First Meeting of the Asia Pacific Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010)

26–28 July 2011
Manila, Philippines
REPORT

FIRST MEETING OF THE ASIA PACIFIC TECHNICAL ADVISORY GROUP ON
THE ASIA PACIFIC STRATEGY FOR EMERGING DISEASES (2010)

26-28 July 2011
Manila, Philippines

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NOTE

The views expressed in the report are those of the participants in the First Meeting of the Asia Pacific Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010) in the Western Pacific Region and do not necessarily reflect the policies of the Organization.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for governments of Member States in the Region and for those who participated in the First Meeting of the Asia Pacific Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010) which was held in Manila, Philippines, from 26 to 28 July 2011.
SUMMARY

The First Meeting of the Asia Pacific Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010) was held in Manila, Philippines from 26 to 28 July 2011. This meeting reviewed the development and content of a draft workplan for the recently updated Asia Pacific Strategy for Emerging Diseases, or APSED (2010), and made recommendations for action by Member States, WHO and partners for the preparation of their own workplans – including the identification of priority actions for the next 12 months.

APSED (2010) builds directly on the significant progress already achieved under APSED (2005) and has been endorsed by both the South-East Asia and Western Pacific Regions of WHO. APSED (2010) retains the five original focus areas and adds three new ones: public health emergency preparedness; regional preparedness, alert and response; and monitoring and evaluation.

Over the last 18 months, WHO has consulted with the Technical Advisory Group (TAG), Member States in both Regions and partners to develop a draft workplan to support APSED (2010).

The meeting participants agreed that the draft APSED (2010) workplan will assist countries to move forward with capacity-building over the next five years. The draft workplan will be further revised in the light of the comments received immediately prior to and during this meeting. Thereafter, the workplan will provide a flexible framework for action by Member States, WHO and partners to advance collective health security.

Meeting participants acknowledged the important context for this work provided by the International Health Regulations, or IHR (2005), including the June 2012 deadline for core capacities, the significant progress already achieved with APSED (2005), the experience gained by Member States and WHO during the influenza (H1N1) 2009 pandemic, and the continuing health (and economic) significance of zoonotic diseases throughout the Asia Pacific region. The participants also recognized the influence of wider societal and environmental factors, including in particular the Millennium Development Goals, One Health, financial constraints, climate change and the impacts of a variety of recent natural disasters.

APSED (2010) deliberately builds on experience with emerging diseases to promote engagement with other sectors to accommodate an “all hazards” approach using a step-by-step approach. APSED (2010) work programmes also benefits from the inclusion of monitoring and evaluation as an explicit requirement from the outset, including consideration of the proposed supplementary performance indicators. Monitoring and evaluation will assist Member States to assess their own progress and also to document the lessons learnt along the way.

A key feature of APSED (2010) workplans will be a continued emphasis on public health surveillance and response capabilities, augmented with the adoption of a structured approach to risk assessment at both the national and subnational levels. Risk assessment should be informed by both event-based and indicator-based surveillance, and ideally should combine all relevant human health and animal health surveillance data and expertise. Risk assessment will continue to be an essential input to risk communication.

Maintaining a focus on field epidemiology training represents a continued commitment to strengthening the public health workforce, which remains a fundamental component of the core public health capacities specified in IHR (2005).
Laboratory capacity-building will seek to enhance public health diagnostic capabilities, including the ability to detect and characterize unknown pathogens, and support risk assessment and outbreak response.

Given the continuing significance of zoonoses as a source of emerging infectious diseases in both the South-East Asia and Western Pacific Regions, the meeting noted the importance of strengthening coordination mechanisms between the human health, animal health and, where appropriate, wildlife sectors. This would facilitate joint approaches to training, surveillance, risk assessment and risk communication, and improve response activities for high-risk diseases where effective control is beyond the ability of any single agency.

Pandemic risk persists. Member States are encouraged to revise their pandemic influenza preparedness and response plans, based on their experience with pandemic (H1N1) 2009. Additionally, countries should move to either develop or update generic emerging diseases and/or public health emergency preparedness and response plans, as well as as an important effort to improve readiness to consider appropriate structure and location of an Emergency Operations Centre with the Ministry of Health.

WHO is encouraged to facilitate regional sharing of surveillance and risk assessment information in order to support alert and early warning systems.

Monitoring and evaluation as a new capacity development area requires immediate action and collaboration between countries, WHO and partners.

Progressing country-level and regional work programmes based on the draft APSED (2010) workplan will assist countries and WHO to improve the management of a wide range of acute public health events. Implementing APSED (2010) will also enable Member States to give effect to many of the recommendations contained in the report of the IHR Review Committee, as endorsed by the World Health Assembly in May 2011.

APSED (2010) thus represents a common framework for shared responsibility and biregional public health security.
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Keywords  
Communicable disease, Emerging – prevention and control / Disease outbreaks – prevention and control / Regional health planning / Asia and the Pacific
1. INTRODUCTION

The First Meeting of the Asia Pacific Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010) was held in Manila, Philippines from 26 to 28 July 2011. The meeting reviewed the development and content of the draft APSED (2010) workplan and the process for developing national workplans for the management of emerging diseases. The meeting made recommendations for implementing APSED (2010), including priorities for the coming 12 months.

1.1 Objectives

The objectives of the meeting were:

(1) to review outcomes of national-level consultations and planning on development of national workplans for managing emerging diseases;

(2) to develop further a draft five-year workplan for implementation of the newly updated Asia Pacific Strategy for Emerging Diseases (APSED) (2010); and

(3) to recommend common priority activities for the coming year before the next Technical Advisory Group (TAG) meeting in 2012.

1.2 Opening remarks

Dr Shin Young-soo, Regional Director, WHO Western Pacific Regional Office, welcomed participants to the meeting. He acknowledged the consultative process and collective expertise that contributed to the development of the APSED (2010) framework. In July 2006, the TAG met for the first time to plan the implementation of APSED (2005). In the past five years, significant progress has been made, progress that proved its worth during the influenza pandemic of 2009 – 2010. However, under both APSED (2010) and the International Health Regulations (2005), or IHR (2005), further capacity-building is required. Dr Shin noted that the new organizational structure of the Regional Office regarding the newly established Division of Health Security and Emergencies was recently tested by a major earthquake and tsunami in Japan (March 2011). In particular, the emerging diseases surveillance and emergency response team were able to gather and disseminate information and provide other support across the Region. In helping to refine the draft workplan for APSED (2010), Dr Shin encouraged meeting participants to consider their own national situations and also to reflect on what is required from all countries to achieve collective public health security.
1.3 Organization of the meeting

The meeting comprised a series of presentations that updated participants on country-level experiences with APSED (2005), the development and content of the draft APSED (2010) workplan, and progress with implementation of APSED (2010) by selected countries. Background materials were provided on country-level implementation of APSED (2010), sex and gender issues in emerging infectious disease (EID) programmes and the IHR Review Committee report. Panel discussion sessions were held on national and regional planning, monitoring and evaluation, and gender and APSED (2010). Group breakout sessions were conducted to discuss indicator-based surveillance, and issues of interest to EID programme managers, national IHR focal points and partners. Detailed feedback from the group work was presented and discussed in plenary sessions (see Annex 1 for the programme of activities and Annex 2 for a list of meeting participants).

Dr Haruo Watanabe, Director-General, National Institute of Infectious Diseases (NIID), Japan, and TAG member was appointed as Chairperson for the meeting. Dr Pratap Singhasivanon, Dean, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand, and TAG member, was appointed as Vice-Chairperson.

2. PROCEEDINGS

2.1 Plenary 1 – Update on IHR (2005) and APSED (2005)

Dr Haruo Watanabe, NIID, Japan introduced the session.

2.1.1 IHR implementation and pandemic review

Dr Isabelle Nuttall, WHO Headquarters, Geneva

APSED (2010) provides a road map for countries in both the South-East Asia and Western Pacific Regions to implement IHR (2005), including the core IHR core capacities. Like IHR (2005), APSED (2010) has an all-hazards scope and includes points of entry such as international ports and airports. An IHR (2005) implementation questionnaire is being completed by Member States and WHO to monitor ongoing progress. National IHR focal points (NFPs) should arrange for the completion of the questionnaire by 1 August 2011 – this would allow time for collation and analysis of responses for the World Health Assembly in May 2012. Country profiles will be developed based on the completed questionnaires. Eight key functional areas, many of which are common to the APSED framework, will be assessed using this monitoring methodology. At the global level, chemical and radiological preparedness are two areas that need further work.

IHR (2005) entered into force in June 2007. The core capacities for surveillance, risk assessment, response and reporting are required to be fully operational by June 2012. Under IHR (2005), extensions to this deadline are allowed, but only where there is a justified need and an implementation plan has been developed. WHO wishes to remind Member States of these requirements. The APSED (2010) workplans will directly assist countries with this important aspect of IHR compliance.
At its fourth meeting of the IHR Review Committee in March 2011, the IHR Review Committee reviewed the functioning of IHR (2005) and the global response to pandemic influenza (H1N1) 2009. The Review Committee recommended a continuing strong focus on IHR core capacities, with WHO support, including promoting awareness at technical, policy and political levels in Member States. The Review Committee also reinforced the importance of NFPs and the adoption of evidence-based measures where the response to a public health threat may affect international traffic and trade. The Review Committee suggested that WHO’s internal capacity to support responses to sustained public health emergencies also needs strengthening. Pandemic preparedness continues to warrant ongoing attention, including the preparation and use of a process for the assessment of pandemic severity and equitable and timely mechanisms for the development and distribution of vaccines.

