



**Asia-Pacific  
Economic Cooperation**

**Proceedings of the 1st APEC Expert Forum**  
for “International initiatives to control  
antimicrobial resistance in the Asia-Pacific region”

**APEC Health Working Group**  
April 2011

## **APEC Project HWG 05/2010A**

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# **Proceedings of the 1st APEC Expert Forum**

for “International initiatives to control antimicrobial resistance in the Asia-Pacific region”:  
Current issues on antimicrobial resistance in Asia

**April 5, 2011**

COEX, Seoul, Korea

**APEC Health Working Group**

April 2011

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# SCHEDULE OF THE 1ST APEC EXPERT FORUM

## Current issues on antimicrobial resistance in Asia

Registration ..... 08:00 - 08:45

**Introduction – APEC project** ..... 08:45 - 09:00

**Jae-Hoon Song** (Project Overseer, Korea)

**Current issues on antimicrobial resistance in Asia : summary of survey results** ..... 09:00 - 09:20

**Doo Ryeon Chung** (Samsung Medical Center, Korea)

**Panel Discussion** ..... 09:20 - 11:20

Chair : **Jae-Hoon Song** (Samsung Medical Center, Korea)

Panel : **Hui Wang** (Peking University People's Hospital, China)

**Po-Ren Hsueh** (National Taiwan University Hospital, Chinese Taipei)

**Hiroshige Mikamo** (Aichi Medical University Hospital, Japan)

**Celia Carlos** (Research Institute for Tropical Medicine, Philippines)

**Visanu Thamlikitkul** (Siriraj Hospital, Thailand)

**Future plan for APEC project** ..... 11:20 - 11:30

**Jae-Hoon Song** (Project Overseer, Korea)

**Closing remarks**

**Jae-Hoon Song** (Project Overseer, Korea) ..... 11:30 - 11:45



# 1st APEC Expert Forum

Introduction of APEC project :  
International initiatives to control antimicrobial  
resistance in the Asia-Pacific region

**Jae-Hoon Song, MD, PhD**

Project Overseer,  
Chairman, Asia Pacific Foundation of Infectious diseases (APFID)  
Organizer, Asian Network for Surveillance of Resistant Pathogens (ANSORP)  
Professor of Medicine, Samsung Medical Center,  
Sungkyunkwan University School of Medicine,  
Seoul, Korea



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## International initiatives to control antimicrobial resistance in the Asia-Pacific region

Proposing APEC Economy : Republic of Korea  
Project overseer : Jae-Hoon Song, MD, PhD (Korea)  
Co-sponsoring APEC Economies : Chinese Taipei, Canada

In collaboration with  and 

### Basic facts of the project

Title of the project	International initiatives to control antimicrobial resistance in the Asia-Pacific region
Proposing APEC economy	Republic of Korea
Co-sponsoring APEC economies	Chinese Taipei, Canada
Project overseer	Professor Jae-Hoon Song, MD, PhD (APFID; Samsung Medical Center, Seoul, Korea)
Organization	Asia Pacific Foundation for Infectious Diseases (APFID) in collaboration with APEC economies, non-APEC stakeholders and ANSORP (Asian Network for Surveillance of Resistant Pathogens)



## Background of the project

### Current situation of resistance in the AP region

- Asian countries are the epicenter of antimicrobial resistance with the highest prevalence rates of resistance in major bacterial pathogens, which are 2- or 3-times higher than those in the western part of the world
- Widespread abuse and misuse of antibiotics and the spread of resistant clones are the main reasons for the rapid emergence of resistance in the Asian region
- However, in many Asian countries, antimicrobial resistance is still a neglected issue due to lack of awareness. Weak and unorganized policies and regulations in many Asian countries are also contributing to the increase in antimicrobial resistance
- Given its devastating impact on human lives and economies, comprehensive strategies for control and prevention of antimicrobial resistance are urgently required in the AP region



## Background of the project

### Unmet need in Asia

- 
- Council of European Union
  - ECDC
- ↓
- Community strategy
  - ECDC-EMEA-ReAct Joint Report

- CDC
- ITFAR (Interagency Task Force on Antimicrobial Resistance)
- STAAR Act





## Objectives of the project

### Long-term goal and objectives

#### ❖ Long-term goal of the project

To control and prevent antimicrobial resistance (AMR) in the AP region

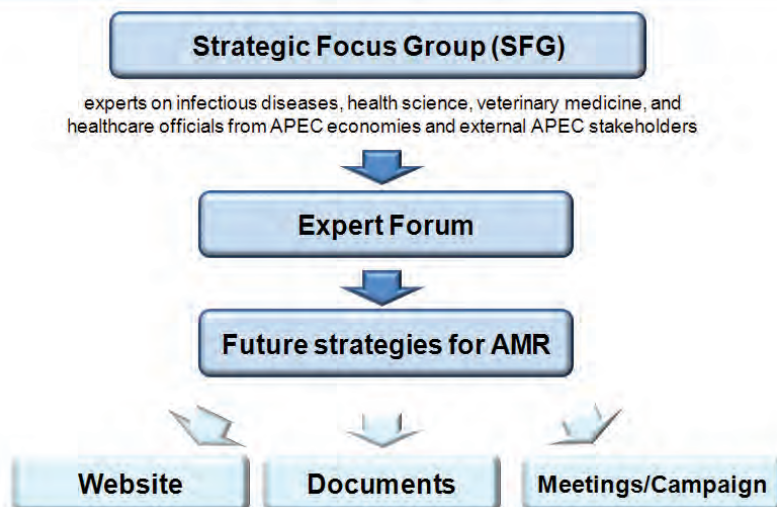
#### ❖ Main objectives of the project

- To organize the Strategic Focus Group (SFG) that will plan the future strategies and coordinate the implementation of the plan
- To organize an Expert Forum to discuss and explore solutions to AMR in the region
- To disseminate the information and future strategies to the APEC economies by websites and documents as well as through available meetings and campaigns



