



Food and Agriculture Organization  
of the United Nations

## Webinar report

# Strengthening country capacities to control and monitor residues for veterinary drugs in food

27 October 2020



Webinar report

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monitor residues for veterinary drugs in food**

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Food and Agriculture Organization of the United Nations  
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## Abstract

The growing global attention on antimicrobial resistance (AMR) and food safety in the recent years led to increased recognition of the significance of veterinary drug / antimicrobial residues and having the appropriate capacities to detect and monitor them. The webinar entitled “Strengthening country capacities to control and monitor residues for veterinary drugs in food” was conducted last 27 October 2020 in the aim to call for more countries to be involved on the second phase of piloting the tool in determining the country’s capacities in measuring residues for veterinary drugs in food.

Organized and facilitated by the Food and Agriculture Organization of United Nations (FAO), the webinar discusses the initiated tool and the experiences of the piloting countries Singapore and Thailand in using the tool. A total of 375 people has participated worldwide in where their and concerns about the topic and the tool were addressed by the facilitators and experts. The series of discussions was able to help the participants realize their need for the tool by letting knowing how it help assess laboratory capacities, conduct gap analyses, determine stakeholders and getting support for allocated resources.

Moving ahead, the selected countries to launch the second phase of piloting program by the year 2021 aiming to a more comprehensive tool applicable for many more countries.

**Keywords:** Food safety, Codex Alimentarius, residues of veterinary drugs in food, residue monitoring, testing, residue laboratory capacity, capacity assessment tool, pilot projects, Singapore, Thailand, Food and Agriculture Organization of the United Nations (FAO).



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## Abbreviations and acronyms

AMR	Antimicrobial resistance
AMU	Antimicrobial use
ASEAN	Association of South East Asian Nations
FAO	Food and Agriculture Organization of the United Nation
ATLASS	Assessment Tool for Laboratories and AMR Surveillance Systems
MRL	Maximum residue limits
OIE	World Organization for Animal Health
RVDF	Residue of veterinary drug in food
SFA	Singapore Food Agency
UNEP	United Nations Environment Programme
WHO	World Health Organization



# 1 Introduction

## 1.1 Background

Veterinary drug / antimicrobial use (AMU) in the animal industry has contributed to improving cost-efficiency in producing animal proteins, making these more affordable for the continuously growing human population. However, potential misuse/overuse of such could lead to the selection, emergence, and subsequent spread and persistence of antimicrobial-resistant microorganisms, now recognized as a global public and environmental health threat. The growing global attention on antimicrobial resistance (AMR) and food safety in the recent years has also led to increased recognition of the significance of veterinary drug / antimicrobial residues and having the appropriate capacities to detect and monitor veterinary drug /antimicrobial residues. The Food and Agriculture Organization of the United Nations (FAO) stresses the importance of achieving progressive improvement of laboratory capacities for antimicrobial residue monitoring in countries under the Focus Area 2 of the global FAO Action Plan on AMR. Codex Alimentarius, an international food standard setting body, also recognizes the importance of the work and emphasizes the needs for countries in quantifying and monitoring veterinary drug / antimicrobial residues in food, while clear objective-setting, planning for monitoring and selection criteria for priority veterinary drugs /antimicrobials can be challenging for many countries in terms of their technical capacities as well as the resource availability.

## 1.2 Objectives

The webinar was conducted in order for the participants to:

- share the experiences, benefits, opportunities, challenges and possible applications of the work conducted in the pilot countries.
- inform countries of this initiative in the region, and invite them to be involved in the next phase of expanded piloting and;
- engage countries to contribute to the further refinement of the pilot tool.

## 1.3 Overview

The webinar is entitled “Strengthening country capacities to control and monitor residues for veterinary drugs in food” was conducted on 27 October 2020, 14.00 – 15.30 (IndoChina Time). This was organized and facilitated by FAO and it targeted all the competent authorities from Asia and Pacific Region to answer the call for the secondary phase of the pilot program. A total of 375 people globally has participated in where their answers and concerns about the topic and the tool were addressed by the facilitators and experts.

