed with other staples, and supporting locally-produced rice.

Ms Josie in her presentation also shared about the wholegrain products innovation in the Philippines. Some of the products developed include the brown rice nutty fruity bar and stabilised brown rice, specifically formulated to address nutritional problems prevalent in the country. Recipes highlighting brown rice were also developed to promote its health benefits and help consumers to enjoy brown rice in various dishes. Despite the promotion of whole grain consumption, Ms Josie highlighted that the intake of whole grains among Filipinos was still low, in which 1 out of 50 Filipino individuals consumed whole grains as indicated in the 2018-2021 Expanded National Nutrition Survey. Also presented were the data on the reasons (taste, habit, health benefits, easy to prepare) and barriers (cost, availability, rough texture) for consuming whole grains.

In conclusion, Ms Josie shared her thoughts that increasing the availability, affordability, and consumer awareness of the health benefits of whole grains and wholegrain products may help to increase consumption across age groups. She also suggested that the lack of regulations on the minimum requirements, labelling requirements, nutrition, and health claims for whole grains and wholegrain products should be addressed by nutrition professionals and policy-making bodies in the country.

#### **Presentation 4**

##### **Whole Grain Consumption for A Healthy Diet in Vietnam: Awareness and Practice**

***Assoc Prof Dr Truong Tuyet Mai, National Institute of Nutrition, Vietnam***

Assoc Prof Dr Truong Tuyet Mai started her presentation with an overview of the whole grains production in Vietnam, which has remained high and stable, with the production of wheat and barley have been increasing over the years. However, Vietnam has also been importing whole grains from other countries to bring diverse choices to the consumers as the domestic whole grain production is insufficient to supply the Vietnamese market. Dr Mai then discussed the whole grain consumption in Vietnam, in which the demand for wheat-based foods, barley, and oats has been on the rise.

Dr Mai also shared the knowledge, attitudes, and practices of whole grain consumption in Vietnam, emphasising that there has been a growing awareness in the country about the health benefits associated with consuming whole grains, and that the attitude and extent to which whole grains are incorporated into daily diet depend on the region, cultural practices, and other factors such as urbanisation,



socioeconomic status, and education. Dr Mai further added that while awareness of whole grains consumption is on the rise in Vietnam; cultural preferences, lack of information, and ingrained dietary habits are some of the barriers to widespread adoption and there remains a need to bridge the gap between knowledge and practice. She highlighted that educational initiatives and targeted campaigns can play a pivotal role in dispelling myths and encouraging a more informed and positive approach toward integrating whole grains into daily diets.

Continuing with her presentation, Dr Mai highlighted the importance of aligning whole grains with existing dietary guidelines and that multisectoral collaboration between government bodies, NGOs, and the private sector is crucial to ensuring a comprehensive approach that addresses not only individual choices but also systemic factors influencing whole grains consumption. Dr Mai opined that orienting a healthy diet with whole grains is important to improve awareness, knowledge, and practical aspects of incorporating whole grains to effectively bridge the gap between awareness and implementation, as well as to support sustainable agriculture and production to produce quality, responsibly sourced whole grains.

In conclusion, Dr Mai shared that while Vietnam stands as a key player in whole grains production, there remains a need for concerted efforts to enhance awareness and promote healthier dietary practices. A multifaceted approach that addresses knowledge gaps, encourages positive attitudes, and provides practical guidance for incorporating whole grains into everyday meals is needed to move towards a nation with a robust whole grain consumption culture.

## 5. PANEL DISCUSSION – BREAKING BARRIERS TO WHOLE GRAINS CONSUMPTION

The panellists for this session included all speakers, Council Members of the SEA-PHN Network as well as Associate Members of the Network who participated to provide insights from the industry perspective. The session was moderated by Dr. Tee E Siong. The main goals of the discussion were to identify potential approaches, and gaps to work on, as well as avenues for public-private partnerships to promote whole grains intake.

