



# CTI 24 2017A (SCSC) – Building Competence in Antimicrobial Resistance Surveillance among APEC economies

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**Financial support: APEC** Sub-Committee on Standards and Conformance SCSC



# CONTEXT



- » This project is jointly developed by the **Chilean Food Safety and Quality Agency (ACHIPIA)** and the **Faculty of Animal and Veterinary Sciences University of Chile (FAVET)**.
- **Colaboration → ISP Chile., Dr. Juan Carlos Hormazabal**
- » **APEC forum:** Sub-Committee on Standards and Conformance (SCSC) / Food Safety Cooperation Forum (FSCF)
- » **Proposing APEC economy:** Chile
- » **Co-sponsoring economies:** Australia; Japan; Korea; Mexico; Papua New Guinea; Peru; Philippines; Thailand; United States; Singapore.
- » **Total Budget: US\$170,500**



# RELEVANCE

» 1994 Bogor Leaders' Declaration underlines APEC's commitment to achieve sustainable and equitable growth and reduce economic disparities for the well-being of its people, by the decrease in the disparity of the approach presented by the different economies in facing a relevant problem to the regional, and worldwide public health.

» In FSCF 2017, Ha Noi statement enhances the importance of the Antimicrobial Resistance (AMR) issues in health and its potential impact in food trade, and they agreed to add to the priorities areas "building competencies in AMR".

» AMR is a major public health issue because of its severe consequences: threatening infectious diseases control, causing re-emergence of some pathogens or increasing their virulence, making medical treatments costlier.

» In 2015 under SCSC/FSCF, Chile held a workshop (CTI 25 2014A Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies) focused on creating awareness about the AMR issue and the importance of generating an integrated surveillance system with harmonized laboratory methodologies.

» The Project showed that currently, there are many differences in management and in the actions taken by the different APEC economies on this issue.



# RELEVANCE

The fact that some APEC economies have already implemented resistance surveillance and monitoring systems and other economies do not have clear policies about this issue creates differences in standards and technical regulations, affecting open trade and the regional commercial flow of food.

The lack of regional integration on this issue has the potential to impact the availability of safe food products for the population.

It is essential to harmonize protocols used for identification and differentiation of each bacterial genus and for sampling, isolation, identification of strains and results reporting to establish a network between economies where data can be compared in time between laboratories.



# OBJETIVES

## » Disseminate the importance of monitoring antimicrobial resistance in the whole food chain

- This will be achieved through the lectures given by the invited experts that will participate in the workshop; these experts will provide APEC economies' representatives with the tools to address this public health problem in order to work towards harmonized and standardized methodologies.

## » Create a framework to encourage APEC economies to participate actively in actions against antimicrobial resistance

- Taking as a model the ones that have been used by other economies in the region and international organizations in order to improve economies' control measures and regulatory oversight of this hazard.

## » Strengthen integrated surveillance of antimicrobial resistance among APEC economies

- Through knowledge transfer between APEC economies with on going surveillance programs and other developing APEC economies that do not have an ongoing surveillance program on this subject.



# OUTPUTS

## Workshop on Antimicrobial resistance (AMR)

- Aimed to extend the capabilities and expertise of the different economies on monitoring antimicrobial resistance through increasing the knowledge and capacities in laboratory techniques.

## Report

- An electronic report available for all economies Will be delivered after the workshop. It Will contain a summary of the activities performed during the workshop, presentations and speakers' CV, among other useful information.

## Webpage

- All the workshop lectures will be available on a webpage that will be created for this purpose.



# OUTCOMES

## Laboratory Techniques Manual

- A manual made by Chile in english language containing laboratory techniques will be prepared for the workshop. It will be given to participants in a hard copy at the beginning of the workshop. The manual will also be shared with the FSCF PTIN members.

## Article

- After the workshop, a news bulletin article diffusing the projects' outputs and outcomes will be published on the APEC bulletin, in order to disseminate the Project to the community.

## Survey

- The results of two surveys will also be included and posted on the webpage.