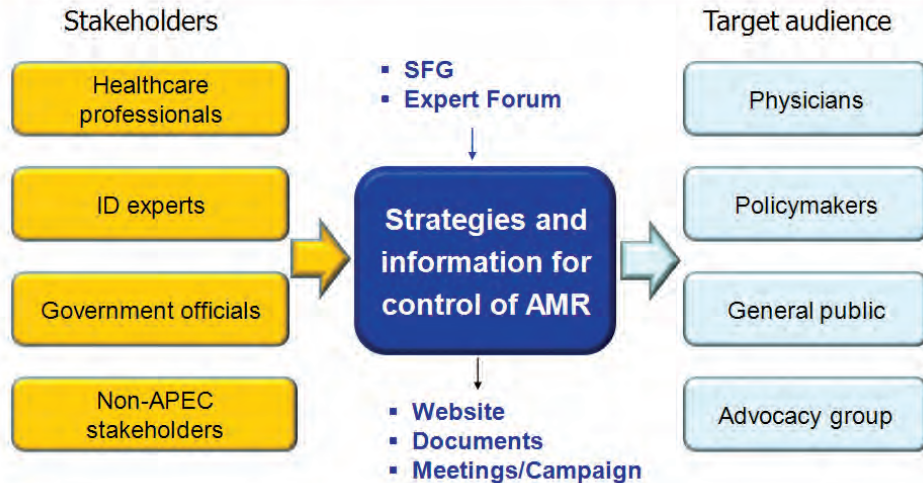
## Method of the project

### How do we perform the project ?



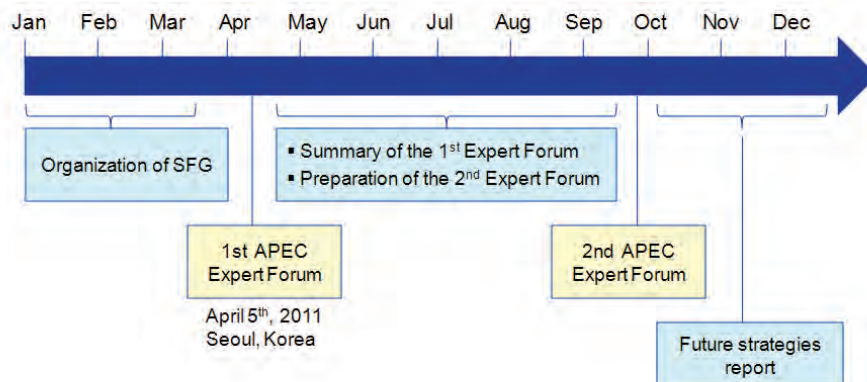
## Method of the project

### Beneficiaries and relevant stakeholders & engagement



## Method of the project

### Timeline of the project



## Method of the project

### Organization of SFG



## Progress of the project

### Organization of SFG – Executive Committee

Economy	Name	Organization	Role
Korea	Jae-Hoon Song	Samsung Medical Center	Chair
Thailand	Visanu Thamlikitkul	Siriraj Hospital	Member
China	Hui Wang	Peking University People's Hospital	Member
Chinese Taipei	Cheng-Hsun Chiu	Chang Gung Memorial Hospital	Member
Korea	Doo Ryeon Chung	Samsung Medical Center	Secretary, scientific affairs
Korea	So Hyun Kim	Asia Pacific Foundation for Infectious Diseases (APFID)	Secretary, publication & logistics



## Progress of the project

### Organization of SFG – 1st Working Group

#### 1st Working Group of SFG

International, multi-sectoral experts from APEC economies

Economy	Name	Hospital	Expertise
Korea	Dr. Jae-Hoon Song	Samsung Medical Center	ID
Thailand	Dr. Visanu Thamlikitkul	Siriraj Hospital	ID
China	Dr. Hui Wang	Peking University People's Hospital	Microbiology
Chinese Taipei	Dr. Cheng-Hsun Chiu	Chang Gung Memorial Hospital	Pediatric ID
Hong Kong, China	Dr. Thomas So	Princess Margaret Hospital	ID
Japan	Dr. Hiroshige Mikamo	Aichi Medical University	ID
Malaysia	Dr. Rohani Md Yasin	Institute for Medical Research	ID
Philippines	Dr. Celia Carlos	Research Institute for Tropical Medicine	Pediatric ID
Singapore	Dr. Li Yang Hsu	National University Hospital	ID
Viet Nam	Dr. Pham Hung Van	University of Medicine and Pharmacy	Microbiology



## 1st APEC Expert Forum

### ❖ 1st APEC Expert Forum

- Date : April 5, 2011 (Tue)
- Venue : ASEM Hall, COEX convention center, Seoul, Korea
- Participants : About 50 experts (11 APEC & 2 non-APEC economies)
  - Members of 1st Working Group of SFG
  - Experts from 11 APEC economies :  
China, Hong Kong, China, Indonesia, Japan, Korea, Malaysia,  
the Philippines, Singapore, Chinese Taipei, Thailand, and Viet Nam
  - Experts from 2 non-APEC economies : India and Sri Lanka



