Report on the WHO/FAO Inter-Regional Meeting to Promote Healthy Diets through the Informal Food Sector.

20th – 22nd August 2019, Bangkok, Thailand

An invite was extended to FSSAI, MoHFW to participate in the inter-regional meeting by WHO/FAO to promote healthy diets through the informal food sector at Bangkok from 20th to 22nd August, 2019. Ms Rohini Saran (DL, FFRC) represented FSSAI and the work done under various initiatives.

Background & Objectives

The inter-regional meeting aimed at extended food safety and nutrition through the informal food sector. The list of participants who attended the meeting is placed at Annexure 1.

The objectives of the workshop were to look into action areas along with experts who have done considerable amount of work in the sector. The three-day discussions were focused on deliberations towards considering urban and rural environments in terms of healthier street
foods keeping in mind the legal frameworks. The objectives and the agenda are placed at Annexure 2.

DAY 1

Session 1: Opening and Introduction

Dr Angela de Silva, welcomed all the participants and mentioned how critical targeting the informal sector for food safety and nutrition is. As majority of the people derive their diets through this channel, it is imperative that the diets provided through this sector are addressed. She mentioned that through this meeting, practical options towards doing work through the various best practices and experiences of different countries will be helpful in exploring the nutrition status of various countries. She also delivered the message of the Regional Director’s message to the audience. The detailed presentation is placed at Annexure 3.

Session 2: Regional Overview

In the second session, Dr Julia, WHO-WPRO, mentioned that the informal food sectors play a critical role in food environment. She said that the focus historically has been on food safety and not so much on the nutrition aspect. The nutritional quality of the street foods has been sub optimal as they are low cost. Involving actors who play key role of good legislation backed by good policy is needed to promote healthier diets. She also mentioned that there is no guideline that exists and we need to get more evidence first. As 68 percent of the employed population are in the informal sector, informal groups are often disinterested in the setting up legal establishments as they are not part of any legal systems. Street foods are part of tourist attraction and provide food security to all sections of poor and the white collar. She informed that Cambodia has just started to reduce sugar and researching on how the food can remain tasty and cheap.
She also mentioned that WHO-WPRO has started to work on studies pertaining to urban food security by undertaking a major survey in 100 cities in the world on how countries are dealing with the influx of population in the city and what would be needed by the countries. She stated that collaboration with UN agencies is underway to understand the situation and form policies to explore how the countries can deal with this in a cohesive manner. The detailed presentation is placed at Annexure 4.

Dr Warren Lee, Senior Nutrition Officer (FAO), mentioned that it is a good opportunity for the FAO to improve the quality of food delivered through the informal food sector. He stated that a great deal of people often migrate from rural to urban which foresees nearly 5 million people with the size of over units and this influx of the has created a pressure in cities to provide safe and nutritious food to its inhabitants. Along with this, there is an increase in incidence of overweight and obesity in the cities. He mentioned that Stunting has increased a great deal as well. As a lot of people coming to the cities are from the low socio-economic class, they often rely on street foods. He mentioned that in Bangkok/Thailand alone, street food accounts for about 40 per cent of caloric intake, which is a significant source of meals through the informal sector. He emphasised that it is time that WHO and FAO must focus on how to improve the food delivery through the informal food sector by cross learnings with various countries and looking at experience, research which can add to the existing knowledge. He reiterated that urban environment and food security must be studied and concerns like cost of fresh food and its implications on the vendors must also be studied. Considering the coordination between the public health authority, vendor associations, suppliers etc. must also be considered. He suggested that a food-based approach to healthy diets must be undertaken which will lead to nutritious diets. This will bring forth nutrition sensitive food consumption data and the nutritional education status of people as in the last 30 years, the medical approach like diet supplements, fortification and diversity has not provided sufficient micronutrients. Quoting the Lancet series 2013, he said that all these nutrition specific action can only deal with 30 percent – 80 percent nutrition sensitive action. However, where the food comes from, what food safety and other aspects are needed are often missing. Therefore, in the new SGDs second goal there is considerable emphasis on sustainable culture to improve the food supply and improve consumption of nutritious food. The detailed presentation is placed at Annexure 5.
Dr Angela de Silva, WHO SEARO, mentioned that we need to cover overall aspects of food, therefore, this meeting will explore the information available, who will implement the areas of policies and what is needed to consider the legislations at the local government levels. She stated that practices like promoting local zoning etc. may need compulsory trainings and additional burden on the food safety/Health departments of the countries. She also mentioned that excess salt acts as a preservative and alternatives must be sought. The critical aspect of any programme is sustainability, and understanding consumer preferences. The most obvious solution is to piggy back on the existing programmes also keeping in mind the constraints and the opposition to acceptability of healthier diets. The challenge is to look into menu options that are healthier, cost-effective thereby sustainable. She mentioned that via the legislation we also need to counteract the advertisement and marketing strategy towards promotion of unhealthy foods.

Dr Angela emphasized that the supply chain is very important including the roles of Ministry of Culture, Health etc. where it is produced and consumed may be categorized through the food system’s approach and not just the price and the income. It must include food security and nutrition impact and not just for shedding light on its interdependence. By looking at these systems we can identify which areas can be used as entry points for interventions. She said that the food system approach helps in the health to not only look at the ecosystem but to tackle the problem of malnutrition at large by relying on the link to the health systems, breastfeeding practices and also the need for social protection of low social economic group and the vulnerable groups.

She elaborated that the challenges of food system are many. The supply of the food chain is shorter, storage situation and price affect the choices. Supermarkets are the new environment for people to adapt. Food marketing influence the people to opt for ultra-processed food due to availability. In the cities, most people with low income rely on street food. Street foods are low-cost and convenient therefore they are very popular. The need for an acoustic engagement for better planning for food supplies is needed and investment towards integration of informal food sector in the food system is necessary. This will also promote the poor households to plan and support choosing healthy diets. She quoted the example of Indonesia, where majority of the population moved from rural to urban areas. That provided them with an employment opportunity and sustenance for the other migrants.
She further mentioned that the goal of this workshop is to look at models and how other countries have taken lead in promotion of healthy diets through their informal sector.

**Session 3: Country experiences, good practices and lessons learned**

*Experiences from region: Healthy diets in informal food sector in Singapore: Good Practices and lessons learned.*

Ms Ann Low from the Health Promotion Board, Singapore mentioned that the idea is to develop programs to cater to uniqueness of each food setting. She shared that Singapore has Hawker Centres, where there are 50 – 100 stalls and every stall is an independent food centres. Government of Singapore has relocated 114 hawker centres around the country and Coffee Shops are typically under the public housing apartments which are government subsidized. There are other eateries and also family owned businesses. She mentioned that a targeted approach is needed. Singapore adopted the Eco-systemic approach two years ago, where both the demand side and supply including the retailers and different programs targeting health were identified. In order to reduce the calorie intake of the population and improve the diet quality, various food and beverage services were studied. It came to the notice that there was in general an excess of 300 calories by the population and the diet quality primarily comprised of carbohydrates, lacking in micronutrients and rich in saturated fats. She mentioned that key stakeholders like department that gave food license targeted the landlords of the businesses. Hawker s were advocated to provide healthier menu options.

Another approach that was taken was the licence pendency approach. The restaurants providing food under the subsidized homes had to go through tender process where the food operator had to bid for the place. If the menu of the provider was healthier, that would entitle them for higher points in the bid. Further, different institutes were encouraged to research the healthier version of foods by reformulation.

Ms Low shared that the entire food supply chain was worked upon starting from raw ingredients and then to upstream with the food manufacturers. She also mentioned that the sugar, salt and fat content of rice noodles, sauces, ketchups etc. was also looked into. Carriers of high sugar etc. manufacturers were encouraged to regulate their recipes. Promoting consumption of brown rice with low GI instead of white rice was strengthened. Healthier version of noodles was released. They played games like spin the wheel in the hawkers
centres as on-ground promotion activities especially targeting iconic hawker centres as they are known for tasty and nutritious food. This helped in generating footfall at the stall. The press attention was also provided to these particular centres, which promotes healthy eating behaviour. Busting the myth that healthy food is expensive was narrowed in on, and the low calorie (under 500 kcals), cost effective menu items were identified and given publicity. Beverage shops with low calorie drinks was also identified. The hawkers reported an increase in their sales as well. This led to a boost in the confidence of food manufacturers and other vendors soon joined in. She also mentioned that a logo must be identified and promoted for the identity of any program by the government. The program is now looking to expand to processed foods. The detailed presentation is placed at **Annexure 6.**

*Country Presentations*

The session began with the country presentations and the current status, programs, and proposed next steps.

**Bangladesh:** The representative mentioned that visible activities around food production catering and transport are ongoing. Around 18 – 334 local government bodies are working together along with major ministries. Under the food ministry, the coordinating body is the Bangladesh Food Safety Authority. They are currently working on adaptation of nutrition labelling at the country level, setting up a network of food safety labs, collecting data etc. They have started the “Kamola cart” which is an orange coloured cart identified as the local food vendor. 600 of these carts were distributed in Dhaka and Phulan after the vendors were trained on food safety. The detailed presentation is placed at **Annexure 7.**

**Cambodia:** Ministry of Commerce is the leading body overlooking the informal food sector. They provide a certificate of good hygiene practices and provide training to the vendors including the testing of the street food samples. The detailed presentation is placed at **Annexure 8.**

**India:** The various initiatives and steps undertaken by FSSAI were shared with the audience. The role of FSSAI as an enabler was stated with special emphasis on initiatives like Street Food Hubs, FOSTAC, Hygiene Rating, RUPO, Swastha Bharat Yatra, Eat Right Melas and the Eat Right India movement. The cluster approach was explained in detail for the informal sector and linkages within the programmes was elaborated. It was shared that through the PPP model,
the food safety department has been leading change in the country. Involvement of all sectors to drive change was discussed. The best practice of involving celebrities to engage and reach out to people was also discussed. The detailed presentation is placed at Annexure 9.

**Indonesia:** The representative mentioned that there are a lot of street food vendors. The country has adopted a centralized system and has conducted many activities like assessment of hygiene and sanitation, food sampling, adulteration tests, building capacity of street food vendors. They have adopted the reward and punishment system and gave stickers to the vendors with high sugar content and operationalized the policies. The detailed presentation is placed at Annexure 10.

**Malaysia:** It was shared that the law depends on the capacity of the local authority. Under the Ministry of Health, hygiene regulations are there and the vendors need to register online on a yearly basis. Joint operation and promotion is carried out to ensure that nutritious food is available. It was mentioned that in 2013 alone, there were 6000 free consultations provided to the vendors. The country has come out with various videos which urge the employees to take short breaks and do stretching exercises. The detailed presentation is placed at Annexure 11.

**Mongolia:** The representative apprised that under the current food safety department, the country has taken up certain action. There are laws in place for Infant and Young Children, mandatory law on Food Fortification, a National Nutrition program however, no set policy is present for the informal food sector. The detailed presentation is placed at Annexure 12.

**Experiences from region: Healthy diets in informal food sector in Hong Kong: Good Practices and lessons learned.**

Mr Mandy Kwan from Central Health Education Unit, Centre for Health Protection, Department of Health shared that there is an Eat Smart Mobile App – which has the details of the Eat Smart Restaurants (ESR) (restaurant/eatsmart/gov.il). It was shared that a star rating system was introduced in the country. For a one star Eat Smart Restaurant, at least five dishes with more fruits and vegetables on a daily basis must be present. For Two-Stars, the restaurant must offer at least five dishes with more fruits and vegetables or with promote eat smart. For a Three-Star Restaurant, at least five dishes with more fruits and vegetables, and 3 less dishes and eat right promotion on a daily basis must be there. The country is providing
ongoing support by briefing session of about two hours disseminating nutrition knowledge to enhance the skills and as part of the quality assurance to check the compliance before any renewal of license of the restaurants. She mentioned that the campaign ran for 8 years and an evaluation was done, areas of enhancement were identified. This gave an opportunity to the restaurants to bring business and patrons. Celebrity endorsement was also undertaken along with price promotion special offers to encourage the consumer to opt for healthier options. The detailed presentation, guidebook and resource material is placed at Annexure 13.

Street Foods and Healthy Diets, a review of available information from Asia.

Professor Pulani Lanerolle, Faculty of Medicine, University of Colombo, Sri Lanka, presented the dynamic side of diets in response to urban development and demographic transition. She shared that the traditional foods, global and mixed diets provide an opportunity for us to change the nutrition platform. She detailed on the PubMed research and shared that there were only 19 studies which looked at nutrients in some way or another. These studies predominantly used questionnaires, especially in India, and focused mainly on adolescents. Working groups, local groups often ignore the quality of the food and the ingredients. Both formal and informal sectors need to be captured to strike a balance between food safety and nutrients that are provided through these diets. She shared that there are limited studies on micronutrients, high fat diets etc. and there is growing need to think of incentives and subsidies for better quality raw materials in the informal food sector supply for sustainability. The detailed presentation is placed at Annexure 14.

Session 4: Linkages and/or integration with other sector or programmes or initiatives

Thailand: The country shared its experience of the Clean Food, Good Taste project where the aim was to ensure healthier menus. A coliform text kit was prepared to test for food safety and an elaborate food sampling method was formulated. The representative shared that the street food management model was adopted which emphasized the standard requirements with central markets and the supplies in the big markets. As the rural markets sold the produce directly, the challenge was to address the issue of health and nutrition in these markets. A sustainable conceptual framework was shared through which the programme is being currently implemented. The detailed presentation and guide is placed at Annexure 15.
Sri Lanka: The representative mentioned that a half a day basic food training is done for the officers where topics of health and nutrition are added. The challenge is addressing the home caterers, or people who cook at home and then bring it to the streets. There is no mechanism to tap the food safety and the nutrient content in that sector. As the food is reheated or sold directly, there is a high chance of food poisoning. There is also a challenge in bringing food delivery personnel on board. However, the country has begun implementation of colour coding system in the schools and also begun the sugar tax. The detailed presentation is placed at *Annexure 16*.

Vietnam: The representative shared that the country under the Food Safety Law, has provided for guidelines for the vendors. There is a certificate for the training attended by the vendor and must have a certificate for eligibility of health. Periodic checks and engagement of all relevant stakeholders is a must. The detailed presentation is placed at *Annexure 17*.

Philippines: The country has begun mandatory fortification; salt is being fortified with Iodine. There is also voluntary fortification for snack foods which has the Saenoi Seal. Rice is fortified with Vitamin A, Iron and Iodine and wheat flour with Iron and Vitamin A. Oil with Vitamin A. She further shared the experience in Sebo, where 17 regions together have a lot of food handlers. It was informed that a caloric counter is underway and food safety guidelines are in place to protect the people. Home based catering services are a challenge as they are not trained to produce nutritious foods and to prepare a quality report. The detailed presentation is placed at *Annexure 18*.

Day 2

**Recap**

The day started with recap of the previous day. The following points were discussed. Overall principles to promote healthier diets:

1. **Policy environment**: enabling policies include legal and regulatory aspects
2. **Data**: Use data to develop policies and plan interventions; costing a healthier formulation, popular street foods, identify base ingredients, mapping of informal food service landscape
3. **Coordination**: across multiple sectors to plan, implement and monitor
4. Incentivize, facilitate and recognize/reward: Facilitation of processes including technical support for recipes, communication to improve knowledge and attitudes of vendors and consumers

5. Use existing programmes; all countries have some ongoing initiatives to build on- more sustainable

6. Connectivity between formal and informal sectors: areas must be recognized - raw materials (e.g. noodles; beverages etc. So PPP is important)

7. Participatory process: consult and involve vendors’ associations and other stakeholders

8. New technologies and communication: new methods to be recognized and utilized

9. Simple, practical and pragmatic. Promote overall healthfulness through focus on few key elements or ingredients; Key principle should be healthier rather than healthy

10. Start small; pilot settings e.g. focus on settings (govt. cafeterias, school vending stalls)

11. Monitoring the implementation process and evaluating outcomes is essential

12. New methods of vending: should be recognized and addressed - home cooked or vendor prepared and sold through apps, Fb etc.

13. Contextual: Actions would be city or region specific Cultural does not always mean healthy- change could be promoted

**Interventions**
- Supply
  - Identify and reformulate raw materials - single foods or food ingredients - rice, sauces.
  - Increase connectivity and supply of fresh raw materials such as fruit and veg through fiscal and other policies.
  - Facilitate fuel supply, cooking equipment, stalls, carts etc.
  - Educate and facilitate use of new technologies, recipe reformulations.
  - Indicate and provide strong support from govt including incentives to draw in business.
  - Keep labelling practices simple; to encourage healthier food choices and point of purchase.

- Meal production
  - Focus on one or two key elements (country specific) in the base product (rice) or ingredient (salt etc).
  - Communicate with vendors associations to use ingredients and base materials.
  - Address taste through developing innovative recipes and alternative ingredients.

- Demand
  - Educate consumers using innovative ways, aligned with new lifestyles and times.
  - Use champions to create demand for healthier diets.
  - Use innovative yet simple labelling methods; nutrient lists are difficult to manage due to recipes not being standardized (not feasible); easy recognizable logos.
  - Support with promotional materials, awards, publicity.

**Implementation pathways**
- Identify policy space and existing programmes for sustainability and reduction of infrastructure and personnel costs.
- Food safety programmes, school food programmes and canteens, government department settings.
- Other: PPP

Monitoring and evaluation is essential for robust implementation.
Expanding Food Safety initiatives to include promotion of healthy diets: Food Safety Specialist, Indonesia

Ms. Chitra Prasetyawati, Food Safety Specialist from Indonesia shared that food safety must broaden its scope to healthy diets. She detailed the current challenges on food safety, predominantly incidence of food borne illnesses and increase in mortality. She highlighted the various challenges pertaining to the informal food sector, and elaborated on how food safety norms on nutrition need commitment. She stressed on the importance of risk-based system and IEC to changing the mind-set of consumers and producers. The detailed presentation is placed at Annexure 19.

Session 5: Critical Components: Leadership, policy frameworks, communications and advocacy, convergence with other initiatives and sectors.

Dr Angela mentioned that the informal sector consists of various areas that need to be mapped. From the school program, where informal cafeterias are present to the online or home cooked meal providers, must be identified. She explained how through the FeedCities project, cities in central Asia and South eastern Europe are being studied. This will help in identifying structures, map the informal sector and further create an enabling environment. The detailed presentation is placed at Annexure 20.

Dr Piyapong from Thailand stated that it is often that traditional foods may be unhealthy and therefore reformulation may be needed. He mentioned that some countries are going ahead with very innovative ways to promote healthy foods and communication through digital platforms is also seen. To elaborate on the Thailand experience, he shared new ways of thinking and other BCC challenges. He shared how in Thailand there is Participatory Talent
System (PTS) which helps in guaranteeing the quality of the organic food. CSA or Commodity Supported Agriculture is a practice where the customer and producer know each other and can reflect and provide a mutual feedback. He stated that the leadership at the highest level is needed as covering the informal sector is not an easy task. The task of reformulation of products is huge and must be done in a phased manner. He announced that Thailand will soon be Trans-Fat Free country. The detailed presentation is placed at Annexure 21.

Shri Atin Ghosh, Hon’ble Deputy Mayor of Calcutta also shared his experience in working with the street food vendors. He mentioned that The Kolkata Municipal Corporation (KMC), the erstwhile Calcutta Municipal Corporation (CMC) was the first city to initiate studies on street foods for better management and hygiene regulation. He gave the details of the study and his learnings from the project in Calcutta. The detailed presentation is placed at Annexure 22.

Dr Indira Chakravarty, Nutrition and Food Safety Expert shared that the informal food sector is a throbbing topic but still needs a lot of intervention. She mentioned that space restrictions in street food can take over, without proper water supplies, segregation of safe and unsafe food vendors is not possible. She shared the details of the pilot study being undertaken where a star rating will be provided to them. The detailed presentation is placed at Annexure 23.

Panel Discussion 1

A panel discussion was held on finding potential for improving nutrient composition of street foods, the practical challenges and solutions thereof. The discussion was around assessing consumer perspectives, their expectations and demands. The food vendor and their perspectives also the quality of raw materials, quality and the food that is prepared by them. What are the existing food supply chains and pricing? How can food safety initiatives be expanded to encompass food quality in tandem with food safety.
To begin the discussion, Dr Purani shared that education to set up healthy food is already there, as well as good cooking methods. There is a need to identify and bring that out. Portion size, healthy diet increased consumption of fruits and vegetables, low HFSS and areas pertaining to food safety must be identified by the food vendor. However, we must not forget the practical usage of high salt as preservative, carbohydrates which provide for satiety unless we have solutions for the same.

Ms Mandy, Hong Kong said that the aim is to create business for them and because there is limitation of the informal food sectors, tailor-made restaurants may facilitate the options that are accommodating tastes.

Dr Warren stated that diversity is low due to poor dietary availability, increase the variety of food and resulting cost in the diet. From an agriculture point of view, we also must think about the livestock, fisheries etc. in particular the peri-urban areas where there are insufficient food supplies. If we can link with the suppliers, farmers to organize farmers and produce organic food, the soil can be benefitted as well. In South Asia, legumes and pulses are staples. This can be introduced to the diet and replace some carbohydrates in the diet. Short supply chain and food supplied is less diversified. You can also engage migrants who have the skills of farming. A lot of education is needed at the consumer level to engage and practice healthy habits. He suggested that FAO could do a nutrition sensitive value-chain study, a project in Myanmar is being conducted to diversify different types of crops.

Dr Indira mentioned that we must expand the agenda beyond food safety and involve stakeholders that will help bring in change. She stated the example of Calcutta, where the police were involved and that proved to be a game changer as vendors listen to the police who also turned out to be good communicators. She mentioned that HACCP points were identified and in their study after the use of gloves, the risk of food safety increased as the
vendors either reused or took off the gloves. Hence, training and knowledge dissemination becomes critical.

Ms Carla, WFP shared that there is a need to step back and think of the pre-requisites and assess if there is space to expand. Prioritization of resources is needed, risk assessment and safety might cause a detriment in the nutrition of the population. Evidence generation is significant from both the seller and the buyer perspective. The other aspect is to build capacity and monitor well. Historically put in the pace as opposed to the opposite is the bottom-up approach. Another gap is demand generation, analysis of diet, lack of diet diversity but affordability. We have to think of optimizing reformulation efforts. Healthier ingredients that are available and cheaper must be ensured. Working with cross functional agencies. Among local and regional governments, find ways of incentivizing small enterprises and improve regulations in terms of zoning.

**Group work 1. Brainstorming**

The panel discussion was followed by Group Work on identifying action points including information/knowledge gaps, convergence with other sectors and related issued. The aim was to:

- Identifying possible action points related to promoting healthier street foods including filling information/knowledge gaps
- Convergence and working with other sectors: Identify possible agencies that would lead interventions to promote healthier street foods, other sectors/partners and stakeholders and opportunities and constraints in implementing programmes
- Monitoring and evaluation

The detailed group work is placed at **Annexure 24**.

**Changes to food preparation methods and labelling of street vended foods.**

Prof Visith Chavisith, Mahidol University shared an overview of the consumption pattern of Thai food habits especially carbohydrates and sugar over time which has led to an increase in the incidence of NCDs. He apprised the audience on how the reformulation of products through nutrient profiling can eventually lead to healthier diets. He shared certain labelling actions that have been taken by the country which can assist in reduction in the NCD
occurrence. He concluded the presentation by mentioning that the improvement of the nutrient profile of foods in restaurant and street food vendor is complicated. Hence, the role of Front of Pack labelling is limited but somehow is still beneficial. By naturally merging the healthier food products into these food services, a healthier diet can be obtained. The detailed presentation is placed at Annexure 25.

Day 3
Recap
The day started with a recap section and alignment of views and work plan of the countries. The following were the discussion points:

- **Leadership**
  1. Political leadership- vital for initiating and driving policies, sustaining programmes and allocation of resources.
  2. Leadership of officials, technical experts: to support processes, provide appropriate methodology including monitoring
  3. Facilitation rather than punishment: Empathy for vendors and their issues- facilitating solutions
  4. Interest and awareness generation through site visits, publicity through media
  5. Context specific, ‘fit for purpose’ models with varied incentives – which ultimately lead to increased business

- **Street foods, nutritional value, consumer perceptions and changing methods:**
  1. The nutrition transition has likely affected the kind of street foods on offer. Earlier data show nutritionally adequate energy, protein and carbs. Newer foods are higher in salt, sugar and fats.
  2. Generally whole meals from traditional foods are more nutritious than snacks and beverages.
  3. Perception of value of a diet dependent on socio economic and educational status; for the poor- value depends on price and quantity whereas for the higher SES, value would be on nutrition, or culture.
  4. Promoted changes need to be practical as well as provide incentives; baking needs electricity, boiling would often take away taste.
5. Consider the double burden of malnutrition

- **Food system approach and urban environment**

  1. To promote heather diets in cities urban and peri-urban agriculture is a must. Shorter food chains and connectivity to food services with zoning of areas must be done. Farming in public institutions including hospitals and schools must be promoted.

  2. Use of soft policies may be more sustainable than regulations and force: e.g. providing a new image for street foods in the 21st century; rebranding vendors and street foods

  3. Behaviour change needs to happen in parallel to structural changes; exploring new concepts such as ‘nudging’ maybe useful.

  4. To improve nutritional value of street foods needs diversity of foods— which is dependent on the food supply and more nutrition sensitive value chains.

  5. Emphasis on urban agriculture through innovation

- **Expanding food safety programmes to promote healthier diets**

  1. A risk based approach must be considered- based on robust evidence. Resources for food safety are already scare and thus programme implementation may be seen. Are the planned activities evidence based? It is therefore best to focus on a single action rather than a multitude of actions which may not be feasible.

  2. Coordination between sectors important, but also coordination between technical agencies

- **Food technology and reformulation**

  1. Reformulation of products is an ‘upstream’ game changer: Harness reformulation efforts of industry to make changes in base ingredients used in informal food sector.

  2. Reformulation of recipes- best done by experts (chefs) rather than technical experts and nutritionists.

- **Improved management of street foods; a practical approach to monitoring**

  1. Successfully extending existing monitoring systems (e.g. food safety) to promote healthier street foods

[16]
2. Monitoring is complex and, in some situations there is limited regulatory manpower for monitoring, training, hand holding, awareness generation etc. expensive, needs lab support and often does not identify underlying drivers of the problem. Use of mobile testing trucks and food safety assessment methods could be adjusted; ‘audio-visual’ as a screening approach for selection of lab testing

3. Accepted practices can be adjusted to be contextual; headgear, wearing of gloves

- The informal food sector
  1. Information from Member States indicate that the definition of informal food sector is beyond street foods.
  2. Street-vended foods” or “street foods”: ready-to-eat foods prepared and/or sold by vendors and hawkers especially in the streets and other public places (CAC/GL 22-1997).
  3. Actions identified in group work span the processing and sale of ready-to-eat food prepared foods in the street and small restaurants/outlets.
  4. Lines between informal and formal food sectors appear to be blurred.

Panel Discussion 2

The second panel discussion focussed on the next steps and recommendations that will help promote nutritious diets through the informal sector. The discussion was around guidance and framework or tools needed, communication with the public to increase knowledge and awareness, what labelling, recipe standardization, legal and regulatory measures are required.