2.1.2 Emerging infectious diseases in the Asia Pacific region

Dr Chin Kei Lee, WHO Regional Office for the Western Pacific

The Asia Pacific region continues to be hot spot for emerging diseases, including infectious, vectorborne and in particular zoonotic diseases – Nipah virus, avian influenza H5N1, dengue, cholera, hand, foot and mouth disease and others continue to pose challenges. The region has also experienced radiological events and events of undetermined origin. Humans living in close proximity to agricultural animals, especially poultry remains an ongoing issue. Surveillance of potential emerging diseases and education of health professionals are important for early detection and management. Dengue remains a regionwide priority, with nearly 300,000 reported cases in the South-East Asia Region in 2010. The emphasis has moved from reactive outbreak responses to proactive measures, including habitat control for mosquitoes. Basic public health surveillance, risk assessment and response functions have also been put to the test by cholera in the Western Pacific Region. Furthermore, WHO has developed updated guidance material to assist countries with the detection and management of anthrax and other conditions. Generic functions such as risk assessment have been an ongoing focus for WHO in the region. Natural hazards such as earthquakes, tsunamis, floods and cyclones have also posed challenges for surveillance and coordination at the regional level – many of these events required active and continuous risk assessment and information dissemination.

2.1.3 Overview of the Asia Pacific Strategy for Emerging Diseases (2010)

Dr Richard Brown, WHO South-East Asia Regional Office

APSED (2010) deliberately builds on the key features of the earlier strategy to help with managing both current and future acute public health threats. APSED (2010) was developed by WHO and TAG following country consultations and a biregional consultation meeting in May 2010. It was subsequently adopted by the Regional Committee for the Western Pacific and endorsed by the South-East Asia Region. APSED (2010) serves as a shared framework for countries and WHO and a pathway to IHR (2005) compliance. While ministries of health remain the primary target audience of APSED (2010), other national agencies, donors and partners are also expected to benefit from it. For example, it will help with mobilizing financial and technical resources and provide a common framework for both national and regional planning. The key objective is to reduce the risk of emerging diseases by strengthening early detection, rapid response and overall preparedness. APSED (2010) maintains the five original focus areas (surveillance and response, laboratory, zoonoses, infection control and risk communication) and adds three new focus areas (public health emergency preparedness, regional preparedness, alert and response, and monitoring and evaluation). As a result of country and technical consultations, a number of other important issues are also addressed in APSED (2010) technical papers; these include points of entry, climate change, social determinants of health, and the special challenges faced by Pacific island countries and areas. While the principal focus remains
on emerging diseases, the new APSED (2010) also extends its scope to mirror the all-hazards approach of IHR (2005).

The Chairperson invited questions and comments:

• The role of WHO regional and country offices was described in relation to capacity-building, but in addition to its monitoring function, the role of WHO Headquarters was also emphasized, e.g. collating and sharing information, developing technical guidelines. Additionally, it was noted that WHO has major partnerships with other intergovernmental organizations, the World Bank, the Global Fund to Fight AIDS, Tuberculosis and Malaria, nongovernmental organizations (NGOs) and the private sector, which are also important elements of the global picture.

• A regional strategy that establishes priorities is very important. The APSED (2010) workplan should clarify which elements will be addressed at the national level, e.g. front-line surveillance and response, legislation and laboratory capacity, and which elements are more appropriately managed at the regional level. APSED (2010) touches upon the breakdown of responsibilities, but the workplan being developed should be explicit as to what actions apply at which level.

• Monitoring of IHR (2005) implementation takes various forms (e.g. “yes” and “no” answers and also a numerical scale, with level 2 being the minimum level required to meet the core capacity requirements). WHO acknowledged that combinations of inputs are used to assess country-level progress with implementation. Participants were reminded that APSED (2010) covers all hazards. For example, the risk reduction objective builds on collaboration with animal health on zoonoses, which was already provided for in APSED (2005), with a view to extending this cooperative approach to a wider range of acute public health threats and other agencies that are involved in managing the associated hazards. Local surveillance and risk assessment capacities are also relevant to the detection and timely management of other acute hazards – even those that are not infectious pathogens.

• A strong focus on coordination is provided for in IHR (2005) and now also in APSED (2010), but how can this matter be measured and strengthened? Exercises are a good way of testing systems and improving operational coordination. Additionally, NFPs play a central role in the whole-of-government information collation and dissemination required for IHR (2005) implementation. NFPs function as an authoritative communication channel between Member States and WHO, and also directly between countries themselves. For this coordination role to be effective, NFPs need to have extensive information-sharing capabilities, established systems and close communication with senior management and political decision-makers.

2.1.4 Panel session: national and regional planning and review process

The Session Chairperson, Dr Anne Schuchat, Public Health Service Director, National Centre for Immunization and Respiratory Diseases, United States Centers for Disease Control and Prevention (US CDC), and TAG member, introduced the session.
The Lao People Democratic Republic’s experience with APSED (2005).
Dr Bounlay Phommassack, Director, National EID Coordinating Office, Lao People's Democratic Republic. Severe acute respiratory syndrome (SARS) and avian influenza H5N1 provided the immediate context for the development of APSED (2005). Around the same time, the Lao People's Democratic Republic was drafting a national pandemic influenza preparedness plan. The planning, implementation and review process for APSED (2005) provided an opportunity for continuous improvement of the draft national plan. In February 2007, the Lao People's Democratic Republic unveiled a national workplan for EIDs using the five focus areas of APSED (2005). A number of partners and other government agencies, including the Ministry of Agriculture and the Prime Minister’s Office, were involved in the planning process. The benefits of using planning to engage with other agencies at the national level, agreeing on priorities and carrying out exercises with them were seen as key lessons. APSED (2005) provided a framework with associated technical guidance and indicators; however, all the reviews, while useful, required considerable government staff time. The new APSED (2010) document will provide a framework for developing a national workplan for EIDs for 2011–2015, again including engagement with other agencies and partners and harmonization with public health emergency planning.

APSED (2010) workplan: monitoring and evaluation. Dr Li Ailan, WHO Regional Office for the Western Pacific. Monitoring and evaluation (M&E) contributes directly to programme accountability and learning. APSED (2005) included many M&E activities, including the collection of baseline data. However, WHO recognized that there was a significant assessment and reporting burden associated with APSED (2005), e.g. mid-term reviews. This led to a simplified, harmonized and explicit M&E framework for APSED (2010) – one with greater ownership by countries and more closely linked to capacity-building. TAG recommended in 2010 a minimum set of result-based APSED indicators, looking at activity, component and system levels. Six supplementary performance indicators were proposed:

1. Proportion of acute public health events in the past 12 months for which a national-level risk assessment was conducted within 48 hours.
2. Number of events that, following a national risk assessment, were the subject of further investigation or response at the national level.
3. Number of surveillance and response updates published, e.g. on an official website or journal.
4. Proportion of potentially significant public health events that were notified to WHO within 24 hours of national assessment.
5. Average time from receipt of a request for verification from WHO to the information being provided.
6. Number of outbreaks or events nationally reviewed each year by an expert group.

Most of these indicators are directly aligned with IHR (2005) requirements and should help countries to assess their own progress with APSED (2010) and also with resource mobilization and working with donors and other partners.
2.1.5 Country experiences from the APSED (2010) planning

**Malaysia. Dr Norhizan Ismail, Head of Surveillance, Disease Control Division, Ministry of Health, Malaysia.** Preparations for both APSED (2005) and IHR (2005) were assessed for baseline purposes. All relevant sections of the Ministry of Health were involved, paving the way for coordination of the national workplan with other agencies, including the use of an interagency focus group. This process helped clarify the approaches needed for health threats not associated with infectious diseases. The workplan adopted a phased model and took full advantage of M&E processes. A national workshop was also used to help finalize the workplan, culminating in a presentation to senior management in the Ministry of Health and other key government agencies.

**China. Mr Liu Zhiqiang, Section Chief, Health Emergency Response Office, China.** China was reporting more than 2000 public health events of all kinds each year. Disease surveillance and early warning systems needed strengthening and both APSED and IHR (2005) helped provide a catalyst for this to gain traction. From the outset, China’s preparation for APSED (2010) was seen as a multiagency initiative that also drew on the expertise of academics. The 2011–2015 workplan was developed in close consultation with other agencies. A team was identified to lead the response to varied emergency events spanning provincial and local governments and the armed forces. Surveillance and reporting systems spanning local, provincial and national levels within the country were an early priority for development.

**Papua New Guinea. Mr Enoch Posanai, Manager for Public Health, Ministry of Health, Papua New Guinea.** APSED (2005) has been a valuable driver for strengthened surveillance (e.g. indicator-based surveillance in hospitals), workforce capacity-building (e.g. EID technical staff have increased from two to eight) and interagency coordination, especially with animal health. A separate new funding stream has been created for EIDs, and this has helped in securing engagement with donors and other partners. There are now annual stakeholders’ progress meetings. The need for and benefits of coordination within the health sector, with provincial governments and other national agencies, has been one of the key lessons learnt.

2.1.6 Panel discussion on monitoring and evaluation

The discussion was facilitated by Dato’ Dr Tee Ah Sian and Dr Bounlay Phommasack. The strong and now explicit focus on M&E in APSED (2010), especially given that it is built into the Strategy and is not exclusively externally driven, is seen as very encouraging. M&E supports improved decision-making, programme design and accountability.

How to get “buy in” for implementation of APSED (2010) from other stakeholders:

- In New Zealand, APSED (2010) is supported by civil defence legislation that requires all agencies to develop and coordinate preparedness plans. In addition, in some instances, other agencies employ public health staff, which makes it easier to discuss public health issues in the context of their priorities.

