

# Mainstreaming antimicrobial resistance into primary health care

International workshop report





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# Contents

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## Abbreviations

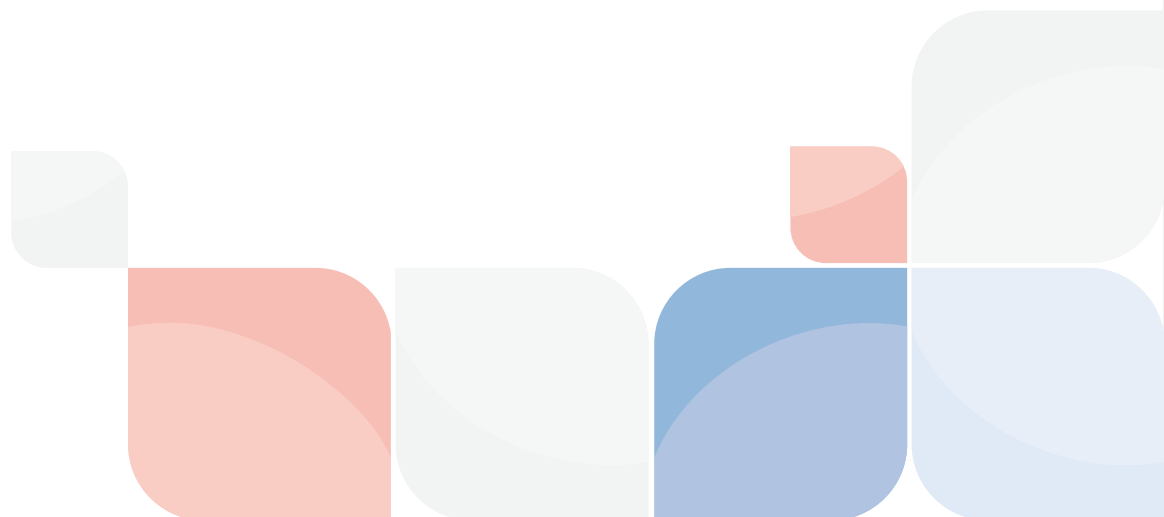
<b>1 Introduction</b>	<b>1</b>
<b>2 Objectives of the workshop</b>	<b>2</b>
<b>3 Workshop description</b>	<b>3</b>
3.1 Experience from the four-country AMR-PHC validation project	5
<b>4 Summary of group discussions</b>	<b>6</b>
<b>5 Workshop impact and conclusions</b>	<b>8</b>
Annex 1. Workshop agenda	9
Annex 2. List of participants	12