## PREVIUS PROJECT:

# Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies - CTI 25 2014A (SCSC)







## PREVIUS PROJECT:

### Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies - CTI 25 2014A (SCSC)

#### Workshop on Antimicrobial resistance (AMR)

- **Santiago, Chile.** October 2015
- **Focus on AMR in order to lay the foundations and economies' needs for establishing a Resistance Surveillance System in each economy in the short term.**
- **Speakers: Experts** in AMR from APEC and non APEC economies were invited. **Internationals organizations** were represented. **APEC economies** present they currently situation in AMR surveillance.
- **Stakeholders:** Government officials, Public and Private Laboratories, food producers, Academia, International Organisms such as OIE, FAO, WHO, PAHO, IICA, among others.

#### Pre Workshop Survey

- **In order to prepare the Workshop and to gather information of the current status of surveillance in the region:** a survey was sent out to all APEC Economies.
- We received **17 responses** including; Australia; Canada; Chile; China; the Philippines; Hong Kong, China; Indonesia; Japan; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; Chinese Taipei; Thailand; USA and Viet Nam.
- This **represents 81 %** of the call.













## PREVIOUS PROJECT:

### **Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies - CTI 25 2014A (SCSC)**

CTI 25 2014A project installed AMR in the APEC Food Safety Agenda

Succesfully engaged Academia-Government- Internacional organizations- Industry

FSCF 2017, Ha Noi statement agreed to add to the priorities areas "building competences" in AMR

APEC Concept Note: Building Competence in Antimicrobial Resistance Surveillance Methodologies







## Workshop Report – Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies

28 - 30 October 2015  
Santiago, Chile

Sub-Committee on Standards and Conformance

March 2016

2016 APEC Secretariat APEC#216-CT-01.3  
ISBN: 978-981-09-9019-0

<https://apec.org/Publications/2016/03/Workshop-Report--Coordinated-Research-Initiative-for-the-Implementation-of-Antimicrobial-Resistance>

Original Article

## Antimicrobial Resistance Control Strategies: A Coordinated Research Initiative Experience in the Asia Pacific Region

Asia Pacific Journal of Public Health  
2017, Vol. 29(4) 250–258  
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DOI: 10.1177/1010539517709026  
journals.sagepub.com/home/aph  
SAGE

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Constanza Vergara, DVM, PhD<sup>2</sup>,  
and Javiera Cornejo, DVM, PhD<sup>1</sup>

### Abstract

The objective was to gather information on the status of antimicrobial surveillance in the Asia Pacific region and suggest control strategies. Twenty-one economies of the Asia Pacific region participated in this initiative. A survey was conducted on antimicrobial use and surveillance throughout the region. A workshop was carried out to create awareness about the issue and discuss the implementation of control strategies. Based on the survey results and workshop conclusions, it can be established that there is better understanding of the implications of antimicrobial resistance in the human medicine area. Only few economies take actions to control antimicrobial resistance on a veterinary/agricultural level. To confront antimicrobial resistance, it is critical to raise awareness; cooperation between all countries is needed to apply international standards, to be able to have harmonized public policies. Countries must align and improve their systems for surveillance and monitoring of antimicrobial resistance in human, animals, and the environment.

### Keywords

antimicrobial control strategies, antimicrobial resistance, antimicrobial surveillance, antimicrobial use, Asia Pacific region

### Introduction

Nowadays, antimicrobial resistance (AMR), associated with animal food production is an issue of special concern worldwide.<sup>1</sup> According to the World Health Organization (WHO), AMR has the potential to threaten health security, and damage trade and economies. The growth of animal production, food global trade and travel allows resistant microorganisms to spread rapidly to distant countries and continents. Estimates show that AMR may give rise to losses in gross domestic

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[http://journals.sagepub.com/doi/abs/10.1177/1010539517709026?url\\_ver=Z39.88-2003&rft\\_id=ori:rid:crossref.org&rft\\_dat=cr\\_pub%3dpubmed](http://journals.sagepub.com/doi/abs/10.1177/1010539517709026?url_ver=Z39.88-2003&rft_id=ori:rid:crossref.org&rft_dat=cr_pub%3dpubmed)