## 1.4 Structure of the webinar

The webinar was held for a total of one hour and thirty minutes. It started with the facilitator familiarizing participants on the event flow, platform settings and housekeeping rules. This is followed by FAO explaining the background and initiative of the tool and where it stands on the bigger picture in the organizations’ work in the detection of AMR in the region. Then the tool was also elaborately discussed. This was followed by the two piloting countries, Singapore and Thailand, sharing their experiences, conclusion and recommendations in using the tool. Lastly, FAO has launched an interactive poll consisting of two questions prior calling interest from member countries in joining the second phase of piloting the project.

Participants' questions were collected through a question and answer box which are being answered by the speakers through responding in the chat box. Some of the questions raised were discussed during the five minute window allotted for question and answer after each speakers' turn. The questions that were not covered by the webinar were addressed in Annex 2.

## 2 Webinar highlights

### 2.1 Project background

The first speaker, Mary Joy Gordoncillo, FAO, provided the brief background on FAOs work on AMR in Asia and the Pacific Region. She has highlighted the scope of FAO's entire work by highlighting the four key areas: (1) Awareness which involves developing key communication materials, education and training, implementation of communication campaigns and the celebration of world antibiotic awareness week. (2) Evidence which concerns in developing tools and methodologies, capacity building, regional networks and support and pilot initiative. The tool that that was tackled in the webinar fall under this category. The first initiative for the residues just started this year. (3) Governance focuses on putting up regional platforms for AMR advisor in Association of Southeast Asian Nations (ASEAN) and South Asia, coordinating with technical working groups with regard to the technical items that is raised in the region, regional coordination and integrating One Health approach to AMR. This is in tripartite with World Organization for Animal Health (OIE) and World Health Organization (WHO) together with United Nations Environment Programme (UNEP) and (4) Good practices which involves the creation of regional antimicrobial stewardship platform, FAO-AgriWASH, farm-level antimicrobial usage and good practices documentation and improving biosecurity, good practices and other measures.

The history of the toolkit was then tackled, in where the first assessment started in 2018 when Lao People's Democratic Republic requested FAO to have an assessment with regard to their capacities in monitoring antimicrobial residues. The Bureau of Quality Control for Livestock Product, Thailand was then invited to take charge of the task. The initiative of creating a tool for replication has become the recommendation of this collaboration. Therefore, on the following year, the tool was launched and two countries were involved in the pilot programme. These are Thailand, which is the ASEAN Food Reference Laboratory and the experts in livestock residues and Singapore, which is the ASEAN AMR Lead for aquaculture residues and FAO Assessment Tool for Laboratories and AMR Surveillance Systems (ATLASS) assessors. A technical working group was formed where they develop and assess the tools that has been conducted. For the next steps, by 2021, a second piloting programme will then be opened in order to further refine the existing framework to be able to be of fit to more countries.

### 2.2 Introduction to the tool: monitoring residues of veterinary drugs in food

The tool was introduced by Stephan Walch, who is an active expert of the Joint FAO/WHO Expert Committee on Food Additives and Contaminants (JECFA). He emphasized that there is a strong need for the countries in Asia and the Pacific to have appropriate capacities in detecting and monitoring veterinary drugs.

### The idea of the tool

The tool basically aims enable a systematic assessment of national laboratories for monitoring veterinary drug residues. Its contents are in synergy to FAO ATCLASS and in addition to this, offers non-descriptive points and step by step methodologies for it to be tailored on a national context. This is done for a country to have a stepwise, progressive improvement of relevant capacities especially in terms of the laboratory setting.

