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Emergency assistance for surveillance of influenza A (H7N9) virus in poultry and other animal populations in the South Asia region

TCP/RAS/3406 (E) and TCP/RAS/3407 (E)

Proceedings of the Emergency Preparedness and Contingency Planning training workshop for avian influenza A (H7N9)

17 to 19 February 2014

Pattaya, Thailand.



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List of Abbreviations

AH	Animal Health
ASEAN	Association of Southeast Asian Nations
C&D	Cleaning and Disinfection
CP	Contingency Plan
CVO	Chief Veterinary Officer
ECTAD	Emergency Centre for Transboundary Animal Diseases
EPP	Emergency Preparedness Plan
FAO	Food and Agriculture Organization of the United Nations
FAOR	FAO Representative
FAORAP	FAO Regional Office for Asia and the Pacific
GEMP	Good Emergency Management Practice
HPAI	Highly Pathogenic Avian Influenza
H7N9	Influenza A(H7N9)
IEC	Information, Education and Communication
LBM	Live Bird Market
LPAI	Low Pathogenic Avian Influenza
OIE	World Organisation for Animal Health
PH	Public Health
PPE	Personal Protective Equipment
PR China	People's Republic of China
RRU	Rapid Response Unit
SAARC	South Asian Association for Regional Cooperation
SOPs	Standard Operating Procedures
TCP	Technical Cooperation Programme
USAID	United States Agency for International Development
US CDC	United States Centers for Disease Control and Prevention
WHO	World Health Organization
WSM	Wholesale Market

Background to training workshop

On 31 March 2013, the authorities of the People's Republic of China first reported three human cases of infection with a novel avian influenza virus A (H7N9) in Eastern China in accordance with International Health Regulations to the World Health Organization (WHO). These cases suffered from severe pneumonia and all three have died. Since then, the disease situation in humans has evolved with new cases being reported almost daily by the Chinese Ministry of Health.

Reports suggest that many human cases have had direct or indirect contact with poultry prior to the onset of disease, including live bird market (LBM) visits, transportation, slaughtering and handling of poultry. While the source of H7N9 has not yet been confirmed, the large scale virological surveillance that has been conducted in China has shown evidence of the presence of infection in chickens, ducks, pigeons and a tree sparrow. In addition, a number of environmental samples collected from LBMs have been found to be positive. So far the virus has not been detected in swine. The mode of infection from animals to humans is believed to be through the respiratory route, causing a range of clinical signs in humans from subclinical to mild disease to severe pneumonia.

This avian influenza A (H7N9) event raised the urgent need to enhance control efforts, increase preparedness and risk mitigation measures in the moderate and high risk countries in the region and address knowledge gaps. The main areas requiring immediate reinforcement are epidemiologic knowledge, surveillance and diagnostic capacity, as well as risk management including preparedness and response.

A regional emergency assistance (TCP) projects were designed and approved to help countries in the ASEAN and SAARC regions to mitigate the impacts of an imminent threat of incursion of H7N9 virus and hinder its spread across the subregion through risk-based surveillance, targeted value chain analysis and regional capacity-building. The TCP projects will also assist countries to strengthen their response systems should the H7N9 virus expand into the region.

Hence this training workshop was designed to further enhance regional and country emergency preparedness and contingency planning.

The timing of the training workshop did influence the emphasis given to the various elements within the workshop. The training workshop was originally planned to be held from 28 to 30 January 2014. However, due to some uncertainty about the situation in Bangkok, the workshop was postponed until 17 to 19 February 2014 and held in Pattaya. During this intervening period, the H7N9 virus continued to spread within PR China and during the last week of January 2014, human cases were reported in Guangxi province, which immediately neighbours the northern border of Vietnam. Previous work assessing the risk of entry of H7N9 virus into other countries in the region had clearly indicated that once the virus spreads to neighbouring provinces, then the risk is increased. These events therefore raised the urgency and importance of this training workshop for the countries attending.