Ms Ann mentioned that one of the key areas now is to define the problem that you are trying to solve into bite size pieces. Follow the solutions and monitor the results. She mentioned that healthy dining didn’t start from the informal sector, the problem seems to be bigger than that. There is a need to rebrand the recipes and reposition healthy brands. Traditional foods are at the heart of any individual, cultural beliefs may influence the promotion of healthy food. Also, a champion is required who will act as an influencer and the
‘Hero’. This human interest angle can be the highlight and bring about a change in the culture as well. She also mentioned that being consistent is important. Going back and build confidence will bring in credibility.

Dr Lee mentioned that working together with the key stakeholders to levy support is important. They can be the spokesperson and bring in some progress to the diet. To add new products, working with the industry to produce better quality of food is essential. Best use of mass media is always a great idea. If you have the persistence, impact will be seen.

Ms Jessica, representative from UNICEF mentioned that science needs to be broken down to consumer language. Influencers in the community may be needed as the choices of consumers is varied. Finding the balance between need and want is necessary. Same message must be disseminated through various channels. Identifying where do people get their information is necessary to build a communication strategy. Subliminal message dissemination through sports news channels, TV series, social media can help link the message with the consumer. Use creative ways to put across your key messages. Provide health messages to the country. There are lot of conflicting some coming from NGOs etc. it is important to have the consumers to follow the message you are trying to relay.

Dr Vasith mentioned that initially there is a lot of resistance but then rather than moving a mountain, move the hill first. Start with medium and small enterprises and the big industries will follow.

Ms Chitra, food safety expert, mentioned that we can learn from each other. Once the leaders commit to the importance, implementation is possible. With clear policy frameworks, all stakeholders must work together.

Further, the group work 2 focussed on the country plan and next steps towards promotion of healthier diets. The detailed group work is placed at Annexure 26.

**Recommendations for Promotion of Healthier Diets through Informal Sector in India through FSSAI**

From the learnings of other countries and discussions, the following are the key suggestions and recommendations that may be undertaken to promote FSSAI’s initiatives and healthier diets through the informal food sector.
1. As FSSAI is looking at promotion of wholesome and safe food through a holistic approach, linkages may be formed between the initiatives to integrate and mainstream the program and bring in sustainability. For instance, restaurants who have adopted hygiene rating or the clean street food hubs must be linked to the RUCO initiative for easy disposal of used cooking oil. This will also ensure boost to other programmes as well.

2. Zoning of areas designated as informal sectors will help in mapping the landscape in India as well. This may be integrated in dashboard of FSSAI.

3. The Eat Smart Restaurant concept or the sticker concept as Thailand may be a part of Hygiene Rating programme.

4. USDA has an elaborate and dedicated nutrient database, the same may be created by FSSAI along with the industry and key stakeholders.

5. In the checklists of various initiatives, nutrition parameters may be integrated to gather knowledge and information.

6. FSSAI may approach the TV serials industry and promote Eat Right India messaging subliminally.
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OBJECTIVES

1. Share best practices and challenges to understand the few operating models that are currently in place in specific cities/areas to support healthy diets in the informal food sector.

2. To prioritize initiatives, including regulatory measures (including local and self-regulatory measures) and support needed to promote for better quality of foods from the informal sector.

3. To develop draft recommendations for promoting a healthy diet through the informal food sector, for consideration of Member States, or large cities within Member States.
## Tentative Programme

**DAY 1, Tuesday, 20 August 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Responsible Officers/resource persons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1: Opening and introduction</strong></td>
<td></td>
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<tr>
<td>0830-0900 hrs</td>
<td>Registration</td>
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<tr>
<td>0900-0930 hrs</td>
<td><strong>Inauguration</strong> (Regional Director’s Remarks/message)**</td>
<td>Regional Director’s message to be read by Dr Angela de Silva</td>
</tr>
<tr>
<td></td>
<td><strong>Meeting Objectives</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>Introduction of participants</strong></td>
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<td><strong>Photograph</strong></td>
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<tr>
<td>0930-1000 hrs</td>
<td>Tea/Coffee</td>
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<tr>
<td><strong>Session 2: Regional overview</strong></td>
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<tr>
<td>1000-1015 hrs</td>
<td>Informal sector foods including street foods in Asia</td>
<td>Dr Juliawati Untoro, WHO-WPRO</td>
</tr>
<tr>
<td>1015-1030 hrs</td>
<td>Informal food sector- entry points to promote for safe and healthy foods</td>
<td>Dr Angela de Silva, WHO SEARO</td>
</tr>
<tr>
<td>1030-1045 hrs</td>
<td>Perspectives on promoting healthy diets in the informal food sector – an urban food systems approach</td>
<td>Dr Warren Lee, FAO</td>
</tr>
<tr>
<td><strong>Session 3: Country experiences, good practices and lessons learned</strong></td>
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<tr>
<td>1045-1115 hrs</td>
<td>Experiences from Region Healthy diets in informal food sector in Singapore: good practices and lessons learned Q and A</td>
<td>Ms Ann Low Health Promotion Board Singapore</td>
</tr>
<tr>
<td>1115-1215 hrs</td>
<td>Country presentations – 3 countries (Followed by Q &amp; A)</td>
<td>Countries</td>
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<tr>
<td></td>
<td>- Experiences in informal food sector improvement, include food safety, challenges, lessons to be taken to improve diets and future plans</td>
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<tr>
<td>1215-1315 hrs</td>
<td>Lunch</td>
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<tr>
<td>1315-1345 hrs</td>
<td>Country presentations - 2 countries (Followed by Q &amp; A)</td>
<td>Countries</td>
</tr>
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<td></td>
<td>- Experiences in informal food sector improvement, include food safety, challenges, lessons to be taken to improve diets and future plans</td>
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</tbody>
</table>
### Session 4: Linkage and/or integration with other sector or programmes or initiatives

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1440-1500 hrs</td>
<td>Expanding food safety initiatives to include promotion of healthy diets: Clean Food Good Taste project Country presentation: Thailand</td>
<td>Thailand country presentation</td>
</tr>
<tr>
<td>1500-1530 hrs</td>
<td>Tea</td>
<td></td>
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<tr>
<td>1530-1630 hrs</td>
<td>Experiences in informal food sector including food safety, challenges, improving diets for health (followed by Q &amp; A)</td>
<td>Country presentations [3 countries]</td>
</tr>
<tr>
<td>1630-1730 hrs</td>
<td>Discussion: Scope of informal food sector for identification of actions to promote healthy diets</td>
<td>Directed discussion</td>
</tr>
</tbody>
</table>

**DAY 2, Wednesday, 21 August 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Responsible Officers/resource persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>0090-0920 hrs</td>
<td>Expanding food safety initiatives to include promotion of healthy diets</td>
<td>Ms Citra Prasetyawati Food Safety Specialist, Indonesia</td>
</tr>
</tbody>
</table>

**Session 5: Critical components: Leadership, Policy frameworks, Communications and advocacy, convergence with other initiatives and sectors**

<table>
<thead>
<tr>
<th>Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0920-0940 hrs</td>
<td>Identification of critical elements/principles from country experiences and lessons learned, finalizing the scope of actions (collation of information from Day 1)</td>
<td>Dr Angela de Silva, WHO-SEARO Dr Juliawati Untoro, WHO-WPRO</td>
</tr>
<tr>
<td>0940-1000 hrs</td>
<td>An urban food systems approach for promoting healthy diets; urban policies, built environment and practices</td>
<td>Dr Piyapong Boossabong School of Public Policy, Chiang Mai University, Thailand</td>
</tr>
<tr>
<td>1000-1020 hrs</td>
<td>Leadership of mayors and local governments: Remarks</td>
<td>Mr Atin Ghosh, The Hon Deputy Mayor of Calcutta</td>
</tr>
<tr>
<td>1020-1040 hrs</td>
<td>Tea/Coffee</td>
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<tr>
<td>Time</td>
<td>Activity</td>
<td>Presenter(s)</td>
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<tr>
<td>1040-1100 hrs</td>
<td>Healthy diet initiatives for street foods; practical options Q and A</td>
<td>Prof Indira Chakravarty Nutrition and Food Safety Expert, Chief Adviser, Public Health Engineering Department, Govt. Of West Bengal</td>
</tr>
<tr>
<td>1100-1120 hrs</td>
<td>National and sub national legal frameworks, ordinances and regulations for safe and healthy foods</td>
<td>Dr Manisha Shridhar, WHO/SEARO (remote presentation)</td>
</tr>
</tbody>
</table>
| 1120-1220 hrs | Panel discussion 1  
Potential for improving nutrient composition of street foods: practical challenges and solutions  
- Consumer perspectives: expectations and demands  
- Perspectives of food vendors (raw materials, quality and food preparation)  
- Food supply chains and pricing  
- Expanding food safety initiatives to encompass food quality | Dr Pulani Lanerolle  
Ms Mandy Kwan  
Dr Warren Lee  
Dr Indira Chakravarti  
WFP |
| 1220-1315 hrs | Lunch                                                                     |                                                                              |
| 1315-1340 hrs | Changes to food preparation methods and labelling of street vended foods. | Prof Visith Chavisith Mahidol University                                      |
| 1340-1400 hrs | FeedCities Project for evaluating street foods in Central Asia            | Dr Angela de Silva                                                           |
| 1400-1500 hrs | Group work 1.  
Identifying action points including information/knowledge gaps,  
Convergence with other sectors including legal and regulatory issues  
food related options such as labelling, Monitoring | Moderators: resource persons                                                 |
| 1500-1530 hrs | Tea/coffee                                                                |                                                                              |
| 1530-1630 hrs | Commentary:  
Synergies for improving informal food sector to promote healthy diets; practical possibilities and initial steps for cities | Mr Atin Ghosh, The Hon Deputy Mayor of Calcutta  
Other city/municipal corporation members from country delegations.  
Dr Piyapong Boossabong, Chiangmai University, Thailand  
Connectivity to other programmes such as Healthy Cities |
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Resources</th>
</tr>
</thead>
</table>
| 0900-0930 hrs | Critical strategies for healthy diets in the informal food sector including convergence with other initiatives/sectors | Dr Angela de Silva, WHO-SEARO  
Dr Juliawati Untoro, WHO-WPRO  
Dr Warren Lee, FAO |
| 0930-1030 hrs | Panel Discussion 2: Key actions and way forward  
Guidance frameworks/tools needed  
Communication with the public - consumer awareness and education  
Labelling, recipes standardization, legal and regulatory issues,  
Expanding food safety initiatives: Monitoring – innovative possibilities | Ms Ann Low  
UNICEF  
Dr Visith Chavasit  
Ms Citra Prasetyawati |
| 1030-1100 hrs | Tea/Coffee                                                               |                                                                           |
| 1100-1200 hrs | Group work 2: Moving ahead - next steps/ recommendations  
Government/Cities - urban planning and actions across sectors  
Strategic framing: food/ agriculture, environment issues for policy direction  
Communication and advocacy: with street vendors/informal sector  
Communication with public  
Expanding the knowledge base | Group work |
| 1200-1300 hrs | Lunch                                                                    |                                                                           |
| 1300-1500 hrs | Group presentations                                                      | Comments by resource persons                                              |
| 1500-1530 hrs | Tea/coffee                                                               |                                                                           |
| 1530-1630 hrs | Concluding session                                                      | Dr Juliawati Untoro, WHO-WPRO  
Dr Angela de Silva, WHO-SEARO  
Dr Warren Lee, FAO RAP |
Informal food sector- entry points to promote safe and healthy foods

Angela de Silva
Regional Adviser Nutrition and Health for Development
WHO Regional Office for South-East Asia
Outline

• Describe the informal food sector and definitions

• Suggestions to define the scope of the informal food sector for this meeting

• Aspects to consider when discussing entry points for healthier diets through the informal food sector
• The informal sector participates in food supply and distribution through food production (rural-urban links), transport, retail sales

• Significant role in Asian economies, specially in urban settings; livelihood, diets etc..

• Few policy documents refer to informal foods in the context of healthy diets
e.g. 2016 Milan Urban Food Policy Framework for Action; SEAR regional action plan to reduce the double burden of malnutrition; New food safety documents; draft voluntary guidelines for healthy diets (CFS). Framework for Action (ICN 2, Rome, 2014)

• Complex; no evidence based guidance or recommendations are available to comprehensively promote healthy diets in informal settings
Meeting objective: To promote healthier diets through the informal food sector;

- **Scope?**
  Processing and sale of ready to-eat food (prepared food in the street and small restaurants/outlets
  Healthier diets overall or NCD nutrients? Focus on selected food types
  Mobile vending premises or food stalls? other?

- **Information / data:** Since social, technical, economic, institutional, legal and political aspects need consideration, information is needed

- **Implementors?** Multidisciplinary and multidimensional collaboration, convergence between local governments, food safety authorities, nutrition sectors
Definitions

‘Street-vended foods” or “street foods”': ready-to-eat foods prepared and/or sold by vendors and hawkers especially in the streets and other public places. (CAC/GL 22-1997).

**Street Food Stall**: a place where street food is prepared, displayed, served or sold to the public. It includes carts, tables, benches, baskets, chairs, vehicles with or without wheels and any other structure ......

**Street Food Centre**: any public place or establishment designated by the relevant authority for the preparation, display and sale of street foods by multiple vendors. (CAC/GL 22-1997)

Processing and sale of ready to-eat food (prepared food in the street and small restaurants or outlets)
Policies, legislation, local government regulations on street vending

- Country policies and laws (e.g. public order)
- Local government laws, urban planning regulations, zoning, hawking and vending regulations
- Bylaws and business licensing regulations
- Compulsory/formal uniform training on hygiene, nutrition or other aspects of food preparation linked to registration?
- Regulations on use and storage of raw food materials, waste products, training needs
- Inspections/monitoring? consumer complaint system?
- Environmental regulations
Vendor profiles, perceptions, constraints and opportunities

- Vendors/suppliers: poor urban dwellers, often migrants - low socio economic and educational status, mobile.
- Perceptions that improving the nutritional quality means higher prices- meat, fresh vegetables, healthier oils
- Selection of foods? Taste: salt, fat, tasty, filling, less fruits and vegetables, -- low purchase value, spoilage
- Lack information and are therefore less inclined to follow health directives
- Unlikely to be motivated by practices that are environmentally friendly unless incentivized; solid fuels for cooking, less plastic use.
- ?? repressed by the local authorities
- Cooking practices
Consumers

- Consumer profiles; ? mostly from lower socio economic status; unable to afford higher prices
- Inadequate nutrition literacy
- Taste, cultural foods, convenience
- Preferences for certain foods (deep fried over uncooked due to food safety concerns)
- Physical access
Education and awareness

- Knowledge, attitude and practices (KAP) of vendors and consumers on safe and healthier foods
- Awareness of officials regarding informal foods and their importance
- Recipes and labelling
- How to sustain current education and awareness beyond project mode?
- Other issues: environmental pollution; plastic, solid cooking fuels

World Health Organization
Regional Office for South-East Asia
Data needs

• What policies are currently in place?
• Better understanding the role, operators and consumer practices and profiles in the purchase of food prepared in the street and small restaurants/outlets.
• Identification of itinerant food vendors and small restaurant operators and their activities.
• Types of foods and their quality in terms of nutrition- probably country and locality specific.
• Identify points of sale, needs for infrastructure, equipment, information and training.
• Groups and associations of informal operators.
Other considerations

• Food safety initiatives - can they be extended?
• Which agency should lead? Local authorities/municipal corporations are best positioned.
• Good coordination between the public health authorities, police and local body administration essential.
• Connectivity between small farmers and street food vending; network of suppliers and practices.
• The presence of organized associations or cooperatives - for negotiation; vendors have a voice, access credit, information
• Consumer accessibility and interest in particular foods
• Emphasis on food, region and cultural heritage connectivity
Possible policy options: processing and sale of ready to-eat food prepared in the street and small restaurants/outlets

• Attitudes and policies favourable to food informal operators
• Relocation of vendors into "food centers" located at strategic sites
• Issuance of licences – depends on following basic course on healthier diets? following of recipes/standards
• Fiscal measures and other incentives for food vendors/along the supply chain; access to credit, positive labelling/ratings
• Facilitating access to the services needed by the informal food sector; technical support for recipes, equipment
• Increase consumer demand for healthier options......

Dialog within the city hierarchy and vendors' and consumers' representatives and other stakeholders
Thank you
INFORMAL FOOD SECTOR IN ASIA
Regional Overview

Dr Juliawati Untoro
Technical Lead, Nutrition
WHO Regional Office for the Western Pacific
More than 68% of the employed population in Asia-Pacific are in the informal economy

- 1.3 billions people work informally in Asia-Pacific, comprising 68% of the world’s informally employed (ILO).
- According to the OECD, people who work in the informal sector:
  - “typically operate at a low level of organization,
  - with little or no division between labor and capital as factors of production and on a small scale.
  - Labor relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.”
- Largely unrecognized, unrecorded/unregistered, and unregulated small-scale activities.
- The informal sector is much greater in developing nations.
What is “informal” food sector?

- The “informal food sector” (IFS) exists in many forms.
  - It includes small producers, enterprises, traders and service providers, involved in legal as well as unrecognized activities related to food.
  - Various micro-entrepreneurs are some ways legally recognized by authorities.

- Food retail - comprises the actors who move products through the market into the hands of the consumer.
  - open or wet retail markets and small, independent (family-run) retail stores;
  - informal food vendors and restaurants.
## Types of Informal Food Sector

<table>
<thead>
<tr>
<th>Street Food</th>
<th>Market Vendor</th>
<th>Small Restaurant/Caterer</th>
</tr>
</thead>
</table>
| - A wide range of ready-to-eat foods and beverages sold and sometimes **prepared in public places, notably streets.**  
- Vendors' stalls are usually **located outdoors or under a roof which is easily accessible from the street/sidewalks.**  
- Important to the poor for socio cultural, economic and nutritional reasons | - Most visible actors in the IFS - **formal markets** (e.g. public markets managed by local authorities) and **informal** or spontaneous markets. | - Home-based **caterers** are entrepreneurs who cook food at home and then serve the finished products.  
- **Small restaurant/canteen** – often not registered. |
Roles of Informal Food Sector

- **Economic impact**
  - an income-generating activity,
  - employment, income and livelihood especially for the urban poor.

- **Food security** - cheap and easily accessible.

- **Social function.** Street vendors have knowledge of local conditions and develop close relations with customers.

- Offer variety of *traditional/cultural food - tourism.*
Social and economy roles

• IFS plays key roles. However policy in low- and middle-income countries to date on these retailers has rarely been focused on diet quality.

• There are 2 aspects:
  • Survival with primary aim is daily food security – policy with high social content.
  • Economical with primary aim is economic growth – policy with economic content.

• Investment to ensure the competitiveness of this sector to help make nutritious foods accessible and affordable to local populations could strengthen them in the face of competition from supermarkets.
## Examples
### Regulations and initiatives

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulations/Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>In July 2017, Phnom Penh municipal government began clearing away vendors from streets and sidewalks, beginning with 11 of the city’s main streets.</td>
</tr>
<tr>
<td>Indonesia</td>
<td>• In Surakarta, Street Vendor Management Programme relocated over 3,000 vendors to cleaner areas (2005).</td>
</tr>
<tr>
<td></td>
<td>• In Jakarta, the state government waived licence fees for street vendors in 2013, and included areas for hawkers in the city’s Spatial Plan 2030.</td>
</tr>
<tr>
<td>Philippines</td>
<td>• Street vendors were legalised in 2001, registered as informal workers and supervised under vendor associations. Parks, side streets and vacant lots were designated as legal hawking areas. In 2016, the government cracked down on illegal vendors and established a Zero Vending policy.</td>
</tr>
<tr>
<td></td>
<td>• The Cebu City United Vendors’ Association - founded in 1984 and includes 63 member organizations represents approximately 7,000 members. Their roles include engagement in policy development; advocacy to support street vendors’; facilitating the access to credit.</td>
</tr>
<tr>
<td>Myanmar</td>
<td>In 2014, hawkers were banned in 33 townships in Yangon. In 2016, food vendors on Yangon’s 11 busiest streets were relocated to two night markets or onto side streets. Officials said there were plans to open more night markets.</td>
</tr>
</tbody>
</table>
## Examples
### Regulations and initiatives

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</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>In 2007, the Seoul government designated legal hawking streets. In 2016, it said that it would legalise 8,000 illegal vendors by creating a legal framework for vendor licensing.</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Street vending/ hawking is only permitted with a license granted through the local councils.</td>
</tr>
<tr>
<td>Mongolia</td>
<td>There is a policy on regulation and licensing of street vendors. However, due to time-consuming bureaucratic hurdles in getting registered, street vendors do not register which makes them illegal.</td>
</tr>
</tbody>
</table>
| Singapore | • Hawker license” issued by the National Environment Agency under the “Environmental Public Health Act”  
• All food prepared and sold in the centers must comply with rules set out in the Environmental Public Health Act, the Environmental Public Health (Food Hygiene) Regulations, and the Sale of Food Act.  
• To facilitate relocation of hawkers from the street to hawker centers, the government offers subsidized stalls in the hawker centres. |
| Viet Nam | Regulations and strengthened campaigns to clear the sidewalks. |
Challenges

- Lack of recognition by authorities as a legitimate land use activity leading to conflicts in use.
- Lack of sustainability due to lack of recognized rights for vendors to set up mobile vending stands in regulated places.
- Lack formal/legal status that would facilitate improvement in food hygiene and access to credit.
- Vendors suffer from traffic, noise, personal safety and hygiene problems.
- Consumers face nutritional and food safety risks.
Summary (1)

- IFS exists in all countries in Asia and Pacific.
- It continue to offer incomes to a wide variety of people. Convenience to purchase and appreciated not only by urban poor but also office workers and tourists.
- Although much work remains to be done, there are good reasons to be optimistic about the future of the informal food sector and its potential.
Summary (2)

Authority should consider IFS as partner of local development initiative.

- **Regulation/policy**
  - regulatory framework and formulate enabling programmes.
  - regulations on land occupancy and integrate into urban planning.

- **Information and training**
  - provision of relevant food safety, hygiene and nutrition training – *sustainable and there is provision for repeated capacity building*.
  - Involve of the civil society in the awareness, campaigns, and policy advocacy

- **Environment, Sanitation and Hygiene**
  - Supply operators with adequately infrastructure facilities, equipment and services.
  - Ensure compliance with standards and regulations.

- **Food Safety**
  - Enforce regulations on food safety and quality standards and rules of hygiene.

- **Food Quality and Nutrition**
  - Create policy related to healthy and safe street food.
  - Governments to update food standards and quality objectives.
THANK YOU
Promotion of Healthy Diets in the Informal Food Sector – an Urban Food System Approach

Warren T K Lee, PhD, RD, RNutr (Public Health).
Senior Nutrition & Food Systems Officer, FAO Regional Office, Bangkok, Thailand.

WHO/FAO Inter Regional meeting to promote healthy diets through the informal food sector, Bangkok, Thailand, 20-22 August 2019.
200,000 people a day, 1.5 million people a week move from countryside to cities
Growth in global urban and rural populations to 2050

70% people will live in the urban areas by 2050

Source: UN, 2015.
Asia-Pacific is increasingly urbanized

Trends of the paradox over time

Trends of U5s stunting prevalence in Asia (1990-2016)

Trends of adult obesity prevalence in Asia (1975-2014)


Source of raw data: NCD-RisC (2018)

Note: High-income countries in Asia include Brunei Darussalam, Japan, Republic of Korea and Singapore.

With increasing urbanization in Asia, food insecurity shifts from rural areas to urban areas.
Stunting in urban poor is comparable and even higher than rural poor
Diversified healthy diets are often unaffordable for the poor

Source: WFP Cost of diet (COD) and Fill the nutrient gap studies
FAO’s Food Systems Approach for Healthy Diets & Improved Nutrition

Unbalanced Diets Underpins all Forms of Malnutrition

Moving towards a **Nutrition-sensitive Food Systems**...

**Medical approaches** (e.g., diet supplements) under the **Health Systems** only tackle acute and specific nutrient deficiencies, but cannot resolve underlying problems of malnutrition without addressing **where foods comes from**, i.e. **agriculture & food systems** (diet diversity & quality; food availability, access and consumer’s choice)
Healthy Diet, Nutrition and Food Systems

Healthy diets ...

Ensure sound nutrition:
- **Foods** - foundation for growth, health and well-being, in turn ......

- **Low-quality diets** - the common denominator for all forms of malnutrition

- **Sustainable Food system** (from farm to fork) has a huge potential to improve diets, nutrition, protect natural resources, improve livelihoods, decent employment

What is a food system?

It gather all the elements of:
- People *(food system actors – farmers, consumers, private sector, policy makers, etc.)*
- Environment *(socio-political, economic, and technological)*
- Infrastructures
- Institutions

... and activities that related to:
- Production
- Storage & processing
- Transportation
- Sales/marketing
- Distribution
- Selection, preparation and food consumption
- Social-economic & environmental outcomes

*Note: food system governs the safety, diet quality and affordability of foods, & modulates nutrition & health outcomes of humans, it also has impacts on the planetary environment*
Transforming Food Systems for Healthy Diets and Improved Nutrition

- Improving nutrition requires addressing all stages of Agri-food systems **horizontally and vertically** where foods come from, in order to make the food system nutrition-sensitive

Source: Global Panel on Agriculture and Food Systems for Nutrition, 2016
Why Food ‘System’ approach?

... it deepens the understanding of the link btw. food, diets and nutrition and its modulators

- Food system approach extends its *food-related* activities to socio-economic, environmental and food security & nutrition outcomes.
- It sheds light on inter-dependency between sub-systems: production, consumer behaviour, food security and the environment (e.g. food loss & waste management)
- Food systems thinking points to non-linear processes, feedback loops and tipping points in the food system.
- It sheds light on root causes and trade-offs between different intervention strategies towards improved diets and nutrition
- Core objective is to find synergies and (most effective) leverage points (places to intervene) in the food system for improved nutrition
- The food systems lens enables thinking across the bubbles and beyond the silo (e.g. health sys., social protection sys., economic & trade sys., etc.)
Challenges of the Food Systems in the rapid Urbanizing World

1.1 Reduced access to diverse, nutritious, safe and affordable foods

- Food comes from regional local farms (short supply chain) vs. food imported from abroad (Long supply chain) – affect food quality and price, etc.

- Food environment affects people’s food choice –
  - Traditional (wet markets, farmers’ markets, grocery stores; home-grown and home-made foods, traditional restaurant) vs.
  - Current Trends: (supermarkets, convenience stores, fast/ convenience foods, street foods, online order).

- Fresh fruits & veg are more costly than ultra processed foods in cities.
- Food marketing & advertising vs. food labelling, food regulations & legislation, consumer education.
Challenges of the Food Systems in the rapid Urbanizing World

1.2 Reduced access to diverse, nutritious, safe and affordable foods:

- Limited/lack of kitchen/cooking facilities in urban households – *an increasing trend*.

- Street foods - low-cost and convenient *ready-made* foods – A significant food source – popularity goes beyond low income groups
  - However, diet quality and food safety - major concerns

- A challenge to improve quality of foods provided
  - The vendors often with limited schooling/education.
1. Consequences of poor diet quality and inadequate food safety:

- Over-consumption foods and processed foods –
  - high in fat (esp., saturated and trans-fats), salt and sugar.
  - Low in nutrient-rich foods: fruits, vegetable, legumes & pulses, nuts & seeds.

- Increased prevalence of overweight, obesity; diet-related non-communicable diseases (diabetes, high blood pressure, stroke, cardio-vascular diseases, colorectal cancers, etc.)

