Food and Agriculture Organization
of the United Nations

Technical summary report:
Round table Meeting on Food Safety Indicators (FSI)

18 April 2019
Friendship Hotel, Beijing, China

Technical summary report:

Round table Meeting on Food Safety Indicators (FSI)

18 April 2019
Friendship Hotel, Beijing, China

Regional Office for Asia and the Pacific
Food and Agriculture Organization of the United Nations
Bangkok, 2019

Required citation:
FAO. 2019. *Technical summary report - Round table Meeting on Food Safety Indicators (FSI).* Bangkok, 22 pp. License: CC BY-NC-SA 3.0 IGO.

Abstract

A round table session on food safety indicators (FSI) was held on 18 April 2019 at Friendship Hotel, Beijing during the 10th International Forum on Food Safety and Health (IFoFSH) with the following objectives:

1) Obtain information about the concept of FSIs;

2) Obtain the results of the regional consultation held in December 2017;

3) Identify FAO pilot project countries and their potential priority areas for developing FSIs and

4) Provide feedback on the initiatives, including potential priority areas for China to have FSI.

It was attended by 17 specially invited representatives from food safety indicator pilot projects, international food safety experts, high-level officials from government agencies of China and Germany, Chinese institutes and universities and Chinese media representatives and about 40 walk-in participants. The concept of food safety was introduced to the participants which was followed by country examples of pilot projects on food safety indicators and presentation on food safety culture in Australia and measuring food safety in Belgium.

After listening to these presentations and the long question and answer session that followed, senior government officials and food safety experts from China have committed their support to develop China's own food safety indicator project that may be used as an example for other countries. The round table meeting was a success with great participation interest from Chinese and international participants and we could showcase FAO's regional initiatives on food safety.

Keywords:

Food safety indicators, national indicators, capacity development, prioritization, Australia, Bhutan, China, Cook Islands, Philippines, FAO pilot project

Contents

Acknowledgements

Food and Agriculture Organization of the United Nations (FAO) would like to express its appreciation to the many people who contributed to the FAO's national food safety indicator development initiative. The initiative is coordinated by Masami Takeuchi, Food Safety Officer of FAO with a help from Yoenten Phuentshok, Junior Professional Officer who took the notes of the meeting. The overall direction has been provided by Sridhar Dharmapuri, Senior Food Safety and Nutrition Officer of FAO Regional Office for Asia and the Pacific (FAORAP). FAO is grateful to the Chinese Institute of Food Science and Technology (CIFST), China National Center for Food Safety Risk Assessment (CFSA) for their support in organizing the round table session during the International Forum on Food Safety and Health 2019 held in Beijing, China. Technical contributions from the experts from Australia, China and the Philippines as well as many FAO colleagues, particularly from Vincent Martin (FAO China), Rong Fu (FAO China), Jose Luis Fernandez (FAO Philippines) and Rafael Umbrero (FAO Philippines) are gratefully appreciated.

Abbreviations and acronyms

BAFRA	Bhutan Agriculture and Food Regulatory Authority
CAC	Codex Alimentarius Commission
CFSA	China National Center for Food Safety Risk Assessment
CIFST	Chinese Institute of Food Science and Technology
FAO	Food and Agriculture Organization of the United Nations
FASFC	Belgian Federal Agency for the Safety of the Food Chain
FSANZ	Food Standards Australia New Zealand
FSI	Food Safety Indicators
IFoFSH	International Forum on Food Safety and Health
LOA	Letter of Agreement
MoAF	Ministry of Agriculture and Forests
PCVPH	Philippine College of Veterinary Public Health
RACER	Relevant, Accepted, credible, Easy to monitor and Robust in time
TWG	Technical Working Group

1. Introduction

1.1. Overview

A round table session on food safety Indicators (FSI) was held on 18 April 2019 at Friendship Hotel, Beijing during the IFoFSH. The objectives of having the round-table session for the participants to the International Forum were to: 1) Obtain information about the concept of FSIs; 2) Obtain the results of the regional consultation held in December 2017; 3) Identify FAO pilot project countries and their potential priority areas for developing FSIs and 4) Provide feedback on the initiatives, including potential priority areas for China to have FSI. The expected outputs of the session were: 1) Report of the round-table session and 2) Analysis of the feedback on the initiatives and potential priority areas for China to have FSI.