# 1st APEC Expert Forum

## Agenda of the 1st Expert Forum

### ❖ Current issues on antimicrobial resistance (AMR) in Asia

- Current situation of AMR in Asian countries
- Current situation of antimicrobial uses in Asian countries
- Current regulations and policies related to antibiotics, national health care infrastructure
- Panel discussion : major current issues on AMR in Asia
- Plan for 2nd APEC Expert Forum





# 1st APEC Expert Forum

## Current issues on antimicrobial resistance in Asia : Summary of survey result

**Doo Ryeon Chung, MD, PhD**

Associate Professor of Medicine  
Division of Infectious Diseases,  
Samsung Medical Center,  
Sungkyunkwan University School of Medicine,  
Seoul, Korea



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## Current issues on antimicrobial resistance in Asia

### *Summary of survey results*

Doo Ryeon Chung, MD, PhD

Associate Professor of Medicine  
Division of Infectious Diseases,  
Samsung Medical Center,  
Sungkyunkwan University School of Medicine, Seoul, Korea



## Current issues on antimicrobial resistance in Asia: summary of survey results

- **Objective of survey**

To understand the current situation of antimicrobial resistance issues in Asia

- **Question issues**

- Surveillance of Antimicrobial resistance in major pathogens
- Surveillance of antibiotic usage
- Antibiotic control in hospitals
- Regulations and policies for proper antibiotic use
- Awareness of antimicrobial resistance and antibiotic use / Antibiotic campaign



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## Current issues on antimicrobial resistance in Asia: summary of survey results

- **Individuals being surveyed**
  - Infectious diseases physicians
  - Pediatric infectious diseases physicians
  - Clinical microbiologists
  - In economies
    - APEC : Korea, Japan, China, Hong Kong, China, Chinese Taipei, Philippines, Thailand, Viet Nam, Malaysia, Singapore, Indonesia
    - Non-APEC : India, Sri Lanka, Saudi Arabia
- **Method of survey**
  - Questionnaire by e-mail



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## Current status of antimicrobial resistance in Asia



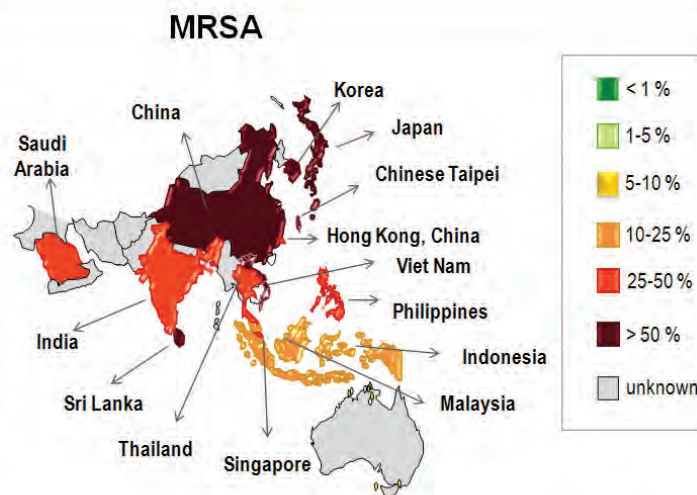


## Current status of antimicrobial resistance in Asia

	Antimicrobial resistance surveillance systems	
	Nationwide	Hospital
Korea	Yes	Yes
Japan	Yes	<b>NO</b>
China	Yes	Yes
Hong Kong, China	Yes	Yes
Chinese Taipei	Yes	Yes
Philippines	Yes	Yes
Thailand	Yes	Yes
Viet Nam	Yes	<b>NO</b>
Malaysia	Yes	Yes
Singapore	Yes	Yes
Indonesia	<b>NO</b>	<b>NO</b>
India	Yes	Yes
Sri Lanka	Yes	Yes
Saudi Arabia	Yes	Yes

## Current status of antimicrobial resistance in Asia

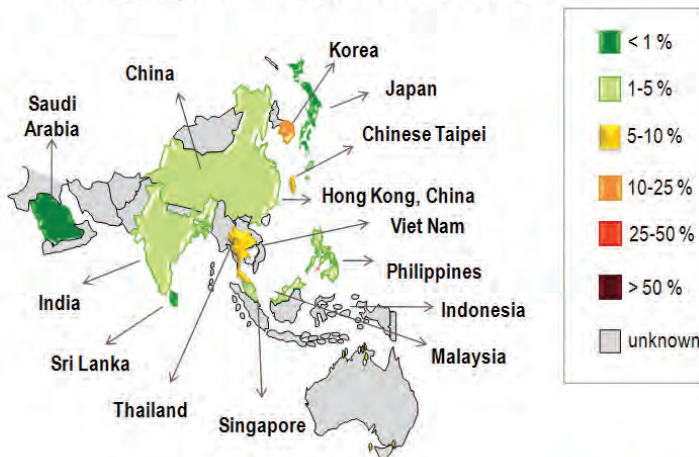
	Resistance %
Korea	>50%
Japan	>50%
China	>50%
Hong Kong, China	25-50%
Chinese Taipei	>50%
Philippines	25-50%
Thailand	25-50%
Viet Nam	>50%
Malaysia	10-25%
Singapore	25-50%
Indonesia	10-25%
India	25-50%
Sri Lanka	>50%
Saudi Arabia	25-50%



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	10-25%
Japan	<1%
China	1-5%
Hong Kong, China	1-5%
Chinese Taipei	5-10%
Philippines	1-5%
Thailand	5-10%
Viet Nam	
Malaysia	1-5%
Singapore	1-5%
Indonesia	
India	1-5%
Sri Lanka	<1%
Saudi Arabia	<1%