Summary

The training workshop on Emergency Preparedness and Contingency Planning for avian influenza A (H7N9) was held from 17 to 19 February in Pattaya, Thailand. A total of 36 participants attended the workshop. The 36 comprised of 24 animal health agency staff from 14 countries, 3 FAO country staff, 6 FAO RAP staff from Bangkok, 1 USCDC staff member and as observers, 2 USAID staff.

The broad workshop objectives were to assess the level of emergency preparedness of the attending countries and to forge agreements amongst countries on important elements to be considered in enhancing country contingency plans. Specific outcomes as defined at the commencement of the workshop were to:

- Increase knowledge of the characteristics of H5N1 and influenza A (H7N9) viruses and the implications for detection and control;
- Improve capacity to use a range of inputs to control and respond to influenza A (H7N9);
- Identify the essential elements of existing contingency plans for influenza A (H7N9);
- Successfully incorporate most important elements in country contingency plans for influenza A (H7N9);
- Development of a framework for updating the animal health contingency plan for influenza A (H7N9) and sharing this plan with country public health and wildlife authorities

The workshop was structured around presenting some specific information and concepts followed by group work to put the learning into practice. The group work focused on the current threat posed by H7N9 virus in the region. A large portion of the second day of the workshop was dedicated to a scenario exercise in which the groups had to detail what the animal health agency would do following either the detection of H7N9 virus in a live bird market or having a confirmed human case of influenza A (H7N9) associated with a live bird market. During the workshop, it was clear that the balance had to move more toward emergency preparedness planning (i.e. what to do before an incursion of H7N9 virus) rather than concentrating on developing a contingency plan for when the virus enters

each country. The emergency preparedness activities do include the development of a contingency plan, but the workshop did emphasise what needed to be done now.

Two tools were used to assess the levels of emergency preparedness planning and contingency planning for each country. Before the workshop, each country completed and emailed a pre-incursion checklist that assessed a number of elements relating to emergency preparedness planning. During the workshop, a contingency planning checklist was completed to assess elements related to this planning. In general, it was apparent that the work that FAO has undertaken addressing H7N9 virus surveillance, has assisted countries with better surveillance plans and activities. The areas, which require more attention, seem to include advocacy, communication planning generally (at a range of scales) and building relationships before an incursion. Importantly, countries in attendance recognised the need to have fully documented emergency preparedness and contingency plans.

In the last session of the workshop, individual countries present were asked to detail actions that would be taken in the next 4 to 6 weeks to address the threat of a H7N9 virus incursion. This session was essentially seeking a commitment to action from those attending the workshop.

1. Introduction

The workshop commenced with a general welcome and ice breaker session to allow participants to learn who was in the room. The icebreaker session also allowed FAO, US CDC and USAID staff to introduce themselves to the country participants. During this icebreaker session, Dr Subhash Morzaria (from ECTAD FAORAP) also took the opportunity to highlight that the 'Emergency assistance for surveillance of H7N9 virus in poultry and other animal populations' Technical Cooperation Programme (TCP)—which this training workshop is part of—is funded by USAID. Dr Morzaria thanked USAID for their continued and valuable support.

The workshop facilitator (Peter Black) then explained that the workshop would involve some repetition of key concepts from a number of perspectives and that participant's thinking would likely change over the course of the two and a half days of the workshop. The facilitator also explained that at the end of the workshop, countries would not walk away with a detailed set of emergency preparedness and contingency plans, but participants would leave with the capacity to develop and document the required plans to address the H7N9 virus threat. Finally the introductory session outlined the style of the training workshop, so participants knew that information and concepts would be presented and then followed up by group work.