- Government-funding mechanisms can assist with the achievement of work programmes with implications for multiple agencies.

- In Thailand, a recent workshop provided policy recommendations for government agencies to address coordination issues based on experience with pandemic influenza.
• Regular meetings with other agencies will assist to maintain interagency momentum. What is needed at the regional level through the TAG process to support monitoring and evaluation.

• Consider the proposed six supplementary performance indicators and how the information gathered will be shared across the Region.

• Having a national M&E focal point for APSED (2010) could facilitate communication (though it would be up to countries to decide if this person was the same as the IHR NFP).

• Countries could share their APSED (2010) workplans with each other.

• TAG should provide a frank assessment of the value of the six supplementary indicators after the initial reporting period, i.e. assess their value to countries and to WHO.

• The indicators should not simply be viewed as having been developed by an external group of experts for accountability purposes. They need to be presented as helping the countries themselves to assess their own performance and identify priorities for further attention.

• Tease out for planning purposes what issues are more appropriately addressed at the country level and which should be progressed at the regional level.

• From a banking perspective, it will be important to have evidence of where progress is occurring and where it is not, in order to help mobilize resources.

• The indicator framework also needs to have relevance to front-line public health workers.

• WHO’s role in convening TAG meetings will be vital to the ongoing rollout of APSED (2010), and M&E will be central to this. This also recognizes that it is concrete and measurable progress with implementation with APSED (2010) that will contribute to collective public health security – “prosper thy neighbour”.

• Some countries require Ministries to have an annual operational plan. Both APSED (2010) and IHR (2005) need to be included in this process if funding is to be available. Additionally, the proposed six indicators may also be useful for sharing information with donors.

• WHO does not publish country-level information about IHR implementation, but countries themselves could choose to disclose their own indicator reports, e.g. their country profiles as prepared by WHO based on IHR reporting.
2.1.7 Special session: Gender

Dr Pratap Singhasivanon, Dean, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand and TAG member, introduced the session on the treatment of gender issues in APSED (2010).

*Gender in APSED (2010), Dr Chin Kei Lee, WHO Regional Office for the Western Pacific.* Classical epidemiological analysis of person, place and time, including the age and sex of cases, is a basic component of descriptive epidemiology. Data should always be disaggregated by sex as this can help with assessments of exposures, risk and response measures, including risk communication. Gender is treated as a cross-cutting theme in APSED (2010). During the SARS epidemic, case rates were slightly higher for females, but mortality rates were slightly higher for males – the reasons for this disproportion remain unclear. However, it may be that poor training and low status jobs offered to some health care workers, often females, are affecting infection control. A specific gender focus has been recently adopted by the WHO Regional Office for the Western Pacific, and a gender analysis matrix has been developed.

Males are at higher risk of contracting dengue, especially for younger, working-age people. This can have consequences for risk communication and control measures. In some circumstances, males are less likely to access health care services, especially mental health services, perhaps because of their working hours or other issues related to the availability or accessibility of services.

The Chairperson invited questions and comments:

- Gender is not always immediately relevant to all diseases and conditions. However, it should be assessed in all situations. Additionally, it can sometimes be valuable to examine the data in more depth at a later stage to gain new insights into the disease and the kinds of risks it poses.

- Gender is a development issue as well as a health issue, and improved understanding of gender and sex issues can help improve the design and implementation of health services and programmes. Because of the significant sociocultural component, this means that gender-related issues cannot necessarily be assumed to transfer from one country to another or even from one locality to another within a country.

2.2 Plenary 2 – Zoonoses

The Session Chairperson, Dr Pratap Singhasivanon, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand, introduced the session.

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1 Sex refers to biological factors such as anatomy, immune system and pregnancy.

2 Gender refers to sociocultural norms, roles and responsibilities that can have direct and indirect implications for exposures, decision-making rights and access to resources.
2.2.1 One Health and FAO/OIE activities

*Dr Carolyn Benigno, FAO and Dr Ronello Abila, OIE*

The Global Framework for the Progressive Control of Transboundary Animal Diseases, which is intended to safeguard the livestock industry, was developed in 2004 following a major hand, foot and mouth disease outbreak in the United Kingdom of Great Britain and Northern Ireland. This framework is a joint initiative of the Food and Agriculture Organization (FAO) and World Organisation for Animal Health (OIE), and WHO is now involved in programme oversight. The framework is a facilitating mechanism that looks to strengthen early warning and rapid response to potential events – directly comparable to the objectives of APSED (2010). The goal is to protect food safety, food security and trade-based economic well-being, all of relevance to health outcomes.

One Health came out of an ecological examination of the drivers for avian influenza H5N1 and other zoonoses, including interactions between wildlife, population growth, rapid urbanization, agricultural practices (including the close proximity between people and agricultural animals in developing countries), and the increasing mobility of livestock through domestic and international trade. Interagency collaboration and use of multidisciplinary expertise emerged as essential for One Health goals. One Health aims to promote transparency and science-based decisions in relation to animal and plant health and trade. One of the components has been the evaluation and strengthening of veterinarian services, including associated epidemiological and laboratory capacities.

2.2.2 APSED (2010) workplan – zoonoses

*Dr Gyanendra Gongal, WHO South-East Asia Regional Office*

More than 75% of emerging diseases over the last three decades have been of zoonotic origin. This trend shows no sign of abating. Many of these disease outbreaks have their epicentres in the Asia Pacific region. For these reasons, close coordination between human and animal health surveillance, risk assessment and response is vital, including timely information sharing between agencies locally, nationally and regionally. Communication and coordination protocols between the human and animal health sectors need to be established and maintained in “peace time”, so that the relationships and systems for sharing information on, and responding to, zoonotic events are well established when outbreaks occur. Hence, zoonoses were incorporated in APSED (2005) as one of the five focus areas. The combined FAO/OIE/WHO collaboration guidelines are a tangible expression of the importance of ongoing coordination at the global level. APSED (2010) can also be thought of as providing a basis to help give effect to One Health objectives.

2.2.3 Country experiences

*Mongolia. Dr Gungaa Surenkhand, Deputy Director, National Centre for Communicable Diseases, Mongolia*. Mongolia has a relatively small and dispersed population and experiences a wide range of extreme temperatures. The Government recently established a multiagency zoonoses coordinating committee, which operates at national and provincial levels. This committee has identified priority diseases and coordinates the sharing of surveillance information and risk assessments. An intersectoral operational plan has been developed, APSED (2005) has helped to promote communication and cooperation between the government agencies. However, while progress has been made, evidence-based decision-making and response measures remain weak, partly due to challenges such as limited workforce and resources.
Philippines. Dr Lyndon Lee Suy, National Programme Manager, Department of Health, Philippines. In recent years, the Philippines has had vast experience with zoonoses, including rabies, Ebola Reston, cutaneous anthrax and avian influenza H5N1. A national coordination committee was established in 2007 and has since provided multiagency leadership on surveillance, training and response coordination. The committee ensures that animal health, human health and Department of Environment plans, programmes and policies are consistent with the national workplan for zoonoses. This collaboration has extended to surveillance and information sharing on wildlife species as well as a strong focus on agricultural animals.

The Chairperson invited questions and comments:

- It has been well established that most emerging infectious diseases are of animal origin and that close coordination between human health, animal health and environmental/wildlife services remains a clear priority. The question is, given widespread poverty and the importance of the Millennium Development Goals relating to education and poverty reduction, how can we strengthen the associated implementation processes?

- Zoonoses will remain a human health priority, certainly for the foreseeable future. One Health can help to improve understanding and management of the wider disease environment.

- In addition to addressing concerns about zoonotic disease, the One Health framework can contribute to food safety and food security. In the context of continued population growth, both of these initiatives are fundamental to future human health and well-being.

- FAO and OIE support a Field Epidemiology Training Programme (FETP) for veterinarian capacity-building.

- Approaching other agencies to improve the management of zoonotic diseases can help to open the door to other areas of intersectoral collaboration, e.g. for information-sharing and priority-setting purposes. It can also be important to brief key politicians and seek their mandate to promote interagency coordination.

- The animal health sector often faces significant challenges with limited workforce, equipment and other resources. In addition to preventing and controlling zoonoses, this sector must also manage the risk of human disease transmission to animals and provide ongoing education to farmers and the agriculture sector.

- Many meeting participants shared their concerns about zoonoses and the importance of multisectoral coordination. While the mechanisms for giving effect to interagency coordination vary between countries, key themes emerged, including senior management and political “buy-in”. Additionally, coordination must occur both nationally and subnationally, resources need to be allocated on a sustained basis and the coordination processes need to be actively maintained over time and formalized in some way, e.g. by way of committees, shared workplans, standard operating procedures (SOPs) and memoranda of understanding to clarify roles, responsibilities and information-sharing protocols.
2.3 Plenary 3 – Surveillance, risk assessment and response

The Session Chairperson, Dr John MacKenzie, Professor of Tropical Infectious Diseases, Curtin University, Australia, and TAG member, introduced the session.

2.3.1 APSED (2010) workplan – surveillance, risk assessment and response

Dr Graham Tallis, WHO Representative Office, Indonesia

Gathering public health intelligence is a routine function and continues to be a core focus for local and national-level capacity-building. The current emphasis is on consolidating the gains made under APSED (2005). The primary focus is therefore on strengthening the systematic application of event- and indicator-based surveillance capabilities, for both early warning of unexpected events and baseline assessments, respectively. These and other data sources will be used for risk assessment, which may involve both further investigation and rapid response. The goal is to integrate structured, documented risk assessment into everyday public health practice. Multiagency participation in surveillance, risk assessment and response is also being encouraged.