- Increased risks of food borne illnesses and infections – esp. foods purchased from informal food sector:-
  - Lack of food safety & personal hygiene practices; lack of regulation, licensing, legislation and enforcement.
Informal food sector in Asia

Contributions to the society:

- Food security - provide affordable foods at convenient locations for the urban poor in Asia.
  - reach out to the under-served ‘food desert areas’ anytime, selling in small units and sometimes offering credit.
  - Monthly income (%) spent on foods in the urban poor (Boonyabancha and Kerr 2015):
    - Nepal & Philippines (43.5%); Thailand (50.3%); Sri Lanka (51.9%)
- Employment opportunity – attract unskilled labour (low and irregular income), low in education, especially women.
- Preservation of traditional food culture.
- Contribute to urban food economy & poverty alleviation
  - employment opportunity (social stability), food supply chains and food trade, logistics, tourism (street foods)
Informal food sector in Asia

Challenges of Informal food vendors:

- victims of abuse. e.g. police harassment and arbitrary confiscation of merchandise, complicated registration & licensing, restrictions on trade location, unaffordable taxes and fees.
- limited access to public space, infrastructure, utilities and services.
- fail to recognize the informal food sector as part of the urban food economy – making the sector invisible in official statistics for planning and investment.
Informal food sector in Asia

Consider Informal Food Sector in urban food systems planning

- Consider to include formal and informal food systems stakeholders, recognizing both are crucial resources to address food security and nutrition with place-based solutions.
- Informal food sector in some cities are lacking regulation and control on food safety and hygiene, let alone healthy diets standards.
- The vendors: Quite often the most vulnerable, primarily women, refugees and displaced populations, since street food vendor require little start-up capital and no formal education.
- Need inclusive engagement with street food vendors, consumers and relevant stakeholders for planning
- Need investments and an enabling environment to make a difference.
Integrate informal food sector in urban planning.

- Better spatial planning for food outlets and food markets;
  - Promote shorter supply chains (localising food production in and around cities to reduce the environmental impacts of food transport and waste.

- Easy of access to safe and nutritious foods by the poor households.

- Inclusive dialogue by engaging different actors and the community to plan and support positive changes to the food environment.
Make the (local) food system work for healthy diets

The following 5 questions may help:

- **What’s the scope of the (real) problem?**
  Understand the real problem - move beyond symptomatic control to address the root causes of the problem. Targeting key actors to drive a system change.

- **Who are involved and how?**
  Involve public, private and civil societies, etc. actors in a multi-stakeholder process (Inclusiveness). Also, engage multiple disciplines, linking technological interventions to behavioural change communication, etc.

- **What’s the goal?**
  Think about the outcomes of the food system and how to achieve these: malnutrition, incomes, jobs, healthy environment, etc. (e.g. related SDG goals)

- **What’s the effect?**
  Look for synergies between multiple outcomes: create a win-win for income, job, nutrition and environment, etc.

- **What has been done elsewhere?**
  Look for solutions and success stories in other food systems with similar problems and apply adaptation.
FAO Resources related to Urban Food Agenda and Food Systems

FAO Framework for Urban Food Agenda, 2018

Integrating Food into Urban Planning, 2018

Asia and the Pacific Regional Overview of Food Security and Nutrition 2018 – Accelerating progress towards the SDGs 2018.

UN High Level Panel of Experts Report on Food Systems and Nutrition 2017

A Vision to City Region Food Systems, 2014
Thank You!
Food security challenges are more and more interlinked.

Nutrition

7 billion world population (growing to 9-10 billion in 2050)

- 2 billion malnourished
- 2 billion overweight
- 800 million with chronic hunger
- 600 million obese

Poverty

- 50% of the working population is active in agriculture
- 20% of people are very poor
- 75% of the very poor live in rural areas

Urbanization

Climate

- 24% of the total global GHG emissions come from the food system
- 20% of the total global GHG emissions come from agricultural production
Food systems thinking can help to navigate this complexity..
Concluding remark

A food system approach allows for a wider perspective on possible sustainable solutions for undertaking the triple challenge the food and agricultural sector faces:

• Ensuring food security and nutrition (globally and nationally)
• Using natural resources sustainably, while contributing to climate change mitigation and adaptation
• Providing a livelihood for agents along the food chain
Moving towards nutrition-sensitive food systems: a promising and sustainable way to address all forms of malnutrition

- A food system determines diet quality and consumer food choice
  - supplies nutritious foods, from farm to fork to promote healthy diets

- A nutrition-sensitive food system:
  - Uses a food-based approach to ensure food production and food supplies are diversified and nutritious
Healthy Diets in Informal Sector: Good Practices & Lessons learnt

Health Promotion Board, Singapore
Ann Low

20 Aug 2019
Overview: Food service landscape in Singapore

Est total number of outlets = ~28,000

- Foodcourt Stalls: 6,027 (25%)
- Hawker Stalls: 6,944 (29%)
- Coffeeshop Stalls: 6,944 (29%)
- Institution Caterers: 6%
- Caterers /Online Bakeries: 3%
- Kiosks /Dessert: 2%
- QSRs: 3%
- Restaurants: 12%
- Cafes /Food Chain (Drinks): 5%
- Cafes: 12%
- Dessert; Ice Cream: 3%
- Bakery: 3%
- Hawker Centres: 6,944 (29%)
- Coffeeshops: 6,944 (29%)
- Food Courts: 6,027 (25%)

Source: Euromonitor Report – Consumer Food Service (2017); Total SG outlets ~28,000
Eco-systemic approach to influence supply and demand of healthier options

- **Reduce caloric intake; Improve Diet Quality**
  - **Upstream food innovation to ensure availability**
  - **Program targeting at stakeholders in the value chain**

  **Awareness**
  - Calories Literacy (Food & Nutrition) education; Program awareness/Brand building

  **Product Innovation Broaden Choices**

  **Healthier Ingredient Development Scheme (HIDS)**

  **Leverage Partnership Manufacturers, F&B, Retailer**

  **Healthier Dining Programme (HDP)**

  **Healthier Choice Symbol (HCS)**

  **Driving Consumer Demand**

  **Whole of Gov:**
  - Tenancy Specification (NEA); Evaluation Criteria (HDB)
  - Catering; Drink Policy; Mainstream School
  - Hawker activation; Cooking Classes
  - Eat Drink Shop Healthy (EDSH)
Multi-stakeholder partnership to make healthier options available and accessible

Changing the Context and Environment to Nudge consumers

Public agencies

Consumers

Industry Partners

Making healthier choice default and accessible
Food supply chain: Program design to target at different stakeholder

**Food Supply Chain**

- **Raw Ingredient Suppliers/Manufacturers**
- **Food Manufacturers / Importers**
  (Category: Oil, Wholegrain rice/noodle, SSB, sauces, dessert)
- **Grocery Retail**
- **F & B Outlets**
- **End Consumers**

---

**Build industry capabilities in new product development, commercialization and support consumer adoption**

**Healthier Ingredient Development Scheme**
Grant Supports: R&D, Marketing, Trade Promotion up to $500k

**Healthier Dining Prog**
Complimentary Services e.g. Nutrition services; Lab Test

**Healthier Dining Grant**
Supports: Point of Sales Marketing up to $30k

**Healthier Dining Innovation**
Supports: R&D, Culinary Training, Ingredients Trials, reformulation up to $5k x 8 vouchers

**Public Education & Awareness**
@ mass, digital & on-site

**On-ground activations**
@ hawkers, supermarkets, shopping malls

**Digital “Always-on” Consumer Promotion**
Eat Drink Shop Healthy Challenge

---

Applicable to hawkers
How can this bowl of duck noodle and drinks be healthier?

It is healthier because...
- Below 500kcal or/and
- Use Healthier Ingredients
  - Lower in sugar

<table>
<thead>
<tr>
<th>Healthier options</th>
<th>Lower in sugar</th>
<th>HIGHER in Wholegrains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthier SSB: &lt;6% sugar</td>
<td>Regular SSB: &gt;6% sugar</td>
<td>Wholegrain Noodle: Wholegrain 15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Healthier Oil</th>
<th>Sat Fat &lt;35%</th>
<th>Regular Oil</th>
<th>Sat Fat ~50%</th>
</tr>
</thead>
</table>

Reduce calorie intake
Identify food that is lower in calories (<500kcal) compared to other food

Improve diet quality
Select food cooked with healthier ingredients (oil in lower saturated fat or noodles/rice higher in wholegrains), drinks with no/lower in sugar
Create awareness with easy to identify Healthier Choice tag at front of house and on-site.

Generate interest trial and purchase through continuous promotion.

Generate Demand: How to increase adoption of Healthier Food and Drinks

Debunk Myths: Tasty food can be healthy too

- Lower in calories
- We use healthier oil
- Wholegrain options

Create awareness with easy to identify Healthier Choice tag at front of house and on-site.

Generate interest trial and purchase through continuous promotion.

- Food sampling
- Spin & Win with every purchase of healthier food or drinks

Debunk Myths: Tasty food can be healthy too

- Hawker food never tasted healthier
- Feature stall owners to share their experience

Support the HPS in sharing, so why not?

Feature common local food – Wanton noodle

Hawker food never tasted healthier

Feature stall owners to share their experience

Support the HPS in sharing, so why not?
Generate buzz to encourage trial and build confidence amongst F&B operators

Eating healthier at hawker centres

Channel 8 News coverage on Wholegrain Noodle manufacturer, Leong Guan reporting YoY 50% sales growth

Nasi Padang guna bahan lebih sihat terus dapat sambutan
Where are we now…

Target: 40% of 13,000 stalls across hawker centres and coffeeshops with at least 1 healthier option

As of March 2019, 7,400 (~50%) food and drink stalls in hawker centres and coffee shop offering at least 1 healthier option in their menus

HPB pushing for more healthy hawker food options by 2019

Today 10 Jul 2017

New Hawker Centres to serve healthier food

Extract from NEA New Hawker Centre tender clause:

“The Successful Tenderer shall work with the Health Promotion Board to implement the Healthier Dining @ Hawkers Programme at the Hawker Centre.”

NEW HDB Coffeeshop tender evaluation criteria:

“Participation in HPB Health Dining Programme. Award points to proposal with Healthier options available.”
Early success ...

Progress on eating healthier, but there’s room to do more

A push to eat more whole grains and veggies. A bit to cut down on oil and sugar intake. And now, the target is trans fats. Insight looks at the effort to get Singaporeans eating healthier and the impact they’ve had.

Singaparans taking less sugary drinks, rice and bread

Singapore has one of the most comprehensive food strategies in the world, using both regulation and promotional efforts, and working with the public as well as manufacturers.

“Singapore probably has one of the most comprehensive food strategies in the world, using both regulation and promotional efforts, and working with the public as well as manufacturers.”
Build a Healthier Food eco-system with a Comprehensive Mix of Intervention Tools

### Mix of Intervention Tools

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Downstream</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research &amp; Development</strong></td>
<td><strong>Policy &amp; Regulatory</strong></td>
</tr>
<tr>
<td>Food Ingredient Innovation and reformulation for key staples and ingredients</td>
<td>Trans fat ban</td>
</tr>
<tr>
<td>• From refined carbs to unrefined carbs eg wholegrain</td>
<td>Singapore to ban key source of artificial trans fats by 2021</td>
</tr>
<tr>
<td>• Sugar reduction from SSB, sauces and desserts</td>
<td></td>
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<tr>
<td>• Sat fat reduction from cooking oil</td>
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### Leverage strength of Whole of govt

- **Leverage strength of Whole of govt**
- WOG Catering – Taking the lead to switch to wholegrain staples
- Tenancy agreement and Tender Evaluation Criteria to ensure new F&B operators offer healthier options

### Tighten Nutrition Guidelines

- **Tighten Nutrition Guidelines**
- Healthier Choice Guidelines :
  - SBB Sugar content 7% to 6%
  - Wholegrain content in Noodle from 8% to 15%

### Education & Promotion

- **Education & Promotion**
- Drive awareness on media, on-site at point of sales eg Front of house labelling, poster, pillar wraps
- Encourage trial, 1st & repeat purchase with promotion
- Build stakeholders’ confidence

### Design New & Expand Program

- **Design New & Expand Program**
- Leveraging strong brand equity of Healthier Choice Symbol in consumer packaged goods to food service

---

### Higher in Wholegrains, Lower in Sugar/ Saturated Fat

- Higher in Wholegrains, Lower in Sugar/ Saturated Fat
- ({..identified 68 common local food)}

### Healthier Ingredients

- Healthier Ingredients

- Lower in Calories
Lesson learnt and Challenges ahead

Lessons Learnt

- **Start small** with iconic partners, food, location
- **Walk the ground, iterative process** of fine tuning and find the best mix of tools
- **Keep implementation simple**, efficient for scalability and sustainability
- **Leverage** on key stakeholders **strengths** and build industry capabilities

Challenges Ahead

- **Lack of timely data** to evaluate program efficacy
- **Change and sustain** consumer behaviour
- **Price parity** of healthier ingredients eg wholegrain noodles
- **Physical constraints** eg no space in stall
How healthy is hawker food?

Produced by Channel 5 highlighted HPB’s challenges in getting hawkers to serve wholegrains on the ground, as well as success stories, and it is possible to have healthier hawker food.

Thank you
Informal Food Sector in Bangladesh

Bangladesh Food Safety Authority
Presented by: Faria Shabnam (WHO-Bangladesh)
August 20, 2019
Formal and informal Food business in Bangladesh

Agri

Food Business

Processing

Food Serving
Informal Food Sectors in Bangladesh

Visible activities relating to the informal food sector are:

- Food production (urban and periurban);
- Catering and transport;
- The retail sale of fresh or prepared products (e.g. the stationary or itinerant sale of street food)
Food Safety Directives to Food Control Agencies

Around 18 ministries with their allied department and 334 local govt. Bodies (city corporation/pourashava)
Functions of BFSA

- Food safety Regulation Standard Setting
- Coordination Enforcement
- Food Laboratory Networking
- Data collection/Monitoring
- Science-based Policy Advice
- Food Safety Awareness
- Training for Food safety Inspectors/food handlers
Food Safety concern in formal and informal sectors

- Well coordinated Food Laboratory Networking is required for Testing
- Implementation of GMP/HACCP/GAP/FSMS, Good Hygiene Practices, etc. throughout the entire food chain.
- Setting of Food safety standards, Rules, Regulations, SOPs, etc.
Healthy, Safe and Nutritious food

Intervention points
- Communication, public awareness
- Policy, Legislation, institutions, enforcement
- Reliable and accurate surveillance data
- Private sector: self-regulation, code of practice, investment
- Introduced: adulteration, hygiene, storage

Risk pathways
- Hygiene and healthy food preparation
  - Introduced: adulteration, hygiene, storage
- Adulteration: hygiene, storage and transport
- Environmental, production related safety issues

Household – Consumer demand / Hygiene
Market – cleaning, preparation and sale
Value chain: Informal & formal
Crops
Livestock/fisheries
A New Breed of Food Cart Is Improving the Health of Millions of People in Dhaka

the UN, the Dutch and two city governments teamed up to make street eats safer
Surveillance and Monitoring of Informal food sector
Authorised Officers

- **Safe Food Inspectors**
  - Inspection of Food Premises
  - Taking Food Samples
  - Seizing, Detaining and Destruction
  - Investigation of Complaints

- **Food Analysts**
  - Investigations
  - Food analyses

Food Court – powers of prosecution
Food Surveillance and Monitoring

- Chemical Contaminants
- Microbiological Contaminants
- Veterinary Drug and Pesticide Residues
- Food Adulteration

Food Laboratories
Challenges

• Knowledge gap
• Traditional practice and food habit
• Multiple regulatory agency and laws
• Worsening traffic and space constraints
• Lack of fund allocation
• the reluctance of educational institutions in Dhaka to allow vendors on their grounds.
Recommendations

• Establish a dedicated wing of under BFSA to supervise, inspect and monitor of informal food vending
• Inaugurate recognitions and hygiene grading system
• Establish registration system for all informal business operators
• Appropriate and effective food vending structures maintaining uniformity and desired standard
• Intensive capacity development programme
• Awareness programme for vendors and customers
• Effective involvement of print and social media
• Effective coordination
Recommendations for informal Food sectors:

1. Establish a dedicated wing under BFSA to supervision, inspection and monitoring of informal food vending. In addition, take country-wide program to aware them through 5-keys to safer food communications materials.
2. Inaugurate recognitions and hygiene grading system with a view to motivate them and ultimately this will help to create food safety culture.
3. Establish registration system for all informal Food business Operators
4. Appropriate and effective food vending structures maintaining uniformity and desired standard
5. Micro-credit programs to provide necessary financial support may be introduced
6. Intensive capacity development programs with emphasis on self-regulated hygiene sanitation program
7. Food safety awareness program for both vendors as well as the general consumers
8. Awareness building program on proper food vending and food safety.
9. Effective involvement of Electronic, print and social media
10. Need effective collaboration with all stakeholders, e.g: Food Safety Authority, LGED, Dhaka City Corporation, Institute of Public Health, relevant Universities, Local Government and Engineering Department and Consumers Association of Bangladesh, Bangladesh Food safety Forum (BFSF) and many take up the responsibility.
WHO/FAO Inter Regional Meeting to Promote Health Diets through the Informal Food Sector

Bangkok, Thailand 20–22 August 2019

Dr. VEAL CHANDARITH MoH
Ph. CHHIM TONY MoH
# COUNTRY PROFILE
## Cambodia Population

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<table>
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<tr>
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<tbody>
<tr>
<td><strong>Total Population (July 2019)</strong>***</td>
<td>15.2 Million</td>
</tr>
<tr>
<td><strong>Male/Female Ratio</strong>*</td>
<td>0.95 male(s)/female</td>
</tr>
<tr>
<td><strong>Death Rate</strong>*</td>
<td>7.4 deaths/1,000 population</td>
</tr>
<tr>
<td><strong>Birth Rate</strong>*</td>
<td>22.5 births/1,000 population</td>
</tr>
<tr>
<td><strong>Life Expectancy</strong>*</td>
<td>65.2 ys</td>
</tr>
<tr>
<td></td>
<td>M = 62.7 ys</td>
</tr>
<tr>
<td></td>
<td>F = 67.9 ys</td>
</tr>
<tr>
<td><strong>GDP Per Capita (2018)</strong>**</td>
<td>USD 1,476</td>
</tr>
</tbody>
</table>

* Source from: 2018 World Fact Book
** Source from: 2018 World Bank
Food safety policy and legislation in Cambodia
There are 6 ministries concerned with food safety management.

1. Ministry of Agriculture, Forestry and Fisheries (MAFF)
2. Ministry of Industry and Handicraft
3. Ministry of Commerce (MOC)
4. Ministry of Health (MOH)
5. Ministry of Tourism (MOT)
6. Ministry of Economy & Finance (MEF)
The ministry of Agriculture, Forestry and Fisheries

- Manage the safety and quality of Agriculture products
- Control slaughtering operations
- Animal health authorities
- Assess of pesticide formulation and pesticide residue
The ministry of Industry and Handicraft
Sub-degree 12 (02–02) National Standards

- Develop the national standards in order to improve the quality of local food products
- Control on quality in food processing and manufacturing
- Register labelling of pre-packaged food products which must conform to standard CS 001:2000
- Inspect/monitor the processing foods samples on microbiological and/or chemical
The Ministry of Commerce

Sub-degree 54 (09–97) CAMCONTROL

Inspecting and repression goods with fraudulent while being in circulate at the market
The ministry of Health
Sub-degree 67 (10–97) Food Safety

- Control on food safety and management
- Monitor on microbiological and chemical hazards in food and food borne disease
- Conduct health education on food safety for the public and school children
- Check on food supply and food control chain in end used (Table).
Sample of Certificate
Sample of Logos
Related to the Street vendors foods
Food Safety Activities

In The City/Municipal
The officials in charge of food safety promote and training food safety to the venders, food handlers
- Proper hands washing
- Personal hygiene
- Leaflets
Coordination

Ministry of Health
Between ministries of health, municipal/city
- Draft street food legislation
- Training to the trainers some of officials in charge of food safety in the city/municipal
- Establishment check list for monitoring street vendors foods
Promoting and Supporting actions

Ministry of Health
Part 1 (04 Jan 2017 to 30 March 2017) & Part 2 (27 Nov 2017 to 27 April 2018) 3 focal zones
Food Safety Bureau Officials Department of Drug and Food (DDF), Officials in The City/Municipal and Pharmacy internship students conducted the food hygiene and safety surveillance. The officials and students were trained

- Filling of the surveillance questionnaire
- Identified samples and how to collect the samples methodology used to select samples and test kits
- How to storage, transport and send the samples to the laboratory
Prepare training and mapping of students (21–23 November 2016), in order to collect food samples in street food, Phnom Penh
Promoting and Supporting actions

Activities students training, analysis(test kit) and collected food samples of food vendors in Phnom Penh
Promoting and Supporting actions

Activities collected food samples of food vendors in Siem Reap Province
Promoting and Supporting actions

Activities collected food samples in street vendors, Preah Sihanouk Province
Test kit analysis to Borax, Formalin, Sodium Hydrosulfite, Coliform in food, water & ice and Cleanliness
Promoting and Supporting actions

- Leaflets
- Demonstration proper hands washing/personal hygiene
- Demonstration how hygienic condition
  - Foods preparations
  - Kitchen equipment keeping
  - Etc.
Possibilities/plans and Challenges

Expanding the food hygiene and safety surveillance over the country
Training to the trainers about food safety in all cities/provinces
Public awareness of food safety in whole country

Challenges

Officials in the City/ Municipal
- Numbers limited
- Overlap of working
- Retirements
- Lack of financial & transport supported
Improve food quality and safety in street food, it recommenced that

- All food handlers should adhere food hygiene requirements
- Food must be kept in hygienic manner and keep in appropriate temperature
- All kinds of vegetable have to wash with clean running water.
- All food contact surfaces include glass, plate, knives, chopping boards have to clean, disinfect and keep in hygienic manner.
• Food and drinks should be protected from contamination (microorganisms, toxic, chemicals, dirt, etc.
• Food handlers should be trained specially on subjects of personal hygiene and food preparation. They should follow appropriate hygienic food handling practices. The cook should always wear a clean white apron, and hair should be covered.

Conclusion
Thank you!
REGIONAL MEETING TO PROMOTE HEALTHY DIETS THROUGH THE INFORMAL FOOD SECTOR
COUNTRY PRESENTATION - INDIA

MS. ROHINI SARAN, DEPUTY LEAD (FFRC)
FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA
MINISTRY OF HEALTH AND FAMILY WELFARE INDIA
MANDATE

ensure safe and wholesome food

1. Food Standards & Safe Practices
2. Food Testing
3. Food Safety Compliance
4. Training & capacity building

Focus on nutrition
Consumer Connect and Social & Behavioural Change

Build a positive work culture & ethos
Adopt collaborative approach to get ideas and support from all
Create shared vision with stakeholders as change agents
Leverage technology to achieve standardization, efficiency and scale
EAT RIGHT INDIA MOVEMENT

Eat Safe
1. Food Adulteration
2. Hygiene Rating
3. Clean Street Food Hub
4. RU CO
5. BHOG

Eat Healthy
7. Food Fortification
8. SNF@School
9. Reduce HFSS
10. Trans Fat Free India @75

Others
11. Eat Right Campus
12. Training and Capacity Building (FoSTaC)
13. No Food Waste

NetProFaN
CLEAN STREET FOOD HUB (CSFH)

“A hub or cluster of vendors/shops/stalls selling popular street foods, 80 per cent or more of which represents local and regional cuisines and meets the basic hygiene and sanitary requirements. It excludes fine dining”

Objective:

To raise the quality of street food vending to the level of food courts and established hotels and restaurants while preserving rich culinary heritage of the country
STANDARD OPERATING PROTOCOL

01 Cluster Identification
A geographical area with an aggregation of clusters of vendors will be identified and recommended by the local food authority to FSSAI for declaration.

02 Pre-Audit
Vendors of the potential hub will be jointly inspected by State FDA and FSSAI empanelled auditing agency for gap analysis.

03 Implementation
Training: Hand holding under FOSTAC. Compliance Submission*: Compliance of suggestions given during initial inspection to be done within 30-60 days’ time limit which is to be confirmed by concerned State FDA official.

04 Final Audit
 Conducted by same FSSAI empanelled auditing agency. Report of assessment to be submitted to concerned state FDA.

05 Certificate of Declaration**
After proper examination, FSSAI will certify the cluster as a “Clean Street Food Hub” and reward the hub with a plaque.

06 Sustenance & Renewal of certificate
- Routine inspection, sampling, quality and microbiological testing by State FDA
- Renewal of certificate up to 2 years

*Cluster will be delisted from potential hub list if final audit is not conducted within six months of pre-audit
** If 80% compliance is achieved in the pre-audit, the cluster may be certified as “Clean Street Food Hub” post pre-audit.
FOOD SAFETY DISPLAY BOARD

How to decode Food Safety Display Boards

License/Registration No. of Food Business Operators (FBO)

Colour coded for different sectors

Food Safety & Hygiene practices to be followed by FBOs

With Us You Will Get Safe Food

Hygiene Rule Codes

1. Keep vending premises/cart clean and pest free
2. Use potable water for food preparation
3. Cook food thoroughly. Keep hot food hot and cold food cold
4. Handle and store veg & non veg, raw & cooked food separately
5. Store cold food at cool temperature
6. Use separate chopping boards, knives, etc. for raw, cooked & veg/non veg food
7. Wear clean clothes/uniform
8. Wash hands before & after handling food and after using toilets, coughing, sneezing, etc.
9. Use water proof bandage to cover cuts or burn wounds
10. Do not handle food when unwell
11. Use clean and separate dusters to clean surfaces and wipe utensils
12. Keep separate and covered dustbins for food waste

Consumer Feedback details for concern/feedback/queries

Where to find one?
Retail stores, Milk booths, Vegetable & Fruit retail, Meat shops, Restaurants, Street food vendors.
ROLE OF GOVERNMENT AGENCIES

Convene and coordinate overall implementation of the project

Upgrade and monitor overall infrastructure and facilities of existing street food hub such as lighting, ventilation, water supply, waste disposal system, cleanliness, personnel hygiene facilities etc.