# RESULTS

Survey 2018: 26 questions

14 economies

More answers will be included in final report

Australia

Canada

Hong Kong

Indonesia

Malaysia

México

New Zealand

Perú

Philippines

Thailand

Viet Nam

Japan

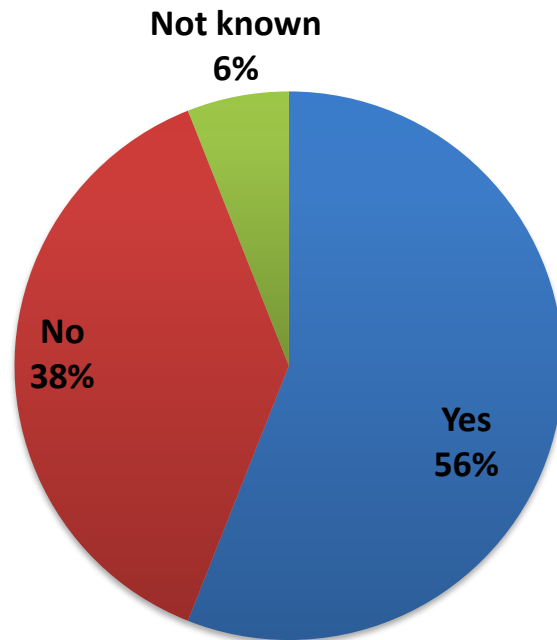
United States

Chile



# 2015

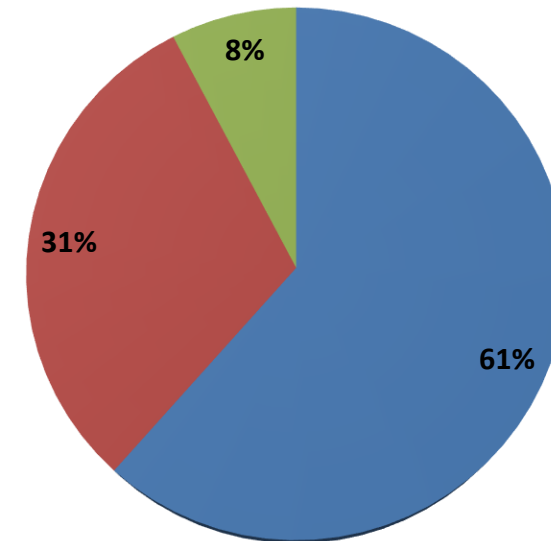
**In your economy, by law: Do AMR surveillance programs exist?**



# 2018

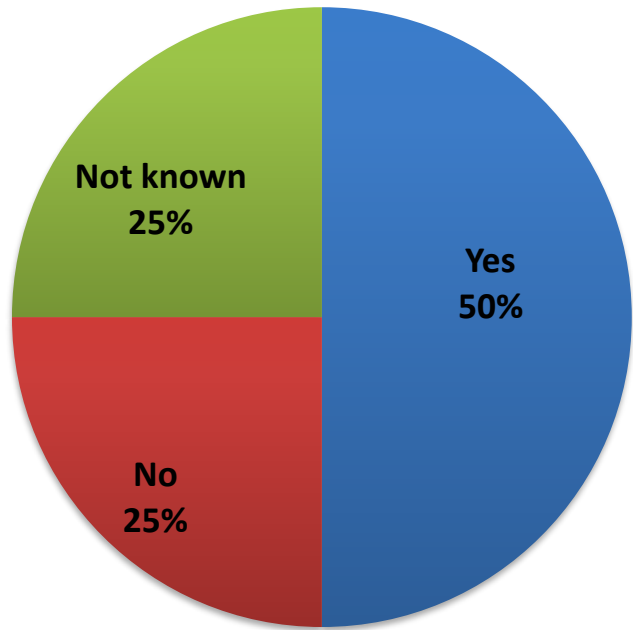
**In your economy, by law: Do AMR surveillance program exist?**