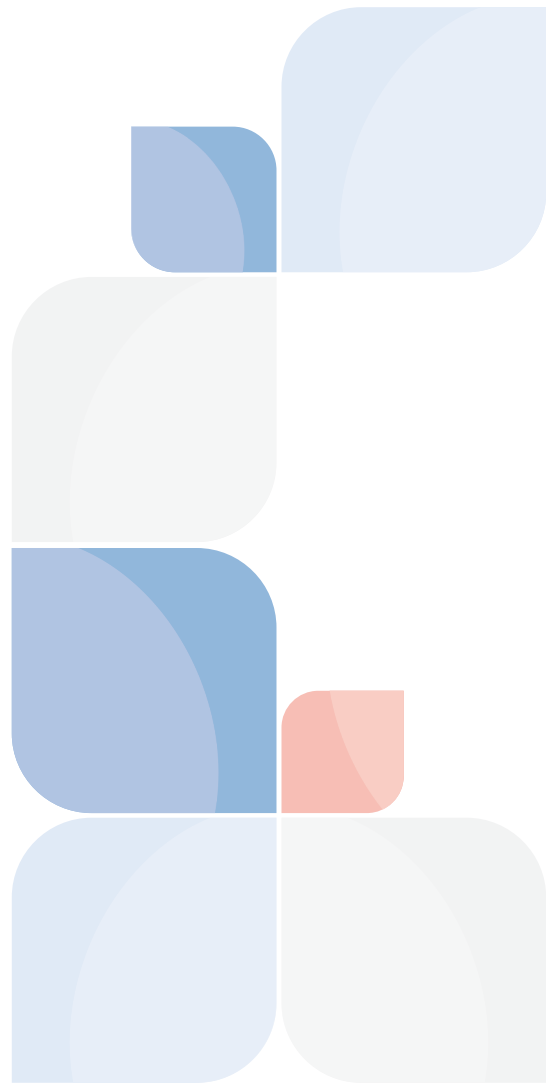


# Abbreviations

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AMR	antimicrobial resistance
AMS	antimicrobial stewardship
ASEF	Asia-Europe Foundation
AMU	antimicrobial use
AWaRe	Access, Watch and Reserve (WHO classification of antibiotics)
PHC	primary health care
Strama	Swedish strategic programme against antibiotic resistance
WHO	World Health Organization





# 1 Introduction

The Asia-Europe Foundation (ASEF) and the World Health Organization (WHO) organized an international workshop from 18 to 20 March in Bangkok, Thailand, in close collaboration with the Government of Thailand on mainstreaming antimicrobial resistance (AMR) into primary health care (PHC), to discuss the growing challenge of AMR and targeting core AMR interventions to strengthen primary health care (PHC)-oriented health systems. Funding for the workshop was kindly provided by the Government of Japan through ASEF. We would like to thank the International Health Policy Program Foundation for organizing to site visits to the primary care facilities and community pharmacies and all the national representatives from 22 countries that actively participated in the workshop.

A PHC-oriented health system aims to maximize the level and distribution of health and well-being through three components: (i) primary care and essential public health functions as the core

of integrated health services; (ii) multisectoral policy and action; and (iii) empowered people and communities.

As part of the PHC-oriented health system, primary care is the service delivery platform with the core function of providing first-contact, accessible, continuous, comprehensive and coordinated patient-focused care. Primary care translates the principles of PHC into practice, making it foundational to a robust PHC-oriented health system essential to realizing universal health coverage.

Most patient interactions occur in primary care and in the community, where an estimated 80–90% of antibiotics are prescribed. Effective primary care plays a vital role in improving the management of infectious diseases and in reducing overuse and inappropriate use of antibiotics, thus slowing the emergence of AMR and ensuring the continued effectiveness of antimicrobials.



## 2 Objectives of the workshop

- ✓ Share challenges, opportunities, best practices and lessons from country experiences in mainstreaming AMR through PHC-oriented health systems.
- ✓ Provide practical guidance and tools for countries to identify opportunities to strengthen integration of AMR interventions into PHC-oriented policies, plans and strategies.
- ✓ Describe AMR interventions and actions relevant for primary care.
- ✓ Foster collaboration among stakeholders to integrate AMR interventions into a PHC approach.