Monitor and review progress of the overall project

- Food and Drug Administration (State/UTs)
- Archaeological Survey of India
- Ministry of Culture
- Ministry of Tourism
- Municipal Administration and Urban Development Department

Personnel Hygiene
Cleaning & Sanitation
Pest Control
Raw Material Control
Production Control
Storage & Distribution
Drainage & Waste Disposal
Lay out & Infrastructure
Surroundings
THANK YOU

Girgaon Chowpatty, Mumbai

Urban Chowk, Ahmedabad

Chappan Dukan, Indore

Food Street, Gandhinagar

Kankaria, Ahmedabad

Gopi Talav, Surat

Juhu Chowpatty, Mumbai

SBR Social, Ahmedabad
FOOD SAFETY FOR STREET FOOD VENDOR IN INDONESIA

Eni Gustina (MoH)
Sugeng Irianto (WHO Indonesia)
Endra Muryanto (Jakarta Regional Health Lab)
Dr. Hera Nurlita (MoH)
Endang Widyastuti (MoH)
Abdul Malik Setiabudi (MoH)
Yuni Zahraini (MoH)
OUTLINE

1. FOOD SAFETY ACTIVITIES RELATED TO STREET VENDED FOODS
2. COORDINATION BETWEEN MINISTRY OF HEALTH, MUNICIPAL CORPORATIONS AND OTHER SECTORS
3. EXAMPLES FOR PROMOTING AND SUPPORTING ACTIONS
4. POSSIBILITIES AND CHALLENGES
<table>
<thead>
<tr>
<th><strong>Law no.36 /2009 on Health</strong></th>
<th><strong>Law no.18 /2012 on Food</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Article 162</strong>&lt;br&gt;Environmental health efforts aimed at establishing the quality of a healthy environment, whether physical, chemical, biological, and social to enable more people to achieve the degree of health as high.</td>
<td><strong>Article 143</strong>&lt;br&gt;The government is responsible for increasing knowledge and public awareness of the importance of nutrition and its effect on improving nutritional status.</td>
</tr>
<tr>
<td><strong>Law no.18 /2012 on Food</strong></td>
<td><strong>Regulation no. 28/2004 on Food Safety, Food &amp; Nutrition Quality</strong></td>
</tr>
<tr>
<td><strong>Ministry of Health Regulation no. 2/2014 on Food Borne Diseases Outbreaks</strong></td>
<td><strong>Ministry of Health Regulation no. 1098/2003 on Hygiene and Sanitation of Street Foods</strong></td>
</tr>
<tr>
<td><strong>Ministry of Health Regulation no. 41/2014 on Balance Diet Guidelines</strong></td>
<td><strong>Ministry of Health Regulation No. 30/2013 The Inclusion Of Sugar, Salt And Fat Contents As Well As Health Message On Processed Foods And Fast Foods</strong></td>
</tr>
</tbody>
</table>
FOOD SAFETY ACTIVITIES
RELATED TO STREET VENDED FOODS
FOOD SAFETY ACTIVITIES RELATED TO STREET VENDED FOODS

**ASSESSMENT**
Conducting assessment of the hygiene and sanitation conditions on food, kitchen, equipment and personal hygiene aspects—(MOH Develop assessment form)

**FOOD SAMPLING**
Conducting food sampling in detecting biological, chemical or physical contamination (MOH and District provide rapid test kit)

**STICKERIZATION**
For vendor with no biological, chemical and physical contamination of food (MOH and district provide IEC material)

**CAPACITY BUILDING**
Strengthening capacity building for street food vendor

**MONITORING & EVALUATION**
- Reward
- Punishment
- Collecting Data
- Software E - Monev

**COLLECTING DATA**
- Software E - Monev

**MONITORING** & **EVALUATION**
- Reward
- Punishment
- Collecting Data
- Software E - Monev
COORDINATION BETWEEN MINISTRY OF HEALTH, MUNICIPAL CORPORATIONS AND OTHER SECTORS
REGULATION

- Provincial Level
- District Level

MoH
Intersectoral Colaboration for Healthier Street Foods Campaign in Jakarta Province

Municipal Government

Trading and Micro Business Agency

Health Agency

Food Security Agency

Provincial Health Laboratory

Food and Drug Agency

Food safety is a shared responsibility
EXAMPLES FOR PROMOTING AND SUPPORTING ACTIONS
Challenges of “Street Vended” Food Safety

- Microbial problem, unsanitary conditions, uses of unsafe-chemicals; Incl. unsafe use of food additives

Conducting Food Safety education at school:

- Food safety campaign
- Mascot for food safety campaign for school children
- Training for food safety facilitator at elementary school
- Five Keys for Safer Food at school
- Website: http://klubpompi.pom.go.id
Local Balance Menu (Breakfast) to fulfill student’s nutrition needs

School Meals Programme (Pro-GAS)

Knowledge of Nutrition

strengthening character education

FOOD SAMPLING
Food is the main factor in improving human health and environmental sustainability.

Indonesia need to establish national system of food safety; including

1. Strengthening implementation of regulation & policy

2. Build food safety infrastructure and Inspection System; assurance of compliance, Improvement human resources & standardized laboratory; provide clean water, clean ice, etc

3. Develop massive food safety education program for community, producers, consumers and stakeholders; encouraging street food serve healthy diet

4. Establish stronger partnership to improve funding; Corporate Social Responsibility, Centralization street food vendors

5. Expand certification of food product; Implementation of “Halal Certification” standardization recipe & enclosing nutrition information
Thank You -Terima Kasih -Khxbkhuŋ
ENSURING FOOD SAFETY & PROMOTING HEALTHY FOOD AT FOOD PREMISES – MALAYSIAN EXPERIENCE

ZALMA ABDUL RAZAK
& ZURAINI ADAM
MINISTRY OF HEALTH MALAYSIA
EXAMPLES OF FOOD PREMISES IN MALAYSIA (FORMAL & INFORMAL)
ENSURING FOOD SAFETY AT FOOD PREMISES
RELATED FOOD LAWS

To protect the public against health hazards and fraud in the preparation, sale and use of food.

Food Hygiene Regulations 2009:
- Food premise register with the MOH (FOSIM)
  - P1 = manufacturing establishment
  - P2 = Catering
  - P3 = Food outlet/premise
  - P4 = Food truck
  - *P0 = Others (season food stalls, etc)
- Compliance with elements of food hygiene

By Law:
- All food business/operators must be licensed
- Managing waste
- Compliance with elements of food hygiene
**FOOD SAFETY STRUCTURE**

**MINISTRY OF HEALTH (FEDERAL HEADQUARTER)**

**STATE HEALTH DEPARTMENT**

**DISTRICT HEALTH OFFICE**

**Planning and Policy Development**

**Supervision of the Implementation of Activities**

**Implementation of Activities**

**MINISTRY OF HOUSING AND LOCAL GOVERNMENT (FEDERAL)**

**STATE GOVERNMENT**

**LOCAL AUTHORITY**

Implementation of activities:
- **Food premise Register with MOH and License with Local Authority**
- **Enforcement**: Food premise inspection by MOH / Local Authority
  - Similar checklist for inspection and data sharing
  - Joint Operation and Enforcement Premise Inspection
  - Joint Operation for bazar Ramadan
- **Promotions**: Accreditation BeSS / Premise Grading
  - Joint food safety carnivals
"BERSIH, SELAMAT AND SIHAT" (BeSS) is a recognition given to food premises to encourage food premises operator to maintained the cleanliness of food premises, provide safe food and promoting healthy eating to consumers.
BESS

• BeSS recognition is a basic step towards Healthy Cafeteria as the requirements for recognition is not high which only involves Healthy Eating Promotion such as poster display, calories tagging and plain water provided.

• Up to Jun 2019, 6417 cafeterias has been awarded BeSS recognition.
PROMOTING HEALTHY EATING AT FOOD PREMISES
HEALTHY CAFETERIA

- Healthy Cafeteria is one of the strategies to provide an environment that promotes and supports healthy eating.

- Provides healthier menu options to customers.


- Up to August 2019, 240 cafeterias has been recognized as Healthy Cafeteria – government & private sectors, institutes of higher learning.
OBJECTIVES

General Objective:
To ensure quality foods (safe, nutritious & healthy) are served to consumers by recognizing the food premises (cafeterias) that pass a systematic evaluation process.

Special Objectives:
- To ensure availability of safe and healthier food choices to the public.
- To improve knowledge and skills of cafeteria operators in the provision of safe and healthy food.
- To facilitate the preparation of nutritious foods - based on the Malaysian Dietary Guidelines and Recommended Nutrient Intake.
- To ensure that the Food Hygiene Regulations 2009 is adhered to in food preparation.
- To encourage cooperation between Ministry of Health and cafeteria operators in promoting safe and healthy food.
Healthy Cafeteria Evaluation Process
Pre-requisite Criteria

1) All food handlers is COMPULSORY to attend Food Handling Course & Healthy Catering Course and received Typhoid Vaccination.

2) **Attain above 86% for Food Premises Hygiene Inspection.**

3) Has a record of not more than one food poisoning incident for the pass one year.

4) Not selling snacks that contain flavors or colouring and instant noodles.

5) Not selling processed foods, such as burger patties, sausages and nuggets.

6) Not selling all kinds of pre-mixed drinks.

7) Not selling drinks (including carbonated drinks) with artificial sweeteners.

8) Not selling alcoholic beverages.

9) Not selling all kind of sweets/candy except for medicinal purposes.

10) Must sell at least 1 type of vegetable.

11) Must sell at least 1 type of fresh fruit.

12) Must serve plain water.
Criteria on Healthy Eating (passing marks - 86%)

1) Serve healthier food options:

- At least two choices of dishes from cereals & at least one with high fiber, eg. whole meal bread, brown rice and oats.
- At least 20% of the total amount of side dishes are vegetables (excluding vegetables for garnishing, deep fried vegetables, creamy vegetable soups and salads mixed with dressing such as mayonnaise or thousand islands).
- Available poptions for dishes prepared using healthier cooking methods, eg. steaming, boiling or grilling.
- At least one dish prepared using nuts or legumes.
- Provide drink options prepared using low fat or skimmed milk.
- Fried dishes are not too oily.
Criteria on Healthy Eating (cont..)

- More vegetables are added to the dishes, eg. chicken rice served with more cucumber & tomato.
- Not using MSG or commercially prepared flavoring stocks.
- Sauces & salt are not provided at the dining table.
- Does not sell all types of creamy or sugar coated foods.
- The food or drink is not too sweet.
- The food is not too salty.
- Provide low sugar drinks upon request.
- Does not sell drinks prepared using cordials or premix (eg. 3-in-1 coffee).

2) Promoting Healthy Eating

- Calorie Tagging.
- Promoting healthy eating eg. via posters.
Healthy Cafeteria Recognition Flow Chart

Start

Preliminary assessment on potential food premises

Fulfil the criteria

Internal assessment

Application forms send to the State Health Department

Assessor reviews and completes the application forms as required

Not fulfil the criteria

Coaching

Internal re-assessment

3 month

6 month

Application forms reviewed and validated

Uncomplete

Complete

A

B
Healthy Cafeteria Recognition Flow Chart (cont..)

A

Submission of complete application form to the Secretariat of the National Healthy Cafeteria Recognition Committee

Application is discussed in the National Healthy Cafeteria Recognition Committee Meeting

Result

Approved

Healthy Cafeteria Recognition

Healthy Cafeteria Certification & Plaque

Validity period of Healthy Cafeteria Certification is three (3) years

Not approved

B

Application rejected and the applicant will be informed through the State Health Department
Street vended foods in Mongolia

Winter temperature average -35*, While the summer average +30*
Retail trade from July to September
Fruits and vegetables
CURRENT POLICY DOCUMENTS OF FOOD SAFETY OF MONGOLIA

1. Food law (article 4 and 9, 2012)
2. Law on Food product safety (article 17, 2012)
3. Law on Food for Infant and Young Child, (2017) updated on breast milk substitute
5. National nutrition program (2016-2025)
6. Common rule commerce and service ULAANBAATAR
COMMON RULE COMMERCE and SERVES ULAANBAATAR CITY

• To sell unqualified or expired products.
• To sell salads, products that expires within short period of time, unsealed or not fully done products at the food concessions. /khuushuur, cake and others etc./
• To sell products outside of the boundaries that are permitted by the districts /fruits, vegetables, barbecue/
• To sell meat products such as brisket fermented horse milk drink or boiled in public area.
• To sell milk, milk products or any kind of meat products in public places or open markets.
HEALTHY DIETS IN FOOD SECTOR IN HONG KONG:

EATSMART RESTAURANT STAR +

MANDY KWAN

SENIOR DIETITIAN, DEPARTMENT OF HEALTH, HONG KONG

20 AUG 2019
OUTLINE

• Introduce the “EatSmart Restaurant Star +” campaign
• Experience Sharing – lessons learnt
ABOUT EATSMART RESTAURANT STAR +

• Previous was known as “EatSmart@restaurant.hk” campaign launched in 2008
• Aim:
  1) Educate, empower and enable the community to have easier access to healthier dishes when eating out;
  2) Encourage, empower and enable food premises operators to provide a wider choice of healthier dishes.
TO BECOME AN EATSMART RESTAURANT

Restaurant are required to

- provide at least 5 EatSmart dishes and highlighted by the relevant logos
- place decal near the entrance / prominent location
EATSMART DISHES

means that either fruit or vegetables are the sole ingredients of the dish or they occupy at least twice as much the amount of meat and its alternatives present in the dish.

means that the dish has less fat or oil, salt and sugar, meeting the “3 Less” requirement.
“3 LESS” DISHES

- There are various requirements on ingredients, preparation, cooking methods and mode to serve
ONGOING SUPPORT

- Guidebook
- Briefing session
- Recipe vetting
MONITORING AND RENEWAL

**MONITORING**
- unscheduled visit

**RENEWAL**
- annual visit before renewal
CAMPAIGN EVALUATION IN 2016
CAMPAIGN EVALUATION IN 2016 – SUCCESSFUL FACTORS: BENEFITS TO RESTAURANTS

Bring business to the restaurants

Mangers: More patrons chose the EatSmart Dishes

Mangers: Increased sales

Mangers: More patrons visited the restaurants for the EatSmart Dishes
CAMPAIGN EVALUATION IN 2016 – SUCCESSFUL FACTORS: POSITIVE INFLUENCE ON STAFF

Positive feedback from staffs:
Healthier cooking and eating

- 82% have a healthier view on diet
- 78% have a healthier eating habit
- 76% chefs prepare food more healthily
- 68% frontline staffs are more likely to promote the EatSmart Dishes
HEALTH IS NOT A PRIORITY CRITERIA WHEN CHOOSING RESTAURANTS

Base: All respondents excluding “None”
CONCLUSIONS FROM THE STUDY

**Opportunities**
- EatSmart dishes bring business to the restaurants

**Successful factors**
- Staff were fully aware of the requirements of ESR
- No difficulty in implementation
- Positive impact on staff – ate healthier, cooked healthier

**Challenges**
- Price, taste and location take precedence over customers’ demand for healthy eating

Need for new strategies
ENHANCEMENT IN 2019

“EatSmart@restaurant.hk” campaign

“EatSmart Restaurant Star +” campaign
EATSMART RESTAURANT STAR +

• Launched in May 2019
• Introduced a three-star rating scheme
BENEFITS OF THREE STAR-RATING SCHEME

- Accommodate different modes of operation in restaurants
  greater flexibility and more participations

- Provide an advancement opportunity to the restaurants
HOW CAN WE ACHIEVE A WIDER ACCEPTANCE BY THE RESTAURANTS?
A win-win situation
I. GOVERNMENT LEADERSHIP

- Being the organiser to implement the campaign
- Establish partnership with trade and relevant stakeholders in the community
- Attached great importance to the “EatSmart Restaurant Star +” campaign

[Director of Health, Secretary for Food and Health]
TOWARDS 2025: STRATEGY AND ACTION PLAN TO PREVENT AND CONTROL NON-COMMUNICABLE DISEASES IN HONG KONG

<table>
<thead>
<tr>
<th>Publications</th>
<th>9 local NCD targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image of TOWARDS 2025 report]</td>
<td>[Images of NCD targets]</td>
</tr>
</tbody>
</table>

- Reduce premature mortality from NCD
- Reduce harmful use of alcohol
- Reduce physical inactivity
- Reduce salt intake
- Reduce tobacco use
- Contain the prevalence of raised blood pressure
- Halt the rise in diabetes and obesity
- Prevent heart attacks and strokes through drug therapy and counselling
- Improve availability of affordable basic technologies and essential medicines to treat major NCD
2. WORK WITH TRADE

• Understand their concerns
• Assist to formulate practical strategies
• Be a pioneer
• Motivate others’ participation
RECRUITMENT STRATEGIES

- Conduct on-site recruitment
- Complete the enrollment procedure at one-stop
- Provide tailor-made materials to promote the EatSmart dishes
INCENTIVES TO RESTAURANTS

- Must be in the interests of the restaurants
- For EatSmart Restaurants, it is promotion to bring business
3. INTERESTS OF PATRONS

- Factors of making food choices

1. Price
2. Taste
3. Location
SMART STRATEGIES

• create significant impact
• are being practical to restaurants
• are being attractive to patrons
DISHES WITH MORE FRUIT AND VEGETABLES

- It is easy for restaurants to implement.
- According to the Hong Kong Population Health Survey in 2014, about 95% of interviewees did not have adequate intake of fruit and vegetables.

“One-star EatSmart Restaurant” by offering at least five “Dishes with More Fruit and Vegetables”
LOCATION

Locations

More restaurants join

Easy to execute

x 5
PRICE

EatSmart Promotion

- Gain the 2\textsuperscript{nd} Star
- Encourages EatSmart Restaurants to provide special offer on the EatSmart dishes to promote their order
VEGETABLE DISH AS AN ADD-ON ITEM

- Restaurants: ↑ business
- Patrons: ↓ food costs
- Health: ↑ intake of fruit and vegetables
TASTE

- Organise cooking demo and recipe competition to motivate new tasty healthy EatSmart dishes
FOR MORE INFORMATION

- https://restaurant.eatsmart.gov.hk
THANK YOU!
Q: IN YOUR EXPERIENCE, HOW CAN FOOD VENDORS BE INCENTIVIZED TO IMPROVE HEALTHFULNESS OF STREET FOODS BEYOND FOOD SAFETY? SPECIALLY IN TERMS OF RAW MATERIALS AND QUALITY

- Attach great importance to the campaign
- Bring business to them
- Client-oriented, ensure that it is easy to implement
Street foods and healthy diets; a review of available information from Asia

Pulani Lanerolle, Indu Waidyatilaka, Maduka de Lanerolle-Dias
Faculty of Medicine, University of Colombo, Sri Lanka
“Ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers especially in streets and other similar places (Food and Agriculture Organization 2018).”

Entrenched in habitual eating patterns of societies

Urban demand

Maybe traditional current trends global & mixed
Methods
Search strategy

Keywords searched initially within SEAR and then ASIA:

- Informal food sector, Street food, street vendors, hawker food stalls, eating houses, push carts, snack carts, meal carts, Taco stands, food truck, nutrients, Sodium, Ready to eat, Convenience food, Junk food, Urban food systems, Fast food, Diet quality, non-communicable diseases, NCD, BMI, body mass index, obesity, overweight, hypertension, cancer, carcinoma, metabolic syndrome.

Detailed PubMed and Google Scholar search

- “street food” OR “street vended” OR “open air market” OR “street vendors” OR “street foods” OR “street vending stalls” OR hawker OR “food stall” OR “eating houses” OR “push carts” OR AND (Asia OR Bangladesh OR Bhutan OR Korea OR India OR Indonesia OR Maldives OR Myanmar OR Nepal OR Sri Lanka OR Thailand OR Timor-Leste

Two independent researchers. Discrepancies resolved by a third

Upto 2018
<table>
<thead>
<tr>
<th>STUDY</th>
<th>TOOL USED</th>
<th>LOCATION</th>
<th>POPULATION</th>
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<tbody>
<tr>
<td>Aloia 2013</td>
<td>Questionnaire</td>
<td>India</td>
<td>n = 204 (35 – 65 yrs)</td>
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<tr>
<td>Bakshi 2017</td>
<td>Interviewer based</td>
<td>India</td>
<td>150 vendors 150 customers</td>
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<tr>
<td>Bryan et al. 1992</td>
<td>Analysis of food</td>
<td>Pakistan</td>
<td>19 samples</td>
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<tr>
<td>Charkravarty &amp; Canet 1996</td>
<td>Interviewer based</td>
<td>India</td>
<td>n = 911 (19 – 48 yrs)</td>
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<tr>
<td>Cho et al. 2011</td>
<td>Questionnaire</td>
<td>Korea</td>
<td>Adolescents n = 310</td>
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<td>Dalal 2016</td>
<td>Questionnaire and FG</td>
<td>India</td>
<td>300 households</td>
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<tr>
<td>de Morais et al. 2018</td>
<td>Food analysis</td>
<td>Tajikistan &amp; Kyrgyzstan (FEEDcities)</td>
<td>Four samples each from 62 food categories</td>
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<td>Gupta et al. 2016</td>
<td>Questionnaire/recall laboratory analysis</td>
<td>India</td>
<td>Vendors n = 44  Snacks n = 49</td>
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<td>Islam et al. 2018</td>
<td>Questionnaire based</td>
<td>Bangladesh</td>
<td>340 consumers</td>
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<tr>
<td>Kashyap 1987</td>
<td>Questionnaire based</td>
<td>India</td>
<td>69 vendors and 55 consumers</td>
</tr>
<tr>
<td>Kumar et al. 2017</td>
<td>Cross-sectional study</td>
<td>India</td>
<td>Adolescents n= 1652</td>
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<tr>
<td>Lachat et al 2009</td>
<td>24-h recall</td>
<td>Vietnam</td>
<td>Adolescents n= 1172</td>
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<tr>
<td>Naidoo et al. 2017</td>
<td>Questionnaire Focus groups</td>
<td>Singapore</td>
<td>Adults, n = 1647  18 focus groups</td>
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<td>Shaikh et al. 2016</td>
<td>Questionnaire</td>
<td>India</td>
<td>adolescents. N = 399</td>
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<td>Solanki 2011</td>
<td>Food analysis</td>
<td>India</td>
<td>12 food items from each food zone</td>
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<td>Sundaram et al. 2018</td>
<td>Questionnaires</td>
<td>Malaysia</td>
<td>Univ. students n = 384</td>
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<td>Tedd et al. 2003</td>
<td>Questionnaires</td>
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<td>Wang et al. 2011</td>
<td>Questionnaires</td>
<td>China</td>
<td>Adolescents n = 3368</td>
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Consumer base
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<tr>
<td>Aloia 2013</td>
<td>2.7 times /year - 6.5 times /year</td>
</tr>
<tr>
<td>Charkravarty &amp; Canet 1996</td>
<td>33% daily with 23% 1 - 4 times/week</td>
</tr>
<tr>
<td>Charkravarty &amp; Canet 1996</td>
<td>75% of office workers</td>
</tr>
<tr>
<td>Cho 2011</td>
<td>62% of females and 40% of males ate 1 – 2 times/week.</td>
</tr>
<tr>
<td>Dalal 2016</td>
<td>17% daily, 29% weekly, 33% monthly</td>
</tr>
<tr>
<td>Kashyap 1987</td>
<td>25%, twice/ week, 21% weekly</td>
</tr>
<tr>
<td>Kumar et al. 2017</td>
<td>90% frequently, 37% often, 53% sometimes</td>
</tr>
<tr>
<td>Naidoo et al. 2017</td>
<td>61% daily – main meals. 5 times/ week – median frequency</td>
</tr>
<tr>
<td>Shaikh et al. 2016</td>
<td>1- 3 days / week - public school students</td>
</tr>
<tr>
<td>Shaikh et al. 2016</td>
<td>0-5 days / week - private school students</td>
</tr>
<tr>
<td>Sundaram et al. 2018</td>
<td>42% of respondents who eat outside prefer street foods</td>
</tr>
<tr>
<td>STUDY</td>
<td>WHO IS THE CONSUMER?</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Aloia 2013</td>
<td>Low SES: prefer street food to fast-food and restaurants</td>
</tr>
<tr>
<td>Bakshi 2017</td>
<td>Small + large cities. Low SES &amp; students First choice for major meals.</td>
</tr>
<tr>
<td>Charkravarty &amp; Canet 1996</td>
<td>Variable consumption (INR 40 – 400 / month)</td>
</tr>
<tr>
<td>Kashyap 1987</td>
<td>15-30% of total income Varied custom (businessmen, officers, office clerks, school teachers, daily-wage earners, children)</td>
</tr>
<tr>
<td>Naidoo et al. 2017</td>
<td>Younger participants less likely Men more likely Indians &amp; Malays less likely compared to Chinese.</td>
</tr>
<tr>
<td>Shaikh et al. 2016</td>
<td>Public school students higher than private schools</td>
</tr>
<tr>
<td>Tedd et al. 2003</td>
<td>Main custom low SES</td>
</tr>
</tbody>
</table>
A considerable proportion of the population depend on street foods. Those who rely on it do so frequently. Majority of adults studied were the working population. More studies on adolescents. A greater proportion is of low socioeconomic status (SES). Some are higher SES.
What is the consumer’s priority?
<table>
<thead>
<tr>
<th>STUDY</th>
<th>FACTORS AFFECTING BUYING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aloia 2013</td>
<td>Convenience, cost, <strong>social enjoyment</strong>, quality of meal</td>
</tr>
<tr>
<td>Bakshi 2017</td>
<td>Daily need</td>
</tr>
<tr>
<td></td>
<td>Experience <strong>taste</strong> and flavors of a region.</td>
</tr>
<tr>
<td>Cho et al. 2011</td>
<td>Low cost (21%), time saving (6%), <strong>accessibility</strong> (32%), ready to eat (23%)</td>
</tr>
<tr>
<td>Dalal 2016</td>
<td><strong>Taste</strong> (48%), quick (13%), low cost (29%), <strong>socialise</strong> (23%).</td>
</tr>
<tr>
<td></td>
<td><strong>Negative factors</strong>: not hygienic (52%), spicy (27%), poor nutrition (21%)</td>
</tr>
<tr>
<td>Kashyap 1987</td>
<td>Cheap, fast, convenient, when shopping, early departure, difficult to prepare meals in advance, distance to work</td>
</tr>
<tr>
<td>Naidoo et al. 2017</td>
<td><strong>Variety</strong> of cuisines under one roof, low cost, convenience, easy access, lack of time for eating and preparation</td>
</tr>
<tr>
<td>Sundaram et al. 2018</td>
<td><strong>Variety</strong> of food available</td>
</tr>
<tr>
<td></td>
<td>Relatively cheap</td>
</tr>
</tbody>
</table>
Factors that influence buying

- Low cost, Convenience
- Taste, Appearance
- Variety
- Social aspect – for entertainment
- Food safety and nutrition are not major factors
Types of street food
<table>
<thead>
<tr>
<th>STUDY</th>
<th>TYPES OF STREET FOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aloia 2013</td>
<td>Samosa, channa batura, <strong>carrots and peppers</strong> served with white bread rolls, ddukbokki, sundae, and uhmok</td>
</tr>
<tr>
<td>Bakshi 2017</td>
<td>Tikki, chaat, samosa, kachori, dahi bhalla, golgappe, bhel puri, <strong>channa chaat</strong>, fruit chaat, bread omelette, pakodas, burgers, chow mein, manchurian, spring rolls, pakodas, chhole bhature, puribhaji, paobhaji, <strong>idli</strong>, dosa, sambhar, Jalebi, rasmalai, gulab jamun, falooda kulfi, lacche, ice cream, softies, jaljeerapani, lemon soda, milk shakes, cold drinks, sodas, hot gulab jamun, imarti, jalebi, halwa, <strong>momos</strong>, tikki, burger, chhole bhature, chow mein</td>
</tr>
<tr>
<td>Bryan et al. 1992</td>
<td>Bhalla, Boondi, <strong>lassi</strong>, <strong>salad</strong></td>
</tr>
<tr>
<td>Charkravarty, Canet 1996</td>
<td>Lassi, <strong>idli</strong>, dahi vara, <strong>dosa</strong>, <strong>vegetable curry</strong>, ghugn, alu kalb</td>
</tr>
<tr>
<td>Cho 2011</td>
<td>Ddukbokki, sundae, uhmok, hotteok, bungeoppand, toast</td>
</tr>
<tr>
<td>Gupta et al. 2016</td>
<td>Golgappe, mixture, freshly prepared kachodi, bhindi, sweet biscuits, salted biscuits rusk, pao, fan, mathri, <strong>moong dal</strong>, soan papdi, samosas, kachori, bread pakora, bhatura</td>
</tr>
<tr>
<td>STUDY</td>
<td>TYPES OF STREET FOOD contd……</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Kashyap 1987</td>
<td>Peanuts, popcorn, roasted Bengal gram, samosa, chana bhatura, mutton-rice and dhal-rice/chapati-vegetables, muri, bhel, cut sliced fruits, sprouted Bengal gram, popcorons, cut fruits, soaked Bengal gram, fried peanuts and fried mung dahl</td>
</tr>
<tr>
<td>Tedd et al. 2003</td>
<td>Sri Lanka: wade, veralu pickle, cassava chips, murukku, gram, jak seeds, rotties, kolakenda (herbal porridge) Lunch (rice and curry)</td>
</tr>
</tbody>
</table>
Formal sector
- Safe
- Regulated food production
- Accountable
- Labeled
- Formal spaces
- Variable nutritional quality
- Marketed and promoted

Formal sector products may be sold in informal sector

Informal sector
- Food safety may not be ensured
- Prepared onsite/at home/small factories
- Unregulated
- Uncountable
- Not usually labeled
- Non formal spaces
- Variable nutritional quality
- Not marketed or promoted

Raw materials may be bought from formal sector
Steyn et al (2013) 23 studies

Daily energy intake from street food
- Adults 13% to 50%
- Children 13% to 40%

Daily intake of protein
- 50% of the recommended daily allowance (RDA)

Iron, calcium, vitamin A

In SEAR: most studies report a high reliance on street foods

SEAR
No data on proportion of daily energy supplied by street food
<table>
<thead>
<tr>
<th>STUDY</th>
<th>NUTRIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charkravarty &amp; Canet 1996</td>
<td>500g meal contains 1000kcal (20 – 30g protein, <strong>12 – 15g fat</strong>, 174 - 183 g carbohydrate)</td>
</tr>
</tbody>
</table>
| de Morais et al. 2018       | Sodium: 500 - 2500 mg / serving  
Potassium: 35 -1646 mg / serving  
**Na:K ratios 1.1 – 10.1**    |
| Gupta et al. 2016           | **Saturated fats** - 25% to 69% of total fatty acids  
**Trans fats** - 0.1% to 30% of total fatty acids  
Mean fat content /100g serving:  
- **28.8 ± 17.8 g** (villages), **29.6 ± 12.6 g** (urban slum)  
Highest fat content/ 100 g:  
- snack mixture, 64.8 g (rural); kachodi, 46.6 g (urban) |
| Solanki 2011                | **Vended vs homemade:** oil (15g vs 10g) spices (10g vs 3g)water (15g vs 7g)  
Pani puri: more oil (11g vs 6g) and tamarind pulp (10g vs 0g)  
Bhel: less Bengal gram (5g vs 10g)  
Pizza: more butter (8g vs 2g), oil (5g vs 2g) less cheese (5g vs 10g)  
Chinese rice: less food content, more water (47g vs 27g)  
Masala dosa: more water (35g vs 12g) less green gram (5g vs 15g) |
Street foods are high in
- Saturated fat
- Trans-fat

Processing methods indicate the use of high fat, salt and sugar
- Deep frying
- Sweetening
- Salting methods

From the FEEDcities project, Central Asia, (Tajikistan, Kyrgyzstan),
- Very high sodium and inappropriate sodium to potassium ratio
- High in fat

Limited studies on micronutrients

Foods high in fat and carbs tend to be low in micronutrients
Challenges in addressing nutrient content

- Variation in recipes for the same product is a challenge to labelling
- Poor preparation methods (deep-frying possibly with reuse of cooking oil) challenges improving nutrient content
Most studies: consumers consider taste, variety, convenience and cost

Singapore: consumers were aware that street foods are high in fat and low in vegetables, but this did not appreciably influence buying

Taste dominance more pronounced in lower income segments (Singapore. No documentation elsewhere).