■ Yes ■ No ■ N/K



# 2015

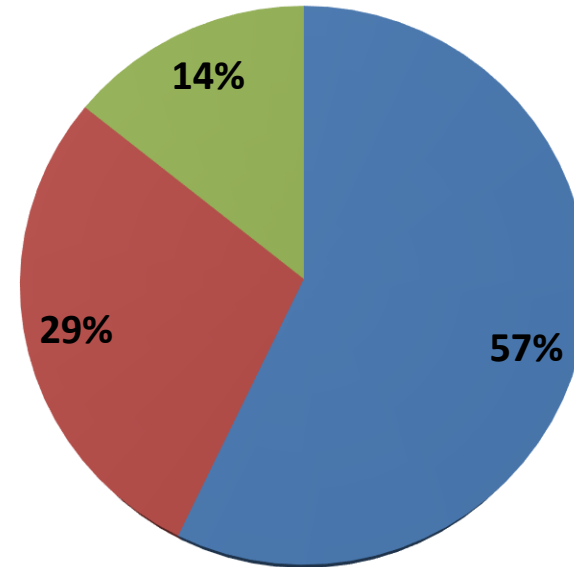
**Does a List of Essential Drugs exist in your economy?**



# 2018

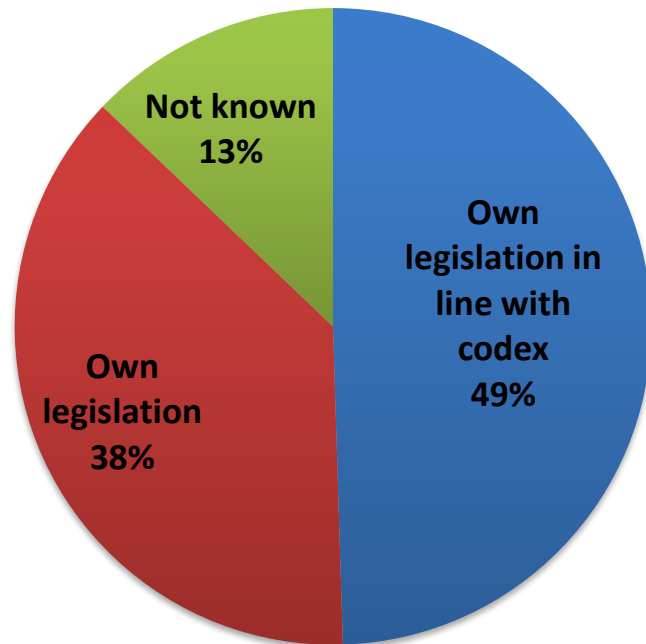
**Does a Critical Important Antimicrobial National list exist in your economy?**

■ Yes ■ No ■ N/K



# 2015

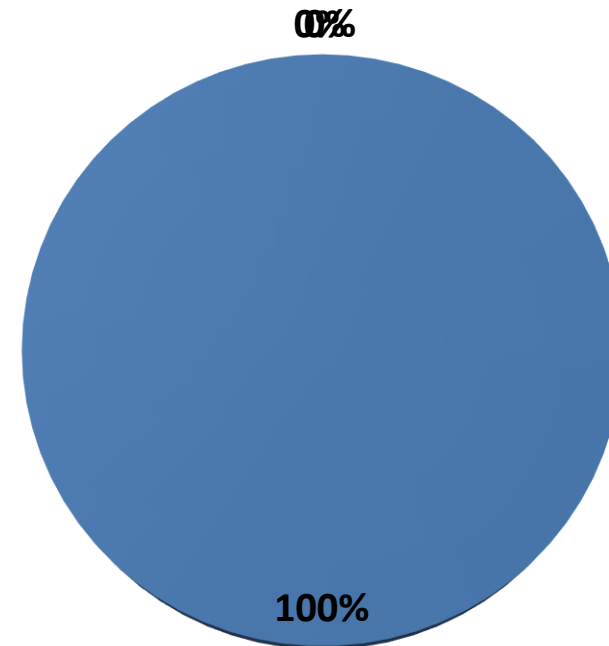
The list of authorized veterinary drugs in your economy corresponds to:



# 2018

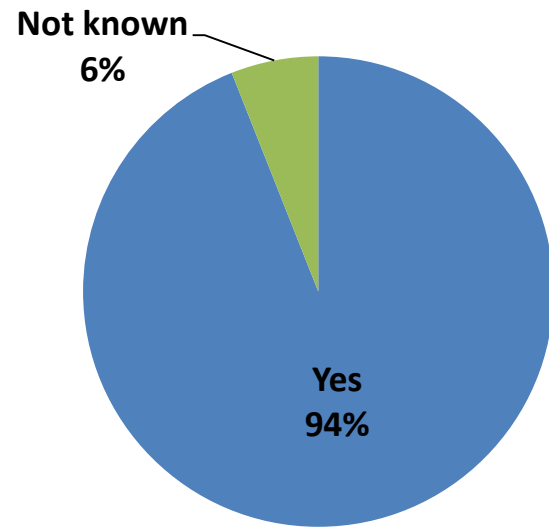
If your answer is NO. Does your economy use the WHO CIA list as a reference?

■ Yes ■ No ■ N/K



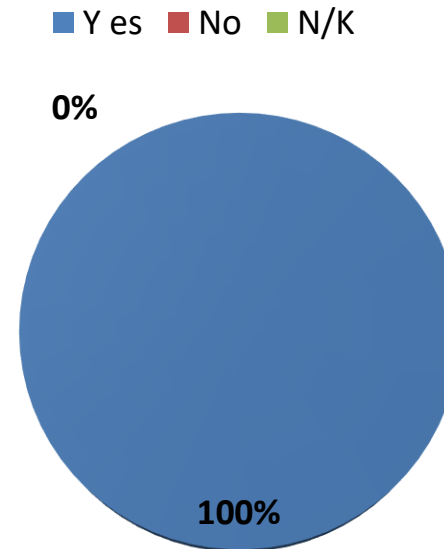
# 2015

**Does a government agency in charge of the registry and authorization of drugs for veterinary use exist in your economy?**



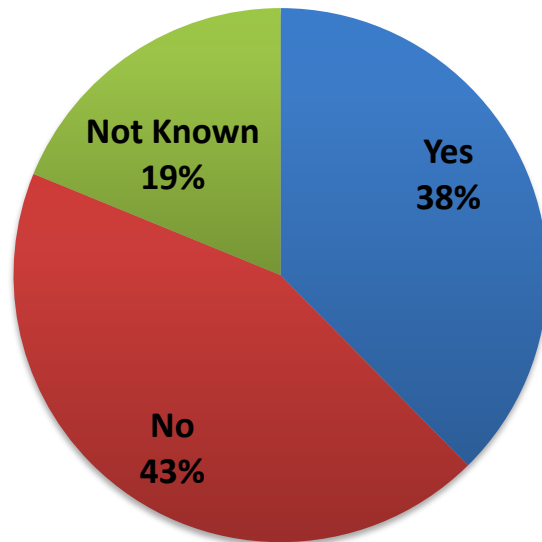
# 2018

**Does a government agency is in charge of the registry and authorization of drugs for veterinary use in your economy?**



# 2015

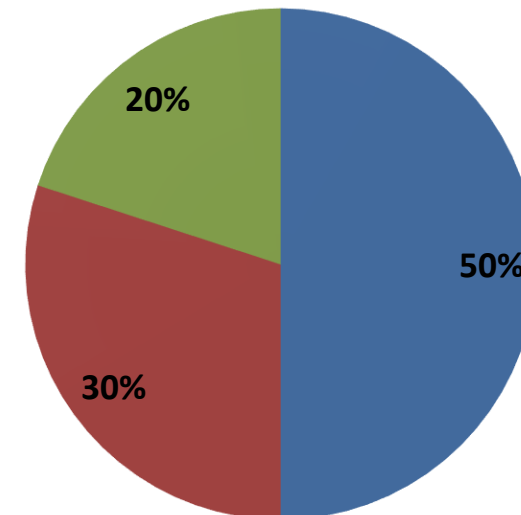
Does this control take place with traceability program?