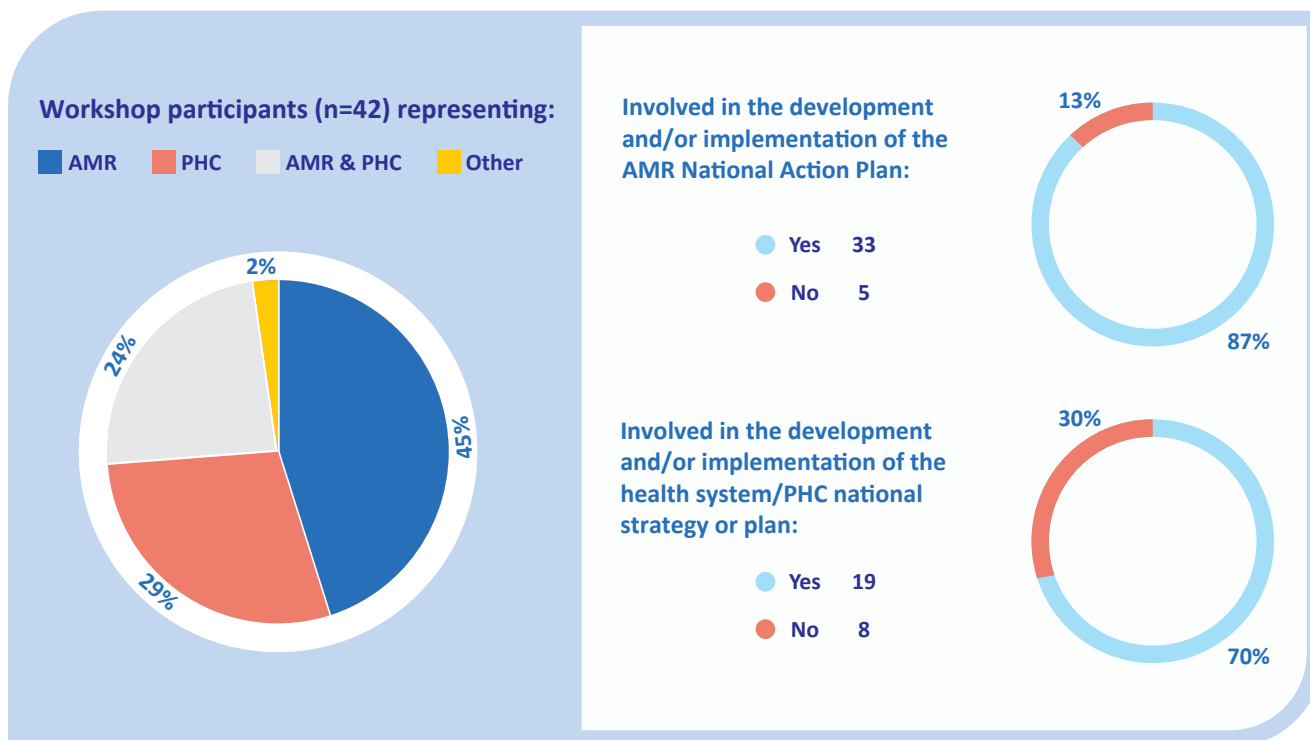
### 3 Workshop description

The workshop utilized various approaches, including plenary presentations, panel discussions, site visits to primary care facilities, and breakout group discussions. See Annex 1 for the Workshop agenda.

**Day 1** began with opening remarks from several dignitaries, followed by outlining the workshop’s objectives and introducing participants from 22 Asian and European countries. Participants were AMR and PHC technical leads from government agencies and primary care managers from invited countries in Asia and Europe. Figure 1 shows the background of the participants, as well as their involvement in strategies and plans in these areas. See Annex 2 for the list of participants. Faraz Khalid (WHO) outlined the operational

framework for PHC-oriented health systems and provided concrete examples of AMR-relevant interventions used in PHC-oriented health system reforms from a review of country case studies. Nienke Bruinsma (WHO) presented the WHO “People-centred approach to addressing AMR and mainstreaming AMR interventions into PHC”, which included an introduction to the AMR-PHC project funded by the Government of Japan through ASEP and implemented by WHO.

