

Project Completion Report

Please submit through your APEC Secretariat Program Director within 2 months of project completion.

SECTION A: Project profile

Project number & title :	HWG 05/2010A - International initiatives to control antimicrobial resistance in the Asia-Pacific region		
Time period covered in report:	Jan 2011 – Dec 2011	Date submitted:	Dec 20, 2011
Committee / WG / Fora:	Health Working Group		
Project Overseer Name / Organization / Economy:	Jae-Hoon Song / Chairman, Asia Pacific Foundation for Infectious Diseases (APFID); Organizer, Asian Network for Surveillance of Resistant Pathogens (ANSORP); Professor, Samsung Medical Center, Sungkyunkwan University School of Medicine / Korea		

SECTION B: Project report and reflection

Briefly answer each of the questions below. Section B should be a maximum of 2-3 pages, inclusive of the questions and tables provided.

1. Project description: In 3-4 sentences, describe the project and its main objectives.

Given the serious clinical and economic impact of antimicrobial resistance (AMR) on the APEC economies, particularly in the Asian region, international and multifaceted collaboration is required to control and prevent AMR. Therefore, the main objective of the project was to prepare the future strategies for control and prevention of AMR in the AP region by organizing the Strategic Focus Group (SFG), consisting of multi-sectoral experts from APEC economies and the Expert Forum to discuss the current issues on AMR and to explore solutions to AMR in the region. The first international strategies to control and prevent AMR in the Asian region from this project would help APEC economies to establish national and international infrastructures on AMR and to prepare the future strategies to mitigate the economic and clinical impact of AMR.

2. Meeting your objectives: Describe how the project went, with reference to the objectives laid out in your project proposal. Include any major changes to your project as proposed and any problems or obstacles that you encountered and how you overcame them.

Objectives	Activities	Project outputs
Organization of Strategic Focus Group (SFG) for multi-sectoral and international collaboration	Organized SFG to coordinate the Expert Forum and to prepare the future strategies	<ul style="list-style-type: none"> The first international group consisting of multi-sectoral experts from private and government sectors in the AP region was successfully established to initiate and coordinate international collaboration for control and prevention of AMR in the region
Organization of Expert Forum to discuss and explore solutions to AMR in the AP region	Organized Expert Forum twice in April and October, 2011, respectively, in Seoul, Korea	<ul style="list-style-type: none"> The 1st Expert Forum discussed the current status and problems of AMR in the AP region from multi-sectoral points of view The 2nd Expert Forum discussed the international strategies for control and prevention of AMR in APEC economies
Preparation of the strategic plans to control and prevent AMR in the AP region	Developed Strategic action plan to control and prevent AMR in the AP region	<ul style="list-style-type: none"> Strategic action plan to control and prevent AMR in the AP region was successfully developed by SFG and prepared based on Expert Forum

Objectives	Activities	Project outputs
		<ul style="list-style-type: none"> The future strategies will be published in an international medical journal that can be helpful to disseminate the information and contents of the strategies to healthcare professionals and policy makers in the APEC economies and other parts of the world as well It will also be submitted to APEC as an official document of APEC project in due course

3. Project evaluation: Describe how you evaluated the project and provide some details on the results of the evaluation (e.g. participant evaluation, peer review of publication, measurement of indicators, statistics demonstrating use of outputs etc.).

This project has been successfully completed based on evaluation of following outputs.

Outputs	Results of evaluation
Strategic Focus Group (SFG) consisting of international, multi-sectoral experts	<ul style="list-style-type: none"> Organization of SFG consisting of 35 experts on infectious diseases, microbiology, veterinary medicine, and pharmacy and government officials from 11 APEC economies (Korea, China, Hong Kong, China, Indonesia, Japan, Malaysia, the Philippines, Singapore, Chinese Taipei, Thailand, and Viet Nam)
Expert Forum with healthcare professionals and government officials from APEC economies	<ul style="list-style-type: none"> Organization of Expert Forum twice on April 5 and October 15, 2011, respectively, in Seoul, Korea Participation of 50 multi-sectoral experts from private and government sectors from 11 APEC economies for each Expert Forum (experts from 2 non-APEC economies, India and Sri Lanka, for the 1st Expert Forum only)
Future strategies (action plan) to control and prevent AMR in the AP region	<ul style="list-style-type: none"> The "Strategic action plan to control antimicrobial resistance in the Asia-Pacific region" has been developed by SFG and prepared based on Expert Forum, which will be published in the international medical journal and also be submitted to APEC

4. Key findings: Describe one or two examples of important findings arising from the project (e.g. results from surveys or case studies, insights provided by participants or experts, policy recommendations, roadblocks to progress on an issue etc.).