# 2018

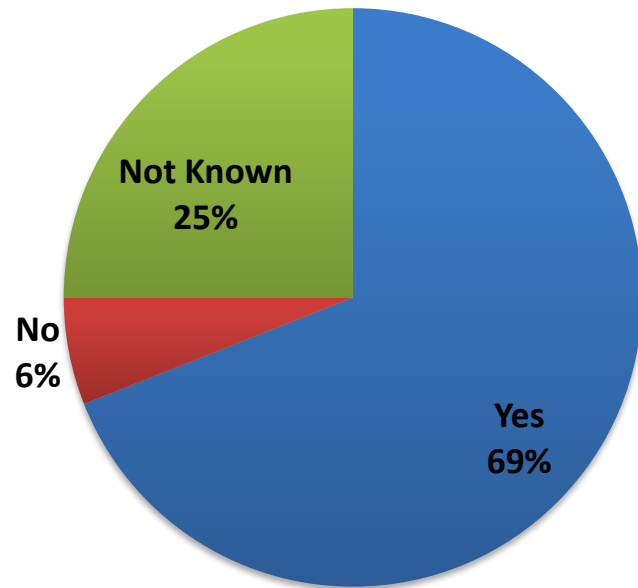
Does this control take place with traceability program (control throughout the food chain) for the use of these drugs?

■ Yes ■ No ■ N/K



# 2015

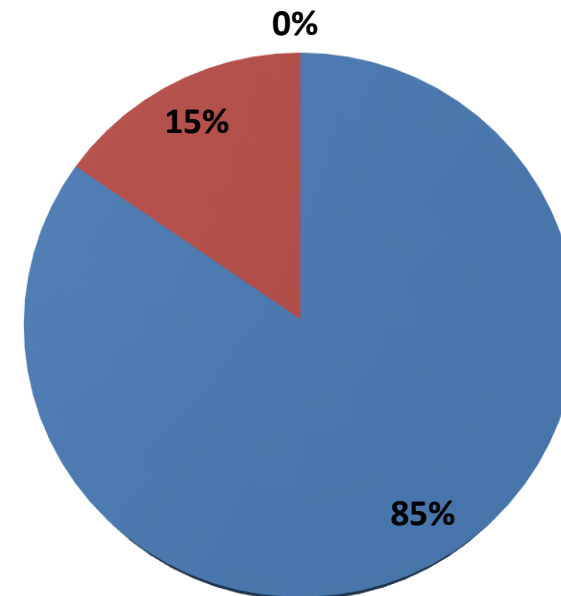
**Does a program for the control of veterinary drug residues in food and/or the environment exist in your economy?**



# 2018

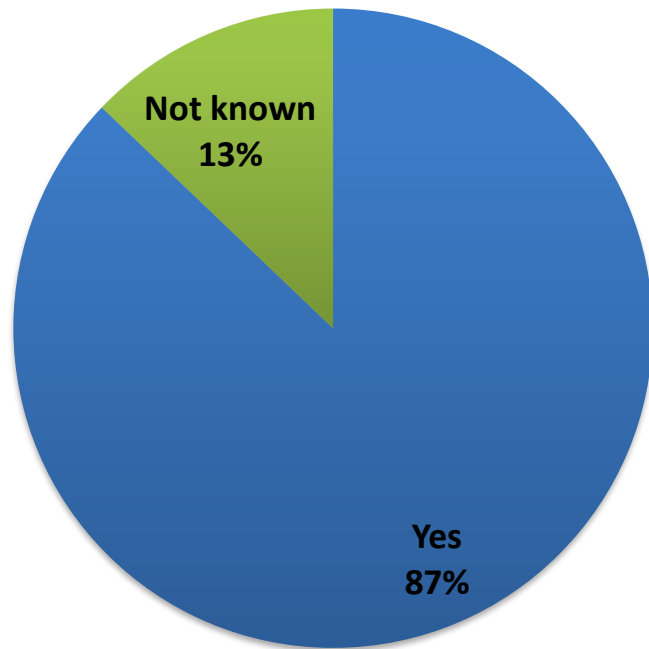
**Does a program for the control of veterinary drug residues in food and/or the environment exist in your economy?**