2.3.2 Risk assessment

Country experience with event-based surveillance – Cambodia, Dr Ly Sovann, Deputy Director, CDC, Cambodia. The occurrence of SARS and avian influenza H5N1 led to the development of APSED (2005), which in turn led Cambodia to develop a planned framework for early warning and risk assessment, using both disease syndromic and event-based surveillance. Reporting was improved by the adoption of a text messaging or SMS system for use by both private and public health clinics, from district and provincial to national surveillance. The system is structured around weekly reporting, with immediate reporting of urgent events via free-phone “hotlines”. Media screening from multiple sources is undertaken to support the early warning capability. Data obtained from event-based surveillance are used to identify clusters of disease or unusual events. The risk analysis process includes data confirmation, an assessment of the significance of the event and then decisions about next steps, e.g. further investigation and/or response, reporting to senior management and Minister, or no further action, as appropriate.

Risk assessment, Dr Ruth Foxwell, WHO Regional Office for the Western Pacific. Risk assessment is about converting data into information and using that “added value” to inform action. Risk assessment helps to prioritize actions and the deployment of resources to maximize health benefits. It provides a systematic tool to predict and plan. It also helps to create an evidence base for decisions and proportional response measures. Risk assessment should also be used to inform risk communication. Risk assessment considers the likelihood and nature of exposures, the magnitude of effects and also the perceptions of stakeholders including the public. Combined analysis of these issues guides the most efficient and effective response measures. Risk assessment should be ongoing, as new information comes to light and the impact of interventions is reviewed, so that the response can be adapted to the event as it unfolds. Risk assessment also provides a solid basis to engage with other agencies, e.g. in terms of their involvement with surveillance and possible response measures. For potentially significant events, risk assessment is one of the national-level core capacities required under IHR (2005) to determine which events may need to be notified urgently to WHO. This process can give political and other senior decision-makers confidence in the management of disease outbreaks. It also allows risk communication messages to be adapted to the specific circumstances and context of the event.
The Chairperson invited questions and comments:

- Risk assessment involves multiple functions and inputs and serves different purposes, e.g., it not only informs immediate response measures, but also contributes to policy development, longer-term decision-making, risk communication, and identification of training requirements.

In Cambodia, only 20%–25% of the population access publicly funded health services. This has implications for data reporting. Hence, Cambodia’s event-based surveillance seeks information from private facilities as well, including the free-phone hotlines. Other countries share this difficulty – fully engaging with private health care facilities can pose an ongoing surveillance challenge. This can be addressed by establishing good communication channels, and a mix of formal requirements (e.g., legislation and hospital accreditation procedures) and informal arrangements (e.g., providing feedback such as publishing surveillance and risk assessment information) to promote collaboration.

2.3.3 Field epidemiology training and rapid response teams

Country experience with field epidemiology training – Thailand. Dr Woraya Luang-on, Medical Officer, Bureau of EID, Ministry of Public Health. Thailand has had structured field epidemiology training since the 1970s and has progressively sought to strengthen its systems. Thailand’s Field Epidemiology Training Programme (FETP) involves training of staff from the Ministry of Public Health, other government departments (e.g., agriculture, wildlife and defence) and also from neighbouring countries. Field epidemiology training makes a direct contribution to rapid response capacity and supports early warning and outbreak investigation. Thailand’s Surveillance and Rapid Response Teams are deliberately charged with undertaking a range of closely related functions, including early warning surveillance, intelligence/risk assessment, outbreak investigation and rapid containment action. Thailand has played a leadership role in the ASEAN +3 FETP Network. Challenges include sustainability, harmonization and demonstrating the benefits of the programme.

Overview of field epidemiology training and rapid response teams. Dr Tamano Matsui, FETP Coordinator, WHO Regional Office for the Western Pacific. APSED (2005) identified FETP as an efficient and effective mechanism for workforce development. Subsequent reviews and programme strengthening have led to a modified approach that includes key competencies, variable course lengths and training through a mix of practical field work, service and mentorship. Appropriate placement of FETP graduates in the Ministry of Health requires careful consideration, including ongoing support, access to equipment and other resources and career progression. An additional challenge is securing funding on a sustainable basis. To help understand these issues, a pilot assessment of FETP was conducted in the Lao People’s Democratic Republic.

The Chairperson invited questions and comments:

- Where possible, FETPs should be country specific, as each country has particular disease profiles as well as social, economic and environmental circumstances and requirements.

- The post-training placement of FETP graduates (where they go, what they do and what further support they get), their retention and their career pathways are all key issues for the future of programme.
• Different levels of training are also useful, e.g. introductory, intermediate and advanced components may all need to be available. A module-based approach can help with flexibility to ensure that training meets country needs.

• Veterinarian FETP graduates have proved to be effective advocates for capacity-building, animal health surveillance and risk assessment.

• Following training, some graduates can be reluctant to return to their original position, especially a provincial or district post, after completing training at the national level.

• As post-training placements can be a challenge for a number of countries, a regional approach to supporting, retaining and maximizing the use of FETP graduates might be worth pursuing, especially as skilled graduates might eventually move on to senior leadership roles. This in turn highlights the need for management training across health systems. The Philippines provides management training for provincial public health leaders.

• APSED (2005) has contributed to the strengthening of FETP across the region. The renewed and expanded focus on FETP in APSED (2010) is deliberate and intended to further promote capacity-building in the core skill sets that are vital to local, national and regional capacities for effective public health services and collective health security.

2.3.4 Indicator-based surveillance

_Influenza workplan, Dr Jeffrey Partridge, WHO Regional Office for the Western Pacific_. After years of pandemic preparedness planning and the advent of influenza A (H1N1) 2009, the influenza surveillance system has proved to be a good example of a well-developed system. The WHO biregional workplan seeks to strengthen national influenza surveillance capabilities and creates roles for WHO, Ministries of Health, National Influenza Centres (NICs), laboratories, etc. A key focus of the workplan is to foster pooling of epidemiological, clinical and virological data and to enhance national networks of laboratories and surveillance functions. One element is to promote laboratory capacity-building across the region by developing terms of reference for NICs, quality standards, and biosafety and reporting protocols. As influenza circulates widely and very rapidly, information sharing is important at not only the country level, but also the regional and global levels. FluNet provides one platform for information sharing, with weekly publicly available updates. A review of data from virological and epidemiological sources from the Western Pacific Region has highlighted problems with the lack of common collection methodologies and case definitions in the Western Pacific Region.

_Epidemiology and laboratory collaboration, Dr Lee Lior, Technical Lead, Surveillance Outbreak Investigation & Response, Canada_. The Canada-Asia Regional Emerging Infectious Disease Project (CAREID) involves five core countries in the region working to strengthen surveillance, investigation, response and laboratory capacity through to December 2012. CAREID promotes a collaborative, sustainable multidisciplinary approach that is adapted for, and relevant to, the country-level context. Activities involve common training for epidemiological and laboratory staff in-country. Existing guidelines and reference documents are used as “toolkits”. Operational activities are designed to complement APSED (2010) and One Health, and include an evaluation component. The project supports the continuum of activity from specimen collection through to interpretation and public health action.
Additionally, different disciplines are gaining a greater appreciation of the roles of others and a deeper understanding of their interdependencies.

**Indicator-based surveillance under APSED (2010). Dr Chin Kei Lee, WHO Regional Office for the Western Pacific.** Surveillance and response is the first line of defence against both endemic and emerging disease threats. Indicator-based surveillance performs multiple roles, including outbreak detection and generation of time series data for baseline context to help interpret other surveillance input, e.g. event-based surveillance information. Indicator-based surveillance also yields information about long-term disease trends. Many countries do not have fully functional surveillance systems and further work is needed to link surveillance data to risk assessment and response functions in a timely and reliable manner. Unnecessarily lengthy or historical lists of diseases and syndromes under surveillance would benefit from review, so as to better focus on key priority diseases and make the most efficient use of surveillance resources.

The Chairperson invited questions and comments:

- Influenza surveillance can potentially serve as a model for improvements to general surveillance systems. Any enhancements to surveillance capacity should be tested in exercises, with donors and partners providing resources and technical support.

- Rather than simply reporting data to the national level for analysis and interpretation, local surveillance staff should whenever possible undertake their own preliminary risk assessment, as this will assist with timely investigation and response.

2.4 Plenary 4 – Public health emergency preparedness

The Session Chairperson, Dato’ Dr Tee Ah Sian, introduced the session.

2.4.1 Pandemic review in the Region

**Dr Chin Kei Lee, WHO Regional Office for the Western Pacific**

APSED (2005) served as a framework not only for IHR (2005) implementation but also for pandemic preparedness. Pandemic (H1N1) 2009 provided the first major test of the capacity built over the previous decade. Effective command and control systems proved a vital aspect of country-level and WHO responses – support for information sharing, response coordination across government and other sectors, and provision of reliable and timely information for decision-making and planning. Most countries had developed pandemic plans prior to the 2009 pandemic and had tested them in exercises. After the pandemic, countries and WHO used the opportunity to review their experiences and lessons to revise their plans and procedures. They learnt, for example, that prolonged regular reporting of case numbers creates a reporting burden for many countries. Additionally, plans need to have strong provision for logistics and be flexible to accommodate unanticipated evolution of events.