1.1 Workshop programme

Day 1 Monday 17 February 2014

Time	Activity/session	Leader
0830	Registration/Morning tea	
0900	Official Start Welcome and introductions	Peter Black (PB)
0930	What this workshop will achieve for you and what it will not achieve for you. Style of workshop	PB
	Questions?	
Session 1 – Context and background		
0945	Context What is happening and what has been done by FAO	FAO RAP (Subhash Morzaria)
1015	Morning tea	
1045	Background information	FAO RAP (Subhash Morzaria)
1120	Questions	
Session 2 Market chain analysis		
1130	Market chain analysis – how does it fit	Jan Hinrichs
1210	Questions	
1230	Lunch	
1330	Market chain continued (group work)	Jan Hinrichs
Session 3 - Strategic thinking and planning		
1400	Strategic thinking and planning STEEPLE and what is really going on, scales and timeframes	PB
1420	Small Group work (group 6-8 per group) What are the key challenges under the STEEPLE heading to be considered for a high priority country?	Small Groups
1445	Report back	
1515	Afternoon tea	
Session 4 - Emergency preparedness plans and contingency plans		
1545	Emergency preparedness plans and contingency plans: the basics - what are they, why are they important and how do they relate to each other? What is usually included within these plans.	PB
1615	Lessons in emergency H7N9 communication	Chitoor Gopinath

1640	Questions and general discussion	Plenary
1700	Homework – With respect to H7N9, what are the drivers or issues causing most concern for a high priority country	
1715	Contingency plan checklist for review and close	
	Dinner - participants own arrangements	

Day 2 Tuesday 18 February 2014

Time	Activity	Leader
	Breakfast	
0830	Brief review of Day 1 Questions/clarification	PB
0900	Report back from homework	Plenary
	List of drivers and concerns	
Session 5 Country reports		
0930	Country reports from Vietnam, Laos, Myanmar and Nepal 15 Minutes each (What have you done and what would you do if H7N9 detected). Wrap up	Country reps PB
1040	Morning tea	
Session 6 Scenario exercise		
1100	Scenario start – using the generic description of country	Whole group led by PB
1115	2 Scenarios – Groups allocated to two scenarios. For all scenarios groups will be asked to list and prioritise measures that need to be taken, focusing on risk assessment, targeted surveillance, risk management (including along the poultry value chain) and communication.	Small groups
1330	Lunch	
1430	Continue scenario work	Small groups
1500	Report back	Small groups
1530	Afternoon tea	
1600	Report back continued	Small groups
1630	Capture feedback	Plenary
Session 7 Contingency plan checklist		
1730	Clicker exercise on post incursion contingency plan checklist	Plenary
1830	Close (Dinner - participants own arrangements)	

Day 3 Wednesday 19 February 2014

Time	Activity	Leader
	Breakfast	
0830	Brief review of Day 2 Questions/clarification	PB
0915	Identify main priorities to develop or enhance emergency preparedness plans for high priority countries	
0945	Report back	
1000	Morning tea	
Session 8 Action list		
1030	Specific actions that will be undertaken over the next 4-6 weeks	All countries
1115	Report back	
1145	Workshop evaluation and formal close	
1200	Lunch and departure of participants	

1.2 Workshop Participants

A total of 36 participants attended the workshop. The 36 comprised of 24 animal health staff from 14 countries, 3 FAO country staff, 6 FAO RAP staff from Bangkok, 1 US CDC staff member and as observers, 2 USAID staff. A complete list of attendees is included in Appendix A.

The number of participants from the thirteen countries is listed below:

Country	Number of attendees
<i>From ASEAN</i>	
Cambodia	2
Indonesia	2
Laos PDR	1
Malaysia	2
Myanmar	1 – FAO country representative
Philippines	2
Singapore	2
Thailand	1
Vietnam	2
<i>From SAARC</i>	
Bangladesh	2
Bhutan	2
Nepal	2
Pakistan	2
Sri Lanka	2

2. Workshop sessions

2.1 Session 1 – Background and context

This session was designed to give the participants some context and background for the training workshop. The session was delivered by Dr Subhash Morzaria and detailed what was happening with influenza A (H7N9) virus in the region and what work had been undertaken by FAO. Specifically, Dr Morzaria covered a wide range of issues including the following:

- More cases of influenza A (H7N9) in second wave compared to first.
- Virus has spread over 16 of 32 of the provinces in PR China.
- Influenza A (H7N9) is a novel virus that has emerged from mutation and re-assortment events (H7 from wild duck H7N3, N9 from wild birds H7N9 and internal segments from commonly occurring H9N2).
- H9N2 is very widely distributed in back yard/wild bird interface.
- Large number of influenza A viruses circulating in the region. Highly pathogenic H5N8 emerging with more than 6.6 million bird and ducks destroyed in the Republic of Korea (South Korea)
- Warning that growth in poultry production will continue as cheap source of protein (meat), actually witnessing unprecedented growth in numbers of poultry.
- Lots of opportunity for continued mixing of viruses.
- Influenza A (H7N9) does not cause disease in birds but slowly and surreptitiously spreading.
- Human cases have led to severe damage within poultry industry in PR China.
- Lots of information from PR China which has been very useful in understanding what is happening and how to design surveillance and control strategies.

- This virus will spread to Southeast and South Asia over time due to close connectedness of trade (informal and formal) in the region.
- Live bird market closures have been shown to decrease human disease. However, secondary markets do establish and this can encourage spread of the virus.
- FAO had first consultation in May 2013 and built on the capacity that had been established to respond to H5N1 virus.
- With the international community, developed guideline documents for risk analysis, risk management and risk based surveillance.
- First round of surveillance in September 2013 with no signs of spread of virus from PR China.
- Second round started in December 2013 and is continuing.
- Recent events have changed the perception that humans are always acting as sentinels as in Hong Kong H7N9 virus was detected in poultry with no human cases. So perhaps virus is more widespread.
- Concern about presence of virus in Guangxi province just north of Vietnam and also concerns that if virus spread into Yunnan province, then risk to Myanmar and Laos will increase.

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How to respond

- Virus is here to stay so question is when—not if—the virus will enter countries in the region.
- Therefore attitude at this workshop needs to be that for all countries, treat this ‘as if you are all in the front line’ (this meant that all countries were to consider themselves for the purposes of this workshop as a high priority country – i.e. one likely to experience a H7N9 incursion in the near future)
- Over time, move from prevention - to detection - to dealing with incursion - to dealing with wide spread infection.
- Classic One Health issue that needs a multi-sectoral approach.
- Thinking about control more broadly in the longer term (emerging production systems will receive more attention).

This session very effectively set the scene for the rest of the training workshop. Feedback showed that attendees appreciated having very up-to-date information delivered by a senior FAO officer who was very familiar and knowledgeable about the influenza A (H7N9) situation.

2.2 Session 2 – Market chain analysis

This session was designed to improve the understanding of participants of how and why value chain analysis underpins much of the risk assessment, surveillance and contingency planning work. The session also introduced participants to the prioritized value chain information required for risk assessment and live bird market management. This work increased the ability of participants to undertake basic value chain analysis.

The session was led by Jan Hinrichs from FAO.

The questions considered in this session were:

1. What value chain information is required to introduce LBM closures upon detection of H7N9 and to subsequently conduct tracing?
2. How can the required value chain information be collected?

Mr Hinrichs gave a presentation to encourage participants to consider the following:

- Live Bird Markets have both push and pull factors up and downstream including farmers wanting to sell poultry to maintain incomes, farms needing to move poultry out of barns to make room for new batches, demand of poultry in peak or festival seasons etc. which are all likely to be impacted in the event of market closure.

- Farmers/traders are resistant to some intervention methods making H7N9 a difficult issue to manage. The key change from HPAI H5N1 is that farmers/traders may no longer observe sick birds in the case of LPAI H7N9, resulting in the requirement for active H7N9 surveillance.
- There is significant potential for loss of profits and therefore market closure is likely to be met with resistance by multiple stakeholders. Market closures may have significant distortion impacts on trade flows from normal catchment areas and onwards sale destinations. Incentive payments would be one option to enforce market closures.
- Traders may not want to disclose their poultry supply sources and buyers once H7N9 has been detected and control measures might have negative impacts on their economic activity.
- The responsible person/agency for enforcement of market closure may not have knowledge about H7N9 characteristics.
- Culling, cleaning and disinfection will require planning of required staff time and financial resources. Market characteristics such as surface, building and cage materials, clean water and drainage availability will determine the cleaning and disinfection feasibility and required days.
- Live poultry is often stored near markets and these areas might be another source of virus multiplication. During market closures more poultry is likely to be stored here.