■ Yes ■ No ■ N/K



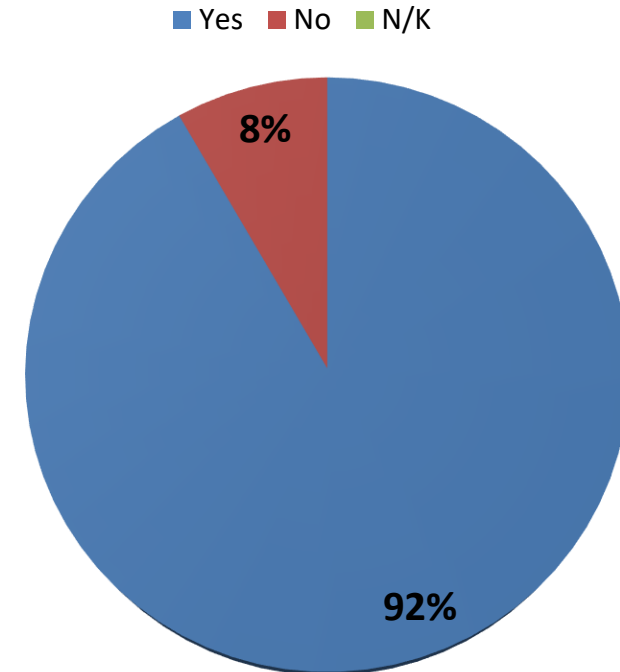
# 2015

**Is there an official National Reference Laboratory (NRL) for AB susceptibility testing?**



# 2018

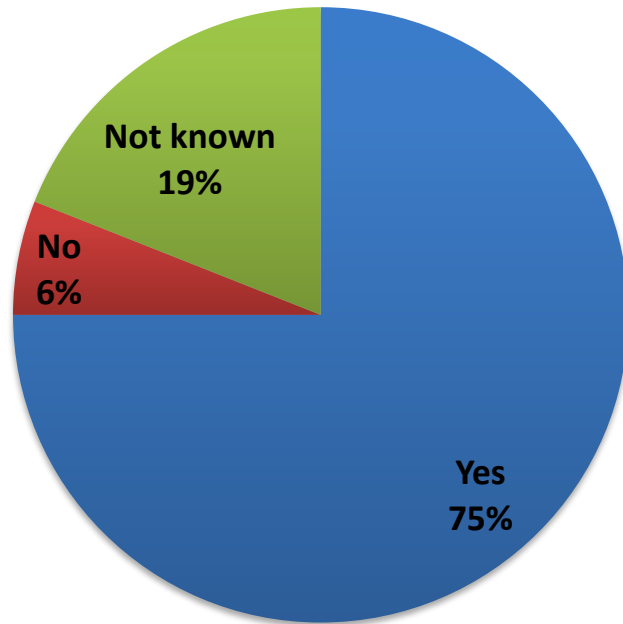
**Is there an official National Reference Laboratory (NRL) (or some other key public laboratory performing some or all of the typical tasks of NRL) for AB susceptibility testing?**





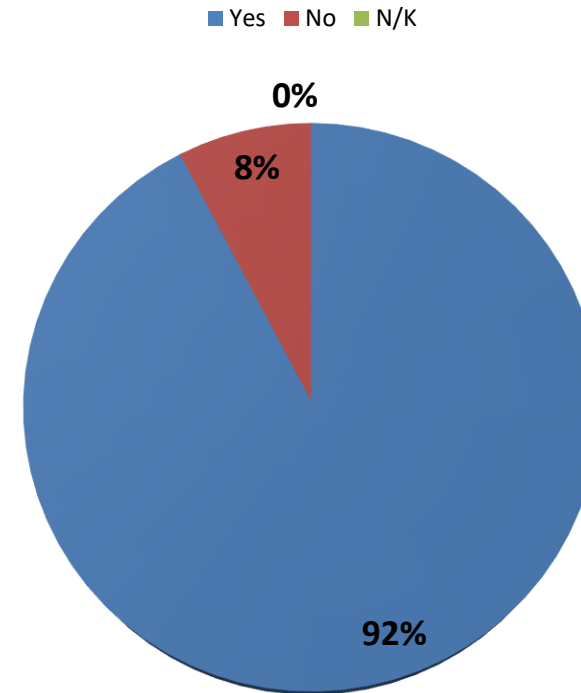
# 2015

Is there in the economy "research and development" (R & D) related to AMR?