### Structure of the tool

Walch has then led through the tool which contains six sections which are the following:

- Competent authorities which highlights the presence of some groups of people in the current organizational structure (i.e. One Health consultation committee ; RVD coordination committees).
- Residue monitoring which include the checklist points of the country having an existing national or regional regulations and RVDF data collection, analysis and interpretation.
- Human Resources that highlights all the relevant personnel working for the monitoring of RVDF, a section which is relevant in all levels of laboratories.
- Technical capacities such as, machineries where available relevant equipment in monitoring of RVDF should be ticked out.
- Sampling, which accounts the residues food safety monitoring program. An example of this is the amount of samples a laboratory analyse for a year as a part of food safety monitoring.
- Laboratory quality control in where it includes other aspects such as proficiency tests, benchmarking etc.

### Tool roadmap

As the first pilot countries has already sent their contributions and feedback, the call for second round of piloting will then be opened in order gain more criteria and experience in putting up the tool. Other plans also include developing systematic criteria for each question, evaluation criteria with scalable options and a document guide to use the assessment tool.

## 2.3 Tool application: Singapore

### Overview of Singapore's food system

The first country to present its experiences is Singapore. Ping Shen of Singapore Food Agency opened the main topic by discussing the unique situation of the city-state where it imports around 90% of the food they eat. Therefore, testing the tool was very interesting knowing their case.

The Singapore food safety system is underpinned by three principal considerations which are:

- Farm to fork system approach, a concept that covers the every angle of food supply system. Food safety is being ensured by the regulatory bodies from the overseas supplies, importers, limited local farms, processors, manufacturers, distributors, retailers and consumers.
- Science based risk assessment and management to assess food safety

- Joint food safety responsibility in where it is highly specified that food safety is not only applicable to the regulating bodies but also the businesses, the industries and most specially to the consumers.

#### Introduction of Singapore's action plan on antimicrobial resistance

Singapore has an existing National Residue Monitoring Programme which mainly focuses on import control (eggs, meat and seafood) and local farm surveillance (poultry layer, livestock and food fish farms)

On top of this, the country has a specific National Strategic Action Plan on Antimicrobial resistance which sets the framework for the national response on AMR, especially bacterial resistance to antibiotics. The plan unifies and formalises the initiative by government agencies across different sectors while providing a roadmap to address existing gaps and prioritise future interventions. The actions conducted are aligned to the WHO's Global Action Plan on Antimicrobial Resistance, and with standards and guidelines established by intergovernmental bodies such as FAO and OIE.

#### Tool Implementation procedures

Dr Ping Shen then discussed on how the tool was able to make them assess the current AMR monitoring capacities within the county. The section contains the current resources that Singapore has assessed with the help of the tool.

**Competent authorities:** The assessment exercise with the tool was conducted by the country's national residue monitoring system which include the following One Health agencies:

- Ministry of Health (MOH)
- Singapore Food Agency (SFA)
- National Parks Board (NParks)
- National Environment Agency (NEA)
- Public Utilities Board (PUB)

**Regulations:** The existing guidelines and policies that could aid in the assessment were discussed. These include the Sale of Food Act (SOFA), Singapore Food Regulations, Feedings Stuff, Fisheries Acts and Animal Birds Act.

**Residue monitoring:** Singapore has existing residue monitoring scheme in four sections.

- Food and animals used for food. Which tests imported and locally produced food for residue by SFA that serves as a part of its food import control and local farm surveillance. The National Centre for Food Science (NCFS) of the SFA is responsible for antimicrobial residue testing in food and feed in Singapore. NCFS focuses on the method development, diagnostics and data analysis for residue monitoring. NCFS also functions as the national reference laboratory and provides guidance and technical support to other laboratories involved in residue testing.
- Non-food Animals in where NParks gathers antimicrobial sales data from wholesalers regularly.
- Animal Feed. The regulation of animal feed in Singapore is governed under the Feeding Stuffs Act. Feed manufacturers have responsibilities to implement a system

based on Good Manufacturing Practice (GMP) and Hazard Analysis and Critical Control Point (HACCP) principles, to ensure feed safety. SFA regularly samples and tests feed used by local food animal under its local farm surveillance program. NParks regulates the import and manufacture of feed for non-food animals.

- Environment and Water. Residue monitoring in the environment is conducted by National Environment Agency (NEA) and National Water Agency (PUB).