Group work steps:

1. Form a group (2 ASEAN groups, 2 SAARC groups)
2. Identify a note taker within the group (PowerPoint or flip chart for reporting back)
3. Participants asked to discuss the questions within the group
4. Make a list with the essential value chain information, and identify for each item:
 - a. Who needs the information?
 - b. How this information can be made available to relevant person or agency.
5. Report back via flip chart or Power Point

Group work outcome

Below is a summarised outcome of the four working groups:

Value chain information required

- Quantity and type of poultry in LBM
- Buying and selling price
- Type of LBM (traditional, modern, big, small, equipment, fomite, etc.), location /operations (timing of cleaning and disinfection, other activities such as slaughtering)
- Number of traders and vendors and number sold by each vendor/trader
- Source of birds for each trader
- Location and existence of alternative areas such as poultry stock houses and collector yards
- LBM network: location of nearby connected markets

How to collect information

- Choose a trader/vendor likely to cooperate with authorities and provide information
- Talk to LBM management
- Questionnaires for management, vendors and traders
- District veterinary officer, township and community leaders where LBMs are located
- Engagement with the poultry association, vendor forum

Who needs the information

- Department of animal health and sub-divisions

- Department of human health and sub-divisions
- Local Government officials
- Field officers
- Vendors and traders
- Poultry associations, producers
- Consumer
- Communications department to liaise with media and the public

How to make the information available

- Press releases by the Ministry
- Dialogues with traders and vendors

2.3 Session 3 – Strategic thinking and planning

The session was designed to improve participants understanding of the broader context of emergency preparedness. Specifically the session intended to emphasise the need to ensure that more than technical issues are addressed with rigour when preparing plans for both short term and long term challenges such as the emergence and spread of H7N9 virus in the region. The session was led by Peter Black and he delivered a PowerPoint presentation that outlined a number of issues that underpins strategic thinking that is required before undertaking planning. Main points from the presentation were:

- Need to understand what is really happening before starting to think about what might happen.
- Where to focus energy in terms of scale (e.g. farm, province, national, regional) depends on the problem and your role in addressing that problem. However, always good practice to look at least at the scale below and the scale above.
- Introduced the mnemonic STEEPLE which stands for
 - S social
 - T Technical
 - E Economic
 - E Environmental
 - P Policy/political
 - L Legal
 - E Ethical

This was to remind participants to think about more than the technical issues when addressing any issue or problem and emphasised that emergency preparedness planning and contingency planning always involves much more than technical issues.

- Drivers of change briefly introduced including:
 - Human population growth
 - Economic growth
 - Urbanisation
 - Infrastructure
 - Changing animal production systems
- Figures presented for human population growth, increase in gross domestic product and increasing numbers of chickens and ducks in the region
- What does it really mean? More influenza viruses will emerge in the future (both HPAI and LPAI) and some will behave like H7N9 and cause human deaths. Changes to the poultry production and marketing systems will be required over the longer term.

Group Work.

The specific question to be addressed was:

What are the key challenges under the STEEPLE heading to be considered for a high priority country?

The Group work steps:

1. Same four groups as in session 2.
2. To encourage interactive participatory discussion, metacards were provided to each participant so that he/she was able to freely contribute his/her ideas. One main issue/challenge per card
3. Participants were asked to discuss the question within the group
4. Make a list under the STEEPLE headings and post them on the wall
5. One person to report back on the main issues identified on the metacards.

Group work output combined from four groups

Social

- Closure of LBM will impact many – lead to unemployment of traders, vendors
- Livelihood of farmers
- Even though laws are in place, it is difficult to ensure compliance
- Religious sentiments (e.g. wrong to slaughter healthy animals)
- Cheap source of protein – pro-poor commodity, disease has direct effect on the livelihoods of the poor.