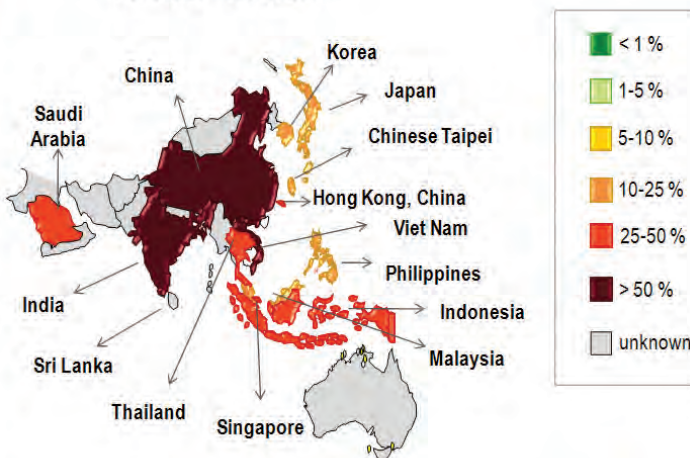
### Vancomycin-resistant Enterococcus



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	10-25%
Japan	10-25%
China	>50%
Hong Kong, China	25-50%
Chinese Taipei	10-25%
Philippines	10-25%
Thailand	25-50%
Viet Nam	>50%
Malaysia	10-25%
Singapore	25-50%
Indonesia	25-50%
India	>50%
Sri Lanka	
Saudi Arabia	25-50%

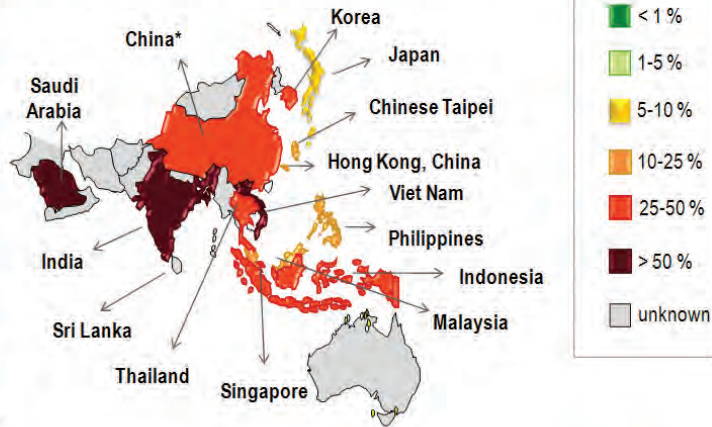
### ESBL+ *E. coli*



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	25-50%
Japan	5-10%
China	25-50%
Hong Kong, China	10-25%
Chinese Taipei	10-25%
Philippines	10-25%
Thailand	25-50%
Viet Nam	>50%
Malaysia	10-25%
Singapore	25-50%
Indonesia	25-50%
India	>50%
Sri Lanka	>50%
Saudi Arabia	>50%

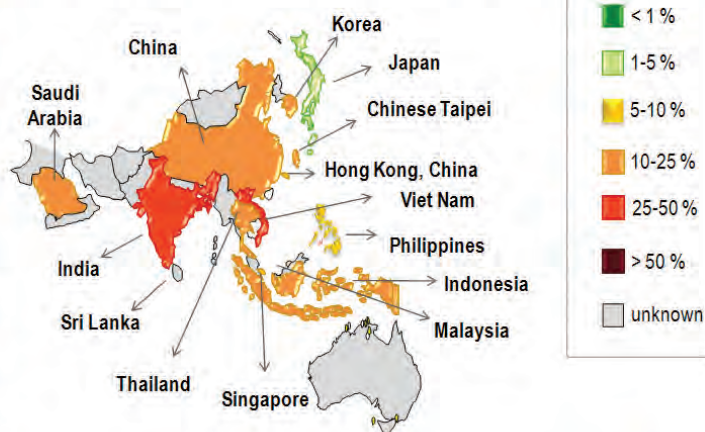
### ESBL+ *Klebsiella pneumoniae*



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	10-25%
Japan	1-5%
China	10-25%
Hong Kong, China	10-25%
Chinese Taipei	10-25%
Philippines	5-10%
Thailand	10-25%
Viet Nam	25-50%
Malaysia	
Singapore	10-25%
Indonesia	10-25%
India	25-50%
Sri Lanka	
Saudi Arabia	10-25%

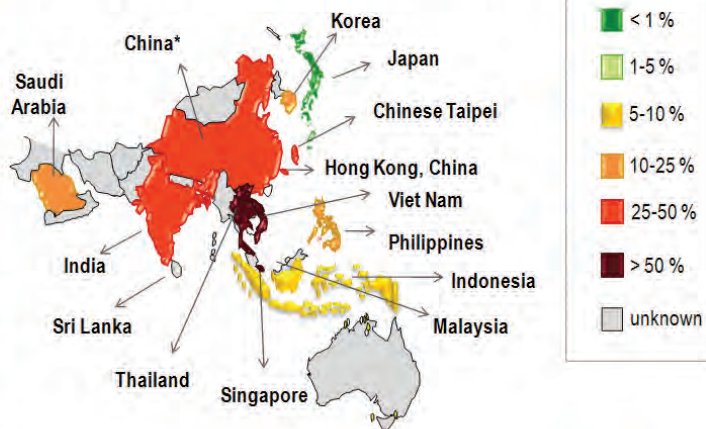
### MDR *Pseudomonas aeruginosa*



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	10-25%
Japan	<1%
China	25-50%
Hong Kong, China	25-50%
Chinese Taipei	25-50%
Philippines	10-25%
Thailand	>50%
Viet Nam	>50%
Malaysia	
Singapore	>50%
Indonesia	5-10%
India	25-50%
Sri Lanka	
Saudi Arabia	10-25%