**Technical Capabilities for veterinary drug residues monitoring:** Ping indicated that the tool has mainly become a benchmark exercise for them in order to assess their technical requirements. This tool is highly helpful if the country is aiming to do the measurement of residue monitoring capability in food. It has a comprehensive coverage to help the country go through.

**Reporting communication and networks:** Communication in this initiative mostly circulates within the One Health Coordination Committee which regularly shares information and coordinate AMR related activities. Positive outcomes of the coordination work include coordinated training for capability building, coordinated efforts to combat AMR and the development of joint protocols for zoonotic and foodborne disease outbreaks. In addition, residue testing data by the commercial laboratories used for export health certification are collectively analysed together with import control data to reflect the overall residue occurrence profile of the nation. With these, it enables timely review of policies and enhance the national strategic action plan for antimicrobial monitoring and control.

#### [Pilot conclusion and recommendations from Singapore](#)

Overall, Singapore has demonstrated sustainable capacities in all mentioned aspects recognized by the tool and the country will be using the tool to review its national residue monitoring system and plan for new initiatives in two areas which include the increase of the scope of residue monitoring (to include soil samples from vegetable farms and water samples from fish farms etc.) and engage the private sector to grow the commercial testing industry and strengthen the country's capacity in residue testing.

Ping believes that the tool is very important in helping the nations to plan for the next steps. The tool will identify the gaps in where the countries could fill in and it covered all the aspects needed for assessment. This will make them easily work with stakeholders to conduct strategic exercise on how to address the identified issues and formulate national work plans in food safety and AMR.

She mentioned that a country should have a network consisting of experts and the people involved in having this assessment exercise. These can be done by:

- Identification of the stake holders and key contact persons.
- Having specific communication platforms as due to the pandemic, the people cannot meet personally.
- Planning the sessions in advance, setting up of correct timeline and following up. Assessment is a very extensive exercise and will finish for a longer time if proper planning was not conducted.
- Inclusion of summary and report drafting of key findings.

She closed her presentation by giving the countries an encouragement to be a part of the tool's piloting program and to have a thorough exercise on the national residue monitoring system. As for the outcomes can be used as a justification for support on capacity building for residue monitoring and enhancement of the national residue monitoring system. And as for the tool, she has recommended for the improvement of the terms and languages used in the draft version, adjustment on the granularity of the questions asked to focus on major animal species or food commodities and the details which are highly requested making the tool very lengthy.

#### Highlighted questions and answers

After Dr Ping's discussion in the case of Singapore, some most important questions were raised. One of these is the specificity of the toolkit. Facilitators clarified that the toolkit is used to assess the laboratory capacity for AMR testing. Which can be applicable for various commodities. The tool can be customized based on the assessor's objectives.

Another question arised about the different roles of the agencies in using the toolkit and who is the main agency should initiate the piloting of the toolkit. As it is observed in this webinar, the people involved are mostly from the food safety sector as the question of the residue being safe for human consumption is a food safety issue. However, antimicrobial residue monitoring itself concerns different agencies and holds a different purpose. This issue if only handled by the food safety professionals will not be effective. In the case of Singapore, the use of One Health approach has been emphasized in where this include the relevant sectors. These sectors regularly meet to plan on who does what, share information, initiatives, update progress and also their issues. And since Singapore is a small country, it gains an advantage to engage each other in working together and have meetings. Also can share laboratory resources. They can easily organize training and deploy staff.

## 2.4 Tool application case study: Thailand

### Overview of Thailand's food system

The experiences of Thailand, the second pilot country was shared by Panadda Silva, who is currently the Vice President of the Metrology Society of Thailand and the country's focal point person of the tool. As she has expressed her astonishment to Singapore's way in handling the tool she also indicated that Thailand has several contrasts compared to the other country. Thailand, unlike Singapore, is not a city state where they can engage each other easily. In addition to this, Thailand is a country who mainly produces for a country like Singapore and identifies itself as the kitchen of the world.