**Fig. 1. Workshop participants, results from a pre-workshop survey**

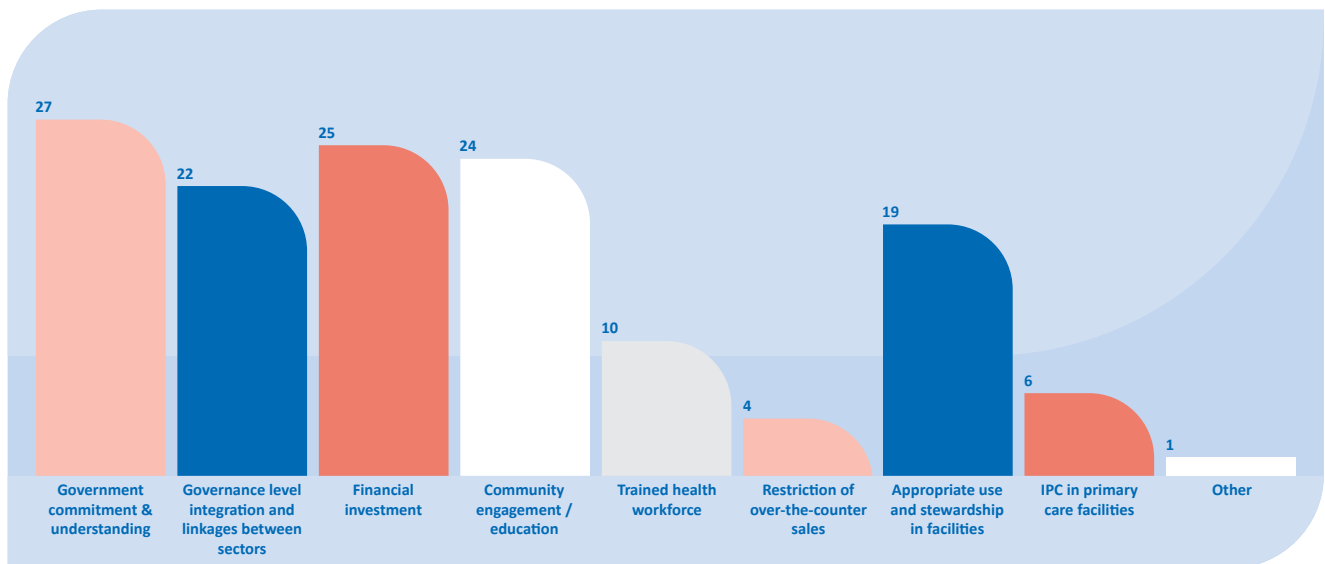


AMR: antimicrobial resistance; PHC: primary health care

**Day 2** included site visits to primary care facilities near Bangkok, where participants observed infection prevention practices, antibiotic prescribing, and the role of community health workers. Breakout group discussions focused on country experiences with AMR in primary care, highlighting the varying stages of integration and the importance of policy, community engagement, and health services.

**Day 3** continued with group discussions focusing on integrating AMR into PHC policies, appropriate antimicrobial use, and community promotion of AMR. An interactive feedback session gathered participants' impressions and identified key areas for strengthening AMR interventions in PHC, such as government commitment, financial investment, community engagement, and governance integration. Figure 2 shows the most important areas identified by workshop participants needed for strengthening PHC-oriented health systems to address AMR.

**Fig. 2. Most important areas needed for strengthening PHC-oriented health systems to address AMR, as identified by workshop participants**



### 3.1 Experience from the four-country AMR-PHC validation project

A panel discussion of country experiences in mainstreaming AMR into PHC-oriented health systems was held. The panel comprised:

- Jintana Srisompong, Deputy Director, Health Administration Division, Ministry of Public Health, Thailand;
- Yuni Rukminiati, Policy Analyst, Ministry of Health, Indonesia;
- Aigul Kassymova, Director, Republican PHC Center, Kazakhstan; and
- Stephan Stenmark, Public Health Agency, Sweden.

In Thailand, a key component of antimicrobial stewardship (AMS) is the national plan for rational drug use, which originated in a programme known as Antibiotic Smart Use. Its aims are to reduce inappropriate prescribing of antibiotics and to change prescribing behaviour for three conditions: upper respiratory infections, acute diarrhoea and simple wounds. The target is to ensure prescribing of antibiotics for no more than 20% of such cases.

In Indonesia, the main challenge is that 60% of antibiotics are obtained without prescription from community pharmacies. In primary care, there is insufficient funding for training and limited microbiological testing. Indonesia is planning to expand training for primary care workers on AMR to

promote appropriate use of antibiotics and to scale up the Gerakan Masyarakat Cerdas Menggunakan Obat awareness campaign to educate the public on appropriate antibiotic use.

Kazakhstan has a national infection control plan (2022–2027) and has legislation on rational use of medicines. Integration of the WHO AWaRe antibiotic system into primary care is being planned, with development or updating of manuals on prescribing and dispensing in primary care. The National Association of Clinical Pharmacologists in Kazakhstan is planning training for primary care workers on rational use of medicines.

The Swedish eHealth Agency maintains a national database covering drug sales and prescription information, including from primary care facilities, from where monthly national/regional statistics can be accessed by national authorities. At facility-level the data is used by managers and regional authorities to benchmark performance against specific goals, which is supported by the Swedish strategic programme against antibiotic resistance (Strama). In Sweden, AMS programmes are implemented at all levels of health care, including primary care, led by Strama.