Vendors had poor knowledge of the nutritional aspects of the foods that were sold.

Vendors were willing to use better oils if the taste and qualities could be maintained
Gaps in research

- “Prevalence” of street food consumption
- Individual diets and the contribution of street foods to total energy
- Macro and micronutrients
- Packaged foods and prepared foods separately
- Fresh fruit and vegetables minimally processed
- Linking food safety to nutrient density – are nutrient dense minimally processed foods safe?
- Adulteration of prepared foods with addition of water or other cheap ingredients for cost reasons
Potential next steps...

**Address poverty-driven nature of industry**
- Incentives for better services?
- Subsidies/benefits?

**Improve raw materials**
- Link formal sector supply
- Informal sector supply
- Minimise waste

**Promotion of better foods and cooking methods**
- Consumer awareness
- Vendor awareness

**Food safety & sustainability**
- Sanitation & water, waste disposal, reuse, recycling
- Training in food handling
Street Food Management Model Development in Thailand

Food safety for Health promotion and tourist support

Chailert Kingkeawcharoenchai, Food Sanitation System Development Unit
Bureau of Food and Water Sanitation,
Department of Health, Ministry of Public Health, Thailand
Objectives

- To develop prototypes of street food management emphasizing sale & consumption of vegetables and fruits, and standard requirements
- To develop system & mechanism on street food management with cooperation of network partners
- To promote knowledge literacy of consumers for changing behavior of vegetables and fruits consumption
- To propose policy recommendation on development of street food management for the Public Health Ministry
12 previous provinces: Chiang Mai, Lampang, Ayutthaya, Suphanburi, Chonburi, Buriram, Kalasin, Ubonrachathani, Suratthani, Phuket, Trung, Songkla

12 new provinces: Mae Hong Son, Phare, Chainat, Lopburi, Satun Prachuapkirikun, Krabi, Yasothon, Samutprakan, Khonkean, Chaiyapum Nakornpanum

Extend new target areas development by coaching from previous areas

Policy recommendation (Ministerial level)
System & Mechanism Development for new target areas
Development of Street Food areas

Monitoring & Evaluation

Raw fruits & vegetables
- Safe & clean raw products
- Inspection
- Organic products

SF prep & services
- Wash & clean raw products
- Follow SF standard

Fruits & Vegetables consumption
- Health literacy
- Consumption adequate fruits & vegetables

Healthy people
- Safe & clean food (esp. fruits & vegetables)
- Healthy

Good economic

Tourist/Trade/Prosperity

Sustainability

Consumers’ needs

System & mechanisms to develop SF management (Standard, safe fruit & vegetable consumption)
Develop street food model management for health promotion

- Promote sales & consumption of safe fruits & vegetables
- Achieve street food standards requirement (health, economic, social and culture)
- Develop system & mechanism to manage SF by local authority

Creating well-being for consumers and supporting Thai tourism.
Outcomes

1. Local policy to promote safe street food for consumers’ health & well-being

2. Learning centers and services of safe street food

3. Procedure to sustainably management of street food standard by network partners

4. Knowledge on policy & measures to promote safe & adequate fruits & vegetables

5. Reduction of risk of non communicable diseases and increase consumption of healthy food
Campaign, Study visit, Lesson learnt
Clean Food Good Taste Project
Objectives:

- To reduce risk of water & food borne illness from foodservices
- To promote clean & hygienic food in foodservices for local and foreign tourists
- To promote food & environmental management of local government
Target group:

Restaurants and street foods around the country at tourist attractions:
- Airport
- National park, zoo, wildlife park
- Festival & special occasions
- Entertainment
- Petrol stations
- etc.
Strategies:

1. Formation of Multi-sectioned party between government offices and private sector

2. Quality assurance for certified foodservices ‘Clean Food Good Taste’ sign

3. Sustainable management

4. Public relation
Responsible offices:

- Department of Health, Ministry of Public Health
- Ministry of Interior (local governments)
- The Tourism Authority of Thailand
- Other related government offices
- Private sectors
Target:

At least 80% of total number of foodservices (restaurants, street food) can meet the required standard of food sanitation (physical & biological)
Standard criteria for Clean Food Good Taste

• **Physical condition**
  - Food sanitation standard (places, food, utensil, pest, person)

• **Bacteriological condition**
  - Test for contamination of coliform bacteria in food, utensil and cooks’ hands (90% of the samples must be negative)
Food Sanitation Standard: Physical conditions
Monitoring & Evaluation System

1. Quantity
   - Report through supervision system of the Ministry of Public Health from local level to central administration via E-Inspection

2. Quality
   - Provincial Health Offices and local government carried out quality evaluation of the certified foodservices twice a year and report through E-Inspection

(30% of the CFGT certified food services around the country for quality control and evaluation.)
3. Quality assurance by private sectors & consumers

- Foodservices association incorporates with local government offices inspect their premises according to the CFGT standards

- Consumer feedback to the officers when finding the sanitation problem in the foodservices
Coliform Test Kit (SI-2)
Sampling method

Food

Hand

Utensils
Results & Report
Licensing procedures for Foodservices

Licensees

> 200 m² of Food services areas & not for market place

< 200 m² of Food services areas & not for market place

Licenses

Notification

Local Government or Municipality

Ministerial Regulations on Hygiene in Foodservices, 2018

Chapter 1-4 & Transitional provision
- Food hygiene for foodservices
- Hygiene of food preparation, cooking, storage & sale
- Hygiene of utensil & apparatus
- Personal hygiene of food handlers
<table>
<thead>
<tr>
<th>Chapter</th>
<th>No.</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1 – 2</td>
<td>Enforcement within 180 days &amp; Definition</td>
</tr>
<tr>
<td>Chapter 1</td>
<td>3 – 8</td>
<td>Food hygiene for foodservices</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>9 – 18</td>
<td>Hygiene of food preparation, cooking, storage &amp; sale</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>19 – 20</td>
<td>Hygiene of utensil &amp; apparatus</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>21</td>
<td>Personal hygiene of food handlers</td>
</tr>
<tr>
<td>Transitional Provision</td>
<td>22</td>
<td>Implementation within 180 days, except 1. No. 8 Fire Protection, corrected within 1 year 2. The owners &amp; Food handlers passed Food sanitation course, corrected within 2 years</td>
</tr>
</tbody>
</table>
Affected people

“Foodservices’ owner”
Person or corporation who obtained licenses or notification to establish foodservices. This includes the person assigned to supervise the operation of foodservices.

“Food handler”
Any person involved in the process of food preparation, cooking, distributing, and serving. This includes the person assigned for washing and storage equipment.


Chapter 4, No. 21 Personal hygiene for food handlers

Transitional provision: shall perform within 2 years after amendment of the Ministerial Regulation (16 Dec. 2020)


Proprietors and food handlers in all foodservices shall pass the food sanitation training course
Promoting healthy food through informal food sector

Dr Ruwan Wijayamuni  MD., MPH,. MSc Comm Med
Chief Medical Officer
City of Colombo
Public Health Department
Colombo Municipal Council
Non communicable disease burden

Percentage of Mortality by Cause, 2014

- Cardiovascular diseases: 40%
- Cancer: 14%
- Respiratory diseases: 11%
- Diabetes: 10%
- Other NCDs: 8%
- Communicable diseases and other conditions: 7%
- Injuries: 10%

http://www.who.int/nmh/countries/en/ (last access 9th March 2015)
Informal food sector in the City of Colombo

Food is regulated by the Food Act No. 26 of 1980 and the amended act of 1990. Municipal Councils Ordinance and the By Laws that are formulated under that Ordinance.

Street Food is “Illegal”
The informal food sector in the city

- Approximately 500-600 street food vendors make up the major proportion of the informal food sector in Colombo City.
- Use food carts, temporary stalls, food vans,
- Three-wheeler or Tuk Tuk Mobile food vendors are selling mainly bakery products, and pastry
  - Sellers of sliced fruits (pineapples, mangoes), fruit juices etc, fermented fruits (achcharu), Herbal porridge (kola kanda), tea, vadai, string hoppers, hoppers, etc.
Informal food sector in the Colombo City

- With the booming tourism sector during past decade informal food sector in the city have expanded remarkably.
- There are 880 eateries within Colombo city.
- Out of which 220 are unregistered.
- Mobile food vans are a growing trend in Colombo city.
- More than 500 street food vendors and 92 mobile food vans
Canteens: There are 182 government and school canteens.
Roadside Fruits stall
Approximately 300 home based informal food producers sell 375000 food parcels daily.
Food riders connected through mobile apps e.g.- Uber eats).
New initiatives taken by the Ministry of Health to promote Healthy Food

• Food Based Dietary Guidelines and
• National Food Policy being revised
• Under the Food Act the Regulation for Food Colour coding for Sugar, Salt, and Fat gazetted and has to be expanded to informal sector too
• Regulation for Food Premises Registration gazetted
Initiatives taken by the Public Health Department to promote safe and healthy food by the informal sector

- Implementation of food safety and hygiene regulations to the informal food sector.
- Health education of food vendors regarding bad practices that can increase Non Communicable Diseases among consumers.
- Implementation of national policies and guidelines aimed at reducing NCDs, e.g., implementation of Healthy Canteen Policy.
- Involvement of social media (facebook) in promoting healthy foods among General Public.
- Food handler training programs for street food vendors and home-based food producers.
- Preparing and implementing new guidelines for food delivery riders.
Implementation of food safety and hygiene regulations for the informal food sector.
Health education of food vendors regarding bad practices that can increase Non Communicable Diseases among consumers.
Food handler training programs for street food vendors and home based food producers.
Food handler training programs for street food vendors and home based food producers.
Involvement of social media (facebook) in promoting healthy foods and food safety.
Preparing and implementing new guidelines for food delivery riders.

CMC introduces guideline for mushrooming food deliverers

The Colombo Municipal Council (CMC) has introduced a set of guidelines to be followed by all the food deliverers, who are on the rise in the city.

The officials of the Municipality’s Health Department had drafted the guideline to food deliverers in line with the Food Act under the guidance of Mayor Rosy Senanayake and the instructions of Chief Medical Officer Dr Ruwan Wijayamuni.

The City Food Safety and Hygiene Promotion Unit, Dr Subash Mendis said there were several deliverers attached to various restaurants to deliver food in the past and the number has increased recently with the entry of Uber and Uber Eats food deliverers.
Challenges and Issues

- **Street food is Illegal but Do Exist**
- **Huge demand among consumers**
- **Need to promote On-Site Preparation of street food**
- Very high turnover of food handlers involved in informal food sector.
- Seasonal variations in number of street vendors. Numbers very high during festive seasons such as New year and Vesak festival.
- Consumers are very sensitive of the price of street food. Which in turn forces vendors to prepare food items using substandard raw material and overuse oil for frying.
- Grossly inadequate knowledge and training among food handlers regarding food safety, hygiene procedures and healthy food.
- New trend in emergence of home based food industry who sell their products using mobile apps and food delivery services (Uber Eats, Pick Me eats).
Thank you
Viet Nam’s Experience in Ensuring Street Food Safety

VIET NAM - MOH
Contents

1. Street Food
   ◦ Definition, Advantages and Food Safety Risks

2. Street Food Management
   ◦ Legal documents and state authorities

3. Shared Responsibility
   ◦ Roles of Government
   ◦ Collaboration with private sector, development partners and consumers
   ◦ Difficulties in street food management
1. Street Food

- Definition:

*Street food* means the food processed for instant consumption which is displayed and sold in the street, at public places or similar places.

*(Food Safety Law, 2010)*
I. Street Food

- Advantages:
  - Low price
  - Easy to approach
  - Diverse types of food
  - Create jobs
  - ...
1. Street Food

- **Food Safety Risks:**
  - Hard on traceability
    - Lack of document records
    - Mobility of stalls…
  - Poor processing conditions
  - Health conditions
  - Lack of safe water, storage facilities (chilling)
  - Sewage and garbage treatment
  - ...
2. Street Food Management

- Legal documents:
  
  Food Safety Law (2010):
  
  ◦ Conditions for ensuring food safety in respect to places where street food is displayed for sale:
    
    • It must be separate from toxic and contaminant sources.
    • Food must be displayed for sale on tables, shelves or means, ensuring food safety and hygiene and good-looking street.
    • Sellers must wear clean and neat clothes and use one time gloves when directly contact with food and drink.
Regulations for street food saleman

- Have a certificate of training on food safety.
- Have a certificate of eligibility for health.
- Persons suffered from diseases on the list of contagious diseases as prescribed by the Ministry of Health not allowed to sell street food.
On October 2018, Government was dated Decree 115/2018/ND-CP on penalties for administrative violations against regulations on food safety. This decree regulates a higher level of penalties than previously regulations for street food business:

- A new point of the Decree 115 is the elimination of warning sanction and only maintain money sanctions.

- The penalty level is also much higher than before: from 500,000 VND to 1,000,000 VND (≈ 1,000 Baht) for street food business establishments against one of the following acts:

  + without tables, cabinets, shelves and equipments as regulations for selling food;
  
  + food are not be covered to prevent dirt, insects...;
  
  + do not use gloves during direct contact with cooked food, instead food ...
2. Street Food Management

- State authorities:
  - The Minister of Health specifically stipulates the conditions for ensuring food safety in trading street food.
  - People’s committees of all levels are responsible for management of street food trading in the locality.
3. Shared Responsibility

Street Food Management

- Street food vendors
- Socio-political associations
- Development partners and private sectors
- Consumers

Government
3. Shared Responsibility

- Roles of Government:
  - Develop the regulation on conditions for ensuring food safety in trading street food
  - Inspect periodically (2, 3 or 4 times per years)
  - Inspect unexpectedly while food safety incidents occur
  - Enhance the knowledge on food safety for consumers and people taking part in food processing
3. Shared Responsibility

- Sub-VFAs at some provinces have established “Model of Safe Street Food Stalls”.

- In Ho Chi Minh city, local authorities are developing models for control food safety conditions of street food:
  - Food Streets;
  - Streets with no food stalls
  - Logos for “Safe Street Food”
3. Shared Responsibility

<table>
<thead>
<tr>
<th>Stt</th>
<th>TIÊU CHÍ</th>
<th>Chi tiêu/tổng số cơ sở</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nơi kinh doanh phải sạch, cách biệt nguồn ô nhiễm (công trình, rác thải, công trình vệ sinh, nơi bày bán gia súc, gia cầm...).</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>2</td>
<td>Bày bán thực ăn trên bàn/giải cao cách mặt đất ít nhất 60 cm.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>3</td>
<td>Thực ăn được che đầy, bảo quản hợp vệ sinh, chống được ruồi, bọ bẩn, mọt, nắng và các loại côn trùng, động vật khác.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>4</td>
<td>Không để lấn giuka thực phẩm sống và thực ăn chín.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>5</td>
<td>Có dụng cụ xúc,-gap thực phẩm sạch sẽ/gắng tay sử dụng 1 lần khi tiếp xúc trực tiếp với thực ăn chín.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>6</td>
<td>Bảo đảm có đủ nước và nước đa sạch phù hợp với quy định.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>7</td>
<td>Người kinh doanh thực ăn đường phố phải được khám sức khoẻ.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>8</td>
<td>Người kinh doanh thực ăn đường phố phải được tập huấn kiên thức về an toàn thực phẩm.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>9</td>
<td>Có sổ sách ghi chép nguồn gốc thực phẩm.</td>
<td>&gt; 85%</td>
</tr>
<tr>
<td>10</td>
<td>Có đủ dụng cụ, túi đựng chất thải, rác thảikin và hợp vệ sinh.</td>
<td>&gt; 85%</td>
</tr>
</tbody>
</table>
3. Shared Responsibility

- **Collaboration with socio-political associations:**
  
  - Government and Vietnamese Fatherland Front signed a document for the collaboration program on promoting and monitoring food safety activities in the period of 2016-2020
3. Shared Responsibility

- **Development partners and private sectors:**
  - Provide technical supports
  - Provide tools: gloves, aprons, hats, masks…
  - Improve the awareness on food safety for consumers and people taking part in food processing
3. Shared Responsibility

- **Consumers:**
  - Viet Nam Food Safety Month in 2014 (15 Apr to 15 May) “Action for Street Food Safety” enhanced the responsibilities of consumers on ensuring the safe of street food:
    - Choose the safe food: cooked thoroughly, safe storage…
    - Choose the clean stalls
    - Choose healthy handlers
Difficulties in street food management

- The inspector force is not enough
- Awareness of business people is still low, some people do not know the sanctioning decree

Solutions

- Strengthening communication, education and raising awareness for people.
- Reminding for the first time violation and higher penalties for next time violation.
THANK YOU!
INFORMAL FOOD SECTOR
FOOD SAFETY IN THE PHILIPPINES

JOSEFINA H. SERNEO, RND, MSc.
Nutritionist Dietitian IV
DOH-MMCHD
PHILIPPINES
Republic Act No. 10611: Strengthening the Food Safety Regulatory System

• In August 23, 2013 President Benigno Aquino S. Aquino III signed into law Republic Act No. 10611: otherwise known as the “FOOD SAFETY ACT of 2013”

• The law primarily adheres to the Philippine Constitution’s declaration to protect and promote the right of the people and keep its populace from the threat of trade malpractices and substandard and hazardous products
INNOVATED 120-DAYS DIETARY SUPPLEMENTATION FEEDING OF MALABON CITY
Karinderia para sa Kalusugan ni Chikiting at Buntis
(Carinderia for the Health of Children and Pregnant)

- Feeding program of Malabon City were innovated and improved its strategies in operating the program.
- **Before**, caregivers of feeding beneficiaries and Barangay Nutrition Scholars (BNSs) are responsible in preparing nutritious hot meals, washing of soiled dishes and cleaning the venue after feeding session
- With this, it affects the time of BNSs in preparing quality report (they are tired already after feeding session) and caregivers spend lots of their time helping settling the venue of feeding session
Karinderia para sa Kalusugan ni Chikiting at Buntis
(Carinderia for the Health of Children and Pregnant)

• **Now**, Karinderia owners are responsible in preparing the nutritious food for under 5 years old children for 120-days

• Foods are more palatable and appetizing. With this, there is a good result or accomplishment because children are more excited to visit the feeding venue due to food is more delicious (karinderia cook are well-equipped in cooking)

• BNSs can create their quality report on time and Caregivers can spend much more of their time for their family.

• The City can provide livelihood programs for the small carinderia business in the community
Good Practices

- The City are consistently supported by private sectors, business establishments, Non-Government organizations and private individuals through sponsoring and donating goods (rice, eating utensils and etc) for the feeding program. Gifts and other incentives were also donated every graduation for the feeding beneficiaries.

- Karinderia owners are taking their responsibilities more than our agreement. They are doing house to house visit when children are not around during feeding session.
Good Practices

- The program is hitting two birds in one stone (nutritional status of children were improved while Carinderia owners is receiving livelihood program from the City Government).

- Carinderia owners were also responsible in providing food during emergencies (fire, flooding and etc).
Challenges

- Children and Nutritionally at risk pregnant are not able to attend the feeding session due to heavy rain and flooding
  - *Karinderia owners are doing house to house visit to provide hot meals for their feeding beneficiaries.*

- When children and Nutritionally at risk pregnant are not feeling well and was not able to attend feeding session
  - *Karinderia owners will look for medical prescription or any proof of medication and they will send food for the beneficiaries.*
<table>
<thead>
<tr>
<th>WEEK</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
<th>SUNDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sayote with Giniling Boiled Rice Fruit in Season</td>
<td>Chicken Potchero Boiled Rice Fruit in Season</td>
<td>Fish (Fillet) Sarciado Boiled Rice Fruit in Season</td>
<td>Pork Langka Sinigang Boiled Rice Fruit in Season</td>
<td>Ginataang Sitaw Kalabasa Boiled Rice Fruit in Season</td>
<td>Pork-Tokwa Menudo Boiled Rice Fruit in Season</td>
<td>Chicken Adobo with Patatas &amp; Saba Boiled Rice Fruit in Season</td>
</tr>
<tr>
<td>2</td>
<td>Vege-Tofu Guisado Boiled Rice Fruit in Season</td>
<td>Pork Giniling with Quail Eggs Boiled Rice Fruit in Season</td>
<td>Guinisang Monggo with cassava at talbosing kamote Boiled Rice Fruit in Season</td>
<td>Chicken Tinola with Sayote Boiled Rice Fruit in Season</td>
<td>Batchoy with Malunggay Leaves Boiled Rice Fruit in Season</td>
<td>Fish Shanghai Boiled Rice Fruit in Season</td>
<td>Fried Fish (Fillet) Pinakbet Boiled Rice Fruit in Season</td>
</tr>
<tr>
<td>3</td>
<td>Vegetable Omelet Boiled Rice Fruit in Season</td>
<td>Chicken Afritada Boiled Rice Fruit in Season</td>
<td>Ginulayan Isda (Fillet) Boiled Rice Fruit in Season</td>
<td>Pork Nilaga Boiled Rice Fruit in Season</td>
<td>Pinakbet with Dried Dils Boiled Rice Fruit in Season</td>
<td>Chicken with Liver Adobo Boiled Rice Fruit in Season</td>
<td>Tuna-Sayote-Carrot Guisado Boiled Rice Fruit in Season</td>
</tr>
<tr>
<td>4</td>
<td>Pork-Veggie Express Boiled Rice Fruit in Season</td>
<td>Veggie-Sardines with Miswa Boiled Rice Fruit in Season</td>
<td>Pork-Tokwa Apritada Boiled Rice Fruit in Season</td>
<td>Chicken Simanpalukan Boiled Rice Fruit in Season</td>
<td>Almondigas with Patola and malunggay Boiled Rice Fruit in Season</td>
<td>Pesang Tilapia (Fillet) Boiled Rice Fruit in Season</td>
<td>Pork-Veggie Burger Boiled Rice Fruit in Season</td>
</tr>
</tbody>
</table>
Thank You!
Expanding Food Control System to Promote Healthy Diets

Citra Prasetyawati

Presented in:
FAO/WHO Inter Regional Meeting to Promote Healthy Diets through the Informal Food Sector
20-23 August 2019
Agenda

Food Safety System: Scope and Objective

Current Challenges on Food Safety

Food Safety and Nutrition

Official Food Control system

Nutrition Program and Official Food Control - A collaboration

Practical Examples
Food safety system

Consumer protection from foodborne health risks

Safe food
- Chemical hazards
- Biological hazards
- Physical hazards

Healthy Diets

A broader scope of food safety
Current Challenges on Food Safety

WHO Global Estimation on foodborne diseases burden *) (2010)

*) based on available publications
### Foodborne Events of International Concern (INFOSAN, January–March 2019)

29 food safety incidents involving 66 countries globally

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Contaminated food</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Microbiology: (Salmonella 7, Listeria monocytogenes 4, E. coli 2, Bacillus cereus 1, Hepatitis A virus 1, Norovirus 1, Vibrio paraohaemolyticus 1, and Vibrio vulnificus 1))</td>
<td>Milk and milk products (5), spices (4), meat and meat product (4), snacks, desserts (4), fish and seafood (3), fruit and fruit products (3), product for special nutrition purpose (2), cereals and cereal based product (1), composit food (1), nuts and vegetable oil (1), and vegetables (1).</td>
</tr>
<tr>
<td>• Physical: metal fragment (2), plastic (2) dan glass (1))</td>
<td></td>
</tr>
<tr>
<td>• Allergen: almond (1), eggs and milk (1), gluten (1), pistachio (1))</td>
<td></td>
</tr>
<tr>
<td>• Hazardous chemical Poor hygiene practices</td>
<td></td>
</tr>
</tbody>
</table>
Key Food Safety Challenges in Informal Sector

Low investment on food safety

-Unsafe raw material including water source
-Lack/absence of cold chain facilities (i.e. electricity, cold chain appliances)
-Lack of hygiene facilities (i.e. running water, trash bin, food safety equipment for handlers)

Lack of food safety awareness

-Poor hygiene and sanitation practices
-Low awareness on labelling information
Food Safety and Nutrition within A Cycle
(FAO-The Future of Food Safety, 2019)

Food safety is the base of healthy diets and lives

Unsafe food prevent suitable intake of nutrient and affect the long term development delays in children (aflatoxin & stunting)

People with malnutrition are more susceptible to diseases, including those are foodborne
Food safety cannot be only about preventing people from getting food poisoning or falling sick due to food-borne illnesses, but must tackle the full spectrum of diet-related health risks

(Jose Graziano da Silva, FAO DG, on International Food Safety Conference 2019)

Broaden food safety framework for action to promote healthy diet (WHO SEARO, 2019)

The importance of food safety in achieving better human nutrition through healthy diets (International Conference on Nutrition 2, Rome, 2014)
## Food Control System – The Fundamental Elements

- **Policy and Legal Framework**
- **Control Management**
- **Risk-based Inspection**
- **Laboratory System**
- **Education, Information, and Communication**
- **Data and Information**
- **Emergency Preparedness and Response**

*FAO/WHO Guidelines for Strengthening National Food Control System*
Policy and Legal Framework

- Develop coordinated policy to include regulation for healthy diets as a part of control system

- Some practical examples:
  - Regulation on Food fortification
  - Labelling requirement to include nutrition information
  - Policy on Salt and Sugar reduction
  - Restriction of hydrogenated fat (Trans fatty acid)
Risk-based Inspection

- Official inspection is conducted to enforce the implementation of policy and regulation
- Modern risk-based food inspection assesses the effectiveness of any measures taken to prevent foodborne diseases and facilitates improvement of measures to manage foodborne risks
- Some practical examples:
  - Hazard specific control programmes such as to monitor aflatoxin which is associated with stunting
  - Encourage investment on cold chain to facilitate supply and storage of fresh and perishable foods
  - Facilitate investment on hygiene facilities and potable water
  - Certification/licensing/recognition of food facilities based on current level of hygiene and nutrition i.e. food star award system
Education, Information, and Communication

• Consumers play significant role in initiating behavioral changes within their communities, both for food safety and nutrition programmes.