2.4.2 APSED (2010) workplan – public health emergency preparedness

**Dr Richard Brown, WHO South-East Asia Regional Office**

Pandemic preparedness and outbreak response plans are increasingly seen as contributing to generic public health emergency preparedness. Additionally, under IHR (2005), all countries are required to develop and maintain a generic national public health emergency preparedness plan. Such plans should in turn be compatible with any national disaster response plan or other relevant plans, such as for food safety or chemical events. A central feature of a generic national plan is a strong, centralized command and control capability within the health sector,
with the equipment, authority and staff to assess the situation, make decisions and coordinate the overall health response. Where possible, pre-agreed or existing systems (e.g. for surveillance and information sharing with other agencies) should be used. SOPs should be also used to maximize consistency and assist with shift handovers. However, no system or procedure will be able to anticipate all situations, so the Emergency Operations Centre (EOC) must have the flexibility and authority to adapt systems and response measures as required. Where a generic national public health emergency preparedness plan has been revised or developed, it should be tested in an exercise.

The Chairperson invited questions and comments:

- A generic command and control structure, with training offered to familiarize staff, has proved valuable in New Zealand during its response to a range of events including the 2009 pandemic, tsunamis in the Pacific and earthquakes throughout the Region.

- Decision-making procedures should be clarified before an emergency so that all parties within the health sector and in relation to other agencies have a common, prearranged understanding of the command and control arrangements.

- Annex 1 of IHR (2005) requires all Member States to develop and maintain a generic national public health emergency preparedness plan, with the same deadline as the other core capacities (15 June 2012).

- All health emergency plans will ultimately draw on the same public health workforce. It will be their experience, expertise and familiarity with the systems and equipment already available to them that will determine the extent to which they can support any response.

2.4.3 Response logistics and Emergency Operations Centres

Mr Steven Bice, WHO Regional Office for the Western Pacific

Logistics management involves directing the flow of resources. Response logistics provides a framework for providing reliable and timely support to an emergency response, where either the scale or nature of the logistics challenge means that normal systems will be inadequate. Prior planning is the starting point, as is a strong understanding of the supply chain. Clear command and control is essential, and so is the security of the workforce and other resources deployed to the field for response purposes. Response logistics also supports the orderly withdrawal of staff and removal of resources when the response is stood down, e.g. ensuring that biological and other waste is managed appropriately. EOCs can be used to support everyday functions, e.g. to contribute to situational awareness and to support decision-making on a routine basis. When an emergency arises, staff should already be familiar with the systems, procedures and equipment. EOCs should be located in the Ministry of Health, should be used by Ministry of Health staff and should be designed to meet the country’s functional purposes.

2.4.4 Country experience with emergency operations centre – New Zealand

Dr Darren Hunt, Acting Director of Public Health, Ministry of Health, New Zealand

New Zealand uses a coordinated incident management system (CIMS) for generic command and control. CIMS, with its common systems and terminology, is used by the Ministry of Health as well as other government departments, e.g. civil defence, fire, animal health and police. CIMS describes roles by function, rather than by person. Key functions or “desks” include the incident controller, operations, planning and intelligence, logistics, liaison
(with other agencies) and communications. A CIMS-based EOC is scalable. Meaning, for a small event, only one person may be needed for each “desk” (or several functions might be combined into a single desk), but for a larger event, many people may be needed to support a given function. During the 2009 pandemic, the Ministry of Health was able to bring in staff from other agencies who were familiar with CIMS. Because they knew the functional requirements, they were readily able to help support the EOC and contribute to the response. Other than actual event responses, exercises are the next best way to enhance staff familiarity with EOC procedures. A web-based information, communication and technology (ICT) platform is used to share information and assign tasks across the health sector and to other sectors. During the H1N1 pandemic, the national health EOC was activated the same day the first cases were reported, starting with only a small number of people (as it was a weekend). Additional staff was rapidly co-opted in the following days as the event grew in size and complexity. Under the New Zealand Pandemic Plan, the Health EOC provided leadership to the whole-of-government response. The Canterbury earthquake response also activated the Health EOC, but this time to support civil defence, which led the overall response. Strengths of the system include flexibility and scalability, based on functional roles, and inter-operability with other agencies. However, it can be challenging to maintain the intensity of operations during a sustained response.

2.4.5 Country experience with public health emergency and response – Japan

Dr Tomoya Saito, Deputy Director, Office of Public Health Emergency Preparedness and Response, Ministry of Health Labour and Welfare, Japan

The focus of emergency planning in Japan has changed over the years, from communicable diseases to environmental pollution, environmental disasters, counter terrorism and climate change. Responding to the 9.0-magnitude earthquake on 11 March 2011, combined with the 15-metre tsunami and ongoing radiological emergency, proved to be a major challenge for Japan. Pre-existing interagency emergency coordination mechanisms were activated, including interaction with local government. Nonetheless, four months later, more than 5000 people are still missing. For managing the radiological hazard, the primary concern is maintaining and reviewing the exclusion zone, detecting hot spots and monitoring and controlling potential food contamination. To date, no one has died from radiological exposure. Public anxiety remains high and risk communication will require significant resources for the long term. Complex disasters pose immense challenges, even for emergency plans developed with “all hazards” in mind – just not necessarily simultaneously.

2.4.6 Point-of-entry preparedness

Dr Li Ailan, WHO Regional Office for the Western Pacific

Under IHR (2005), designated points of entry (PoE) must have core capacities, covering both routine requirements and emergency response. WHO has worked with the International Civil Aviation Organization (ICAO) and other stakeholders on this effort and has specifically included PoE emergency preparedness in APSED (2010) at the request of Member States. Public health measures at PoE can have major implications for travellers and trade, and so response measures need to be justifiable, i.e. evidence based, proportionate and regularly reviewed. Airlines, shipping operators and the travelling public expect that reasonable public health measures will be implemented consistently at PoE. During pandemic (H1N1) 2009, some countries adopted measures based on the steps taken by neighbouring countries, rather than on their own risk assessment. IHR (2005) recognizes that PoE is only one component of a multilayered system for detecting and responding to the spread of disease threats. While it is generally not reasonable to close borders in an attempt to prevent entry, for island countries, increased surveillance, provision of information and appropriate use of response measures at PoE, in conjunction with comparable post-border measures, may help to delay and reduce spread, which can be advantageous. The WHO Regional Office for the Western Pacific has developed
some interim guidance to assist public health and PoE authorities to work with other agencies in order to enhance public health emergency preparedness at PoE. Risk assessment should inform the adoption of proportionate response measures in all situations, but especially at PoE.

The Chairperson invited questions and comments:

• In outbreak situations, decision-makers often implement screening at PoE, as these types of measures tend to reassure the public and raise awareness. It is recognized, however, that such measures can also be resource intensive. Technical guidelines are available to help authorities make evidence-based decisions about appropriate measures at PoE.

• Uncontrolled borders will always be a risk for the spread of disease. This is inevitable, but countries must prioritize the use of their resources and may choose to collaborate with neighbouring countries e.g. on information sharing.

• PoE is not “one way” routes, i.e. under IHR (2005) countries are obligated to not knowingly export a disease threat. However, in practical terms this is very difficult for countries to address. Provision of information to the public can help, e.g. advice to delay or defer travel if unwell.

• Relying on ineffective but symbolic measures such as thermal scanning can actually undermine public confidence in officials, especially given the opportunity cost of such measures. Staff could be more productively engaged elsewhere with other more effective health protection activities.

• Coordination with other agencies in relation to the location and operation of EOCs will need to be considered on a country-by-country basis. In some circumstances, discussion may be needed, e.g. if other departments do not consider its location appropriate. Regardless, the health EOC should focus on coordinating the health response, and then, depending on the nature of the event, liaising with other EOCs, e.g. disaster management, may also be required.

2.5 Plenary 5 – Regional preparedness, alert and response

The Session Chairperson, Dr Xiao Donglou, Director-General, Public Health, Bureau of Disease Control, Ministry of Health, China, and TAG member, introduced the session.

2.5.1 APSED (2010) workplan – regional preparedness, alert and response

Dr Chin Kei Lee, WHO Regional Office for the Western Pacific

A review of APSED (2005) suggested a focus beyond country-level capacity-building to include regionwide activities in relation to intelligence gathering and information sharing to support early warning and response. This builds on the Global Outbreak Alert and Response Network (GOARN) and provides for the collation and analysis of surveillance inputs from across the region to provide a timely alert capability. A risk assessment product was also developed and linked with the Western Pacific Surveillance and Response initiative. Preparedness activities will take the form of strengthening regional systems, e.g. NFP networks.
2.5.2 Regional surveillance for priority diseases – avian influenza H5N1 and pandemic influenza

Dr Jeffrey Partridge, WHO Regional Office for the Western Pacific

The declaration of a public health emergency of international concern (PHEIC) in April 2009 triggered intensified surveillance and reporting around the world. The WHO Regional Office for the Western Pacific activated its 24/7 surveillance collation and intelligence capability and produced daily situation updates, tracking the progression of the pandemic and sharing epidemiological and clinical information. FluNet characterized and reported the virological characteristics of influenza strains circulating and the ascendancy of A (H1N1) 2009. Avian influenza H5N1 continues to be monitored regionally and acute events are reported daily or as necessary. The Regional Office undertakes a rapid risk assessment for each event in close collaboration with the country concerned. Intelligence information is posted on a WHO secure website for other regional offices and all Member States. Global H5N1 intelligence updates are published weekly.