17 specially invited representatives and 40 participants to the IFoFSH attended the session. Specially invited attended included country representatives from Philippines and China where FAO has initiated pilot projects; a food safety expert from the Belgian Federal Agency for the Safety of the Food Chain (FASFC) and a food safety culture expert from Food Standards Australia New Zealand (FSANZ); government representatives from China including Deputy Director and administrative Director of the Department of Food Sampling and Inspection; Director of the Department of Quality and Safety Supervision of Agricultural Products; President and director for china Affairs of the German Federal Institute for Risk Assessment; representatives from Chinese food safety institutions like China National Center for Food Safety Risk Assessment (CFSA), Chinese Institute of Food Science and Technology (CIFST) and Children's Food Research Institute of Nanjing Xiaozhuang College; and representatives including professors and students from Chinese universities. Going by gender, majority (65percent) of the attendees were female. List of specially invited attendees is attached as Annex 1.

1.2. Background

As recommended by the Codex Alimentarius Commission (CAC), developing a set of regional food safety indicators (FSI) with the overall goal of strengthening national food control systems has been a key topic at various regional food safety meetings in Asia and the Pacific. Member states in the region have requested FAO to initiate dialogues on the topic and thus a regional consultation on FSI was held on 6-8 December 2017 in Singapore. A keynote presentation was

delivered by an expert from Belgium, where a competent food safety authority has developed a set of indicators called “food safety barometers” and participants learned from the initiatives on opportunities and challenges of developing and using food safety indicators. The consultation concluded with a regional pool of 40 common areas for food safety indicators and experts suggested to pilot the indicators at national level. China, together with Bhutan, Cook Islands, Republic of Korea and the Philippines have volunteered to take a lead in the FAO pilot project on food safety indicators.

Therefore, a round table session on FSI was organized by FAO during the IFoFSH where international experts from Belgium and Australia and pilot country representatives of Bhutan, China and Philippines shared and exchanged their experience and future plans to the session attendees. Presentations on FSIs in Belgium and food safety culture in Australia was also made during the round-table session.

2. Highlights of the training

2.1 Opening

The round-table session was co-chaired by Fan Yongxiang, Director of Food Safety Standard Division, CFSA and Masami Takeuchi, Food Safety Officer, FAO Regional Office for Asia and the Pacific. Dr Fan opened the session by welcoming the attendees and stated that this session is in essence a capacity-building event. He also mentioned China’s ongoing projects on food safety with FAO and CAC. He confirmed China’s willingness to test the 40 food safety indicators premeditated by FAO so that these indicators can be taken to other countries that have similar objectives for FSI as China.

2.2 Concept of food safety indicators in the Asia-Pacific region

Dr Masami Takeuchi, FAO Food Safety Officer, presented on concept of food safety indicators in the Asia-Pacific region where she highlighted the importance of measurement and mentioned that everything can be measured no matter how fuzzy they are. FSI in the Asia-Pacific region were inspired by other indicators like food security indicator of FAO and nutrition indicator of WHO. However measurement using FSI is complex and there are many questions that FSI need to address starting with why indicators for food safety are needed and at what levels are they needed. FSI in the region is requested by member countries to FAO and during a consultative meeting on FSI, 84

participants from 24 countries in the region divided in 9 groups came up with exactly the same 40 food safety indicators.