©ASEF Panel discussion

## 4 Summary of group discussions

### 4.1 Integration of AMR into PHC policies and strategies

#### Challenges:

- AMR is complex and not always understood by decision-makers;
- lack of integration between AMR and PHC structures and policies at various levels;
- private sector health providers are often excluded from national AMR-related plans;
- AMR is often not prioritised due to competing health agendas, limited resources, and global challenges;
- lack of AMR data and evidence to inform decision-makers; and
- insufficient funding for AMR initiatives.

#### Possible solutions and collaborations:

- ✓ develop health communication and engagement strategies that include AMR for PHC policymakers;
- ✓ translate AMR data into practical messages and use benchmarking to show trends;
- ✓ encourage collaboration at various governance levels and integrate structures based on the patient continuum of care;
- ✓ use regulatory mechanisms to engage the private sector and incentivise data sharing;
- ✓ invest in generating AMR data to convince policymakers of its importance; and
- ✓ collaborate with global, regional, and national AMR surveillance programmes to formulate clear messages for policymakers.

### 4.2 Integration of appropriate antimicrobial use (AMU) and AMS principles and activities into primary care

#### Challenges:

- lack of, or outdated national guidelines and insufficient guidance on diagnosis;
- limited provision of information to patients;
- difficulty in sustaining behaviour changes in healthcare workers for AMS;
- gaps in continuing education for health professionals on AMR;
- shortage of healthcare workers with specific knowledge about AMS;
- obtaining high-quality data on AMU, especially linked to diagnosis; and
- unregulated or unmonitored online sales of antibiotics.

#### Possible solutions and collaborations:

- ✓ develop and update national guidelines, including syndrome-based diagnosis guidance;
- ✓ provide information leaflets to patients and use electronic platforms for symptom checking;
- ✓ propose a package of interventions to address gaps in primary care workers' skills, including education, point-of-care tests, and auditing;
- ✓ use digital interactive learning options and provide feedback to prescribers about their practices;
- ✓ explore structures and incentives to retain healthcare workers and use technology to support clinical processes;
- ✓ conduct point prevalence surveys to obtain high-quality AMU data; and
- ✓ use artificial intelligence to detect online sales of antibiotics and enforce regulations.

## 4.3 Community health promotion on AMR

### Challenges:

- achieving sustainable behavioural change in the general population; and
- addressing AMR in vulnerable populations, such as migrants.

### Possible solutions and collaborations:

- ✓ deliver AMR education for children and youth through school health programmes;
- ✓ use traditional and social media to reach a wide audience and counteract misinformation;
- ✓ engage with civil society, faith-based organisations, and academia to spread AMR messages;
- ✓ provide guidance and training for health professionals, teachers, and community leaders;
- ✓ start public campaigns with a broad approach and then target specific groups;
- ✓ use existing public or community engagement programmes for AMR messaging;
- ✓ document and share successes and lessons learnt; and
- ✓ target specific interventions for at-risk or vulnerable populations based on data analysis.

These conclusions highlight the importance of integrating AMR into PHC policies, improving antimicrobial use and stewardship, and promoting community health to effectively address AMR.

## 5 Workshop impact and conclusions

**Enhanced understanding and collaboration:** The workshop brought together AMR and PHC focal points from various countries, fostering a strategic space for cross-functional dialogue. This helped bridge parallel streams of work and emphasized the importance of integrating AMR interventions into PHC-oriented health systems.

**Practical tools and guidance:** Participants were introduced to the AMR-PHC scoping tool, which they found to be a helpful checklist for guiding further improvements. The tool provided practical guidance for identifying opportunities to strengthen the integration of AMR interventions into PHC policies, plans, and strategies.

**Country-specific strategies:** The workshop encouraged participants to consider their own country contexts and develop actionable strategies for integrating AMR-sensitive actions into PHC reform. This included using the insights and tools shared during the workshop to create context-appropriate strategies.

**Commitment to continued collaboration:** The workshop emphasized the need for continued collaboration between AMR and PHC stakeholders at national and subnational levels. The path ahead requires translation of the shared understanding into concrete, system-wide changes to strengthen resilience and responsiveness to the AMR threat through the lens of PHC.