- Control and prevention of AMR should be one of the top priorities among national agenda in the AP region, given a serious situation of AMR and its clinical and economic impacts. All APEC economies in the region should make the control of AMR a "national priority" to combat AMR for public health and national economy and trade.
- The Strategic Action Plan to control and prevent AMR in the Asian region consists of five major components; surveillance of AMR and antibiotic use, appropriate use of effective antibiotics, hospital infection control, vaccination, and relevant policy & regulation.

5. Next steps: Describe any follow-up steps or projects that you recommend. Have you already planned or begun these? What role could APEC play in any follow-up?

- The most important next step is to disseminate the information and contents of the future strategies to involved economies and to implement these strategic action plans in the AP region.
- Among five strategic action plans, the first and the most urgent plan is to promote the appropriate use of effective antibiotics that can prevent the emergence of AMR. This action is implemented by campaigns and educational activities for general public and healthcare professionals.
- Because public health campaign program can be effectively initiated based on public-private partnership, it will be very helpful if APEC can endorse and support the international public campaign program to control and prevent AMR in the Asian region. APEC-supported campaign program is implemented by public health system such as CDC in collaboration with academic organizations in APEC economies.

- Since there has been no international campaign program to control AMR in the Asian region, I Care (Initiatives to Control Antimicrobial REsistance) campaign which has been initiated by Asia Pacific Foundation for Infectious Diseases (APFID) can be used as a platform of public campaign for APEC economies in the region.

- APEC can contribute to more effective management of AMR in APEC economies through APEC's capacity to socialize governments, to attract international attention to the AMR threats, and to share best practices.

6. **Feedback for the Secretariat: Do you have any suggestions for more effective management of projects in the future? Any assessment of consultants, experts or participants that you would like to share?** (The Secretariat collates and examines feedback to identify trends for ongoing evaluation of our project management and/or communications systems.)

No suggestions.

7. **Participant information:** Please provide details, where applicable. Insert rows as needed.

Economy	# male (April/October)	# female (April/October)	Details
Korea	9 / 9	10 / 15	Experts on infectious diseases, microbiology, and veterinary medicine and government officials
China	5 / 1	2 / 0	Experts on infectious diseases, microbiology
Hong Kong, China	1 / 2	0 / 0	Experts on infectious diseases and government officials
Indonesia	1 / 2	0 / 3	Experts on infectious diseases and microbiology and government officials
Japan	3 / 0	0 / 1	Experts on infectious diseases, infection control, and microbiology
Malaysia	1 / 1	1 / 1	Experts on infectious diseases and microbiology and government officials
The Philippines	0 / 0	2 / 3	Experts on infectious diseases and microbiology and government officials
Singapore	2 / 2	0 / 0	Experts on infectious diseases
Chinese Taipei	2 / 0	0 / 1	Experts on infectious diseases and government official
Thailand	2 / 1	0 / 3	Experts on infectious diseases, microbiology, and pharmacy and government official
Vietnam	3 / 4	0 / 1	Experts on infectious diseases, microbiology and government official
Other: India, Sri Lanka	3 / 0	3 / 0	Experts on infectious diseases and microbiology (only in April meeting)

8. **Outputs:** Please provide details, where applicable. Change headings or insert rows as needed.

	# planned	# actual	Details
# of workshops / events	2	2	- 1 st Expert Forum on April 5, 2011 in Seoul, Korea - 2 nd Expert Forum on October 15, 2011 in Seoul, Korea
# of publications distributed	50 per each forum	100 per each forum	- 1 st Expert Forum proceedings (APEC#211-HT-04.1) - 2 nd Expert Forum proceedings (APEC#211-HT-04.2) - The final report "Strategic Action Plan" will be published in the international medical journal and will be also submitted to APEC
# of CDs distributed	-	-	
# of websites created	-	-	
Other:	-	-	

Appendices or additions

Please attach any of the following. This information will help us better understand your project, support overseers of similar projects and plan for future projects.