2.3 Measuring food safety at country level: the food safety barometer

Dr Wendie Claeys from the Belgian Federal Agency for the Safety of the Food Chain (FASFC) presented on the "food safety barometer," a tool that is based on food safety indicators, as a concrete example of developing and using national food safety indicators that participants can adapt to their own governmental environment and situations. She explained that food safety indicators (FSIs) are measuring tools that enable to monitor tendencies or to assess to what extent objectives are being met. They can be used at company as well as at country level, either as a communication tool or to measure the performance of management systems or of policy actions. Based on a set of measurable FSIs the Scientific Committee established at the FASFC developed the food safety barometer as an instrument to measure the food safety situation at country. FSIs were chosen mainly based on 5 criteria, the RACER or "relevant, accepted, credible, easy to monitor and robust in time" criteria. A set of 30 FSIs were selected, including FSIs related to (i) preventive measures taken for safeguarding food safety, (ii) compliance to action limits or criteria for chemical and microbial hazards, and (iii) food infections covering all categories of food safety hazards and the different segments of the food chain including import and export. In order to combine the results of the 30 FSIs into one value describing the food safety status, the relative importance of each FSI upon food safety has been taken into account by means of a weight factor. Weight factors were defined based on expert opinion by means of a survey amongst members of the Scientific and the Advisory Committee, and the management of the FASFC. The final barometer value is calculated as the average of the difference in terms of percentage between the results reported for two consecutive years of each FSI, taking their weight factor into account. Through this approach, food safety status is represented in a relative manner by comparing the status of a given year to the status of a previous year.

She highlighted that the barometer thus provides a helicopter view of the food safety status in Belgium and allows an objective measurement of the food safety status on a yearly basis and of general trends in the longer term. It serves primary to communicate in an intelligible, comprehensible manner on aspects of food safety to stakeholders, including consumers, food industry and international partners.

She updated the attendees that the barometer has been re-evaluated and a new set of FSIs has been chosen. The results of this new version of the barometer will be published at the end of June together with the activity report 2018 of the FASFC (http://www.favv-afsca.fgov.be/home-en/).

2.4 Pilot project: Bhutan

Dr Masami Takeuchi presented on the pilot project on FSI in Bhutan and the plans. She explained that Bhutan Food and Agriculture Regulatory Authority (BAFRA) under the Ministry of Agriculture and Forests (MoAF) is the single agency that looks after food safety regulations in Bhutan. Within BAFRA, both the decision making body and the technical working group are housed together. Current initiatives in Bhutan include: 1) review of its current issues; 2) review of the regional pool of food safety indicators; 3) preliminary consultation with BAFRA field officers; 4) establishment of Technical Working Group and 5) Holding its first stakeholder meeting scheduled from 2-4 May 2019 to set desired outcomes and selection of the pilot indicators. She explained that following a consultation with BAFRA field officers, the following five FSIs: 12, 24, 29, 36 and 38 as possible starting points. These FSIs cover areas of risk categorization and prioritization, detection of food borne diseases and contaminants, traceability system, drinking water safety and trust of the public in BAFRA as a competent food safety regulation and promotion agency.

2.5 Pilot project: Philippines

John Gregory V. Aquino presented on the status and plan for the FSI pilot project in Philippines. He said that the Philippine has enacted its Food Safety Act with the aim of strengthening the country's food safety regulatory system and providing a framework for the implementation of farm to fork food safety regulatory system in 2013. Key agencies were identified for the implementation of the Food Safety Act. However, a tool or performance indicator is deemed necessary to measure the performance of each agency and the effectiveness of their initiatives. Hence after participation in the Regional consultation on food safety indicators for Asia and the Pacific in Singapore co-organized by FAO-RAP and AVA-Singapore in 2017, the Philippines has expressed its interest to implement the FSIs for the country. A Letter of Agreement (LoA) was then signed for a pilot project with the Philippine College of Veterinary Public Health (PCVPH) in December 2018 and initiation workshop was held in March, 2019 in Quezon City, Philippines. The workshop identified the following 5 FSIs as potential starting points: FSIs 14, 18, 21, 31 and 39 covering areas of

official food control, food testing laboratories, self-checking system, information and communication campaign on food safety, and trade (import/export). Currently, the PCVPH-Technical Working Group is working on the identified priority areas to further narrow it down to 3 FSIs that will be pilot tested. A stakeholders' consultation is planned in June 2019 to present the works of the PCVPH-TWG and seek concurrence of the stakeholders on the 3 FSIs to be pilot tested.