• Sufficient information and communication strategy should be made available for consumers education on healthy diets.

• Practical examples:
  ✓ Information for consumers to promote healthy diets such as to put calorie of food on menu, to add nutrition information in food label.
  ✓ Food safety campaign to include promotion on healthy diets (i.e. 3 five keys).
  ✓ Consumer education to promote healthy diets i.e. salt and sugar reduction.
  ✓ Training for food handlers on two inter-related topic: food safety and healthy diets.
Food Safety Campaign integrated with nutrition and healthy lifestyle

The Five Keys to Safer Food has been used since 2001 as basis of education programmes by public and private sector for training of food handlers (street food vendors, household, school children)

The Five Keys to Safer Food has been translated into more than 50 languages all over the world

The Three fives was introduced at WHO health promotion campaign in Beijing Olympic in 2008

- Five Keys to Safer Food
- Five keys to a healthy diet
- Five Keys to Appropriate Physical Activities
Everyone wants to look and feel healthy. By choosing safer food, healthier nutrition and regular physical activity, you can improve your health throughout your life. These choices are particularly important because they are about personal decisions that only you can make.

Increasing your knowledge about the Five key behaviors related to each of the areas above can help you make better choices. These key behaviors are important for your health no matter how old you are or where you live in the world. Look better, feel better, reduce your visits to the doctor, maintain normal blood sugar and blood pressure, keep a healthy weight – these are just a few of the benefits of adopting the key behaviors described in this brochure.

As the teams display the highest levels of fitness and health, the 2010 FIFA World Cup provides a unique opportunity to share these messages. This brochure has been prepared by the South African Department of Health in collaboration with the Regional Office for Africa, World Health Organization. It is part of an overall strategy to enhance public awareness about the contribution of food and physical activity to healthy lifestyles.

Healthy choices, healthy life...

More information is available at: www.who.int/foodsafety/consumer/en
Challenges on Expanding Food Control System for Nutrition in Informal Sector

- Cross-sectoral coordination based on country institutional and specific situation, i.e.:
  - establish coordinated policy
  - develop joint programmes for food safety and nutrition
- Involvement of food business operators and their association
- Initiating behavioural changes of food handlers and consumers on some long rooted habits
Thank you!
Addressing data gaps in informal food sector; learnings from the FeedCities project and beyond

Dr Angela de Silva
Regional Adviser Nutrition and Health for Development
WHO Regional Office for South-East Asia
Data gaps hinder actions on promoting healthier diets

- Country policies and laws, local government regulations
- Vendors and consumers information: demographics, SES, perceptions, priorities
- Foods: what type, nutrients
- Supply chains for raw materials
- Vendor associations
FeedCities Project

• Ongoing multicountry study, which describes the urban food environments of cities in central Asia and South-eastern Europe.

• Focus on street markets and vending sites (including food markets, kiosks and street vendors) selling ready-to-eat food in urban areas and document the types of food most commonly sold.

• Characterizes vending sites and assesses the trans-fatty acids, sodium and potassium content of foods based on laboratory analyses.

• WHO will work with countries to interpret the findings and develop appropriate responses.
Useful information

- Low cost - tie up with academia
- Small scale assessment, but adequate information to extrapolate to other cities in the relevant country
- Some common issues identified across countries – salt, TFA, high sale of beverages; solutions could be multi country
- Compensates somewhat to the lack of data on dietary habits and food composition at a larger scale
- Examination of data from this study with data from other smaller studies to verify and validate inferences.
- As in other street food environments, although traditional foods were widely available, new ingredients and foods processed by large-scale food manufacturers are becoming more prevalent.
- Traditional homemade foods, can also be unhealthy
• **Nutrient data:** of specific nutrients of concern: TFA and sodium

• Characterization of vendors and sites
  - Stationary and mobile street food vending sites.
  - Vendors were mainly women and owned their business.
  - Generally, food was sold everyday across the year—not seasonal.

• **Characterization of foods:**
  - what kind of foods were available
  - were they solids or beverages
  - prevalence of sales of fruit and vegetables
  - home made or industrial products (many sites had a mix of foods)

### Table 6. Food offered at 600 street vending sites by type of vendor

<table>
<thead>
<tr>
<th>Food offered</th>
<th>Mobile (n = 164)</th>
<th>Stationary (n = 436)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit</td>
<td>2.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Food other than fruit</td>
<td>90.2</td>
<td>83.7</td>
</tr>
<tr>
<td>Industrial</td>
<td>13.1</td>
<td>23.1</td>
</tr>
<tr>
<td>Homemade</td>
<td>64.1</td>
<td>53.8</td>
</tr>
<tr>
<td>Homemade and industrial</td>
<td>22.8</td>
<td>23.1</td>
</tr>
<tr>
<td>Beverages</td>
<td>59.8</td>
<td>62.3</td>
</tr>
</tbody>
</table>
Going beyond foods and nutritional information

• Mapping of informal food sector pathways - for specific diets or focus areas
  - Identifying governance structures, policies, pathways and actors to plan and implement an enabling environment
• Vendor and consumer information - knowledge, attitudes, behaviours

World Health Organization
Regional Office for South-East Asia
Thank you
An urban food systems approach for promoting healthy diets: urban policies, built environment and practices

Asst. Prof. Piyapong Boossabong, PhD
School of Public Policy
Chiang Mai University
An entry point:
“Unhealthy diets start from poor food systems”

Irresponsible production
(non-safety food from rural area)

Food manufacturing
(processing & preserving)

Unfresh food distribution & transport
(food miles & carbon footprints)

Ill-recognition of urban food production
(organic orientation)

Linear > Circular

Unfair food wholesale and retail trade
(irrational central markets + monopolized supermarkets & convenience stores + poor hygiene of local & mobile markets)

No connection between demand-side and supply-side

Understand the whole chain, then we should not put pressure only on them

Wastes
(city burden)

Table of consumers
(bad quality
& poor hygiene build environment)

Irresponsible food services
(food restaurants/cafeteria/catering/street vended food)

Because of the structural barriers above
An ideal urban food systems approach

Connecting “from urban farm inputs to table of consumers”

- Urban farm inputs
  - Sustainable wastes mgt. (cleaning and composing)
  - Table of consumers (good quality & build environmental hygiene)
  - Nutrient food services (responsible food restaurants/cafeteria/catering/street vended food/home cooked meal)
- Urban food production (organic orientation)
- Food manufacturing (mindful processing & preserving)
- Fresh food distribution & transport
- Rural farm (< 50%)
  - + peri-urban = within 100 miles away
- Fair food wholesale and retail trade (rational central markets + transparent supermarkets & convenience stores + good hygiene of local & mobile markets)

Then, their struggle is less
Urban policies toward healthier diets

Transforming the linear food systems to be more circular

Shortening food chains by promoting organic oriented urban and peri-urban food production

Connecting food production in and nearby the city to food distribution and food services sectors to ensure fresh and safe raw materials

Creating the loop by promoting the biological decomposition of organic waste and turning to the urban food production sector
Urban policies, in particular to street vended food

- Incentivizing such food service to use fresh and safe raw materials from trustable urban and peri-urban farmers by proposing the lower price than the market price
  - Paying the difference between the market price of those organic products and the proposed lower price
  - OR
  - Building the direct link between them to reduce the transaction cost

- Standardizing the street vended food by labelling the quality of food services based on the degree of healthy diets

- Promoting healthy diets as a new culture, identity, and image of street food in the 21st century
Built environment toward healthier diets

- Regulating the nutritional quality of food and hygiene of the cites with the strict sanction
  - Zoning the dense area of street vendors
- Providing safe, piped drinking water, sanitary facilities & basic waste disposal
- Promoting waste mgt. innovation
- Providing the street vendors the trash can that could turn food waste into garden treasure

- Building a waste hub of each zone
Examples of the practices toward healthier diets

- Promoting organic oriented urban food production and connecting to the street vended food sector
- Protecting urban and peri-urban farming areas
- Reforming the agricultural extension tasks to include the city scale
- Stimulating organic food production within and nearby the city, including in schools, hospitals and governmental offices
- Supporting smallholder and part-time farmers in accessing to land and starting their food production
- Transferring knowledge and innovation to the target groups in the city
- Increasing its contribution (> 50%), in particular to the street food sector

Cope with structural barriers – not only access to micro-credit
Examples of the practices toward healthier diets
Examples of the practices toward healthier diets

- Stimulating behavioral changes ("nudging") of street food vendors by sending monthly letter to their home providing the information about "customers health surveys" and their "rank" in term of nutritional quality and good hygiene in comparison to others in the same area.

Nudging the supply-side

Move to "how" = psychological activation
Examples of the practices toward healthier diets

Transforming healthy diets into the authentic favor of regular street food customers

### Nudge Types

<table>
<thead>
<tr>
<th>Nudge Type</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Nutritional Labelling</td>
<td>Labels in supermarkets, cafeterias, and chain restaurants provide calorie and nutrient facts.</td>
<td>The shelf label or menu board provides information about calorie and fat content and shows a green sticker if the food is healthy or a red sticker if the food is unhealthy.</td>
</tr>
<tr>
<td>Evaluative Nutritional Labelling</td>
<td>Labels in supermarkets, cafeterias, and chain restaurants provide calorie and nutrient information that easily identifies healthier foods.</td>
<td>The shelf label or menu board provides information about calorie and fat content and shows a green sticker if the food is healthy or a red sticker if the food is unhealthy.</td>
</tr>
<tr>
<td>Visibility Enhancement</td>
<td>Supermarkets, cafeterias, and chain restaurants make healthier foods more visible than unhealthy foods.</td>
<td>Supermarkets place healthy foods more prominently in markets, and while cafeterias and restaurants make healthy foods more visible and easier to find on their menus than unhealthy foods.</td>
</tr>
<tr>
<td>Healthy Eating Calls</td>
<td>Staff in supermarkets, cafeterias, and chain restaurants offering promotions to eat more healthy.</td>
<td>Supermarkets or cafeterias offer free or discounted water or customers if they would like to have fruits or vegetables.</td>
</tr>
<tr>
<td>Pleasure Appeals</td>
<td>Supermarkets, cafeterias, and chain restaurants making healthy food more appealing than unhealthy food.</td>
<td>Healthy foods are displayed more attractively in cafeterias to counteract the appeal of unhealthy food.</td>
</tr>
</tbody>
</table>

![Expected reduction in daily calorie intake](image_url)
Examples of the practices toward healthier diets

- **Awarding annually the best street vendor of the zone** who helps creating the healthy environment

- **Initiating the mutual monitoring system** (monitor by other anonymous street vendors in the same area) that can give a friendly feedback direct to each street vendor

- **Enhancing relations and mutual responsibilities between street food vendors and consumers by creating platforms** to communicate, reflect and send any requests in relation to the nutritional quality of food and hygiene of the cites

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Move from “stick” to “carrot” - hard to soft

Move from “surveillance” to “critical friends”

Move from “inspection” to “mutual understanding”
Examples of the practices toward healthier diets

Facilitating the formation of an inclusive association of street food consumers to push forward more healthy diets of street food (e.g. pushing Good Agricultural Practices (GAP), Community Supported Agriculture (CSA) and Participatory Guarantee System (PGS) to ensure fresh and safe raw materials)
Examples of the practices toward healthier diets

Rebranding street food vendors from “street cook” to “chef” (inspired by Netflix)
to stimulate nutritional quality enhancement and good hygiene development of the cites

Plus - articulating all these to climate change/ crisis adaptation plan (as informal sector is the most resilient part?), city foresight (re-positioning for the future) & behavioral policy sandbox/ policy lab
Leadership of Mayors and Local Government - Remarks

Shri. Atin Ghosh,
Deputy Mayor,
Kolkata Municipal Corporation (KMC), Govt. of West Bengal
It gives me immense pleasure to be a part of this extremely important Inter-Regional meeting being jointly organized by the WHO and FAO to promote Healthy diet through the informal food sector in this beautiful city of Bangkok.
I bring my best wishes from my city Kolkata, India.
I would specially like to thank Dr. Padmini Angela De Silva for her effort to invite me for this consultation.
Kolkata and Bangkok, as far as they may geographically be from each other, the vibrant cities have one thing in common. Love for street food is sewn into the fabric of the rich culture and heritage of both these cities. Varied tastes, palatable items and colorful presentation. Street food easily brings delight to travelers and natives alike.

‘Street Food of Kolkata’, as it is of Bangkok, is famous all over the world.
I understand the Hon’ble Mayor of Bangkok was here also yesterday and I am sure he also spoke about the excellent street food selection that Bangkok has to offer.
As both these cities have a remarkable connect, boasting of its rich street food culture, it is not only a responsibility of city corporations, it is obligatory that substantial hygiene control and strict law be implemented in this sphere.
Kolkata is a city that boasts of one of the largest numbers and variety of Street Food vendors, not only in the country but in the world.
The variety ranges from traditional food of our beautiful state Bengal as well as other states in the country along with cosmopolitan multi cuisine food. Actually, we have more than 200 varieties of Street Foods. So if you are looking for cheaper versions of dishes that are served in high-end restaurants, you are sure to find them on the streets!
What makes Kolkata street food attractive is the low price point at which it is available, making it the cheapest in the country, it is also easily available in nearly all public areas and roadsides.
We have approximately 16 thousand street food vendors in the city, some of whom are ambulatory and some have fixed kiosks.
The Kolkata Municipal Corporation (KMC), the erstwhile Calcutta Municipal Corporation (CMC) was the first city to initiate studies on street foods for better management and hygiene regulation.
The first study that CMC did was with Dr. Indira Chakravarty in 1992 – 1995 (Dr. Chakravarty is here with us today); with Chief Secretary of the state chairing the Steering Committee. This endeavor was supported by FAO of the United Nations and it received the highest award – the ‘Eduardo Sauma Award’ from FAO of the United Nations for developing the ‘Calcutta Model’ based on this study in, 1995.
• This study for the first time highlighted that safety of street food can only be ensured if all stake holders such as the Municipality, Police, Customers, vendors etc. work together for the multiple factors that have an impact on it.

• Hence, my predecessor Mr. Subrata Mukherjee was invited by FAO to Chair the ‘Feeding Asian Cities’ Summit in 2000.
Subsequently, several other studies were conducted, supported by WHO and also by Govt. of West Bengal as well as Govt. of India, to take this process forward.
Now, personally, As a true Kolkatan, I have huge affinity towards our Street food. As a stakeholder as well as head of civic body, it is my duty to ensure that this rich heritage of our city is not marred with unhygienic, unscrupulous practices. It may not be a one-man-job, but I try my best to crack the whip wherever I possibly can.
My strong belief is that regulation cannot be done sitting in the comfort of my office. Hence I personally take to the streets on a regular basis to check on the status of Street Food, discuss with vendors, customers, local Police and others to find out their difficulties, starting from taste and quality; usage of ingredients, availability of water; garbage disposal; lighting; accessibility; cleanliness of area and any other related problems.

Subsequently, I try to discuss about these issues with my officers and take relevant corrective actions.
Here are a few glimpses of what I just mentioned:
In 2015, when I took over the charges of this department, one of the major bottlenecks I faced was inadequate number of officers to monitor or assess the quality of Street foods to improve both safety as well as nutritive value.

The number of vendors were massive compared to our regulatory infrastructure.

Hence it was imperative that we build up the required man force to deal with the issue in hand. I am proud to say that as of today, we are well equipped with manpower as well as infrastructure to strictly regulate Street Food Standards.
You will be glad to know that to reinstate this successfully, the first step was initiated by WHO in India, in a meeting in Mysore in 2016, December. And I feel proud to say that I chaired this consultation.
In this meeting many municipalities, institutions, scientists, UN agencies etc. participated which was coordinated by Dr. Indira Chakravartty and conducted by the Foundation for Community Support and Development (FCSD), our NGO partner in this.

Here are a few glimpses:
I am very glad to state that based on this **Bureau of India Standard (BIS)** the standard creating agency of Government of India created a revised ISO Standard (IS 16066 : 2017) which helps in a fast, simple and non-laboratory linked audio – visual testing for first level selection of safe foods (vendors). This also helps us in identification of the cause of the problems as more than 40 individual indicators are used.
Lastly, I will like to say that we are now conducting a massive study on this, covering 104 areas of Kolkata, which covers assessment and evaluation; targeted awareness generation; reassessment to evaluate impact and then assessing its sustainability. It is an unique study as there are partners from all relevant agencies like the

- Kolkata Municipal Corporation (KMC) - Municipality,
- World Health Organization - United Nations,
- Bureau of Indian Standards (BIS) - Government,
- Foundation for Community Support and Development (FCSD) - NGO and
- Kinley – Parivartan - Industry.
I am determined to improve the quality and safety of street food in my city, the “City of Joy”.

We in Kolkata like to eat safe, live safe and feel safe – to be happy, healthy and joyful, like all of you here.

The common man (who eats at the street) to a tourist (who also eats at the street) must feel satisfied and happy.
• I again convey my best regards to everyone here and thank the WHO and FAO for inviting me.

• And all good wishes to the Hon’ble mayor and the people of Bangkok.

• I look forward to seeing him in the International Mayor’s summit being held in Dusseldorf next month.
Healthy Diet Initiatives and Improved Management of Street Foods

Prof (Dr.) Indira Chakravarty Padmashri
PhD, D.Sc

Chief Adviser, Public Health Engineering Department, Govt. Of West Bengal
Director (Independent), ECL, Coal India
Chairman, Water and Beverage sc. Panel, FSSAI, MOHFW, GOI
Member, Empowered Programme Committee (EPC), National Health Mission (NHM), MOHFW, GOI
Member, Governing Council, Indian Council of Medical Research, Dept. of Health Research, MOHFW, GOI
Member, Scientific Advisory Board (SAB), Indian Council of Medical Research, Dept. of Health Research, MOHFW, GOI
Chairman, SAC, ICMR - RMRC, Dept. of Medical Research, MOHFW, GOI
Chairman, Stop Diarrhea Program, Save the Children
Chairman, Innovation Center, Schevaren
Chairman, Maharashtra Nutrition Project, Reckitt Benckiser
Member, Advisory Board, National Center for Science Communication, GOI
Member, Hygiene Index comm., Reckitt Benckiser
Member, Core Committee, WASH, Swachh Bharat, MODWS, GOI
Member, Advisory Board on Water Week, Singapore Water Convention, PUB, Govt. of Singapore
Member, International Board of Advisers, International Inst. of Global Health, United Nations University (UNU)

Former Addl. Director General of Health Services, MOHFW, GOI
Former Director & Dean, All India Inst. of Hygiene and Public Health, MOHFW, GOI
Former Director, Chittaranjan National Cancer Inst., MOHFW, GOI
Former Director Professor & HOD, Dept. of Biochemistry and Nutrition, AIHPH, MOHFW, GOI
Former Regional Adviser ac (Nutr), WHO, South East Asia Regional office (SEARO)
Former Regional Director, South Asia, MI, IDRC (Canada)
Street foods are an ever increasing phenomenon not only in Urban cities and towns, but even in peri-urban or even selected rural areas.
History

• Calcutta (Now Kolkata) was possibly one of the first cities to have started work on Street foods since 1992, supported by FAO, in collaboration with Calcutta Municipal Corporation (CMC).

• At that time we had also visited Bangkok for a study tour.
  • Mayor in council (Health), CMC
  • Commissioner of Police, Kolkata
  • Myself

• This project developed the ‘Calcutta Model’ which got the first prestigious ‘Eduardo Sauma Award’ of FAO. This study looked into safety status; management and monitoring methods to regulate Street foods and also their nutrient composition in 1995
Regional Seminar on Street Food Development
Bangkok, Thailand, September 29 - October 1, 1999

Some of the actions already initiated include
- Listing of all the vendors
- Designing of an ambulatory Kiosk
- Preparation of training manual for local administrators, street food inspectors, street food vendors and selected targets of consumers.
- Prohibition of hawking in certain roads
- Rehabilitation of some vendors in permitted areas
- Provision of water supply and latrine facilities to permitted premises

Subsequently FAO established the **Regional Centre of Excellence for street foods in Asia** at All India Institute of Hygiene and Public Health with Prof. Indira Chakravarty as the Regional Coordinator on a joint agreement signed between the Hon’ble Minister of Health and Family Welfare, Govt. of India and the ADG and Regional Representative RAPA, FAO of United Nations.
A FAO Regional Technical Meeting on street food was held by All India Institute of Hygiene and Public Health, Calcutta, in November 1995 with experts on street foods from various countries viz. China, Colombia, France, India, Indonesia, Mauritania, Peru, Philippines, Thailand, Togo and in 1996 with Police Chiefs and Mayors of 13 important cities of the region.

In December 1996 another seminar supported by FAO of United Nations was held on Integrated Approach for Improving Street Foods by the All India Institute of Hygiene & Public Health, Calcutta with participation from 13 countries which aimed at facilitating an exchange of views amongst Mayor level officials of municipal administrations and chiefs of police of importance cities in Asia. The meeting for the first time brought a linkage, co-operation and co-ordination amongst all concerned Departments. The seminar was attended by 25 participants and 18 observers representing 13 cities including Bangkok, Beijing, Calcutta, Colombo, Dhaka, Hanoi, Jakarta, Kathmandu, Kuala Lumpur, Manila, Phnom Penh, Vientiane and Yangon.
Subsequently, a National Committee on safety of street foods of Govt. of India has also been formed with Additional Secretary, Ministry of Health and Family Welfare, Govt. of India, Additional Secretary, Ministry of Agriculture, Govt. of India, Director General of Health Services, Govt. of India, Food and Agriculture Organization with Prof. Indira Chakravarty as Member Secretary.

Based on the Calcutta study a future proposal has been initiated by the Calcutta Municipal Corporation to be considered by the National Committee which envisage following activities.

- Development of a “Model Street Food Corner” on the street behind the Writer’s Building area which is predominantly a street food vending area
- To create awareness - continuous training would be imparted at all level of street food preparation right from start till the end involving all supportive agencies
- Data generation on small town a smaller municipal settings
- Increase involvement of women in the entire sector at all levels.

This would help in developing country strategies as well as Regional Strategies for this part of the world to improve the overall street food situation in cities, towns as well as periurban areas.

At the end Prof. Indira Chakravarty conveyed the best wishes and invitation of the Chairman of the National Committee on Safety of Street Food, Mr. J. V. R. Prasad Rao, Additional Secretary, Ministry of Health & Family Welfare to hold the next meeting in India. He had conveyed this to Prof. Indira Chakravarty indicating all his support and commitment to this Programme.
Increase of Dependency on Street Foods

- High Urban migration
- Huge Population pressure
- Fast service,
- Very Tasty
- Low cost (Most affordable))
- Immense variety – Both Traditional and fast food
- Needs minimal space to function
- Easy employment for jobless (Informal Economy) - Huge employment
- Needs no formal training
Problems with Street Foods (1/2)

- Questionable quality & safety of Food and beverages served.
- Unsanitary food handling.
- Use of inadequate quantity and unsafe quality of water.
- Poor personal hygiene of Vendors.
- Improper washing methods.
- Uncivic behaviour of Vendors and consumers.
- Poor sanitation around the area.
- Open garbage accumulation.
- No segregation of organic / Inorganic garbage
- Difficulty in accessibility to facilities – water, latrines, garbage bins etc.
- Contamination from open environment.

Cont...
Illegal actions by vendors eg: drawing of unauthorised electricity, over use of polluting cooking fuels etc.

Poor processing technologies. – affects nutritive quality

Unhealthy dietary composition - selectively

No knowledge of vendors and consumers on balanced nutrition

Drudgery of Vendors – No access to amenities, hard labour etc.

Often poor health of vendors, causing contamination.

No social coverage of vendors

Poor coordination among all stake holders.

Non- cooperation of authorities.

No reporting or support mechanism to get support for vendors / customers.
Street Foods and Non-Communicable Diseases

INTRODUCTION

• The concept of nutrition transition was to change the dietary patterns of populations.

• Nutrition transition has contributed to accelerating the epidemiological transition, in other words, a gradual increase in chronic non-communicable diseases such as overweightness and obesity, type II diabetes, arterial hypertension, dyslipidemia, cardiovascular disease and cancer.

• This has also affected street foods

Despite the fact that street foods have been sold for numerous decades and provide a source of income to many families, there is a **dearth of data** regarding the contribution of street foods to the nutritional value of the diet.


- Street food ingredients are **country/region specific** and rarely they are reported and/or analysed.


- Several **social, cultural and economic issues** influence this practice.