Main points discussed during the panel discussion:

- Presentations made at the webinar indicate that there is a great deal of differences in the various aspects of whole grains in countries in the region. There is a lack of data on whole grain consumption, and even fewer studies linking whole grain consumption and health outcomes. There is a dearth of information on consumer understanding of whole grains. Only a few countries have enacted regulations on whole grains recommendations. Few countries have published dietary guidelines on whole grain consumption, and the messages vary across the countries.
- There is a need for clear messages on the promotion of whole grain consumption in the national dietary guidelines. However, recognising that national dietary guidelines may not be reviewed or updated so frequently, it may take some time for these messages to be included.
- The need for a legal definition of whole grains to facilitate various activities related to whole grains and wholegrain foods to be carried out, including assisting consumers in identifying these foods, promotion of dietary recommendations to consumers, research on the consumption of these foods and provide clear information to food industries involved in production and marketing of these foods.
- The need for more initiatives on increasing awareness and promoting whole grains to the general public utilising various media across different platforms. These activities can proceed without waiting for regulations to be in place as the latter may take some time to be in place.
- Consumers in several countries are aware of the goodness of whole grains, but they may not be willing to spend more money to purchase the products; high cost has been identified as an important barrier to consumers not taking whole grains.
- Make available more affordable whole grains and wholegrain foods to consumers.
- The need to develop more affordable whole grain-based recipes, incorporating local/traditional food items/preparation methods. There is also the possibility of translating the healthy cooking with oats recipe books which were previously published in English into various local languages.
- Explore the potential of providing subsidies from the government as an approach to ensure more affordable whole grains and to encourage more consumption
- It is also recognised important to correct consumer image or misconception about whole grains, often perceived to taste terrible, or they are only for sick persons; it is also important to show consumers how to cook whole grains properly as they may require more time for cooking.
- Related nutrition professional bodies in SEA countries could play bigger roles in promoting and enhancing the recommendations for whole grains intake, as well as to advise and assist authorities/policymakers in the enactment of regulations on whole grains and the inclusion of these in the national dietary guidelines.

- Look into the use and challenges of incorporating whole grains into complementary foods for infants and young children as there are reports of high incidence of constipation among young children consuming whole grains
- Potential areas for further interaction and collaboration among SEA countries:
  - To explore the potential to develop common whole grains standards/guidelines and recommended intakes for SEA countries
  - Development of whole grains/wholegrain foods database; develop a common questionnaire on identifying the differences in sources, types, and intake of whole grains and wholegrain products, as well as whole grain content (%) in related products.
  - Common online survey within the SEA countries to gather information about consumers' understanding on whole grains
  - Compare the influence of different demographics on the consumption of whole grains across different countries

Key points from the panel discussion can be used for further interaction and collaboration in the future, as well as for meaningful dialogues with relevant stakeholders on potential efforts to address whole grains consumption in the region.

## 6. PICTORIAL REPORT



Figure 1. Prof Dr Nalinee Chongviriyaphan, vice-chairman of SEA-PHN Network, gave welcome remarks and shared the key activities of the Network



Figure 2. Dr Tee E Siong, chairman of SEA-PHN Network, delivered the keynote lecture on whole grains & health: Scientific & regulatory aspects

Southeast Asia Public Health Nutrition (SEA-PHN) Network  
 WEBINAR SERIES 2/2023  
**Whole grains in Southeast Asia: Health benefits, regulations, dietary guidelines and consumption**  
 23 November 2023 | Zoom Online Platform



**Session 1**

**Country Report on Whole Grains' Health Benefits, Regulations, Dietary Guidelines & Consumption Data in Southeast Asia Countries**



**Dr Kit Phanvijhitsiri**  
*R&D Life Sciences Manager,  
 PepsiCo Services Asia Ltd (Quaker);  
 Member of the Scientific Expert Panel Subcommittees,  
 Thai FDA*


**Chairperson**

Remove Pin Remove Spotlight



Phanvijhitsiri, Kit (PEP)


Figure 3. Dr Kit Phanvijhitsiri chaired the session 1 of the webinar




Prof Dr Hardinsyah Ridwan

**WHOLE GRAINS' HEALTH BENEFITS, REGULATION, DIETARY GUIDELINES, AND CONSUMPTION IN INDONESIA**

**Prof Hardinsyah MS PhD**  
 Professor in Nutrition at IPB University, Indonesia,  
 President Food and Nutrition Society of Indonesia, and  
 Immediate Past President of Federation of Asian Nutrition Societies (FANS)