### Next steps:

- WHO and its partners will explore follow-up mechanisms, including virtual workshops and integration of AMR-PHC content into capacity-building platforms, to ensure sustained learning and action.
- As a first step, WHO will invite the workshop participants to join the AMR community exchange group on PHC and AMR for further engagement and exchange of challenges, best practices and lessons learnt.
- Participants are encouraged to consider their own country contexts and develop actionable strategies for integrating AMR-sensitive actions into PHC reform.

# Annex 1. Workshop agenda

## Multi-country workshop on mainstreaming antimicrobial resistance through a primary health care approach

18–20 March 2025 | Swissôtel Bangkok Ratchada, Bangkok, Thailand

### 18 March 2025 – Day 1

**12:30 - 13:00** Registration

**13:00 - 14:00** Session 1. Opening

*Moderator: Riko Kimoto, ASEF*

- Opening remarks
  - » Ambassador Beata Stoczyńska, Executive Director, ASEF
  - » Mr Kajiwara Toru, Minister and Chief of Economic Section, Embassy of Japan, Thailand
  - » Dr Suriya Wongkongkathep, Senior Advisor National Policy Committee on AMR, Ministry of Public Health, Thailand
  - » Dr Jos Vandelaer, WHO Representative, Thailand
  - » Ambassador Chulamane Chartsuwan, ASEF Governor for Thailand
- Objectives of the workshop (including problem statement) (*Nienke Bruinsma, WHO*)

Introduction of participants

**14:00 - 15:00** Session 2. Setting the scene: Strengthening primary health care-oriented health systems to combat antimicrobial resistance

*Moderator: Riko Kimoto, ASEF*

- Universal health coverage through a primary health care approach: relevant tools and experiences from countries (*Faraz Khalid, WHO*)
- People-centred approach to addressing AMR and mainstreaming AMR interventions into PHC (Introduction to AMR-PHC project and overall results) (*Nienke Bruinsma, WHO*)

Followed by Q and A session

**15:00 - 15:30** Coffee break and group photo

**15:30 - 16:30** Session 3. Panel discussion: Country experiences on mainstreaming AMR into PHC

*Moderator: Nienke Bruinsma, WHO*

Panel comprising:

- Jintana Srisompong, Deputy Director, Health Administration Division, Ministry of Public Health, Thailand
- Yuni Rukminiati, Policy Analyst, Ministry of Health, Indonesia
- Aigul Kasymova, Director Republican PHC Center, Kazakhstan
- Stephan Stenmark, Public Health Agency, Sweden

Followed by Q and A session

**16:30 - 17:00** Session 4. Methodology and practical implementation

*Moderator: Bassem Zayed, WHO*

- Mainstreaming AMR-related interventions into the three components of the PHC framework using the AMR/PHC scoping tool (*Serena Chong, WHO*)
- Introduction to the site visits and division of groups (*Nienke Bruinsma, WHO*)

**17:00** End of day 1

## 19 March 2025 – Day 2

### 07:00 - 12:00 Site visits to observe AMR-relevant practices at PHC facilities in Thailand

07:00	Departure from hotel reception to facility
08:45	Arrival at facility (either district hospital or sub-district health center) Introductions/meeting hospital management team
09:00	Walking tour of the hospital, focusing on below topics
10:30	Group discussion/Q and A session
12:00	Depart for hotel

### 13:00 - 14:00 Arrival at hotel and lunch

### 14:00 - 15:00 Session 5. Reporting back of site visits (using a template)

*Chair/Moderator: Viroj Tangcharoensathien (International Health Policy Foundation, Thailand)*

- Group 1 (*representative, group 1*)
- Group 2 (*representative, group 2*)
- Group 3 (*representative, group 3*)

Followed by Q and A session and discussion

### 15:00 - 15:15 Session 6. Introduction to breakout group discussions

*Moderator: Bassem Zayed, WHO*

- Recap of the PHC approach and country examples (*Faraz Khalid, WHO*)
- Introduction to group work (*Nienke Bruinsma, WHO*)