### About the tool

Thailand aimed to use the tool as a guidance in the stepwise development of the current capacity in terms of laboratory testing of veterinary drug residues in food. The initiative involved three Thai government agencies which are Department of Livestock and Development, Department of Fisheries and Food and Drug Administration. As the work goes by, the country has bridged the two main parts of the tool which are production / supply chain / import and export to the monitoring and control systems by aligning both to the country's law and regulations.

### Limitations

Thailand encountered several limitations in the application of this tool such as the time constraint and the length of the tool. In addition to this, identification of competent authorities especially in the private sectors were quite hard due to bureaucratic obstacles. These processes took the time. Lastly, Thailand covers both import and export aspects from the entire food chain

### Pilot conclusion and recommendations from Thailand

The tool was able to help them identify their strengths and weaknesses in terms on the monitoring on veterinary drug residue in food. They were also be able to map their laws, rules, workflows in order to control and improve. As they were mapping out they were able to see a clearer grasp of the situation in terms of a document which can be used as a references for revising policies and formulating strategies.

As a recommendation to the other countries, Panadda has emphasized that prior starting it is important to identify stakeholders and their functions clearly. In addition to this, visualizing the plan such as making a flowchart for monitoring (who will do which, where to send which) or more like a decision tree so that the bigger picture in the control system can be seen in the respective country. It is also important that focal points should be present and working team for this initiative. A team which consists of members from different organizations will help the country's work easier.

To those the countries who are intending to include many products, she advised that a list of priorities should be present. List of priorities differs from country to country. Different countries have different structure and system, therefore a proper analysis should be done.

Lastly, identification of other sources of information such as the actual production arena, report from the competent authorities and annual reports.

The tool is good in general is good for identifying a country's strengths and weaknesses in the identification of their laboratory capacities in terms of management of residues of veterinary drugs in food.

### Highlighted questions and answers

After the third speaker, a query was raised if there is a need for the tool to indicate the exact amount of commodities as FAO already has the data. It was clarified that FAOSTAT are only numbers taken from the estimates from the countries and public sectors. The tool does not aim to get the exact numbers of commodities tested but the purpose of having an effective monitoring systems. With an eventual goal of consumer protection.

Several techniques in coordinating with different stakeholders were asked to Dr Panadda as legal issues are a very difficult part of agencies collaborating on One Health Issues. As the main user and focal point of the usage of the tool in Thailand, she set an emphasis in instilling to all the members of the initiative that they are working with their heart not their hands. They should be able to feel that they belong in the project and the country's future depends on them (positive approach make them feel that they belong the project). Sense of ownership.

## 2.5 Request for collaborations

Masami Takeuchi, Food Safety Officer of FAO, opened the discussion for requests for collaboration with the countries for the second phase of piloting to occur next year. Participant's pulse on some points regarding the topic were taken by launching a poll of two questions relating to the measurement of countries capacities in monitoring RVDF in where in the details were fully explained in Annex 1.

Poll results show that most of the participants will do overall and laboratory gap assessments as well as search on the other piloting countries in order to further develop an effective national veterinary drug residue monitoring system. However, they are encountering challenges in determining stakeholders, gaining support from their respective governments and lack of laboratories.

Upon knowing these inputs and hurdles, FAO has opened the pool for collaborations for the second phase. The next pilot countries would be given assistance to the usage of the tool will start by next year and will hopefully reap the benefits that first two countries (Thailand and Singapore) has such as:

- completion of country's gap assessment;
- contributions for the global good through the feedbacks in the FAO guide for more countries to use it;
- inclusion of the country's challenges, feedback, comments and insights in the FAO guide and; and
- an opportunity for the individuals to understand the development process and impact of effective residue monitoring systems.

Countries can express their interests by contacting FAO through [FAORAP-Antimicrobial-Resistance@fao.org](mailto:FAORAP-Antimicrobial-Resistance@fao.org). The initiative shall prioritize in supporting countries from the competent government agencies in the Asia and the Pacific Region followed by the countries from the other regions.