List of experts and participants

1. List of participants at the first APEC Expert Forum held on April 5, 2011 in Seoul, Korea

1) APEC economies

APEC economy	Name	Affiliation
Korea	Jae-Hoon Song	Samsung Medical Center; Asia Pacific Foundation for Infectious Diseases
Korea	Kyong Ran Peck	Samsung Medical Center
Korea	Doo Ryeon Chung	Samsung Medical Center
Korea	Cheol-In Kang	Samsung Medical Center
Korea	So Hyun Kim	Asia Pacific Foundation for Infectious Diseases
Korea	Kwan Soo Ko	Sungkyunkwan University
Korea	Yae Jean Kim	Samsung Medical Center
China	Hui Wang	Peking University People's Hospital
China	Bin Cao	Beijing Chaoyang Hospital
China	Yonghong Yang	Beijing Children's Hospital
China	Xuzhuang Shen	Beijing Children's Hospital
China	Shaoguang Huang	Ruijin Hospital
China	Yuxing Ni	Ruijin Hospital
China	Min Lu	Shanghai Children's Hospital, Jiao-Tong University
Hong Kong, China	Thomas So	Princess Margaret Hospital
Indonesia	Latre Buntaran	Children's and Maternity, Harapan Kita Hospital
Japan	Nobuyuki Shimono	Kyushu University Graduate School of Medical Sciences
Japan	Yujiro Uchida	Kyushu University Graduate School of Medical Sciences
Japan	Hiroshige Mikamo	Aichi Medical University Hospital
Malaysia	Rohani Md Yasin	Institute for Medical Research
Malaysia	Christopher Lee	Hospital Sungai Buloh, Jalan Hospital
Philippines	Celia Carlos	Research Institute for Tropical Medicine
Philippines	Sonia Sia	Research Institute for Tropical Medicine
Singapore	David Lye	Tan Tock Seng Hospital
Singapore	Ban Hock Tan	Singapore General Hospital
Chinese Taipei	Po-Ren Hsueh	National Taiwan University Hospital
Chinese Taipei	Cheng-Hsun Chiu	Chang Gung Children's Hospital
Thailand	Visanu Thamlikitkul	Siriraj Hospital
Thailand	Anan Chongthaleong	Chulalongkorn University Hospital
Viet Nam	Pham Hung Van	University of Medicine and Pharmacy
Viet Nam	Do van Thanh	Bach Mai Hospital
Viet Nam	Tran Van Ngoc	Cho Ray Hospital

2) Non-APEC economies

Economy	Name	Affiliation
India	V. Balaji	Christian Medical College Vellore
India	V. Ramasubramanian	Apollo Hospital
Sri Lanka	Jennifer Perera	University of Colombo
Sri Lanka	Kushlani Jayatileke	Sri Jayewardenepura Hospital

2. List of participants at the second APEC Expert Forum held on October 15, 2011 in Seoul, Korea

* S : Surveillance group, F : Future strategy group, P : Policy & regulation group

APEC economy	Name	Affiliation	Group*
Korea	Jae-Hoon Song	Samsung Medical Center; Asia Pacific Foundation for Infectious Diseases	F
Korea	Kyongwon Lee	Yonsei University College of Medicine	S
Korea	Jun-Wook Kwon	Korea Centers for Disease Control and Prevention	P
Korea	Kyong Ran Peck	Samsung Medical Center	F
Korea	Doo Ryeon Chung	Samsung Medical Center	F
Korea	Cheol-In Kang	Samsung Medical Center	P
Korea	Yeong-seon Lee	Korea Centers for Disease Control and Prevention	S
Korea	Sun-hee Park	Korea Centers for Disease Control and Prevention	S
Korea	Hye-Kyoung Park	Korea Centers for Disease Control and Prevention	P
Korea	Kee-tae Jeon	Korea Centers for Disease Control and Prevention	P
Korea	Min-hui Seong	Korea Centers for Disease Control and Prevention	P
Korea	Hyun-sook Koo	Korea Centers for Disease Control and Prevention	P
Korea	Jin-Myung Kim	Ministry of Health and Welfare	P
Korea	So Hyun Kim	Asia Pacific Foundation for Infectious Diseases	S
China	Yonghong Xiao	1st Affiliated Hospital of Medical College, Zhjiang University	S
Hong Kong, China	Andrew Wong	Infection Control Branch, Department of Health	P
Hong Kong, China	Thomas So	Princess Margaret Hospital	F
Indonesia	Amy Rahmadanti	Referral Health Care, Ministry of Health of Indonesia	P
Indonesia	Engko Sosialine Magdalane	Pharmaceutical Services, Ministry of Health of Indonesia	P
Indonesia	Iwan Dwiprahasto	Faculty of Medicine, Gadjah Mada University	F
Indonesia	Lindawati Alimsardjono	University of Airlangga	F
Indonesia	Usman Chatib Warsa	University of Indonesia	S
Japan	Yuki Uehara	Juntendo University, Graduate School of Medicine	F
Malaysia	Christopher Lee	Hospital Sungai Buloh	F
Malaysia	Norazah Ahmad	Institute for Medical Research	S
Philippines	Benilda Galvez	Department of Pulmonary Medicine, The Lung Center of the Philippines	F
Philippines	Celia Carlos	Research Institute for Tropical Medicine	S
Philippines	Lilibeth C. David	National Center for Disease Prevention and Control, Department of Health	P
Singapore	David Lye	Tan Tock Seng Hospital Singapore	F
Singapore	Li Yang Hsu	National University Hospital	S
Chinese Taipei	Shu-Hui Tseng	Centers for Disease Control, Department of Health	P
Thailand	Farsai Chanjaruporn	Bureau of Drug Control, Food and Drug Administration	P
Thailand	Jurai Wongsawat	Bamrasnaradura Infectious Diseases Institute, Ministry of Public Health	F