### 15:15 - 15:45 Coffee break

### 15:45 - 17:30 Session 7. Breakout group discussion on AMR-PHC focus areas: Country experiences, current practices and intersections between AMR and PHC

Group	Moderators and rapporteur
Group 1	Nienke Bruinsma (WHO), Stephan Stenmark (Public Health Agency, Sweden), Palpasa Kansakar (WHO)
Group 2	Bassem Zayed (WHO), Wenjing Tao (Public Health Agency, Sweden), Serena Chong (WHO)

### 17:30 End of day 2

09:00 - 09:15 Recap of day 2

09:15 - 10:30 **Session 8. Breakout group discussion on AMR-PHC focus areas: Opportunities and challenges for mainstreaming AMR into a PHC approach**

Group	Moderator and rapporteur
Group 1	Nienke Bruinsma (WHO), Stephan Stenmark (Public Health Agency, Sweden), Palpasa Kansakar (WHO)
Group 2	Bassem Zayed (WHO), Wenjing Tao (Public Health Agency, Sweden), Serena Chong (WHO)

10:30 - 11:00 Coffee break

11:00 - 12:30 **Session 8 (continued)**

12:30 - 13:30 Lunch break

13:30 - 15:00 **Session 9. Individual and country work or small group discussions: Identifying next steps and take-home messages**

15:00 - 15:30 Coffee break

15:30 - 16:45 **Session 10. Moderated interactive plenary discussion: Opportunities, challenges and next steps for mainstreaming AMR through a PHC approach in countries**

*Moderators: Nienke Bruinsma, Faraz Khalid (WHO)*

- Group 1 (presenter group 1)
- Group 2 (presenter group 2)

Interactive discussion with poll software, including feedback from breakout groups and take-home messages from individual countries

16:45 - 17:00 **Session 11. Summary, next steps and workshop wrap-up**

- Key takeaways from workshop and next steps
- Closing remarks

17:00 End of day 3



# Annex 2. List of participants

## Organizers

Beata Stoczyńska, Asia-Europe Foundation (ASEF)

Riko Kimoto, ASEF

Nur A'in Abd Razak, ASEF

Jos Vandelaer, WHO Representative, Thailand

Richard Brown, WHO Country Office, Thailand

Nienke Bruinsma, WHO headquarters

Serena Chong, WHO headquarters

Faraz Khalid, WHO headquarters

Bassim Zayed, WHO Regional Office for South-East Asia

Palpasa Kansakar Tuladhar, WHO Country Office, Nepal

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Miriam Van den Nest, Austrian Agency for Health and Food Safety, Institute for Surveillance and Infectious Disease Epidemiology

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Angel Kunchev, Ministry of Health

### *Cambodia*

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Pich Lim, National Center for Health Promotion, Ministry of Health

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Ji Fu, National Health Commission

### *Finland*

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Sanna Isosomppi, Epidemiological Operations Unit, City of Helsinki

### *Greece*

Marigo Tseroni, National Public Health Organization

### *Indonesia*

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Yuni Rukminiati, Ministry of Health

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Takafumi Nakamura, Ministry of Health, Labour and Welfare

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Akniyet Zharylkassynova, National Center of Public Health Care, Ministry of Health

### *Latvia*

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Svetlana Batara, Sectoral Budget Planning Department, Ministry of Health

### *Luxembourg*

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Ute Aurbach, National Health Laboratory

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Noraini Mohd Yusof, Public Health Department, Ministry of Health

### *Malta*

Dorothy Zammit, Principal General Practitioner

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Kamana Sharma, National Public Health Laboratory

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Sky Wei Chee Koh, National University Polyclinics

### ***Slovenia***

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Ravikanya Prapharsavat, International Health Policy Program Foundation

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Nuntiya Somjetanakul, Food and Drug Administration

Nuchaporn Srichantapong, International Health Policy Program Foundation

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Nithima Sumpradit, Food and Drug Administration

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Viroj Tangcharoensathien, International Health Policy Program Foundation

Suriya Wongkongkathep, Ministry of Public Health

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Kieran Hand, National Health Service

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