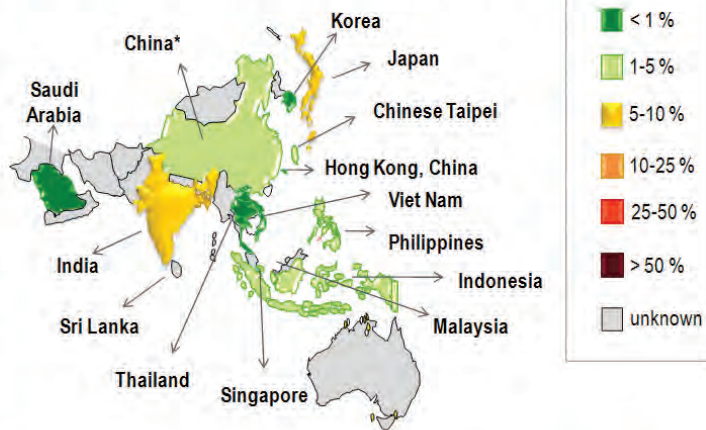
### MDR *Acinetobacter baumannii*



## Current status of antimicrobial resistance in Asia

	Resistance %
Korea	<1%
Japan	5-10%
China	1-5%
Hong Kong, China	<1%
Chinese Taipei	1-5%
Philippines	1-5%
Thailand	<1%
Viet Nam	<1%
Malaysia	
Singapore	1-5%
Indonesia	1-5%
India	5-10%
Sri Lanka	
Saudi Arabia	<1%

### Carbapenem R *Enterobacteriaceae*



## Clinical and economic burden of antimicrobial resistance

### Clinical and economic burden of antimicrobial resistance

Is there any data (mortality, morbidity, hospitalization rates, or length of hospital stay related to antibiotic-resistant bacterial infection) available on clinical burden of antimicrobial resistance in your country?

	Clinical burden of antimicrobial resistance	
	Nationwide	Hospital
Korea	No	YES
Japan	No	YES
China	YES	YES
Hong Kong, China	No	YES
Chinese Taipei	YES	YES
Philippines	No	No
Thailand	No	No
Viet Nam	No	No
Malaysia	No	YES
Singapore	No	YES
Indonesia	No	YES
India	No	YES
Sri Lanka	No	YES
Saudi Arabia	No	No

## Clinical and economic burden of antimicrobial resistance

Is there any data available on economic burden of antimicrobial resistance in your country?

	Economic burden of antimicrobial resistance	
	Nationwide	Hospital
Korea	No	No
Japan	No	No
China	No	No
Hong Kong, China	No	No
Chinese Taipei	No	<b>YES</b>
Philippines	No	No
Thailand	No	No
Viet Nam	No	No
Malaysia	No	No
Singapore	No	<b>YES</b>
Indonesia	No	<b>YES</b>
India	No	No
Sri Lanka	No	No
Saudi Arabia	No	No

## Surveillance of antibiotic usage in Asia

## Surveillance of antibiotic usage

Is there any nationwide data available regarding antibiotic usage in community or hospitals?



## Surveillance of antibiotic usage

Which administration / organization is responsible to generate the database of antibiotic usage in your country?

	FDA	National health Insurance institute	Hospitals	Others
Korea		<input type="radio"/>		
Japan				
China	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Min. of H.
Hong Kong, China				
Chinese Taipei		<input type="radio"/>		IMS
Philippines				
Thailand	<input type="radio"/>			
Viet Nam				
Malaysia				Nat'l Pharma Bureau
Singapore				Local expert network
Indonesia				
India				
Sri Lanka				
Saudi Arabia				

## Surveillance of antibiotic usage

Which classes of antimicrobial agents is the most widely used in your country?

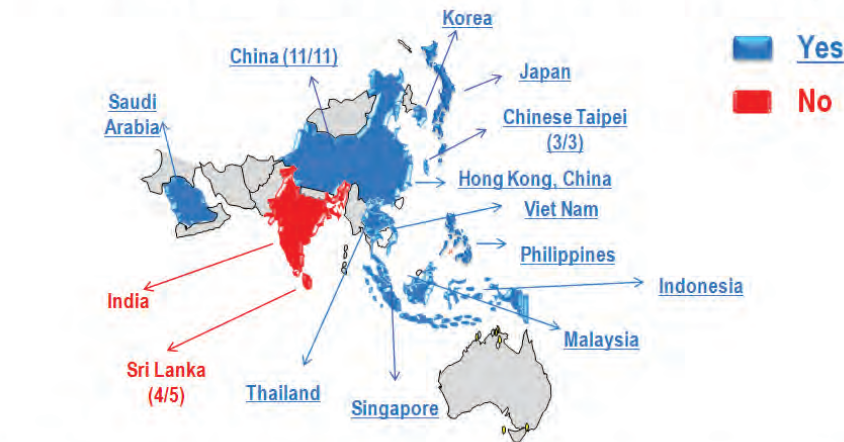
	Cephalosporins	Penicillins	Macrolides	Fluoroquinolones	Tetracyclines	Others
Korea	<input type="radio"/>			<input type="radio"/>		
China	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
Chinese Taipei	<input type="radio"/>	<input type="radio"/>				
Thailand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
Malaysia	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		Carbapenem
Singapore	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		

## Antibiotic control program in hospitals in Asia



## Antibiotic control program in hospitals

Do the hospitals have the antibiotic control / restriction program?