## 3 Conclusions and recommendations

The webinar entitled "Strengthening country capacities to control and monitor residues for veterinary drugs in food" has aimed to disseminate FAO's initiative in the region. In addition to this, share the experiences of the work conducted in the pilot countries in order for them to do the same.

In general, this platform has become a good avenue for all the parties that has been involved to share their different inputs and learn from the outputs regarding topic. FAO explained to the participants on the past, present and future works related to AMR in Asia and the Pacific Region. Indeed, there is a lot of efforts from the organization in order to teach and equip topics with regard to AMR. The opportunities of the tool and using these were also expressed to the participating countries in the region by opening the call for the countries to participate on the second phase of piloting.

The two piloting countries has been a testimony that even you are a majorly importing country like Singapore or an exporting country like Thailand, you will be able to use the tool.

And using the tool poses different experiences and challenges to different countries. Real life examples such as hurdles in conducting gap analysis in both laboratories and policies , collaborating with stakeholders and getting funds for support were also tackled and both of them assured that the tool has aided them in measuring the countries capacities in monitoring residues of veterinary drugs in food. The participants were also be able to voice out their concerns with regard to the tool and the hurdles that they are currently facing regarding the implementation on the effective national veterinary drug residue monitoring system through a poll

## Annex 1. Poll responses

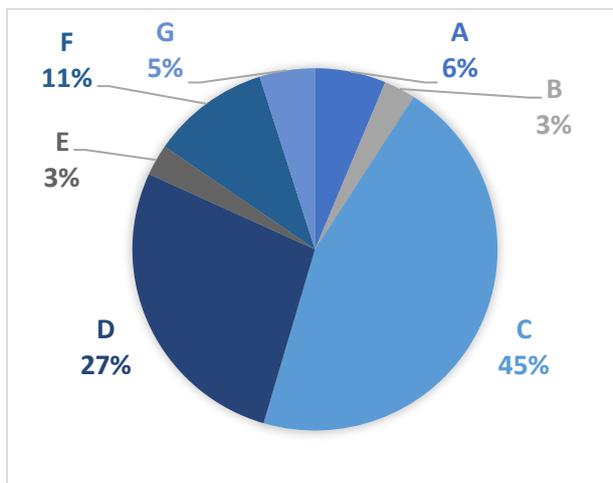
Below are the comprehensive results on the poll that was conducted during the discussions. It should be taken into account that these data are being gathered for the purpose of assessment to the participants and should not be considered as statistically significant.

### Question 1

You have been newly tasked to develop an effective national veterinary drug residue monitoring system. What is the first thing you will do tomorrow?

Choices:

- I will draft a residue monitoring system development action plan.
- I will obtain enough funding and man power to start the work.
- I will first assess the current capacity of the country's residue monitoring in order to conduct a gap assessment.
- I will research and study on how other countries are successfully implementing the system.
- I will formulate a task force so that we can start implementation tomorrow already.
- I will check with laboratories to understand if it is feasible for my country to test and quantify the residues.
- I don't think I can start anything tomorrow.



Annex figure 1. Question 1 poll results.

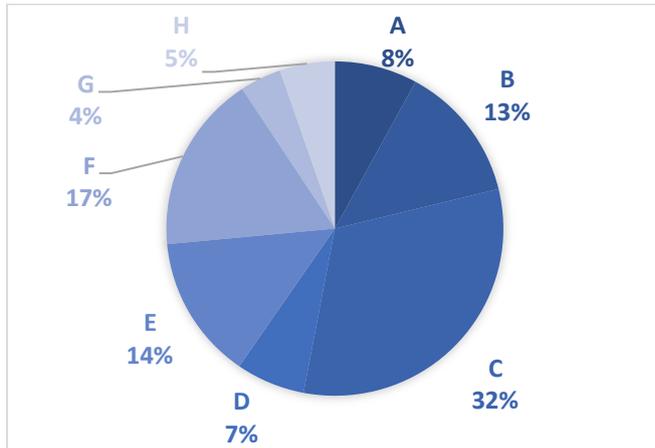
### Question 2

What would be the biggest barrier/challenge for your country in developing or improving national veterinary drug residue monitoring system? We are excluding financial resources, human resources, technical capacities, lack of trainings, and laws and regulations because addressing them would solve some of the barriers and challenges.