2.5.3 Regional surveillance for priority diseases – dengue and hand, foot and mouth disease

Dr Yuzo Arima, WHO Regional Office for the Western Pacific

Dengue and hand, foot and mouth disease are endemic diseases with high incidence across the region. The South-East Asia Regional Office reported almost 300,000 cases of dengue in 2010, with 1896 deaths, and an increase in the number of countries reporting dengue cases. The Western Pacific Regional Office reported 353,000 cases in the same year. WHO’s strategy is to develop a “one-stop shop” for surveillance and information updates. The goal is to support countries to develop and implement evidence-based response measures. The Association of South-East Asian Nations (ASEAN) has also recognized the social and economic significance of dengue across the region and is supporting a range of activities. Susceptible populations fluctuate between countries, and to help provide a more complete picture, gender is now explicitly included in the epidemiological information. Gender trends tend to vary by age, and while this has been investigated to see if it is an artefact of access to health care services, it has helped with targeting response measures. Hand, foot and mouth disease has also experienced a regional increase in reported cases, leading WHO to start systematic collation and analysis of reported data. WHO has also developed a guide for clinical and public health management of the disease.

2.5.4 Western Pacific Surveillance and Response

Ms Emma Field, WHO Regional Office for the Western Pacific

The Western Pacific Surveillance and Response (WPSAR) journal was launched in October 2010 to provide regular dissemination of high quality information on surveillance and response to public health events of regional significance. WPSAR is primarily web-based, allowing articles to be published immediately after finalization. The web platform (www.wpro.who.int/wpsar) is supplemented by limited print runs. WPSAR contributes to information sharing and promotes awareness of technical findings and best practices, such as the rollout of new surveillance and early warning systems by national governments, as well as lessons learnt from acute event responses. Each article is peer reviewed to encourage critical analysis and rigour in the preparation of manuscripts. The primary audience is government agencies, but research institutions, NGOs, donors and the media are also recipients. The journal is available in English and Chinese. Subscription is free.
GOARN, established in April 2000, recognizes that no single institution has all the technical and operational capacities needed to manage significant emerging events. GOARN is coordinated and supported by WHO, but it is comprised of multiple collaborating partners globally. GOARN helps countries to investigate and characterize acute public health events and supports rapid response measures in-country, for example, in response to pandemic influenza, cholera and leptospirosis. In addition to supporting in-country outbreak responses, GOARN contributes to APSED (2010) implementation by assisting with training, advocacy, risk assessment and risk communication capacity-building across the region. Priorities for the coming year include continuing with scenario-based training and fostering better links between GOARN and FETPs.

The Chairperson invited questions and comments:

- Has a strain analysis been undertaken as part of the gender analysis for dengue? No, the gender analysis has not been supplemented by a virological assessment. However, the preliminary multi-year age and sex analysis has still been informative. For example, in the Western Pacific Region, the fact that males have higher dengue rates appears to be related to socio-demographic differences affecting risk of exposure. This information should eventually be published, e.g. in WPSAR.

- Appreciation was expressed by countries for the continued efforts with surveillance and response for dengue and hand, food and mouth disease. Countries were encouraged to pursue systematic prevention programmes and to evaluate them.

- APSED (2005) certainly helped prepare the region for pandemic (H1N1) 2009, but in terms of further planning for major public health emergencies, how can the health sector encourage the whole of society to engage in prevention and response measures? Provision of information and risk communication can contribute to this objective, as well as health sector advocacy with political leadership.

- An example of rapid response to a chemical incident demonstrated that there is considerable expertise in the region, but it is not always easy to identify or mobilize.

- For influenza H5N1, is it possible to access incidence and outbreak data about both human and animal cases/trends? Further collaboration between human and animal health sectors under APSED (2010) may help to support information sharing and common risk assessment and risk communication. WHO, in collaboration with OIE and FAO, will continue to seek, analyse and share combined data wherever possible.

- APSED (2010) could provide a catalyst for clinical and epidemiological training, e.g. training on hand, foot and mouth disease as requested by Cambodia.

- If developing a draft five-year APSED (2010) workplan is the main objective of this meeting, especially in terms of what participants will need to take home to their country colleagues, where is it? This meeting is intended to review the workplan prepared in draft form by WHO following TAG and country-level consultations. APSED (2005) had a very detailed workplan, but a different approach is envisaged for APSED (2010). The APSED (2010) workplan will be a common reference point for countries to use in developing their own national workplans, tailored to their own
circumstances and needs. Hence, this meeting does not need to formally approve the workplan itself. Rather, countries are encouraged to use it as a shared framework to plan their own activities for implementation, bearing in mind that there will be collective annual reporting on progress made towards giving effect to the APSED (2010) focus areas. Regional-level activities will be more concrete.

- Participants stressed that they needed to have more clarity about the core functions and capacities to be achieved, i.e. how the focus areas will be acted upon. It was explained that, in addition to using the APSED (2010) workplan as a reference point for developing country-level workplans, technical support and further guidance will be available from WHO and other partners to assist countries in planning and implementing APSED (2010).

- Clarification was sought on the status of the proposed supplementary indicators. It was explained that as most of the underlying functions are linked to IHR reporting, countries should generally be comfortable with them. There are only six indicators and they are not difficult to measure. One strategy to support reporting on these indicators is to include monitoring and evaluation as an explicit element of the planning process. Dr Takeshi Kasai, WHO Regional Office for the Western Pacific, proposed that countries review the supplementary indicators and provide comments to WHO within three months, i.e. by 1 November 2011. Based on feedback received from countries, WHO will develop a guidance document.

- While the presentations were universally of a high standard and informative, it was noted that having fewer presentations and more time for group work and plenary discussions would be valuable for future meetings. In this light, further guidance from WHO on the next steps and on the technical support available to Member States as they prepare their national APSED (2010) workplans would also be useful.

2.5.6 Summaries from group work

The Session Chairperson, Associate Professor Chew Suok Kai, Deputy Director of Medical Services (Public Health Group), Ministry of Health, Singapore, and TAG member, introduced this session.

**Indicator-based surveillance under APSED (2010).** Most countries have a functional indicator-based surveillance system in some form, including a mix of any or all of notifiable disease surveillance, syndromic surveillance and sentinel reporting.

Notifiable disease surveillance is usually required from medical practitioners and laboratories. Though in practice, obtaining data from private clinics can sometimes be a significant challenge.

The APSED (2010) focus on indicator-based surveillance should emphasize the systematic and ongoing collation and analysis of syndromic surveillance and reporting from sentinel health care facilities. The indicator-based surveillance may need to concentrate on relatively small number of priority diseases (e.g. prioritized on the basis of prevalence, public health impact, “preventability” and “treatability”). A key advantage of indicator-based surveillance is that it provides data about age, gender, location and the time of onset of symptoms.
The objective is to combine data from indicator-based surveillance with that of event-based surveillance to improve overall situational awareness. Historical indicator-based data provide a vital reference point for determining the relative significance of current trends or outbreaks.

Countries could be encouraged to share surveillance information on the secure WHO IHR event information site (EIS). Additionally, WHO could provide surveillance information for specific diseases of regional significance e.g. dengue or Japanese encephalitis.

Countries could be encouraged to publish their own surveillance data and risk assessments. They can approach NFPs directly to seek information about public health risks in other countries, and also approach WHO to facilitate this.

A further long-term goal is to integrate human indicator-based and event-based surveillance systems with zoonotic surveillance from the animal health and wildlife sectors to provide a richer data set for risk assessment and risk communication.

*Emerging Infectious Diseases Programme Managers.* APSED (2010) should be used by countries to support the implementation of IHR Review Committee recommendations, e.g. continued focus on strengthening of core capacities for surveillance, risk assessment, response, reporting and public health emergency preparedness plans (noting the IHR deadline of 15 June 2012).

In some countries, the NFP is not within the Ministry of Health, but located in another organization.

EOCs can be used to manage day-to-day events such as EIDs, and should be scalable to respond to acute events. SOPs for EOCs should be tested in exercises.

Risk assessment is essential for health security. Risk assessments should be documented and should apply relevant guidelines consistently. The skill sets and professional disciplines will sometimes vary according to the nature of the event under consideration.

*National IHR Focal Points.* NFPs reported no concerns with the draft workplan and supported its flexibility. However, they requested greater clarity in terms of which activities were to be carried out by countries or WHO.

NFPs encouraged WHO to continue to conduct annual functional exercises, and to explore the possibility of a biregional exercise.

Use of monitoring and evaluation tools, such as the IHR implementation questionnaires and APSED supplementary indicators, helps to raise issues within the Ministry of Health and to foster discussion with other agencies. WHO country summary profiles derived from the questionnaires should be shared with the countries – which may then wish to publish them.

NFPs play a big role in public health event communications, e.g. communicating with other countries as well as with WHO.

Challenges include the nature or level of pre-agreed NFP authority, the need for interagency consultation, staff turnover, language barriers and the fact that sometimes the NFP function falls on just one person.
NFPs suggested strengthening the Event Information Site, e.g. make it a richer source of risk assessment and epidemiological intelligence, and also make it more timely, e.g. by including provisional information (explicitly identified as such) prior to the completion of verification procedures.

Partners’ forum.


They endorsed the strategy’s flexibility with implementation. Partners generally support multiple capacities, though some capacities or programmes receive more support than others.

Multiple projects can create gaps and overlaps.

Support for GOARN activities, collaboration with animal health and risk communication based on evidence-based decisions.

Make maximum use of the annual planning and review cycles, including targets and monitoring and evaluation for accountability and performance management purposes.

Give special consideration to small countries with limited resources.

Seek strongest possible alignment between APSED (2010) and the IHR (2005).

Consider how best to engage with new global partners who have results-focused agendas.

APSED progress reports would be more helpful for donors and partners if data were disaggregated by country.

While supportive of all hazards public health emergency preparedness, implementation of APSED (2010) should avoid undue focus on natural or technological disasters.

Partners wish to continue to be engaged with APSED (2010), using performance indicators to measure progress, which will help with better coordination of sustained partner support.