## Antibiotic control program in hospitals

Which antibiotics are usually included in the list of restricted antibiotics in hospitals?

	KR	JP	CH	HK	TW	PH	TH	VN	MA	SI	IN DO	SL	SA
3rd G cephalosporin			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>					
4th G cephalosporin			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>				
IV fluoroquinolone			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>				
Carbapenem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vancomycin or teicoplanin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
Others:	Linezolid Tigecycline Colistin New antifungal	Linezolid	Linezolid (1/11)		Linezolid Daptomycin Tigecycline Piperac/tazo Amikacin New antifungal		Linezolid Tigecycline Piperac/tazo Colistin New antifungal			Linezolid Daptomycin Tigecycline New antifungal			

## Antibiotic control program in hospitals

Which programs are used to restrict antibiotic use in hospitals?

	KR	JP	CH	HK	TW	PH	TH	VN	MA	SI	IN DO	SL	SA
Computer-based ordering system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>					<input type="radio"/>			
Automatic stop order	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>						
Consultation by ID physicians	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
Formulary restriction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>
Others:													

↑  
Consultation  
By clinical  
microbiologist

## Regulations and policies related to antibiotic use in Asia

## Regulations and policies related to antibiotic use

Is it possible to purchase antibiotics without prescriptions?



## Regulations and policies related to antibiotic use

If it is possible to purchase antibiotics without prescriptions, where do people usually purchase them?

	CH	HK	TW	PH	TH	VN	INDO	IN	SL	SA
Pharmacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supermarket	<input type="radio"/>				<input type="radio"/>				<input type="radio"/>	
Department store					<input type="radio"/>					
Internet shopping mall		<input type="radio"/>								<input type="radio"/>
Hospital shop	<input type="radio"/>									
Alternative medicine clinic	<input type="radio"/>									
Others										

↑  
Black market

## Regulations and policies related to antibiotic use

If it is possible to purchase antibiotics without prescriptions, which classes of antimicrobials can be purchased over the counter?

	CH	HK	TW	PH	TH	VN	INDO	IN	SL	SA
• Cephalosporins	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Penicillins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Macrolides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Fluoroquinolones	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Tetracyclines	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Others								<input type="radio"/> Clindamycin <input type="radio"/> Antifungal <input type="radio"/> Antiviral ,etc	<input type="radio"/> Chloramphenicol <input type="radio"/> Cotrimoxazole <input type="radio"/> Nitrofurantoin <input type="radio"/> Antifungal ,etc	

## Regulations and policies related to antibiotic use

If it is possible to purchase antibiotics without prescriptions, how antibiotics are regulated?



Philippines

There is a law requiring prescription to purchase antibiotics, however, implementation is a problem.



Thailand

Some antibiotics such as anti-HIV drugs are not allowed to be sold in pharmacy.



Indonesia

Some antibiotics (especially parenteral) are restricted, and antibiotics cannot be purchased in the pharmacy without doctor's prescription



India

Some pharmacies require prescription whereas others don't.

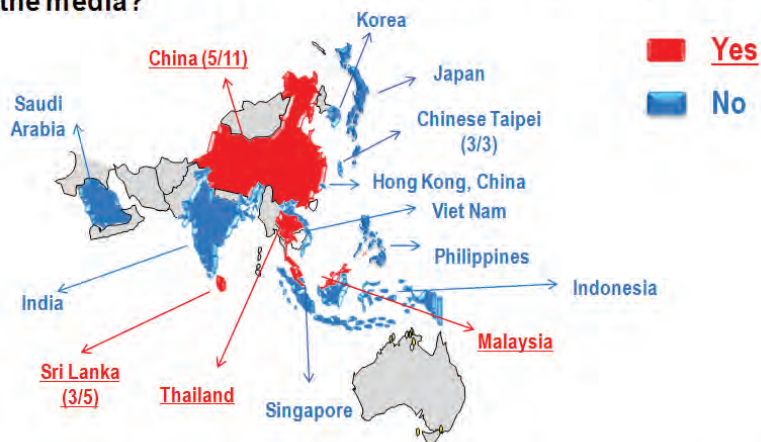


Sri Lanka

Officially, prescription drugs have to be prescribed by a doctor licensed. However, still antibiotics can be purchased in pharmacies without prescription except in those belonging to state.

## Regulation / Policy for antibiotic control

Is an advertisement for antibiotics or public marketing allowed in the media?



## Regulation / Policy for antibiotic control

Do you have any information that counterfeit antibiotics are used in your country?



## Regulation / Policy for antibiotic control

Is there any regulation to control counterfeit antibiotics?



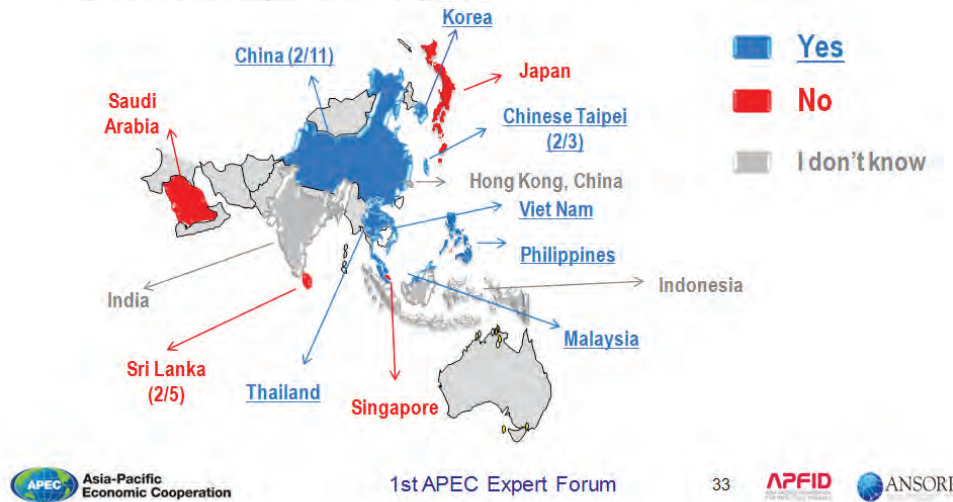
## Antibiotic usage and regulation in livestock production

Are there any public efforts to promote rational use of antibiotics in livestock production in your country?