2.6 Comprehensive evaluation index of food safety

Professor Luo Yunbo talked on comprehensive evaluation of food safety and how having FSIs can contribute to measuring and communicating food safety in China and gaining the trust of the Chinese people. He said that the food safety evaluation using randomly sampled food is very good in China with 98 percent qualification rate but Chinese media and the public tend to focus on the 2 percent unqualified samples rather than the 98 percent qualified ones. Acceptance of food safety is generally low while attention is high which makes this area prone to negative news fueled by social media platforms that lead to low recognition of government's food safety reports. On the other hand, people has zero tolerance for food safety issues. He reminded that measurement of food safety is not easy and since it is impossible to set all kinds of indicators in food quality and safety standards, some products that meet the standards can be defective. The comprehensive evaluation of food safety situation is the most important thing that a single qualification rate index can not address as food safety is composed of many factors. Having comprehensive evaluation indicators that can holistically look at all aspects of food safety including consumers perspectives may objectively reflect the overall level of food safety. He highlighted that comprehensive food safety indicators can be applied in many ways including: 1) publishing of reports; 2) generate food safety measures common people can understand; 3) to be used as a means of communication to the public; 4) allocate resources adequately and rationally; 5) identify key issues related to food safety and serve as a tool to predict trends; and 6) measure effectiveness of food safety controls. For this China will have to start with the basics which is identifying priority food safety indicators.

2.7 Measuring food safety in Australia

Dr Wendy Henderson of Food Standards Australia New Zealand (FSANZ), Australia talked about inculcating a culture of food safety within everyone as a solution to food safety issues that the world is facing currently. She explained that we all agree we need food safety requirements in

place for structures and processes but there is a growing realization that we need a broader focus- something more than just regulations. We need to include culture and commitment to food safety. She urges regulators to shift their roles in food safety from monitoring and responding to non-compliance to education-oriented along the lines of "the more you educate, the less you need to regulate". This is where food safety culture comes in and everyone involved in food must make sure that the food they produce or serve is safe and must take pride in it. She highlighted that food safety culture should be embraced by everyone starting at the top with strong leaders committed to making food safety top priority and committed managers who dedicate time and efforts to food safety. The whole organization must believe in importance of safe food and everyone can play a part and should take accountability of food safety. Strong culture must flourish with continual improvement. This does not happen quickly but it starts with recognition that food safety is critical for success and making food safety and integrity top priorities. Food businesses must promote food safety culture along the chain starting from the start until food reaches the consumer, as regulators cannot cover every step of every food. Food business is evolving every day and with it, food safety is becoming challenging. To make food safety culture a success, a strong focus on people and behavior should be given and everyone- regulatory and non-regulatory, government and industry should work together on this. She concluded by reminding the attendees that food safety doesn't just happen and we need to know how to produce safe food; do things the right way every time and follow this through for a long time to create a strong food safety culture.

2.8 Pilot project on food safety indicators in China

Ms Ding Hao of CFSA presented on China's progress with the FSI pilot project and their immediate plans. She mentioned that FSI are needed for China to: 1) measure the effectiveness of the Food safety law that has been in place in China since 2009; 2) growing attention on food safety from public; and 3) to guide future food safety initiatives. She said that the FSIs which are deemed relevant, non-ambiguous and practical for China were chosen as pilot indicators for China. The pilot indicators chosen are 1, 4 7, 19, 26 and 36 covering areas of lead agency, national policy and legislations, evidence and risk based food safety risk assessment, notification mechanisms, outbreaks of foodborne illnesses and safe drinking water. China will work further on the six pilot indicators and then choose another 5 or 6 relevant indicators to work on.