IPB University  
23/11/23

Professor Hardinsyah MS PhD  
 Applied Nutrition Division, Faculty of Human Ecology, IPB University  
 President Food and Nutrition Society of Indonesia, Immediate Past President of FANS

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Figure 4. Prof Dr Hardinsyah presented on whole grains' health benefits, regulation, dietary guidelines, and consumption in Indonesia

SEA-PHN  
Southeast Asia Public Health Nutrition Network

TARUMT  
TUNKU ABDUL RAHMAN UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

Koo Hui Chin

**Whole grains in Malaysia: Health benefits, regulations, dietary guidelines and consumption**

Koo Hui Chin  
Tunku Abdul Rahman University of Management and Technology (TAR UMT)

Figure 5. Assoc Prof Dr Koo Hui Chin presented whole grains in Malaysia: Health benefits, regulations, dietary guidelines and consumption

SEA-PHN  
Southeast Asia Public Health Nutrition Network

Department of Science and Technology  
**FOOD AND NUTRITION RESEARCH INSTITUTE**  
DOST-FNRI

Ms Josie Platon-Desnacido

**Whole Grains Consumption in the Philippines**

**JOSIE PLATON-DESNACIDO**  
Science Research Specialist II  
Department of Science and Technology - Food and Nutrition Research Institute

SEA-PHN Network Webinar Series2/2023  
November 23, 2023

WHOLE GRAIN

Figure 6. Ms Josie Platon-Desnacido presented whole grains consumption in the Philippines



Figure 7. Assoc Prof Dr Truong Tuyet Mai presented whole grain consumption for a healthy diet in Vietnam: Awareness and practice

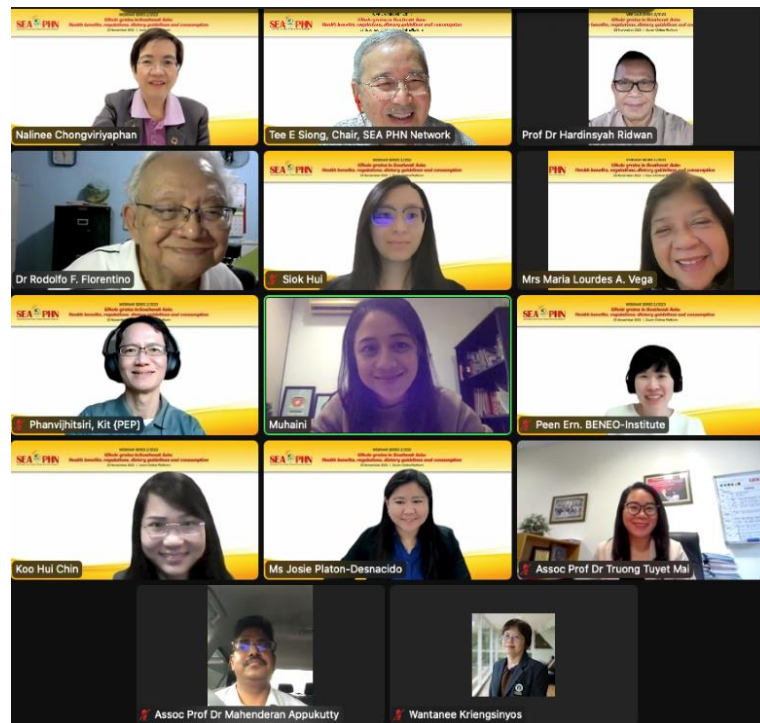


Figure 8. Group photos of invited speakers, chairpersons, council and associate members of SEA-PHN Network, guests and the Network secretariat

## 7. ACKNOWLEDGEMENTS

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The SEA-PHN Network would like to thank the chairs of the Webinar, all speakers for their presentations and sharing their views and thoughts during the panel discussion. The Network acknowledges the educational grant of BENEIO-Institute and PepsiCo Services Asia Co. Ltd in enabling this webinar to be carried out. The Network also places on record its appreciation to all participants for attending the webinar. Appreciation is also conveyed to VersaComm Sdn Bhd for serving as secretariat of the SEA-PHN Network and organised the webinar.

Report prepared by:  
VersaComm Sdn Bhd, Secretariat of SEA-PHN Network

Report vetted and approved by:  
Dr. Tee E Siong, Chairman of SEA-PHN Network

26 December 2023