Choices:

- We don't know exactly who should be taking the lead in developing the effective monitoring system.
- We don't have any laboratories that can test the residues.
- So many stakeholders exist, thus coordination will be the biggest challenge.

- d. We don't know how to set up effective sampling for residue analysis.
- e. People think this is less of a priority, as my country have many other pressing priorities.
- f. Decision makers won't get convinced to allocate resources because they may think this is not one of the priorities.
- g. We don't know where we stand, in terms of the capacity level, so we don't know where to start.
- h. We don't have any barriers / challenges.



Annex Figure 2. Question 2 poll results.

## Annex 2. Question and answers

The question and answer box has received a total of 37 questions and was cut down into half by removing the recurring questions with regard to obtaining the power point , request for participation in the second piloting project and questions that were answered live that was indicated in the previous section of this report. The screened questions were addressed by to whom it is addressed. General questions were the questions answered by the facilitators, Masami Takeuchi and Mary Joy Gordoncillo.

### Annex 2.1. The tool

This tool follows the framework of the FAO Assessment Tool for Laboratory and AMR Surveillance Systems (ATLASS), the residues tool, ATLASS-RVDF, was developed with the intention of providing guidance to countries towards a stepwise, progressive improvement of their relevant capacities. It is strictly based on the various guidelines that Codex Alimentarius develops. And OIE is an important partner to Codex Alimentarius where strong alignments and synergies are confirmed. In addition, it should be put into account that conducting this assessment is purely voluntary.

Aside from the one mentioned in the highlights of the webinar, the tool include:

- Inclusion of One health approach in governance;
- Other portions which include environment, water;
- Customizable portions that the countries can tailor it for their purpose; and
- Specific commodities (milk) which has been specified in the webinar.

### Annex 2.2 Questions for the piloting countries

Singapore's AMR risk assessment requested to be tackled. According to Ping, antimicrobials are strictly controlled in Singapore local farms. Therefore, the risk of AMR from food produced locally is relatively low based on the risk assessment. Further expansion of the testing is being planned up to the environmental samples for antibiotics so that the obtained data can help us do conduct further risk assessment on the AMR in the environment.

In addition to this, the overall violation rate for veterinary drugs in imported food in Singapore is less than 1%. This is because the key food items are imported only from the accredited establishments overseas. The sampling and testing are scheduled based on the risk of the food categories, there is no fixed frequency testing. For new sources or problem sources, almost every batch of import is tested. Yes, testing is conducted at the initial stage of accreditation of overseas establishments

In terms of laboratory accredited for testing in the country-state, the competent authorities are the main ones. However, there are many other laboratories that got accredited. These are apart from the fact that we have many private labs that can perform monitoring activities if needed.

In case of Thailand, Panadda assure that the country is doing quite well as we are the exporter and we need to follow international standards. The results is satisfactory.

## Annex 3. Meeting agenda

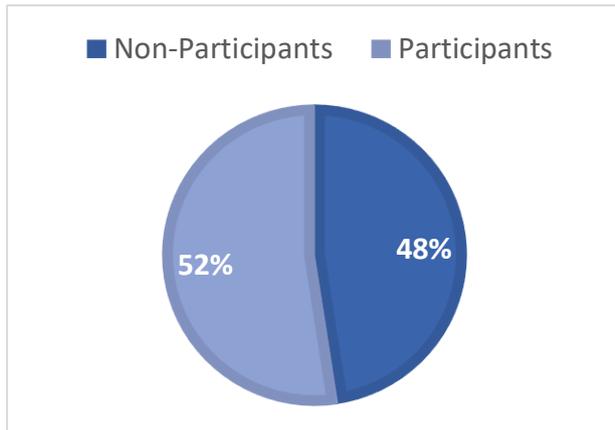
The table below encloses the timeline together with the topics discussed by the webinar.