2.9 Structured discussion

The following points were discussed at depth during the round table session:

Q. Communication is key to food safety. Does the Belgian model of food safety barometer have any indicators on communication?

A. The Belgian FSI were designed with the scope for food safety hazards so no direct measure on the level of communication was included. FSIs do not cover everything so depending on your priorities, you have to make up your mind on what to measure. However, FSIs are a good tool for communication to the public and for the FSIs in the Asia-Pacific region, communication indicators are considered.

Q. For food safety culture, if the producers do not comply to expectations and regulations, what is the punishment?

A. The food safety culture believes food producers do not go in to the business to make people ill and there may be a few stubborn ones which do not comply on a regular basis. Regulations in the country should make sure consequences are dealt with for these producers. Traditional regulation enforcement is not being replaced by food safety culture but this is a long-term plan to ingrain food safety as part of your culture.

Q. Do you believe a risk-based approach is a wise approach in food safety culture?

A. Risk-based approach has been an underlying principle in food safety culture and that is why raw egg and dairy were chosen as our pilot approaches.

Q. How do you evaluate food safety culture?

A. This is objective and project teams are still working on it. We are trying to measure food safety culture for a specific pathogen in a specific food item

Q. Public opinion of food safety in China is improving but China is a very large country and even a small news can be magnified. The public may not understand the concept of comprehensive indicators to evaluate food safety. How would you link and ensure comprehensive index for food safety is understood by the public?

A. Translation of numbers and codes to plain language is a challenge but not impossible. Education of public and consumers getting used to such numbers and indexes are key for

understanding interpretation of comprehensive indicators should avoid sensitive associations and consumers should be able to understand the risks. With this understanding, people should be able to know what is the problem and at what magnitude.

2.10 Feedback and closing

Mr Liang Gang, Deputy Director of Food Sampling and Inspection Department of the State Administration of Market Supervision said this was a very rewarding session and the expert presentations were excellent. He confirmed the interest of his department in working with FAO through the FSI pilot project or other projects in the future. He is particularly interested in the food safety culture, which he thinks is an enlightening idea for him and China. He added that education is key for this culture to be a part of Chinese culture and he said the government will push to promote it in consultation with the experts gradually.

Ms Hao Minghong, Administration Director of Early Warning Exchange and Standards Division, Food Sampling and Inspection Department, State Administration of Market Supervision said China is working on its FSIs and they believe they have adequate data to do a good analysis. She said that the 40 FSIs are well designed and it is both quantitative as well as qualitative measure of food safety. She is happy that though china and the rest of the experts are in opposite sides of the world, we are all thinking the same. She is confident China will make a breakthrough on the FSIs this year and she urges other countries in the region and relevant agencies to collaborate.

Fang Xiaohua, Director of Emergency Response, Department of Quality and Safety Supervision of Agricultural Products, Ministry of Agriculture and Rural Areas said that through agriculture, the country has been successful in feeding sufficient quantities to its people. However, she believes it is time to shift the focus from quantity to quality and safety. With the scale of production expanding, she is not sure if every food producer will live up to the expectations and therefore education on food safety is vital. She assured her support and expressed the interest of her department to be a part of the pilot FSI project in China.

The co-chairs closed the session at 6:30 PM.

3. Conclusions and recommendations

All the countries where pilot projects have been initiated will have another round of consultative meeting to evaluate the indicators the countries have selected. There is a great level of interest and commitment shown from the government and institutions in China on the FSI pilot project. Successful testing these indicators for China should work as a pilot assessment of the applicability of these indicators in other countries similar to China in their priority and objectives of having FSIs. Similarly, pilot projects in other countries namely Bhutan, Cook Islands and the Philippines will be useful in designing similar projects in other countries in the region.