Thailand	Visanu Thamlikitkul	Siriraj Hospital	F
Thailand	Wantana Paveenkittiporn	National Institute of Health, Department of Medical Sciences	S
Viet Nam	Hung Van Pham	University of Medicine and Pharmacy	S
Viet Nam	Nguen Van Kinh	National Tropical Disease Hospital	F
Viet Nam	Nguyen Viet Hung	Infection control Department, Bach Mai Hospital	S
Viet Nam	Tran Van Ngoc	Cho Ray Hospital	F
Viet Nam	Van Cao	Department of Immuno-Microbiology, Institute of Pasteur	F

APEC	Name	Affiliation	Group*
Health Working Group	Steve Chen	Program Director, APEC HWG Secretariat	P

□ **Event agendas**

1. Agenda of the first APEC Expert Forum held on April 5, 2011 in Seoul, Korea

Schedule of the 1st APEC Expert Forum

April 5th, 2011

COEX Convention Center, Seoul, Korea

Current issues on antimicrobial resistance in Asia

Registration	08:00 – 08:30
Introduction – APEC project Jae-Hoon Song (Project Overseer, Korea)	10:00 – 10:20
Current issues on antimicrobial resistance in Asia : summary of data Doo Ryeon Chung (Project Overseer, Korea)	10:20 – 10:50
Panel Discussion Chair : Jae-Hoon Song (Project Overseer, 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)	10:50 – 11:50
Future plan for APEC project Jae-Hoon Song (Project Overseer, Korea)	11:50 – 12:00
Lunch (Jupiter Room, COEX-Intercontinental Hotel – 30 F)	12:00 – 13:10

2. Agenda of the second APEC Expert Forum held on October 15, 2011 in Seoul, Korea

Schedule of the 2nd APEC Expert Forum

October 15th, 2011

Grand Intercontinental Hotel, Seoul, Korea

Future strategies for the control of antimicrobial resistance in the Asia-Pacific region

Registration	08:30 – 09:00
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Opening remarks 09:00 – 09:05
Jae-Hoon Song
(Project Overseer, Asia Pacific Foundation for Infectious Diseases, APFID;
Samsung Medical Center, Korea)

PART 1

Current issues on antimicrobial resistance in Asia

Introduction of APEC project 09:05 – 09:15
So Hyun Kim (APFID, Korea)

Current issues on antimicrobial resistance in Asia 09:15 – 09:30
: Summary of the 1st Expert Forum
Doo Ryeon Chung (Samsung Medical Center; APFID, Korea)

Strategic plans to control and prevent antimicrobial resistance 09:30 – 09:50
Jae-Hoon Song (APFID; Samsung Medical Center, Korea)

Networking Break 09:50 – 10:00

PART 2

Group discussion : preparation of strategic plans for control of antimicrobial resistance

10:00 – 13:00
(Break 11:30 – 11:50)

I. Surveillance group

Chair : Kyungwon Lee (Yonsei University, Korea)
Visanu Thamlikitukul (Siriraj Hospital, Thailand)

- Discussion
 - Major issues on antimicrobial resistance and antibiotic uses
 - Future plan of national and international surveillance of resistance

II. Future strategy group

Chair: Jae-Hoon Song (APFID, Samsung Medical Center, Korea)
Christopher Lee (Hospital Sungai Buloh, Malaysia)

- Discussion
 - Basic scheme of future strategies to control and prevent antimicrobial resistance
 - Appropriate use of antibiotics, hospital infection control and vaccination as future strategies

III. Policy & regulation group

Chair: Jun-Wook Kwon (Korea Centers for Disease Control and Prevention, Korea)
Shu-Hui Tseng (Centers for Disease Control, Department of Health, Chinese Taipei)

- Discussion
 - National health systems, policies, and regulations regarding antibiotic use
 - National and international healthcare system to control and prevent resistance

Lunch	13:00 – 14:00
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PART 3	Future strategies to control antimicrobial resistance in Asia
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Preparation of summary 14:00 – 14:30

Each group

Summary of group discussion

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

Surveillance group 14:30 – 15:10

Future strategy group 15:10 – 15:50

Policy & regulation group 15:50 – 16:30

* Each summary presentation will be 30 min followed by questions and comments for 10 min

Closing remark 16:30 – 16:40

Jae-Hoon Song (APFID; Samsung Medical Center, Korea)