The Chairperson invited questions and comments:

• Common SOPs, case definitions, etc. are desirable, but this type of standardization could be costly to implement, unless it only applies to selected or new diseases.

• There is a collective commitment to make public health systems work more effectively, but in practice, at country and regional levels this is complex. The implication is that continued communication, cooperation, coordination and collaboration at many levels remains vital.

• Clarification was sought on the role of the private sector in public health emergency preparedness. It was noted that a planning meeting will soon be arranged by WHO Headquarters on this topic.
2.6 Plenary 6 – Infection prevention and control

The Session Chairperson, Associate Professor Chew Suok Kai, Singapore, introduced this session.

2.6.1 APSED 2010 workplan – infection prevention and control

Dr Richard Brown, WHO South-East Asia Regional Office

While some progress has been made under APSED (2005), further work is still required to embed infection prevention and control in day-to-day practice. National leadership in this regard can be provided by an infection prevention and control (IPC) resource centre. Such a centre can be located in the Ministry of Health or a major health care facility, but wherever it is located, it should be a centre of excellence. The centre should model good practice and work to become a resource for health care workers. It should operate in conjunction with a national IPC committee.

The Chairperson invited questions and comments:

- Promoting a high profile for IPC on a continuing basis is important for health sector resilience.
- Consider partnerships with the Association for Infection Control. Advocacy should be ongoing, e.g. to convince policy- and decision-makers to ensure the availability of adequate supplies and equipment. Outbreaks of nosocomial infection continue to provide a challenge for health care facilities.
- IPC is an important issue not only for staff working in health care facilities, but also for community health care workers and those involved in outbreak investigation and response. FAO and OIE should have input on IPC in the animal health sector, and may look to the health sector for expertise.
- Collecting and analysing data on nosocomial infections can be very important to provide an evidence base to advocate for IPC resources.

2.7 Plenary 7 – Risk communication

The Session Chairperson, Ms Ann Moen, Associate Director, Extramural Programmes, National Centre on Immunization, CDC, USA, introduced this session.

2.7.1 Risk communication overview

Ms Joy Caminade, WHO Regional Office for the Western Pacific

Situations involving urgency, growing public concern and scientific uncertainty are the normal context for risk communication. Rumours, social media and misinformation can compound public anxiety, which in turn serves to make the event all the more newsworthy. Hence, frequent, evidence-based and timely risk communication can be the difference between success and failure in responding to acute public health events. Key messages may need to be tailored to specific audiences. The five key principles of risk communication are trust, transparency, announcing early, listening to and involving the public, and planning. The objective is to help people make informed decisions on how to protect themselves and to reduce the overall social, economic and political impacts associated with the event.
2.7.2 Risk communication country experience – scarlet fever in Hong Kong (China)

Dr Chuang Shuk Kwan, Centre for Health Protection, Department of Health, Hong Kong

The Centre for Health Protection was established in June 2004 as a public health agency under the Department of Health. The Centre is committed to real-time surveillance, rapid intervention and responsive risk communication. Objectives include promoting awareness of, and preparedness for, public health emergencies, influencing people’s behaviour in a positive manner and encouraging stakeholders and partners to understand that they all have critical roles to play in the management of public health emergencies. In mid-April 2011 an increase in the incidence of scarlet fever was detected in Hong Kong (China). Case numbers rose steadily, eventually including some fatalities. As part of the response, key messages were developed for multiple audiences. Media briefings were held, the Centre’s website was updated, resource materials were provided to schools and technical information was circulated to health professionals. Following the event, a debriefing on the risk communication component of the response was conducted.

2.7.3 APSED (2010) workplan - risk communication

Ms Joy Caminade, WHO Regional Office for the Western Pacific

APSED (2005) helped to put risk communication on centre stage; however, some countries struggled to secure resources and funding, resulting in variable progress across the region. The vision for APSED (2010) is for risk communication to be embedded as an institutionalized functional mechanism, structure or team within the Ministry of Health. This in-house capability will enable the Ministry to engage the media, public and relevant stakeholders and to disseminate key messages and share information in a timely and transparent manner. Projected milestones include:

- Year 1: Focal points, spokespersons and teams for risk communication are identified and trained.
- Year 3: Public health emergency communication structure or mechanism is established. Appropriate SOPs for risk communication and media response, monitoring and analysis are developed.
- Year 5: Member States use their SOPs and mechanisms for risk communication during public health events.

The long-term goal is for Member States to adopt a structured approach to risk communication that is systemic, proactive and functional.

2.8 Plenary 8 – Laboratory

The Session Chairperson, Ms Ann Moen, CDC, USA, introduced this session.

2.8.1 Laboratory

Dr Jeffrey Partridge, WHO Regional Office for the Western Pacific

APSED (2005) helped drive progress in capacity-building across the Asia Pacific Region. For example, in August 2010, the Lao People's Democratic Republic’s National Centre for Laboratory and Epidemiology became the newest NIC in the Western Pacific Region, and two months later, the Chinese NIC was officially designated as a WHO Collaborating Centre for Reference and Research on Influenza. The laboratory focus in APSED (2010) is three-fold: safe
and accurate laboratory diagnosis; laboratory support for surveillance and response; and coordination and laboratory networking. WHO’s work has been supported by a complementary programme run by ASEAN. While ASEAN is concentrating on information sharing, policy and research, WHO is focusing its efforts on capacity-building for accurate diagnosis, support for public health surveillance and response, and biosafety. APSED (2010) envisages that national and regional reference laboratories will support public health laboratories in the reference function and during outbreak responses – in particular for unknown or difficult-to-identify pathogens.

2.9 Closing remarks

The Chairperson, Dr Watanabe, observed that the meeting discussions would greatly assist with the development and implementation of country and regional workplans based on the APSED (2010) workplan. Although APSED (2010) has been adopted by the Regional Committee for the Western Pacific and is supported by the South-East Asia Region, the associated APSED (2010) workplan, which is a flexible guideline, does not need to be formally adopted. Rather, it will be a living document, evolving over time to guide countries instead of binding them with prescriptive implementation requirements. In closing, APSED (2010) will continue to guide countries on their pathway to IHR (2005) compliance and pandemic preparedness, and in so doing will contribute significantly to collective health security across the two WHO Regions.

3. CONCLUSIONS AND RECOMMENDATIONS

The newly updated Asia Pacific Strategy for Emerging Diseases, or APSED (2010), builds directly on the significant progress already achieved under the earlier APSED (2005), and the lessons learnt from the pandemic preparedness and response. APSED (2010) was developed based on an intensive country and regional-level consultative process initiated in July 2009, and serves as a common framework for national and regional capacity-building in both the South-East Asia and Western Pacific Regions. APSED (2010) retains the five original work areas and adds three new focus areas: public health emergency preparedness; regional preparedness, alert and response; and monitoring and evaluation. The 2010 Asia Pacific Technical Advisory Group (TAG) meeting recommended that Member States and WHO should use APSED (2010) as a road map to develop and implement workplans at both national and regional levels, ensuring that the strategy is translated into action; and that taking account of the IHR monitoring tool, WHO work with Member States and partners to develop a minimum set of APSED indicators and agreed on mechanisms that should be used for result-based monitoring of APSED (2010) implementation progress. Building on the earlier voices and needs expressed by countries during the consultative process of developing APSED (2010), and following the TAG recommendations in July 2010, WHO has consulted with Member States, TAG members and partners to develop an APSED (2010) draft workplan, including throughout the national planning process and this first TAG meeting on APSED (2010). The meeting participants agreed that the APSED (2010) draft workplan will assist countries to move forward with capacity-building over the next five years. The draft workplan will be further revised in light of comments received immediately prior to and during this TAG meeting. Thereafter, the workplan will provide a flexible framework for action by Member States, WHO and partners to advance collective health security that benefits all. Participants also acknowledged the important context for this joint effort provided by IHR (2005) (including the June 2012 deadline for core capacities) and especially the experience gained by Member States and WHO during the influenza H1N1 pandemic. APSED (2010) builds on experience with emerging diseases in a
step-by-step manner to help strengthen a range of capacities, including public health emergency preparedness and engagement with other sectors to move towards an ‘all hazards’ approach. The meeting participants recognized that monitoring and evaluation, as a new focus area for capacity development under APSED (2010), will help Member States to strengthen their own national planning and review process, and to monitor country progress. During the meeting participants raised a number of contextual issues concerning influence of wider societal and environmental considerations, including in particular the Millennium Development Goals, One Health, financial constraints and climate change, the global trade of food and food safety concerns, indicating the importance of multisectoral collaboration and linking with other relevant Strategies as needed.

3.1 Conclusions

The main conclusions of the meeting were as follows:

3.1.1 The Asia Pacific region is prone to a wide range of acute public health threats. It is therefore vital to further develop the core capacities to detect, assess and respond to emerging infectious disease outbreaks and acute public health events. APSED (2010) and the APSED (2010) workplan, with their additional three new focus areas, have been developed using a consultative, biregional process to provide a common tool to strengthen capacity across the two regions.

3.1.2 Member States in the Asia Pacific region are progressing well with IHR (2005) implementation through APSED. Many countries have significantly improved their core public health capacities since the beginning of APSED (2005). However, mindful of the June 2012 deadline, further efforts are needed to ensure all countries meet the minimum capacities required under IHR (2005).

3.1.3 While the APSED (2010) workplan provides Member States, WHO and partners with a shared framework for collective health security, it also allows flexibility to adapt planning and implementation to reflect national circumstances.

3.1.4 APSED (2010) and the associated workplan will serve as a platform to implement a number of the recommendations made by the IHR Review Committee that were developed following an international review of the pandemic response and that were endorsed by the World Health Assembly in May 2011.