Annex Table 1. List of Meeting Agenda

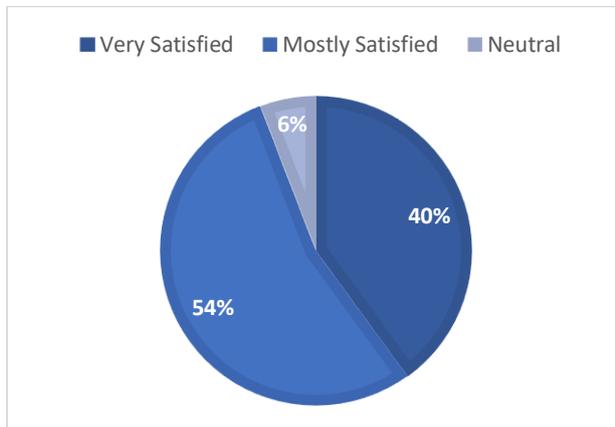
Time (ICT)	Item	Presenters
14.00–14.05	Welcome	Masami Takeuchi
14.05–14.15	Introduction of a new FAO assessment tool on monitoring of the residues of veterinary drugs in food	Stephan Walch
14.15–14.35	Singapore’s experience: application of the tool, opportunities and lessons learned	Ping Shen
14.35–14.40	Q&As	All
14.40–15.00	Thailand’s experience: application of the tool, opportunities and lessons learned	Panadda Silva
15.00–15.05	Q&As	All
15.05–15.25	Call for interests - expanding the initiative in the region: FAO funding and technical assistance opportunities for countries and call for interests	Moderated by Mary Joy Gordoncillo and Masami Takeuchi
15.25–15.30	Closing	Mary Joy Gordoncillo

## Annex 4. Statistical outcome of the webinar

A total of 715 people registered for the event, in where 375 participated in the actual webinar. The number of participants constitutes to 52 % of the number of registrants as seen on annex figure 3. Highest number of participants came from the Philippines followed by Myanmar , and Indonesia as shown on annex table 2. Almost half of the participants are female while the rest are male and other genders All the registrants were able to receive the recorded copy of the webinar together with the presentation links after answering the satisfaction survey. Annex figure 4 show that more than half of the participants were very satisfied on the flow of the webinar.



Annex figure 3. Registration demographics.



Annex figure 4. Satisfaction survey ratings of the webinar.

Annex Table 2. Participant demographics

Labels	Counts
Afghanistan	3
Algeria	1
Australia	8
Bahamas	1
Bangladesh	10
Belarus	1
Belgium	1
Bhutan	6
Brazil	3
Burkina Faso	2
Burundi	1
Cabo Verde	1
Cambodia	3
Cameroon	1
China	2
Colombia	7
Denmark	1
Ecuador	1
Egypt	1
Ethiopia	1
France	4
Germany	3
Ghana	15
Honduras	1
Hong Kong SAR	3
Hungary	2
India	13

Labels	Counts
Indonesia	30
Iraq	1
Ireland	1
Italy	10
Japan	5
Jordan	1
Kenya	5
Lao People's Democratic Republic	4
Malaysia	5
Maldives	6
Mali	1
Mauritius	1
Mexico	1
Mongolia	2
Montenegro	1
Morocco	2
Mozambique	2
Myanmar	31
Nepal	7
Netherlands	1
Nigeria	6
Pakistan	5
Philippines	62
Poland	1
Qatar	6

Labels	Counts
Russian Federation	1
Rwanda	1
Senegal	4
Serbia	1
Singapore	6
South Africa	3
Spain	2
Sri Lanka	1
Suriname	1
Sweden	1
Switzerland	1
Tajikistan	2
Tanzania, United Republic of	1
Thailand	17
Tunisia	1
Turkey	2
Uganda	6
Ukraine	1
United Kingdom	7
United States of America	17
Viet Nam	4
Zambia	3
Grand Total	376

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