## Antibiotic usage and regulation in livestock production

Is there any regulation to control antibiotic use in livestock production in your country?

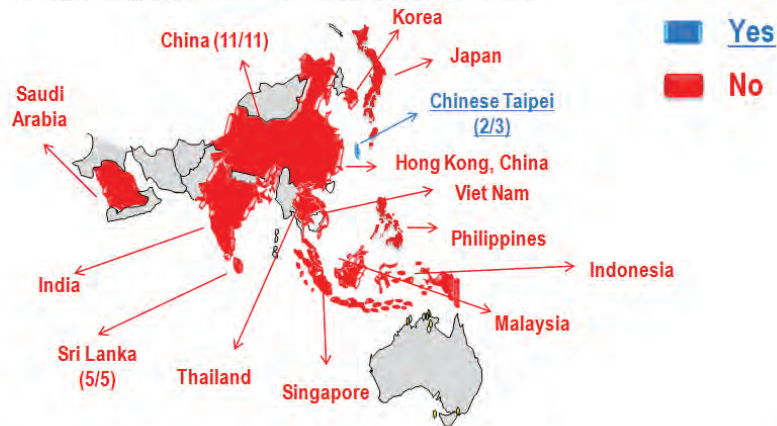


## Awareness of antimicrobial resistance in Asia



## Public awareness of antimicrobial resistance

Do you think that general public in your country have adequate knowledge on antimicrobial resistance?



## Public awareness of antimicrobial resistance

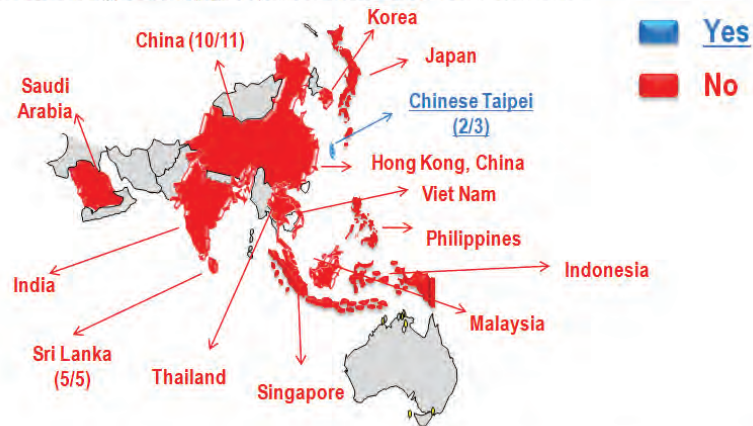
Do you think that public campaigns to increase public awareness of antimicrobial resistance are necessary in your country?





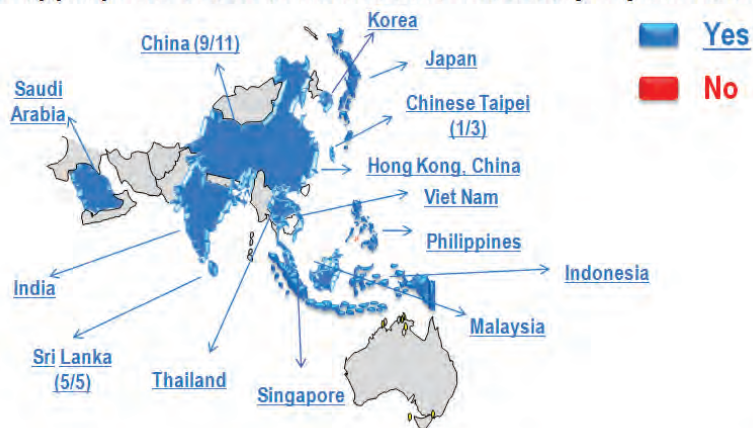
## Public awareness of appropriate use of antibiotics

Do you think that general public in your country have adequate knowledge on appropriate use of antibiotics?



## Public awareness of appropriate use of antibiotics

Do you think that public campaigns to increase public awareness of appropriate use of antibiotics are necessary in your country?



## Medical personnel's awareness of antimicrobial resistance

Do you think that general physicians in your country have adequate knowledge on antimicrobial resistance?



## Medical personnel's awareness of antimicrobial resistance

Do you think that campaigns or education for general physicians to increase awareness of antimicrobial resistance are necessary in your country?



## Medical personnel's awareness of appropriate use of antibiotics

Do you think that general physicians in your country have adequate knowledge on appropriate use of antibiotics?



## Medical personnel's awareness of appropriate use of antibiotics

Do you think that campaigns or education for general physicians to increase awareness of appropriate use of antibiotics are necessary in your country?



## Campaigns on appropriate use of antibiotics and antimicrobial resistance

Are there any national/regional or private sector's campaigns, activities, or educational programs to increase public awareness and promote rational use of antibiotics?