3.1.5 Successful implementation of the APSED (2010) workplan will require joint efforts and actions to align and strengthen partnerships at the national and regional levels, while linking with other relevant strategies as appropriate.

3.1.6 The APSED (2010) planning and review process, at both national and regional levels, fosters working relationships through engagement of various stakeholders and thus contributes to country ownership. The planning process facilitates prioritization and harmonization of activities across many sectors involved in emerging infectious diseases and public health emergencies, and helps to reduce duplication. The TAG mechanism can be fully utilized to improve the coordination of collective efforts of countries and partners towards regional health security that benefits all.
3.2 Recommendations

3.2.1 General

(1) APSED (2010) and the APSED (2010) workplan should be used to provide strategic direction for the development of national and regional capacities required to detect, assess and manage emerging diseases and acute public health events. The APSED (2010) workplan should be used by Member States as a practical and flexible tool for the development of a national plan for the prioritization of activities and mobilization of technical and financial resources.

(2) Member States should continue their planning process to develop or finalize their national workplan for emerging diseases and acute public health events, in line with the APSED (2010) workplan and linking with other relevant strategies as appropriate. The National IHR Focal Point should be involved in this national planning and review process. The national workplan should cover five years and should identify priority activities for the next 12 months.

(3) The WHO South-East Asia and Western Pacific Regional Offices should consult with relevant partners to develop regional workplans, in line with APSED (2010) and its workplan, for priority activities requiring regional coordination.

(4) WHO should provide IHR (2005) core capacity analysis summaries to Member States in a timely manner.

(5) Member States should consider the proposed APSED (2010) supplementary indicators and provide feedback to WHO on the indicators as soon as possible (no later than 1 November 2011). Based on the feedback received, WHO should develop a practical guide for establishing the national planning and review process, including use of monitoring indicators.

(6) TAG appreciates the acknowledgment by partners of the need for improved coordination and alignment of their support to Member States and the region. To this end, TAG encourages partners to continue their efforts to enhance mechanisms for communication and coordination.

3.2.2 Recommended priority activities for the next 12 months

(1) Member States should begin to adopt a structured approach to risk assessment including use of all relevant sources of information and the development and/or use of standard operating procedures (SOPs) and protocols for use at national and subnational levels.

(2) Member States should continue to focus on sustainable field epidemiology training, including consideration of the placement of FETP graduates.

(3) Member States and WHO should collectively strengthen timely indicator-based surveillance capacities for priority diseases such as influenza, dengue and hand, foot and mouth disease.

(4) Member States and WHO should develop laboratory capacity and systems to undertake early detection of both novel and known pathogens to support public health risk assessment and response. Countries without full laboratory facilities should maximize the use of existing regional networks.
(5) Member States should expand collaboration as appropriate among human health, animal health, wildlife and other relevant sectors and partners, to strengthen risk reduction programmes for zoonoses, in addition to coordinating national surveillance, risk assessment and response capacities.

(6) WHO should continue to work with Member States to facilitate access to resource materials and training for infection prevention and control.

(7) Member States should prioritize capacity-building in health emergency risk communication.

(8) Member States should continue to revise their national pandemic influenza preparedness and response plans, building on their experience and lessons learnt from pandemic (H1N1) 2009. Member States should also develop or review their generic public health emergency response plan, building on the foundation of their pandemic plan.

(9) WHO should continue to collaborate with regional partners to help mobilize technical and financial resources to support Member States with the implementation of APSED (2010) workplans.
ANNEX 1

PROGRAMME OF ACTIVITIES
TENTATIVE

Day 1 – 26 July (Tuesday)

08:30 – 09:00  Registration

09:00 – 10:00  Opening session

  Opening remarks
  - Dr Shin Young-soo, Regional Director
  WHO Western Pacific Regional Office

  Self introduction

  Objectives and agenda

  Nomination of Chairs

  Administrative announcements

  Group photo

10:00 – 10:30  Coffee break

10:30 – 12:00  Plenary 1: Update on IHR and APSED

  10:30 – 11:00  IHR Implementation and Pandemic Review
  - Dr Isabelle Nuttall

  11:00 – 11:20  Emerging infectious diseases in the Asia Pacific Region
  - Dr Chin Kei Lee

  - Dr Richard Brown

  11:40 – 12:00  Questions and clarifications

12:00 – 13:00  Lunch: Conference Lounge

13:00 – 15:00  Panel session: National and regional planning and review process

  13:00 – 13:20  Lao People's Democratic Republic experience from the Asia Pacific Strategy for Emerging Diseases (2005)

  - Dr Ailan Li
13:30 – 14:00  Country experiences from the Asia Pacific Strategy for Emerging Diseases (2010) planning
- China
- Malaysia
- Papua New Guinea

14:00 – 15:00  Panel discussion

15:00 – 15:30  Coffee break

15:30 – 16:00  Special session: Gender
  - Dr Chin Kei Lee
15:40 – 16:00  Questions and discussion

16:00 – 17:00  Plenary 2: Zoonoses
16:00 – 16:20 One Health and FAO/OIE activities
  - Dr Carolyn Benigno and Dr Ronello Abila
16:20 – 16:30 APSED (2010) workplan - Zoonoses
  - Dr Gyanendra Gongal
16:30 – 16:50 Country experience
  - Mongolia
  - Philippines
16:50 – 17:20 Questions and discussion

17:30 – 18:30  Reception (Conference lounge)

Day 2 – 27 July (Wednesday)

08:30 – 09:50  Plenary 3: Surveillance, risk assessment and response

  - Dr Graham Tallis
  (1) Risk assessment

08:40 – 08:50 Country experience in event-based surveillance
  - Cambodia

08:50 – 09:00 Risk assessment
  - Dr Thomas Grein and Dr Ruth Foxwell

09:00 – 09:20 Questions and discussion
  (2) Field epidemiology training and rapid response team
09:20 – 09:30  Country experience in field epidemiology training  
- Thailand

09:30 – 09:40  Overview of field epidemiology training and rapid response team  
- Dr Tamano Matsui

09:40 – 10:00  Questions and discussion

10:00 – 10:30  Coffee break

10:30 – 11:10  Plenary 3: Surveillance, risk assessment and response (continued)

(3) Indicator-based surveillance

10:30 – 10:40  Influenza workplan  
- Dr Jeffrey Partridge

10:40 – 10:50  Epidemiology and laboratory collaboration  
- Dr Lee Lior

10:50 – 11:00  Indicator-Based Surveillance under APSED (2010)  
- Dr Chin Kei Lee

11:00 – 11:10  Questions and clarifications

11:10 – 12:00  Breakout session: Indicator-based surveillance under APSED(2010)

12:00 – 13:00  Lunch  
Presentation: (Multifunction room)  
- Rapid containment – Dr Yuzo Arima  
- ASEF/SQ stockpile

13:00 – 15:00  Plenary 4: Public health emergency preparedness

13:00 – 13:10  Pandemic review in the Region  
- Dr Chin Kei Lee

- Dr Richard Brown

13:30 – 13:40  Response logistics and emergency operations centre  
- Mr Steve Bice

13:40 – 14:00  Country experience with emergency operations centre  
- New Zealand

14:00 – 14:20  Country experience in public health emergency preparedness and response  
- Japan

14:20 – 14:30  Point of entry preparedness  
- Dr Ailan Li
14:30 – 15:00 Questions and discussion

15:00 – 15:30 Coffee break

15:30 - 17:00 Breakout session

Emerging infectious disease programme
IHR National Focal Points
Partners’ forum managers

Day 3 – 28 July (Thursday)

08:30 – 10:00 Plenary 5: Regional Preparedness, Alert and response

08:30 – 08:40 APSED(2010) workplan – Regional Preparedness, Alert and Response
   - Dr Chin Kei Lee

08:40 – 08:55 Regional surveillance for priority diseases
   - Avian influenza A (H5N1) and pandemic influenza
   - Dr Jeffrey Partridge

08:55 – 09:10 Regional surveillance for priority diseases
   Dengue and Hand, foot, and mouth disease
   - Dr Yuzo Arima

09:10 – 09:30 Western Pacific Surveillance and Response (WPSAR)
   - Ms Emma Field

09:30 – 09:45 Global Outbreak Alert and Response Network (GOARN)
   - Dr Ailan Li

09:45 – 10:00 Questions and discussion

10:00 – 10:30 Coffee break

10:30- 11:30 Group feedback


10:40 – 10:50 Emerging infectious disease programme managers

10:50 – 11:00 National IHR Focal Points

11:00 – 11:15 Partners’ Forum

11:15 – 11:30 Questions and discussion
11:30 – 12:00  **Plenary 6: Infection prevention and control**

- Dr Richard Brown

11:40 – 12:00 Questions and discussion

12:00 – 13:00 **Lunch: Conference Lounge**

**13:00 – 14:00 Plenary 7: Risk communications**

13:00 – 13:10 Risk communications overview  
- Ms Joy Caminade

13:10 – 13:30 Risk communications experience  
- Hong Kong, China

- Ms Joy Caminade

13:40 – 14:00 Questions and discussions

**14:00 – 14:30 Plenary 8: Laboratory**

14:00 – 14:10 APSED (2010) workplan – Laboratory  
- Dr Jeffrey Partridge

14:10 – 14:30 Questions and discussions

14:30 – 15:30 **Coffee break**

**15:30 – 16:50 Plenary 9: Conclusions and recommendations**

15:30 – 16:50 - Conclusions and recommendations

16:50 – 17:00 **Closing session**
ANNEX 2

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