Prof (Dr.) Indira Chakravarty
## PROXIMATE NUTRIENTS AND CALORIFIC VALUE OF SOME STREET FOODS

<table>
<thead>
<tr>
<th>Foods</th>
<th>Weight (gm.)</th>
<th>Protein (gm.)</th>
<th>Fat (gm.)</th>
<th>Carbohydrate (gm.)</th>
<th>Energy (K.cal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal (Rice, Dal, Egg Curry)</td>
<td>500</td>
<td>26.0</td>
<td>14.0</td>
<td>174.0</td>
<td>966.0</td>
</tr>
<tr>
<td>Meal (Rice, Dal, Meat Curry)</td>
<td>500</td>
<td>30.0</td>
<td>15.0</td>
<td>175.5</td>
<td>955.0</td>
</tr>
<tr>
<td>Meal (Rice, Dal, Fish Curry)</td>
<td>500</td>
<td>28.0</td>
<td>13.0</td>
<td>176.0</td>
<td>933.0</td>
</tr>
<tr>
<td>Meal (Rice, Dal, Veg. Curry)</td>
<td>500</td>
<td>21.0</td>
<td>12.0</td>
<td>183.0</td>
<td>924.0</td>
</tr>
<tr>
<td>Egg Chow</td>
<td>250</td>
<td>18.1</td>
<td>27.7</td>
<td>75.9</td>
<td>624.4</td>
</tr>
<tr>
<td>Mutton Chow</td>
<td>250</td>
<td>15.8</td>
<td>21.7</td>
<td>75.9</td>
<td>56.2</td>
</tr>
<tr>
<td>Veg. Chow</td>
<td>250</td>
<td>11.8</td>
<td>21.0</td>
<td>77.0</td>
<td>543.9</td>
</tr>
<tr>
<td>RDA</td>
<td>1 gm./kg. B.W.</td>
<td>40.0 gm.</td>
<td>455.0 gm.</td>
<td>240 C K.cal.</td>
<td></td>
</tr>
</tbody>
</table>
The Calcutta Model (2/3)

PROXIMATE NUTRIENTS AND CALORIFIC VALUE
OF SOME STREET FOODS (2/2)

<table>
<thead>
<tr>
<th>Foods</th>
<th>Weight (gm.)</th>
<th>Protein (gm.)</th>
<th>Fat (gm.)</th>
<th>Carbohydrate (gm.)</th>
<th>Energy (K.cal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg Roll</td>
<td>150</td>
<td>12.6</td>
<td>22.3</td>
<td>41.3</td>
<td>416.7</td>
</tr>
<tr>
<td>Mutton Roll</td>
<td>150</td>
<td>10.0</td>
<td>16.2</td>
<td>40.4</td>
<td>347.5</td>
</tr>
<tr>
<td>Veg. Roll</td>
<td>500</td>
<td>6.1</td>
<td>15.5</td>
<td>43.7</td>
<td>338.8</td>
</tr>
<tr>
<td>Egg Curry</td>
<td>200</td>
<td>7.7</td>
<td>27.0</td>
<td>13.0</td>
<td>324.9</td>
</tr>
<tr>
<td>Paratha</td>
<td>75</td>
<td>5.5</td>
<td>5.5</td>
<td>37.0</td>
<td>219.5</td>
</tr>
<tr>
<td>Paratha Curry</td>
<td>200</td>
<td>1.8</td>
<td>10.0</td>
<td>23.9</td>
<td>192.9</td>
</tr>
<tr>
<td>Ghugni</td>
<td>100</td>
<td>8.2</td>
<td>5.5</td>
<td>27.1</td>
<td>190.4</td>
</tr>
<tr>
<td>Samosa</td>
<td>30</td>
<td>1.2</td>
<td>7.1</td>
<td>9.2</td>
<td>105.5</td>
</tr>
<tr>
<td>RDA</td>
<td>1 gm./kg. B.W.</td>
<td>40.0 gm.</td>
<td>455.0 gm.</td>
<td>2400 K.cal.</td>
<td></td>
</tr>
</tbody>
</table>
Most of the food were high on carbohydrate
Meals were mostly balanced
Since most of these were traditional foods, they possibly were much more balanced, compared to other fast foods
Issues to be Considered

For improving the management of Street Food sector the **Primary Issues** identified are therefore –

- Improving **safety and hygienic** standards
- Improving **nutritive value** and encourage healthy dietary composition
- **Awareness of vendors** in all respects
- **Customer awareness**
- Improving **Environmental hygiene** and overall **cleanliness** of the areas
- **Improved Monitoring and assessment method**, which shall be - simple; easy to implement; cost effective; fast and scientifically acceptable.
Monitoring of Street Food (1/2)

Monitoring is not only a problem but nearly impossible

Reasons:

1. Extremely **Limited** regulatory **man power** for monitoring, training, hand holding, awareness generation etc.

2. The existing **Monitoring Process** is **cumbersome**, time consuming, needs laboratory support and expensive.

3. The existing **Food Safety assessment method** also **does not identify** the **cause of the problem**

4. It does not have a **Preventive approach**
Monitoring of Street Food (2/2)

What is needed

1. To get a **simple, easy, quick** as well as **dependable method** which can be used by all stakeholders, including the Vendors, for monitoring the quality and safety of street foods. – This can be an excellent method to **segregate** the vendors at **Primary Level** with best, good, fair and poor behavior.

2. **Grading** of vendors using a scientifically approved Scoring method

3. The **reason for the unhealthy / unsafe food** can be identified.

4. Initiate a **Preventive approach** based on it.
Actions Taken to Develop a Simple Monitoring and Management Method

Method developed with support of WHO by the Foundation for Community Support and Development (FCSD) in December 2016

Two levels

Level 1 – Simple Audio Visual testing (No Lab support needed) – ISO 16066:2017

This will help in –

- Quick and easy audio-visual assessment at primary level,
- Segregate vendors into various categories at grade them
- Identify the cause of the problems
- Poorly functioning vendors identified for Level 2 testing

Level 2 – Traditional Laboratory linked method
Actions Taken to Develop a Simple Monitoring and Management Method (2/8)

1. **Categories** – (Following the ‘Calcutta Model’)
   - Category I: Food prepared as a small scale industry
   - Category II: Food prepared at vendors home
   - Category III: Food prepared at place of vending

2. Assess quality using -
   - Indicators – 10
   - Sub Indicators – 39-42

Covers a number of all essential parameters, needed for monitoring of quality and Safety of Street foods and beverages

3. Scoring
4. Grading
5. Star Rating
INDICATORS (1/4)

1. Raw Material
   1.1. Fresh
   1.2. Good Quality (Visually)
   1.3. Healthier and seasonal raw ingredients used preferentially

2. Storage of Raw material
   2.1. Washed and Cleaned
   2.2. Separated from cooked food

3. Processing and Cooking
   3.1. Use of clean equipment’s, amenities’ etc.
   3.2. Clean hands and overall personal cleanliness of handler
   3.3. Use of potable water
   3.4. Through cooking done

Cont...
INDICATORS (2/4)

4. Transportation to street food stall / Kiosk
   4.1. Properly packed / covered
   4.2. Reach area within a short time (Maximum 4 hours)
   4.3. Unpacked using clean hands

5. Display / sale of food
   5.1. Food is kept covered
   5.2. Sold using clean food grade holding utensils and serving utensils with no damage
   5.3. Disposable utensils not reused
   5.4. Proper cleaning and washing of equipment’s and utensils
   5.5. Veg and Non-Veg food separated
   5.6. Cooked and uncooked food separated
   5.7. Cooked food sold within 4 – 5 hours and temperature maintained
   5.8. Heat food thoroughly

Cont...
6. **Use of left overs / garbage management**
   6.1. Disposed off in covered bins
   6.2. Segregated into Inorganic and Organic wastes

7. **Personal Hygiene and Health of Food Handlers**
   7.1. Wash hands with soap and water before touching food
   7.2. Wear clean clothes / apron
   7.3. Have no contagious diseases
   7.4. Any cuts on fingers are properly bandaged and kept clean
   7.5. Wear no jewellery on fingers / palms, if used shall be covered
   7.6. Disposable gloves (if used) not reused
   7.7. Loose hair tied and covered
8. Overall cleanliness
   8.1. Working surface clean and hygienic
   8.2. Kiosk cleaned with safe cleaning agent
   8.3. Placement not near any latrine /garbage dump / dirty area
   8.4. Surrounding area clean / not congested
   8.5. Properly illuminated

9. Water and Ice
   9.1. Source of water – Potable
   9.2. Water container cleaned daily with safe cleaning agents
   9.3. Water contained covered with a side tap
   9.4. Ice made of potable water
   9.5. Ice used for storage, kept separately

10. Nutrition
   10.1. Use of healthy Seasonal vegetables and fruits
   10.2. Healthy cooking methods eg. Steaming, boiling, sauté etc.
   10.3. Avoid of repeated heating/use of oil

Cont...
Based on this a revised ISO standard (ISO 16066:2017) was created by the BIS (Bureau of Indian Standard) – The official Standard agency of Govt. of India (2017)

Rolled out in Kolkata Jointly by the BIS and the Municipal Corporation of Kolkata (KMC) (2017), with participation of WHO
Pilot Study

A study has been initiated with Joint partnership of several concerned agencies –

1. The Kolkata Municipal Corporation (KMC)
2. Foundation for Community Support and Development (FCSD) – The NGO - Conducting the study
3. Bureau of Indian Standard (BIS) – Govt. of India
4. World Health Organization (WHO) – Knowledge Partner
5. Kinley Parivartan - Private sector (A multinational Corporate Industry)
Pilot Study

STEPS OF ACTION

1. Survey Across City of Kolkata (1800 Vendors) in 104 areas

2. Score and Grade (Star Ratings)

3. Conduct targeted training (Awareness Generation)

4. Resurvey (1000 vendors)

5. Score and Grade (Star Ratings)

6. Handhold (Minimal) - 3 months

7. Sample Survey (250 Vendors)

8. Score and Grade (Star Ratings)

Prof (Dr.) Indira Chakravarty
## Coverage

<table>
<thead>
<tr>
<th>City</th>
<th>Zones to be Covered</th>
<th>Area to be Covered</th>
<th>No of Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata, India</td>
<td>10</td>
<td>104</td>
<td>≈ 2000</td>
</tr>
<tr>
<td>Category</td>
<td>Outcome Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category I</td>
<td>76% (Highest) – Prepare at point of sale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category II</td>
<td>16.6% - Prepared at Vendors home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category III</td>
<td>7.3% - Prepared at small scale manufacturing units</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Outcome (2/4)

RATING AND GRADING OF VENDORS

Among the 1767 vendors surveyed it is seen that –

• **Excellent Vendors** (2.1%) numbering **37** (5 Star)
• **Very good Vendors** (18.5%) numbering **326** (4 Star)
• **Good Vendors** (61.34%) numbering **1082** (3 Star)
• **Fair Vendors** (18.08%) number **319**
Inferences –

Types of food sold

• Snacks (48.55%) - Maximum
• Meal (25.52%)
• Other (25.75%)
### IDENTIFICATION OF ISSUES ON WHICH SCORING WAS POOR

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage (%) of vendors did not follow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Garbage segregated</td>
<td>96%</td>
</tr>
<tr>
<td>2. Garbage disposal in covered bins</td>
<td>80%</td>
</tr>
<tr>
<td>3. Hair uncovered</td>
<td>78%</td>
</tr>
<tr>
<td>4. Hand washing</td>
<td>77%</td>
</tr>
<tr>
<td>5. Disposable gloves (if used) not reused</td>
<td>61%</td>
</tr>
<tr>
<td>6. Water container cleaned daily with safe cleaning agents.</td>
<td>49%</td>
</tr>
<tr>
<td>7. Kiosk cleaned with safe cleaning agents</td>
<td>46%</td>
</tr>
<tr>
<td>8. Water container covered with side tap</td>
<td>43%</td>
</tr>
<tr>
<td>9. Avoidance of repeated heating/usage of oil</td>
<td>38%</td>
</tr>
<tr>
<td>10. Wear clean clothes /apron</td>
<td>37%</td>
</tr>
</tbody>
</table>
Future Actions Suggested

1. Revision of the standard marginally – Already in discussion with the Bureau of Indian Standard (BIS)

2. The draft will be prepared immediately (possibly first week of September, 2019)

3. Will be shared at the WHO supported meeting on Street Food standards for Southern States of India to be held in Hyderabad (19/20 September)

4. Changes suggested
   - Minor wordings related to some hygienic issues
   - Add more nutrition related Parameters
   - Add on Garbage management
Thank You!
Group work 1. Brainstorming

• Identifying possible action points related to promoting healthier street foods including filling information/knowledge gaps

• Convergence and working with other sectors: Identify possible agencies that would lead interventions to promote healthier street foods, other sectors/partners and stakeholders and opportunities and constraints in implementing programmes

• Monitoring and evaluation
Bangladesh, India, Thailand,

Table 1
## Point 1: Identifying possible action points

<table>
<thead>
<tr>
<th>S.no</th>
<th>Parameter</th>
<th>Bangladesh</th>
<th>India</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Data &amp; Knowledge Gap</td>
<td>Data unavailable— mapping of street food vendors (1-3) – first do mega cities (infrastructure, food supply etc., understand consumers)</td>
<td>Generate more data and scale up data collection with support of State/City</td>
<td>Data is available in terms of licensing but partial data on food safety &amp; nutrition</td>
</tr>
<tr>
<td>1.</td>
<td>Landscape of Vendors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Food Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Nutrition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Health/Nutrition education to both the consumer and vendors to align supply and demand</td>
<td>Sporadic NE activities towards consumers – no education to the vendors. Food based dietary guidelines by ministry of food and health exist but not disseminated widely.</td>
<td>Communication to the urban groups of consumers but some rural pockets. Need for an extension.</td>
<td>Through the Thai Health Foundation - Health literacy to producer for license including body check ups. Healthy eating behaviours not efficiently disseminated to the consumer.</td>
</tr>
<tr>
<td>3.</td>
<td>Public health comparative outcome in terms of safe and safe &amp; healthy food</td>
<td>Sensitization of policy makers must be done</td>
<td>Needs more sensitization however some States are</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>SPOC</td>
<td>BASF – Ministry of Food</td>
<td>Health Department</td>
<td>Health Department</td>
</tr>
</tbody>
</table>
Point 2: Convergence and working with other sectors


2. Vendor Associations/ NGOs/ Civil organizations/

3. Consumer research organizations

4. Media/ Influencers/ Religious Leaders/ UN Agencies

4. Universities / Academia / health Professionals

Levels at all departments – Centre/State and Local Govt

Point 3: Monitoring & Evaluation

• Design the project and identify parameters for monitoring
  • Evidence gathering for baseline data
<table>
<thead>
<tr>
<th>No</th>
<th>Possible action points</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dissemination and advocacy meeting related stakeholders;</td>
<td>INDONESIA, VIETNAM, CAMBODIA</td>
</tr>
<tr>
<td></td>
<td>Piloting at the provincial level (DKI Jakarta):</td>
<td>INDONESIA</td>
</tr>
<tr>
<td></td>
<td>a. Stickerization not only for food safety but also for healthy food (less sugar, salt, and fat)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Healthy food apps for the restaurant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop healthier foods recommendation for street vendor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training course for vendor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improve healthy diet promotion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surveillance for the street food</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Joined program with NCD Department</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft street food regulation</td>
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</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Identify possible agencies</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Local government unit</td>
<td>VIETNAM, INDONESIA</td>
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<tr>
<td></td>
<td>Ministry of Health</td>
<td>VIETNAM, INDONESIA, CAMBODIA</td>
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<tr>
<td></td>
<td>Food and Drug Department</td>
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<tr>
<td></td>
<td>Ministry of Agriculture</td>
<td>VIETNAM, INDONESIA</td>
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<td></td>
<td>Ministry of Education</td>
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<tr>
<td></td>
<td>Ministry of Trade</td>
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<td>Ministry of Science and Technology</td>
<td>VIETNAM, INDONESIA</td>
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<td></td>
<td>Social Political Association</td>
<td>VIETNAM, INDONESIA</td>
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<table>
<thead>
<tr>
<th>No</th>
<th>Monitoring and evaluation</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Development of monitoring and evaluation instrument and mechanism framework;</td>
<td>INDONESIA</td>
</tr>
<tr>
<td></td>
<td>Technical supervision</td>
<td>INDONESIA</td>
</tr>
</tbody>
</table>
Sri Lanka

1. To map the informal food sector landscape
   Pilot – Colombo municipal council

2. Action point – to address lunch packets
   - Standardize the lunch packet based on food based dietary guideline recommendations that is in place in Sri Lanka
   - 2-way discussion for cost and taste feasibility

**Variables to assess**

- **Mode of selling**
  - Street
  - Mobile
  - kiosks

- **Source**
  - Cooked at home
  - Point of sale
  - Small factories

- **Vendor Profile**
  - Consumer profile

- **Food safety**
  - Hygiene
  - Nutrition
  - F &V
  - Source of fat
  - Whole meal- lunch packets
**Stakeholders**

- Ministry of Health
  - Nutrition Division
  - Food Safety Directorate
- Public Health Department of Colombo Municipal Council
- Faculty of Medicine, University of Colombo
- Canteen Association
- Food vendors association
- CBO

**Monitoring and evaluation**

Assess whether the standardized lunch packed complies with recommendation
Customer and vendor acceptance
Changes to food preparation methods and labelling of street vended foods.

Visith Chavasit
Institute of Nutrition
Mahidol University, Thailand
<table>
<thead>
<tr>
<th>Nutrients received (per person per day)</th>
<th>Year</th>
<th>1960</th>
<th>1975</th>
<th>1986</th>
<th>1995</th>
<th>2003</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td></td>
<td>1821</td>
<td>1749</td>
<td>1766</td>
<td>1751</td>
<td>1436</td>
<td>1443</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td></td>
<td>359.0</td>
<td>310.6</td>
<td>293.7</td>
<td>276.9</td>
<td>222.9</td>
<td>197.9</td>
</tr>
<tr>
<td>Protein (g)</td>
<td></td>
<td>49.1</td>
<td>50.2</td>
<td>50.8</td>
<td>58.1</td>
<td>53.5</td>
<td>56.4</td>
</tr>
<tr>
<td>Fat (g)</td>
<td></td>
<td>18.0</td>
<td>25.5</td>
<td>42.6</td>
<td>45.6</td>
<td>38.1</td>
<td>45.2</td>
</tr>
<tr>
<td>% energy from Carbohydrate</td>
<td></td>
<td>78.9</td>
<td>71.0</td>
<td>66.7</td>
<td>64.3</td>
<td>62.1</td>
<td>54.9</td>
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<tr>
<td>% energy from Protein</td>
<td></td>
<td>10.8</td>
<td>11.5</td>
<td>11.5</td>
<td>13.2</td>
<td>14.9</td>
<td>15.6</td>
</tr>
<tr>
<td>% energy from Fat</td>
<td></td>
<td>8.9</td>
<td>13.1</td>
<td>21.8</td>
<td>22.2</td>
<td>23.9</td>
<td>28.2</td>
</tr>
<tr>
<td>Animal protein (g)</td>
<td></td>
<td>15.2</td>
<td>19.6</td>
<td>22.9</td>
<td>29.7</td>
<td>29.2</td>
<td>37.5</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td></td>
<td>278</td>
<td>359</td>
<td>301</td>
<td>344</td>
<td>220</td>
<td>313</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td></td>
<td>10.0</td>
<td>12.9</td>
<td>11.8</td>
<td>18.1</td>
<td>8.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Vitamin A (µg)</td>
<td></td>
<td>231.5</td>
<td>367.9</td>
<td>608.3</td>
<td>676.7</td>
<td>171.5</td>
<td>428.4</td>
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<tr>
<td>Thiamin (mg)</td>
<td></td>
<td>0.48</td>
<td>0.63</td>
<td>0.89</td>
<td>0.89</td>
<td>0.79</td>
<td>0.72</td>
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<tr>
<td>Riboflavin (mg)</td>
<td></td>
<td>0.40</td>
<td>0.52</td>
<td>0.73</td>
<td>1.1</td>
<td>0.79</td>
<td>0.93</td>
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<tr>
<td>Niacin (mg)</td>
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<td>15.0</td>
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<td>13.3</td>
<td>14.7</td>
<td>13.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Vitamin C (mg)</td>
<td></td>
<td>34.0</td>
<td>30.0</td>
<td>95.9</td>
<td>94.8</td>
<td>34.7</td>
<td>75.1</td>
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<tr>
<td>Sodium (mg)</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4030.7</td>
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<tr>
<td>Potassium (mg)</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1277.4</td>
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<tr>
<td>Cholesterol (mg)</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>262.6</td>
</tr>
<tr>
<td>Dietary fiber (g)</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8.77</td>
</tr>
</tbody>
</table>

Modified from: Department of Health, 1995 and 2003; Aekplakorn et al., 2011

Reduce consumption of complex carbohydrates but increase consumption of sugar.

CHO: Pro: fat
55:16:28
2X of the limit for healthy consumption.
Prevalence of NCDs in Thailand

Source: Bureau of policy and strategy (2011)
Death from non-communicable diseases in different countries of the ASEAN (2008).

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Pop (x1000)</th>
<th>NCD death (x1000)</th>
<th>% death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei Darussalam</td>
<td>415</td>
<td>1</td>
<td>0.240964</td>
</tr>
<tr>
<td>Cambodia</td>
<td>15269</td>
<td>56.5</td>
<td>0.370031</td>
</tr>
<tr>
<td>Indonesia</td>
<td>234181</td>
<td>1064</td>
<td>0.454349</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>6230</td>
<td>23.8</td>
<td>0.382022</td>
</tr>
<tr>
<td>Malaysia</td>
<td>28909</td>
<td>89.5</td>
<td>0.309592</td>
</tr>
<tr>
<td>Myanmar</td>
<td>60163</td>
<td>242.4</td>
<td>0.402905</td>
</tr>
<tr>
<td>Philippines</td>
<td>94013</td>
<td>309.6</td>
<td>0.329316</td>
</tr>
<tr>
<td>Singapore</td>
<td>5077</td>
<td>17.9</td>
<td>0.352570</td>
</tr>
<tr>
<td>Thailand</td>
<td>67312</td>
<td>418.4</td>
<td>0.621583</td>
</tr>
<tr>
<td>Vietnam</td>
<td>86930</td>
<td>430</td>
<td>0.494651</td>
</tr>
<tr>
<td>ASEAN</td>
<td>598498</td>
<td>2653.2</td>
<td>0.443310</td>
</tr>
<tr>
<td>ASEAN6</td>
<td>429907</td>
<td>1900.5</td>
<td>0.442072</td>
</tr>
<tr>
<td>CLMV</td>
<td>168592</td>
<td>752.7</td>
<td>0.446462</td>
</tr>
</tbody>
</table>

Modified from: WHO (2011)
Good Manufacturing Practices: International Standards

Less than 20% Of Thai’s diets
Street foods contribute at least 40% of energy intake for Thais
Clean Food Good Taste Program
Local franchised street food vendor
Local food court

Food court in Department Store
Nutritive values of street foods

- Macronutrient profiles:
  carbohydrates : protein : fat
- Problem nutrients:
  Sodium and Saturated fatty acids
- No problem on trans fatty acid
## Nutritive values of traditional street foods

<table>
<thead>
<tr>
<th>Serving size (g)</th>
<th>Energy (kcal)</th>
<th>Energy density (kcal/g)</th>
<th>CHO (g)</th>
<th>Protein (g)</th>
<th>Fat (g)</th>
<th>Sodium (mg)</th>
<th>Distribution of energy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CHO</td>
</tr>
<tr>
<td>Rice topped with coconut milk based curry e.g. Rice with green curry, rice with mackerel in dried red curry, and rice with matsaman curry</td>
<td>297 (252-353)</td>
<td>365 (307-487)</td>
<td>1.23</td>
<td>52 (45-66)</td>
<td>14 (12-16)</td>
<td>11 (8-18)</td>
<td>1286 (1042-1547)</td>
</tr>
<tr>
<td>Rice topped with curry without coconut milk e.g. Rice with sour curry, rice with tai pla curry, and rice with yellow curry</td>
<td>330 (295-371)</td>
<td>332 (314-339)</td>
<td>0.98</td>
<td>66 (64-69)</td>
<td>11 (10-12)</td>
<td>2 (1-2)</td>
<td>1149 (971-1487)</td>
</tr>
<tr>
<td>Rice topped with stir-fried vegetables and/or meats e.g. Rice with stir-fried chicken and basil leaves, rice stir-fried cat fish and spicy mixed herbs, and rice stir-fried Chinese kale and crispy pork</td>
<td>298 (228-395)</td>
<td>466 (402-546)</td>
<td>1.56</td>
<td>62 (50-67)</td>
<td>19 (14-27)</td>
<td>16 (11-23)</td>
<td>1273 (608-1880)</td>
</tr>
<tr>
<td>Rice topped with Chinese style dishes e.g. Rice cooked with curry powder and chicken, rice cooked in chicken broth, topped with steamed chicken, and rice topped with roasted pork and gravy</td>
<td>304 (248-352)</td>
<td>541 (432-619)</td>
<td>1.78</td>
<td>69 (59-81)</td>
<td>21 (13-28)</td>
<td>20 (11-24)</td>
<td>1250 (906-1430)</td>
</tr>
<tr>
<td>Kow-taew: with soup e.g. Rice noodles with meat ball and soup, rice noodles with steamed chicken and soup</td>
<td>552 (485-572)</td>
<td>364 (244-463)</td>
<td>1.95</td>
<td>49 (43-54)</td>
<td>22 (17-27)</td>
<td>25 (21-28)</td>
<td>2141 (1786-2649)</td>
</tr>
<tr>
<td>Kow-taew: without soup e.g. Egg noodles with pork or rice noodle with pork</td>
<td>255 (244-265)</td>
<td>498 (463-533)</td>
<td>1.13</td>
<td>56 (51-61)</td>
<td>21.8</td>
<td>15 (14-17)</td>
<td>1902 (1753-2051)</td>
</tr>
<tr>
<td>Kow-Tiew: fried and topped with sauces e.g. Fried rice noodle with pork and Chinese kale in gravy</td>
<td>425 (399-450)</td>
<td>482 (457-506)</td>
<td>1.13</td>
<td>56 (51-61)</td>
<td>21.8</td>
<td>15 (14-17)</td>
<td>1902 (1753-2051)</td>
</tr>
<tr>
<td>Kow-Tiew: Stir-fried e.g. Stir-fried noodles with prawn or stir-fried noodles with chicken and Chinese kale</td>
<td>284 (250-320)</td>
<td>538 (486-633)</td>
<td>1.89</td>
<td>59 (56-82)</td>
<td>23 (20-27)</td>
<td>18 (16-21)</td>
<td>1204 (961-1592)</td>
</tr>
</tbody>
</table>

Source: Fast Foods in Transition and Nutrition Problems in Thailand
## Na contents in restaurant-prepared noodles before & after being seasoned

<table>
<thead>
<tr>
<th>Sodium content in noodles prepared by seller before being seasoned by consumer</th>
<th>Fish ball</th>
<th>Tom Yum</th>
<th>Blood-curd soup</th>
<th>Duck</th>
<th>Pink sauce</th>
<th>Roasted pork</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1,592</td>
<td>1,547</td>
<td>1,393</td>
<td>2,150</td>
<td>2,071</td>
<td>1,522</td>
<td>1,682</td>
</tr>
<tr>
<td>Range</td>
<td>976-1,914</td>
<td>1,309-3,123</td>
<td>652-1,777</td>
<td>1,607–3,296</td>
<td>1,364-2,909</td>
<td>1,284-1,878</td>
<td>652–3,296</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium content in noodles after being seasoned by consumer</th>
<th>Fish ball</th>
<th>Tom Yum</th>
<th>Blood-curd soup</th>
<th>Duck</th>
<th>Pink sauce</th>
<th>Roasted pork</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1,670</td>
<td>2,001</td>
<td>1,430</td>
<td>2,006</td>
<td>2,049</td>
<td>1,586</td>
<td>1,763</td>
</tr>
<tr>
<td>Range</td>
<td>865 – 2,439</td>
<td>1,305 – 3,370</td>
<td>761 – 2,096</td>
<td>1,482 – 4,415</td>
<td>1,308 – 3,128</td>
<td>1,098 – 1,995</td>
<td>761 – 4,415</td>
</tr>
</tbody>
</table>

| % difference of sodium content before and after being seasoned by consumers | 5 | 29 | 3 | -7 | -1 | 4 | 5 |