## Campaigns on appropriate use of antibiotics and antimicrobial resistance

Are there any national/regional or private sector's campaigns, activities, or educational programs to increase public awareness and promote rational use of antibiotics?

If yes, ...

	Korea	China	Chinese Taipei	Hong Kong, China
Organized by	Korea FDA / APFID & medical societies	Ministry of Health & Medical association	Taiwan CDC & medical societies	Department of Health
Target audience	Student, teacher, General public	Medical personnel	Medical personnel & general public	Medical personnel & general public
Since	10YA / 2010	2004	2000	2008
Still on-going?	Yes	Yes	Yes	Yes

## Conclusion

- Antimicrobial resistance rates of major pathogens are very high in economies in Asia.
- Although nationwide surveillance of antimicrobial resistance has been conducted, research on clinical or economic burden of antimicrobial resistance is lacking in economies in Asia.
- Nationwide surveillance of antibiotic usage has been limited to some economies in Asia.
- Antibiotics can be purchased without prescription and counterfeit drugs are common in most economies in Asia.
- Awareness of the public and physicians on antimicrobial resistance and appropriate antibiotic use is not adequate and most survey respondents feel that public campaign is necessary to increase the awareness.



## **1st APEC Expert Forum**

Current issues on  
antimicrobial resistance in Asia  
: Panel discussion



Asia-Pacific  
Economic Cooperation

## Current issues on antimicrobial resistance in Asia

### *Panel discussion*

In collaboration with  and 

## Panel of the 1st APEC Expert Forum

Economy	Name	Organization	Expertise
Korea	Jae-Hoon Song	Samsung Medical Center	Infectious diseases
Thailand	Visanu Thamlikitkul	Siriraj Hospital	Infectious diseases
China	Hui Wang	Peking University People's Hospital	Clinical microbiology
Chinese Taipei	Po-Ren Hsueh	National Taiwan University Hospital	Infectious diseases & Clinical microbiology
Japan	Hiroshige Mikamo	Aichi Medical University Hospital Japan	Infection control
Philippines	Celia Carlos	Research Institute for Tropical Medicine	Pediatric infectious diseases



APFID



# 1st APEC Expert Forum

## Future plan for APEC project

**Jae-Hoon Song, MD, PhD**

Project Overseer,  
Chairman, Asia Pacific Foundation of Infectious diseases (APFID)  
Organizer, Asian Network for Surveillance of Resistant Pathogens (ANSORP)  
Professor of Medicine, Samsung Medical Center,  
Sungkyunkwan University School of Medicine,  
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Asia-Pacific  
Economic Cooperation

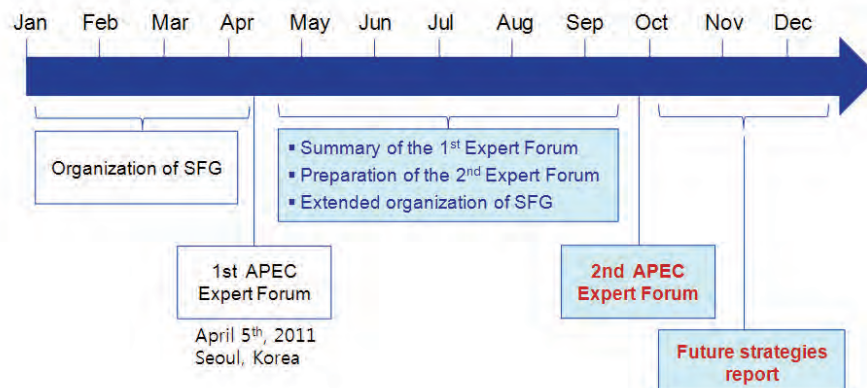
## International initiatives to control antimicrobial resistance in the Asia-Pacific region

### *Future plan for APEC project*

In collaboration with  and 

## Timeline of the project

### Future plan for the project



APFID

## Future plan for the project

### Extended organization of SFG

#### Organization of SFG

Multi-sectoral international experts from APEC economies and external APEC stakeholders



#### \* Participation of the non-APEC stakeholders in the SFG

- Representatives of WHO (WPRO, Western Pacific Regional Office of WHO)
- Representatives of other international health organizations such as the International Vaccine Institute (IVI)



## Future plan for the project

### 2nd Expert Forum

#### ❖ 2nd APEC Expert Forum

- Date : October 2011
- Venue : Seoul, Korea
- Participants : About 100 experts & government officials
  - Multi-sectoral experts from APEC economies
  - Healthcare-related government officials from APEC economies
  - Non-APEC stakeholders



## Future plan for the project

### Organization of 2nd Expert Forum

#### ❖ 2nd APEC Expert Forum

- Agenda : Future strategies for the control of antimicrobial resistance (AMR) in the Asia-Pacific region
- Program :
  - Presentation from each subgroup of SFG (Surveillance group, Future strategy group, Policy & regulation group)
  - Panel discussion
  - Discussion on future strategies to control AMR in the AP region



## Future plan for the project

### Development of future strategies report

#### ❖ Future strategies to control antimicrobial resistance

- Preparation of strategic plans to control AMR in the Asian region based on the discussion by SFG members and at Expert Forum
- Dissemination of the strategic report through website/publications/ meetings & campaign
- Publication of the strategic report in the peer-reviewed international journal



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## Potential future APEC projects for control of AMR

- Evaluation of economic impact of AMR in the AP region
- International campaign to control AMR in the AP region





# 1st APEC Expert Forum

List of participants  
of the 1st APEC Expert Forum

## LIST OF PARTICIPANTS OF THE 1ST APEC EXPERT FORUM

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