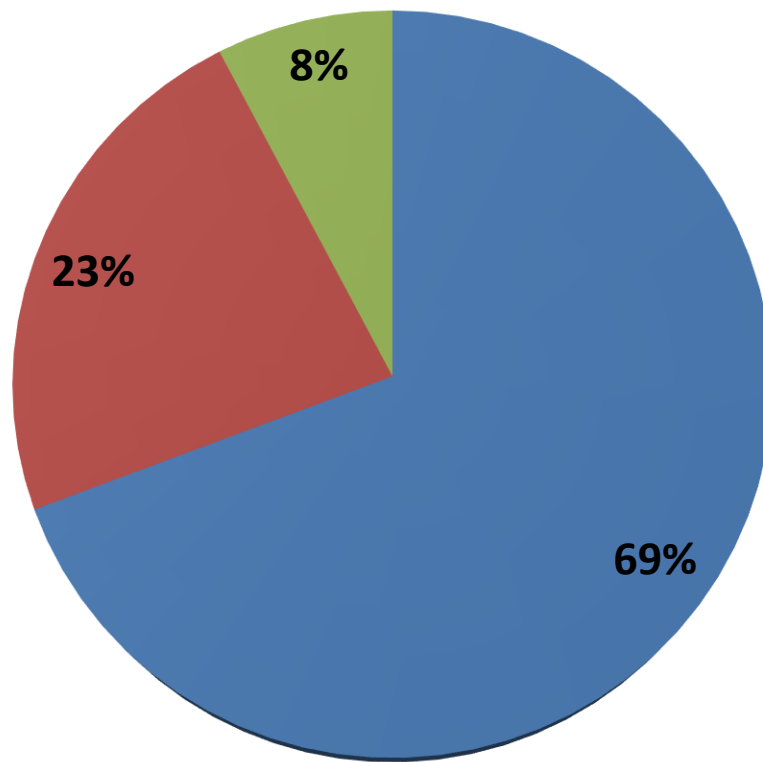
# 2018

In your economy, is there "Research and Development" (R&D) related to AMR?



## Does your economy have an integrated surveillance program of AMR in the food chain?

■ Yes ■ No ■ N/K





# GENERAL CONCLUSIONS

Significant increase of the level of awareness in AMR by the economies

Improve of the AMR surveillance programs, and AM use related programs , as drug use monitoring, drug residues programs, prescription, etc.

Armonization of legislation and regulatory framework

69% of the economies declare to have implemented an Integrated Surveillance Program of AMR in the Food Chain:

- Monitoring: Meat of chicken, bovine, pork; milk; fish and shellfish.
- Different sampling points: Farm, abattoir, processing plants, sale points.

Laboratory capacity ?? Training?? Capacity building??



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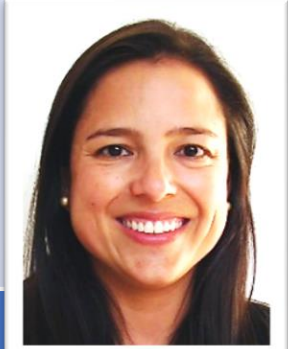
Preliminary results → Final report  
December 2018

FSCF APEC 2019 Chile.

APEC  
2019 | Chile 

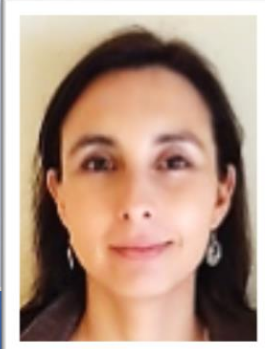
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# THANK YOU

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