Studied by Thai President Foods PLC, 2010
**Trans fatty acid problem**

<table>
<thead>
<tr>
<th>Fats/Oils</th>
<th>gram per 100 gram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm oil</td>
<td>0.38</td>
</tr>
<tr>
<td>Rice bran oil</td>
<td>0.63</td>
</tr>
<tr>
<td>Soybean oil</td>
<td>0.81</td>
</tr>
<tr>
<td>Margarine</td>
<td>0.08-0.38</td>
</tr>
<tr>
<td>Shortening</td>
<td>0.02-0.46</td>
</tr>
</tbody>
</table>

**NO problem**
From nutrient profiles to a healthy diet

Data of Nutrient Analyses of a Food

Nutrient Profiles of a Food

Nutrient Profiling Process

Nutrient Profiling Model

Reformulation

Healthier Food

+ Other Healthier Foods

A HEALTHY DIET
## Population nutrient intake goals

<table>
<thead>
<tr>
<th>Dietary factor</th>
<th>Goal (% of total energy, unless otherwise stated)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total fat</strong></td>
<td>15–30%</td>
</tr>
<tr>
<td>Saturated fatty acids</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Polyunsaturated fatty acids (PUFAs)</td>
<td>6–10%</td>
</tr>
<tr>
<td>n-6 Polyunsaturated fatty acids (PUFAs)</td>
<td>5–8%</td>
</tr>
<tr>
<td>n-3 Polyunsaturated fatty acids (PUFAs)</td>
<td>1–2%</td>
</tr>
<tr>
<td>Trans fatty acids</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Monounsaturated fatty acids (MUFAs)</td>
<td>By difference&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Total carbohydrate</strong></td>
<td>55–75%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Free sugars&lt;sup&gt;c&lt;/sup&gt;</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td>10–15%&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Cholesterol</strong></td>
<td>&lt;300 mg per day</td>
</tr>
<tr>
<td>Sodium chloride (sodium)&lt;sup&gt;e&lt;/sup&gt;</td>
<td>&lt;5 g per day (&lt;2 g per day)</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>≥400 g per day</td>
</tr>
<tr>
<td><strong>Total dietary fibre</strong></td>
<td>From foods&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
<tr>
<td>Non-starch polysaccharides (NSP)</td>
<td>From foods&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
Simplified Logo
Source: Popkin (2013)
## Guideline for scoring system

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Value per 2000 kcal</th>
<th>Value per 100 kcal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>50-100 g</td>
<td>2.5-5.0 g</td>
</tr>
<tr>
<td>Total fat</td>
<td>32.5-65.0 g</td>
<td>1.65-3.25 g</td>
</tr>
<tr>
<td>Saturated fat</td>
<td>20 g</td>
<td>1 g</td>
</tr>
<tr>
<td>Fiber</td>
<td>25 g</td>
<td>1.25 g</td>
</tr>
<tr>
<td>Sugar</td>
<td>25 g</td>
<td>1.25 g</td>
</tr>
<tr>
<td>Sodium</td>
<td>500-2000 mg</td>
<td>150, 120, 100 mg</td>
</tr>
<tr>
<td>Calcium</td>
<td>750-3000 mg</td>
<td>40-150 mg</td>
</tr>
<tr>
<td>Iron</td>
<td>15-45 mg</td>
<td>0.75-2.25 mg</td>
</tr>
</tbody>
</table>
Scoring system for values per 100 kcal

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Unit</th>
<th>Score</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>Gram</td>
<td></td>
<td>&lt;0.50, &gt;5.00</td>
<td>0.50-1.00</td>
<td>1.01-1.50</td>
<td>1.51-2.00</td>
<td>2.01-2.50</td>
<td>2.51-5.00</td>
</tr>
<tr>
<td>Total fat</td>
<td>Gram</td>
<td></td>
<td>&lt;1.65, &gt;3.25</td>
<td>2.94-3.25</td>
<td>2.62-2.93</td>
<td>2.30-2.61</td>
<td>1.98-2.29</td>
<td>1.65-1.97</td>
</tr>
<tr>
<td>Saturated fat</td>
<td>Gram</td>
<td></td>
<td>&gt;1.00</td>
<td>0.81-1.00</td>
<td>0.61-0.80</td>
<td>0.41-0.60</td>
<td>0.21-0.40</td>
<td>0-0.20</td>
</tr>
<tr>
<td>Fiber</td>
<td>Gram</td>
<td></td>
<td>&lt;0.25</td>
<td>0.25-0.50</td>
<td>0.51-0.75</td>
<td>0.76-1.00</td>
<td>1.01-1.25</td>
<td>&gt;1.25</td>
</tr>
<tr>
<td>Total sugar</td>
<td>Gram</td>
<td></td>
<td>&gt;1.25</td>
<td>1.01-1.25</td>
<td>0.76-1.00</td>
<td>0.51-0.75</td>
<td>0.25-0.50</td>
<td>&lt;0.25</td>
</tr>
<tr>
<td>Calcium</td>
<td>Milligram</td>
<td></td>
<td>&lt;8, &gt;150</td>
<td>8-16</td>
<td>17-24</td>
<td>25-32</td>
<td>33-40</td>
<td>41-150</td>
</tr>
<tr>
<td>Iron</td>
<td>Milligram</td>
<td></td>
<td>&lt;0.14, &gt;2.25</td>
<td>0.14-0.28</td>
<td>0.29-0.42</td>
<td>0.43-0.56</td>
<td>0.57-0.70</td>
<td>0.71-2.25</td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First period</td>
<td>Milligram</td>
<td></td>
<td>&lt;25, &gt;150</td>
<td>125-150</td>
<td>100-124</td>
<td>75-99</td>
<td>50-74</td>
<td>25-49</td>
</tr>
<tr>
<td>Second period</td>
<td>Milligram</td>
<td></td>
<td>&lt;25, &gt;120</td>
<td>101-120</td>
<td>82-100</td>
<td>63-81</td>
<td>44-62</td>
<td>25-43</td>
</tr>
<tr>
<td>Third period</td>
<td>Milligram</td>
<td></td>
<td>&lt;25, &gt;100</td>
<td>85-100</td>
<td>70-84</td>
<td>55-69</td>
<td>40-54</td>
<td>25-39</td>
</tr>
</tbody>
</table>

Higher score ➔ healthier
Healthier options available here

We use healthier oil

Lower in calories

Higher in whole-grains

Lower in calories and higher in whole-grains

We serve whole-grains and lower calorie meals
Look out for these identifiers at hawker centres for healthier options.

- Ask for lower-sugar options
- We serve wholegrain options
- Eat 2 + 2 servings of fruits and vegetables daily
- We use healthier oil
- Lower in calories
# Sodium content in condiment

<table>
<thead>
<tr>
<th>Condiment</th>
<th>Quantity*</th>
<th>Sodium (mg)</th>
<th>% of requirement (1500 mg/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Salt</td>
<td>1 tsp</td>
<td>-</td>
<td>2000</td>
</tr>
<tr>
<td>MSG</td>
<td>1 tsp</td>
<td>-</td>
<td>610</td>
</tr>
<tr>
<td>Seasoning powder</td>
<td>1 tsp</td>
<td>-</td>
<td>815</td>
</tr>
<tr>
<td>Bouillon cube</td>
<td>1 cube</td>
<td>-</td>
<td>1760</td>
</tr>
<tr>
<td>Fish sauce</td>
<td>1 tbsp</td>
<td>1070-1620</td>
<td>1350</td>
</tr>
<tr>
<td>Soy sauce</td>
<td>1 tbsp</td>
<td>880-1570</td>
<td>1190</td>
</tr>
<tr>
<td>Seasoning sauce</td>
<td>1 tbsp</td>
<td>1110-1340</td>
<td>1187</td>
</tr>
<tr>
<td>Oyster sauce</td>
<td>1 tbsp</td>
<td>450-610</td>
<td>518</td>
</tr>
<tr>
<td>Sweet chili sauce</td>
<td>1 tbsp</td>
<td>360-410</td>
<td>385</td>
</tr>
<tr>
<td>Chili sauce</td>
<td>1 tbsp</td>
<td>60-350</td>
<td>231</td>
</tr>
<tr>
<td>Tomato sauce</td>
<td>1 tbsp</td>
<td>90-190</td>
<td>149</td>
</tr>
</tbody>
</table>

*condiment 1 tsp = 5 g; Bouillon cube 1 cube = 10 g  

Source: Kriengsinyos, 2013
Salt and Sodium

- Salt (NaCl) comprises 40% sodium and 60% chloride

  1 g of salt contains about 393 mg of sodium

- Products available in the market may have replaced NaCl partially with other ingredients, such as potassium chloride (KCl). Their sodium content may be 25% to 40% lower than the regular
### Selected Examples of Proposed Salt Substitutes

<table>
<thead>
<tr>
<th>Substitute</th>
<th>Applications</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potassium chloride</strong> (KCl)</td>
<td>Many foods, including cheeses, breads, and meats; may be mixed with NaCl in up to a 50:50 ratio</td>
<td>Bitter to many people; many patents to reduce KCl bitterness exist; because potassium intake of the U.S. population is low, increased intake of potassium may benefit some but could harm certain subpopulations (e.g., those with certain medical conditions or taking certain medications)</td>
</tr>
<tr>
<td><strong>Lithium chloride</strong> (LiCl)</td>
<td>None: toxic although almost perfectly salty</td>
<td></td>
</tr>
</tbody>
</table>

---


### Sodium and Potassium consumption of Thais

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Sodium (mg/d)</th>
<th>Potassium (mg/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>male</td>
<td>female</td>
</tr>
<tr>
<td>6-8</td>
<td>2683</td>
<td>2524</td>
</tr>
<tr>
<td>9-12</td>
<td>2615</td>
<td>2720</td>
</tr>
<tr>
<td>13-15</td>
<td>2777</td>
<td>2746</td>
</tr>
<tr>
<td>16-18</td>
<td>3387</td>
<td>2891</td>
</tr>
<tr>
<td>19-30</td>
<td>3634</td>
<td>3338</td>
</tr>
<tr>
<td>31-50</td>
<td>3470</td>
<td>3470</td>
</tr>
<tr>
<td>51-59</td>
<td>2962</td>
<td>3252</td>
</tr>
<tr>
<td>60-69</td>
<td>3367</td>
<td>3238</td>
</tr>
<tr>
<td>70-79</td>
<td>2832</td>
<td>2963</td>
</tr>
<tr>
<td>≥ 80</td>
<td>3249</td>
<td>2851</td>
</tr>
</tbody>
</table>

Source: Aekplakorn 2011

**Recommendation:**
- Sodium 2,000 mg/d
- Potassium 3,500 mg/d
Effect of diets prepared by using sodium-reduced condiment on lowering blood pressure in hypertensive people
Study population

- 18 hypertensive subjects:
  - 15 subj: recently been diagnosed stage 1 hypertension
  - 2 subj: on antihypertensive medications
  - 1 subj: hypertension with diabetes mellitus
Study design: randomized, crossover

Baseline period: อาหารปกติของอาสาสมัคร
Run-in period: อาหารที่จัดให้ใช้เครื่องปรุงรสปกติ
Control diet: อาหารที่จัดให้ใช้เครื่องปรุงรสปกติ
Low sodium diet: อาหารที่จัดให้ใช้เครื่องปรุงรสโซเดียมต่า
Effect of diets prepared by using sodium-reduced condiment on lowering blood pressure in hypertensive persons

Study design: randomized, crossover

Baseline period: Normal diet
Run-in period: normal sodium condiment
Control diet: normal sodium condiment
Low sodium diet: low-sodium condiment
Mean change of systolic blood pressure

- Systolic blood pressure (mmHg)
- Baseline, run-in, wk1, wk2, wk3, wk4
- Low and control groups
Mean change of diastolic blood pressure
Source of sodium and potassium intake.

<table>
<thead>
<tr>
<th>Sodium content</th>
<th>Potassium content</th>
</tr>
</thead>
<tbody>
<tr>
<td>normal</td>
<td>from condiments</td>
</tr>
<tr>
<td>3072</td>
<td>1935</td>
</tr>
<tr>
<td>low</td>
<td>from fresh food</td>
</tr>
<tr>
<td>1677</td>
<td>1935</td>
</tr>
</tbody>
</table>

The chart shows the amount of sodium and potassium intake from condiments and fresh food, with normal and low levels indicated.
Fish sauce with an initial salt content of around 25% (w/w) had undergone electrodialysis to reduce the salt content to various predetermined values.

The optimum conditions should be the use of an input voltage of 6 V and the maintenance of the salt content of the treated fish sauce in the range of 6% to 14% (w/w).
Different sensory thresholds have been defined;

- **Absolute threshold**: the lowest level at which a stimulus can be detected.

- **Recognition threshold**: the level at which a stimulus can not only be detected but also recognized.

- **Differential threshold**: the level at which an increase in a detected stimulus can be perceived.

- **Terminal threshold**: the level beyond which a stimulus is no longer detected.
Scale diagram of taste perception as concentration increases.

Source: Liem et al. 2011
Normal and Sodium-reduced (SR) salts $\rightarrow$ Fermented Fishes: FF and SRFF

Producer 1
Fermented fishes $\rightarrow$ FF
Producer 2
Fermented fishes $\rightarrow$ FF
Producer 3
Fermented fishes $\rightarrow$ FF

1 Selected Fermented Fish: FF and SRFF $\rightarrow$ Seasoning Sauces for papaya salad: FFS and SRFFS

Sauce Producer 1
Seasoning sauces 1 $\rightarrow$ FFS
Sauce Producer 2
Seasoning sauces 2 $\rightarrow$ FFS
Sauce Producer 3
Seasoning sauces 3 $\rightarrow$ FFS

6 Papaya Salad Seasoning Sauces: 3 FFS and 3 SRFFS $\rightarrow$ Papaya Salads: FFP and SRFFP

Street food vendor 1
Papaya salads $\rightarrow$ 3 FFP
Street food vendor 2
Papaya salads $\rightarrow$ 3 FFP
Street food vendor 3
Papaya salads $\rightarrow$ 3 FFP

Note: A seasoning sauce from each sauce producer was used for 3 preparations in each vendor.
Na in papaya salad (1 serving, 160 g):
• 1,182 mg (59% of RDI) → 787 mg (39% of RDI)

K in papaya salad (1 serving, 160 g):
• 270 mg (8% of RDI) → 782 mg (22% of RDI)

Na/K ratio in papaya salad
7.24 → 1.71
Conclusion

• Improvement of the nutrient profile of foods in restaurant and street food vendor is complicated.
• In this case, roles of Front of Pack labelling is limited but somehow is still beneficial.
• By naturally merging the healthier food products into these food services, a healthier diet can be obtained.
THANK YOU
HEALTHIER LUNCH PACKET PROGRAMME NEXT STEPS

Vision: healthy food for healthy city
Theme: healthy lunch pack for city of Colombo
Goal: to design and enforce the informal sector to market a healthy lunch pack within the city of Colombo.

Generating evidence/situational assessment:

Specific objectives
1. To conduct a market survey to identify the spectrum of the whole meal lunch packets sold within the city
2. To ascertain if the packs promote NCD
3. To design a healthier lunch pack (if necessary) in terms of its safety hygiene and nutritional value
4. To design a mechanism for its implantation monitoring evaluation and enforcement.
Urban planning

Explore ways to improve locations (zoning) and
  • Provide water and sanitation
  • Sustainable waste disposal and locations for segregated collection of waste
Use data from situational analysis to
  • map where food is prepared
  • explore improving transport time
  • explore how to improve raw material (link with agriculture)
Activities
1. To formulate a working group comprising of ministry of health (director nutrition, DD food safety directorate, Academia, faculty of medicine)
2. Comprehensive sampling and analysis of lunch packs
3. To explore the possibility of adopting the “healthy plate” designed and promoted by the Ministry of Health for improvement of the street vended lunch packet
4. To establish simple testing mechanism
5. To advocate for the city policy makers
6. To Communication for the public (in media)
7. To implement at pilot level
8. Monitoring and evaluation

Required possible technical assistance: WHO /FAO
Documentation and dissemination of information regarding the program and effectiveness
Country Presentations-2
### Action Points - Bangladesh

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Current Progress</th>
<th>Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Planning</td>
<td>1. Under Ministry of Local Govt, Mo Food and Industry: mobile court is working</td>
<td>1. Dedicated section for hawkers for non-mobility</td>
</tr>
<tr>
<td></td>
<td>2. Zoning is available and zonal food inspectors are placed</td>
<td>2. Check the feasibility of scaling up the concept of ‘Orange Cart’</td>
</tr>
<tr>
<td>Communication/ Advocacy</td>
<td>1. No progress in the informal sector</td>
<td>1.Beginning advocacy with the policy makers and creation of correct and targeted message through right channel.</td>
</tr>
<tr>
<td></td>
<td>2. BFSA has started working targeting the informal sector in collaboration with the local govn.</td>
<td>2. Continuing communication with the street vendors on maintaining hygiene and safe preparation</td>
</tr>
<tr>
<td>Generating evidence/ Situational assessment</td>
<td>Evidence on food safety is there but not nutrition</td>
<td>1. Make use of evidence and begin data collection on nutritional value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Need to gather evidence on local cuisine. So as to recognize the key problem and address it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Data on informal food vendors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Consumer behaviour pattern analysis</td>
</tr>
<tr>
<td>Technical assistance needed</td>
<td></td>
<td>Yes – WHO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAO – revisit the curriculum for risk based inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WFP – fill the nutrient gap analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regional experts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Study tour to India (FSSAI)</td>
</tr>
<tr>
<td>Parameters</td>
<td>Current Progress</td>
<td>Next Steps</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Urban Planning</td>
<td>1. Cluster Approach (50 or more) – through the street food hub project</td>
<td>1. Scale up the projects and include nutrition parameters</td>
</tr>
<tr>
<td></td>
<td>2. Clean Fruits and Vegetable market – just launched</td>
<td>2. Mobile vendors need to be addressed in convergence with the local police</td>
</tr>
<tr>
<td></td>
<td>3. Organic market through the Jaivik Bharat initiative</td>
<td>3. Local models may be looked at for best practices</td>
</tr>
<tr>
<td>Communication/Advocacy</td>
<td>1. All the content is available vetted by experts</td>
<td>1. Convergence as a major issue</td>
</tr>
<tr>
<td></td>
<td>2. Too many messages available</td>
<td>2. Multiple agencies working together</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Wider dissemination – at communication strategy</td>
</tr>
<tr>
<td>Generating evidence/Situational assessment</td>
<td>Evidence is available</td>
<td>1. Make use of evidence and begin scale up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Get district level – detailed data from local</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Linking of data is essential – make a big database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Monitoring and evaluation plan should begin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Already have experts and support</td>
</tr>
</tbody>
</table>

**Action Points - India**
MALAYSIA

1) Meeting with related stakeholders :
   • Ministry of Health (MOH)
   • Ministry of Agriculture (MOA)
   • Ministry of Domestic Trade and Consumerism
   • Ministry of Communication and Multimedia (MCMC)
   • Local council (Putrajaya)
   • FAMA (Federal Agricultural Marketing Authority)
   • Hawker association

2) Gathering data and background of the targeted area
   • Double burden of malnutrition (based on available data (NHMS))
   • Number of stalls in targeted area

3) Choose of area for pilot :
   A) Putrajaya Food Court
   B) Farmers market

4) Target number of food stalls selling meals

5) Discussion with all stakeholders and vendors

6) Consultation and implementation

7) Monitoring – by Phase

• TECHNICAL ASSISTANCE
  • Study tour and meeting organized by WHO in India and involve all the related stakeholders
<table>
<thead>
<tr>
<th><strong>What</strong></th>
<th><strong>Reduce intake salt</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Why</strong></td>
<td>Cardiovascular, hypertension, cancer</td>
</tr>
<tr>
<td><strong>Where</strong></td>
<td>In hospital canteen</td>
</tr>
<tr>
<td><strong>who</strong></td>
<td>caterer</td>
</tr>
</tbody>
</table>
| **how**  | • Education (message, poster, handout)  
|          | • Action point (no table salt, ginger, garlic, etc)  
|          | • Identifying some common dish that are lower in salt (huushuur) |
| **monitoring** | order |
PHILIPPINES

Josefina H. Serneo
Nutritionist Dietitian IV
<table>
<thead>
<tr>
<th>What to do?</th>
<th>Reduce the sugar content in beverages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why?</td>
<td>Decrease Sugar Intake</td>
</tr>
<tr>
<td>Who?</td>
<td>Food vendor</td>
</tr>
<tr>
<td>Where?</td>
<td>Malabon City – with a supportive Mayor thru the wife who is a Chef.</td>
</tr>
<tr>
<td>How?</td>
<td>Using the WHO Guidelines</td>
</tr>
<tr>
<td></td>
<td>Encourage the provision of reduced sugar version</td>
</tr>
</tbody>
</table>

**Monitoring**

- Vendors - Educate and Advocate the preparation of beverages (variety of choice for sugar content 25%, 50% 75% )
  - Provide a logo to the food vendors.

- Customers – create a demand
  - Orientation be given to the population the good point of have less sugar
  - To introduce the promotion of logo

- Using sugar meter for monitoring of the content of sugar in a random visit (Refractometer as advised by Ms. Mandy Kwan of Hongkong)
- Ask the help of Dr. Indira on her experience using the extensive monitoring tool.
Food Sanitation Management in Food Establishments
ORGANIZATION CHART OF HEALTH DEPARTMENT

Health Department

Secretarial Division

Public Health System Development Division

Dental Health Division

Environmental Sanitation Division

Veterinary Public Health Division

Public Health Nursing Division

Disease Control Division

Drug Abuse Prevention and Treatment Division

Pharmaceutical Division

Health Promotion Division

Aids Control Division

Health Laboratory Division

Food Sanitation Division

Public Health Center

Sub-Public Health Center
Organization Chart of the District Office

Director

Assistant Directors

General Affairs Section

Registration Section

Public Works Section

Environment and Sanitation Section

Revenue Section

Education Section

Law Enforcement Section

Community Development and Social Welfare Section

Finance Section

Public Cleansing and Public Park Section
20-YEAR DEVELOPMENT PLAN FOR BANGKOK METROPOLIS (2013-2032)

Together We Build The Vibrant of Asia
THE SIX-DIMENSION VISION

1. **Bangkok as a safe city**
2. Bangkok as a green and convenient city
3. Bangkok as a city for all
4. Bangkok as a compact city
5. Bangkok as a democratic city
6. Bangkok as an economic and learning centre
Strategy 1: Bangkok as a Safe City

Supporting strategy: Free from urban illnesses with availability of safe food
### Food Establishments in Bangkok

**September 28, 2018**

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurants</td>
<td>13,249</td>
<td>70</td>
</tr>
<tr>
<td>Fresh-food Markets</td>
<td>389</td>
<td>2</td>
</tr>
<tr>
<td>Supermarkets</td>
<td>253</td>
<td>1</td>
</tr>
<tr>
<td>Convenience Stores</td>
<td>3,656</td>
<td>19</td>
</tr>
<tr>
<td>Street Food Stalls</td>
<td>1,490</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19,037</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Numbers and percentages may not add up due to rounding.*
1. The hygienic conditions of food establishments

2. Food quality

3. Food handlers/vendors

4. The certification of food safety standards of Bangkok
Existing legislation and standard

- Public Health Act, B.E. 2535(1992)
- Public cleansing and orderliness Act, B.E. 2535(1992)
- Food Act, B.E. 2522(1979)
• Bangkok’s ordinance on place where meals are sold and place where foodstuff is stored, B.E.2545 (2002)

• Bangkok’s ordinance on the distribution of merchandise in public places or ways, B.E.2545(2002)

• Bangkok’s ordinance on fresh-food market, B.E.2546 (2003)
The control of local government concerning fresh-food market

Person establishing a fresh-food market

Private

Obtain a license

Local official

Ministry, bureau, department, local government, or state organization

Do not apply for license but must comply with other provisions of the Act

Alteration, expansion or reduction of fresh-food market

Must comply with local provisions (The BMA’s Ordinance on Market:2003)

Conditions to be notified in written forms

Hygienic conditions
Fresh-food Market
The control of local government concerning restaurant/supermarket

- Person who set up a restaurant or supermarket
  - If an area >200 m² and is not the sale of merchandise in fresh-food market
    - Must apply for a license
    - Local official
    - Issue local provisions
    - Hygienic conditions
  - If an area <200 m² and is not the sale of merchandise in fresh-food market
    - Must notify
    - Must comply with local provisions
Food Sanitation Management

- **food quality**
  
  Randomly food sampling of **hazardous chemical**
  Randomly ready-to-eat foods
  : sampling for pathogen analysis in laboratory
1. **Rapid Survey**

ตรวจวิเคราะห์คุณภาพอาหารโดยชุดทดสอบเบื้องต้น
Education

ประชาสัมพันธ์ให้ความรู้
ให้คำปรึกษาด้านความปลอดภัยในอาหาร

3 Consulting
รณรงค์ให้ผู้ประกอบการตระหนักถึงโทษของสารเคมี และเชื้อโรคที่อาจปนเปื้อนในอาหารที่จำหน่าย

4 Awareness
Food Sanitation Management

- Food handlers/vendors

A training course on food sanitation
A yearly health check
Food Sanitation Management

- The certification of food safety standards of Bangkok.
  - The hygienic conditions
  - Food quality
  - Food handlers/vendors
Food Safety Certification from BMA

- License
- Training on Food sanitation
- Good hygiene condition
- Quality of Food
STREET VENDOR IN BANGKOK.
License for vendors (Renew the License every year)

Maintain general cleanliness and orderliness of vending stalls and pavement.

Control of hygiene and sanitation of street food vending stalls.

Food inspection by using screening test on chemical and biological contamination and food analysis for food borne pathogens in laboratory.

Law enforcement

- License
- Street food vendor ID card

- Law Enforcement Section, District office

- Direct control by District office
- Sampling audit by Health Department

Food Safety Certification from BMA.

- License
- Good hygiene condition
- Quality of Food
- Training on Food sanitation
Street food Vendor Management.

License of Street vending

Street vending ID card

Certificate of Food sanitation training

The food safety certificates issued by BMA.
STAKEHOLDERS (ROLES & RESPONSIBILITIES FOR MONITORING)

- Consumers
- Foundation of Consumers (Consumer Organization)
- Food safety Volunteer
- BMA officers
  - Health Department
  - City law enforcement Department
  - District Office
- Gov. officers
  - MOPH
  - Police
- Street food vendors networks
- Mass communication
- TV
- Press
- Broadcast
- etc.
Street food Vendor Management.
Street food Vendor Management.
Street food in Bangkok
Street food in Chinatown (Yaowarat Road)
Street food in Chinatown (Yaowarat Road)
Thank you