Annex 1. List of invited participants

Sl. no	Name	Office / Agency
Government representatives		
1	Liang Gang	Deputy Director, Food Sampling and Inspection Department, State Administration of Market Supervision, CHINA
2	Hao Minghong	Administration Director, Early Warning Exchange and Standards Division, Food Sampling and Inspection Department, State Administration of Market Supervision, CHINA
3	Fang Xiaohua	Director of Emergency Response, Department of Quality and Safety Supervision of Agricultural Products, Ministry of Agriculture and Rural Areas, CHINA
4	Andreas Hensel	President, German Federal Institute for Risk Assessment, Berlin, GERMANY
5	Xu Wenna	Director of China Affairs, German Federal Institute for Risk Assessment, Berlin, GERMANY
Moderator and spokesperson		
6	Fan Yongxiang	Director, Food Safety Standard Division, China National Center for Food Safety Risk Assessment, CHINA
7	Masami Takeuchi	Food Safety Officer, FAO Regional Office for Asia and the Pacific Bangkok, THAILAND
8	Yoenten Phuentshok	Junior Professional Officer for One Health, FAO Regional Office for Asia and the Pacific Bangkok, THAILAND
9	Wendie Claeys	Staff Direction for Risk Assessment, Belgian Food Safety Agency, Boulevard du Jardin Botanique 55

		B-1000 Brussels, BELGIUM
10	John Gregory V. Aquino	Senior Science Research Specialist, Standards Development Division, Bureau of Agriculture and Fisheries Standards Department of Agriculture, PHILIPPINES
11	Luo Yunbo	Honorary Vice-President of China Food Science and Technology Society Director, Special Food Research Center, China Agricultural University, CHINA
12	Wendy Henderson	Senior Food Safety Coordinator, Food Standards Australia New Zealand, 15 Lancaster Place, Majura Park ACT 2609 AUSTRALIA
Members (Representatives) of the China working group		
13	Lu Baiyi	Assistant Dean, College of Biological Systems Engineering and Food Science, Zhejiang University, CHINA
14	Dinghao	Assistant Researcher, China National Center for Food Safety Risk Assessment, CHINA
15	Chen Zheng	Deputy Secretary-General, Chinese Institute of Food Science and Technology, CHINA
16	Dan Xiaoya	Engineer, Chinese Institute of Food Science and Technology, CHINA
17	Zhu Changqing	Director, Children's Food Research Institute. Nanjing Xiaozhuang College, Nanjing, CHINA
18	Zhang Xiumin	China Food Safety Magazine, Harbin University of Commerce, Harbin CHINA
19	Cheng Lei	Graduate student, China University of Agriculture, Beijing, CHINA

Annex 2. Final workshop agenda

Session 4: Round-table session: international food safety indicators

18th April 2019, Friendship Hotel, Beijing, China

Time	Item	Responsibility
Session chair: Dr Yong Xiang Fan and Masami Takeuchi		
14.00 – 14.15	Opening session	Yong Xiang Fan, CFSA
14.15 – 14.45	Concept of food safety indicators in the Asia-Pacific region	Masami Takeuchi, FAO RAP
14.45 – 15.15	Measuring food safety at country level – Food safety barometer	Wendie Claeys, Belgian Food Safety Agency
15.15 – 15.35	Pilot project progress: Bhutan	Masami Takeuchi, FAO RAP
15.35 – 15.45	***Break***	
15:45 – 16:05	Pilot project progress: Philippines	John G V Aquino, Philippine Department of Agriculture
16.05 – 16.25	Comprehensive evaluation index of food safety	Luo Yunbo, CIFST,
16.25 – 16.55	Measuring Food safety in Australia – Introduction to food safety culture	Wendy Henderson, FSANZ
16.55 – 17.10	Pilot project on food safety indicators in China	Ding Hao, CFSA
17.10 – 17.50	Structured discussion session	All
17.50 – 18.10	Summary and closing session	CIFST & FAORAP

Food and Agriculture Organization of the United Nations – China
Jianwai Diplomatic Compound 4-2-151/152,
Jianguomenwai 100600 BEIJING
Email:FAO-CN@fao.org

CA6982EN/1/11.19