Technical

- H7N9 does not cause clinical disease in birds. Farmers may not understand why we want to disrupt their business so it is important that we educate them on the impact on human health (zoonosis)
- Lack of technical knowledge by farmers, policy makers
- Difficult to convince to cull birds which are clinically healthy
- Deficient technical resources
- Low level of technical awareness in the small farm owners
- Low diagnostic capability
- Closure, C&D could be done if the LBM is already implemented 'zone' (separated between poultry live and other commodities. Partial closure of poultry zone).
- Need communication that during closure, C&D period, live poultry should be kept in collector yards (near LBMs??)
- Lab capacity and capability to test all samples
- Manpower to conduct surveillance and culling activities, as well as C&D.

Economic

- Compensation fund
- Without consideration of economic situation difficult to consider planning for implementation
- Loss of income for farmers
- Government compensation must depend on amount to funds the country has

Environmental

- Large number of dead birds to be disposed
- Closure of LBM leads to increase number birds not sold leads to increase manure production

Policy/political

- Politicians are not interested in animal health development. This sector is very much neglected. Low investment in livestock development.
- Politicians and ministers are not aware of H7N9. Political unrest situation prevailing in the country - it is also delays the activities or project.
- Poor regional cooperation
- Policy can be in place but implementation is difficult
- Negative impact on political party image
- Enforcement of market closure and culling

- Compensation mechanism a) to traders/vendors affected by market closure and b) farmers with infected culled poultry
- Contradicting policy/political compliance

Legal

- Weak legislation
- Time taken for new act to pass is long
- Weak enforcement of act
- No existing legislation for enforcement (e.g. closure of LBM)
- Takes time to enact legislation and obtain approval.

Ethical

- Animal welfare activists
- Weak ethical expression (try to hide the disease)

2.4 Session 4 – Emergency preparedness plans and contingency plans

This session was designed to:

- Increase the understanding of participants about the relationship between an emergency preparedness plan (EPP) and a contingency plan (CP);
- Have participants more familiar with key components of contingency plans;
- Emphasise the importance of a communications strategy as part of both EPP and CP.

This session consisted of three parts. Part one was a presentation by Peter Black showing the definition and relationship between an EPP and a CP. The information drew directly on the reference text about Good Emergency Management Practice (GEMP) produced by FAO¹ which all participants had received as part of the training workshop resource pack. For H7N9, the EPP is essentially about getting ready while the CP is about responding once the virus is detected within the country. This first part also drew attention to where surveillance, risk analysis and risk management fit within the EPP and CP. Again, the documents addressing these issues produced by FAO and available on the web, were made available in hard copy in the training workshop resource pack for all participants.

Part one of this session closed with a list of specific preparedness activities to be considered before an incursion. The list was not exhaustive but included:

- Border controls and encouraging legal trade
- Surveillance in high risk markets
- Establishing/enhancing relationships with market management and traders
- Improving on-farm biosecurity
- Developing and refining communication strategies
- Preparing for adverse market reactions
- Ensuring contingency plan - in case of incursion - fully developed

Part two of this session focused on the importance of communication and Chitoor Gopinath from FAO gave a presentation about lessons in emergency H7N9 communication. This presentation emphasized the following eight lessons:

1. H7N9 needs a separate communication approach from H5N1.
2. Live bird markets are not designed for communication.
3. Market people have low attention span for health communication.

¹ Good Emergency Management Practice: The Essentials: a guide to preparing for animal health emergencies. Edited by Nick Honhold, Ian Douglas, William Geering, Arnon Shimshoni and Juan Lubroth. FAO Animal Production and Health Manual no.11. Rome.

4. Traditional information, education and communication (IEC) materials have almost no impact in a live bird market.
5. Most sites will remain in the preparedness stage. This is a communication opportunity.
6. Interpersonal communication in the market is a critical step in raising risk perception.
7. Communication should work closely with surveillance to get information on market environments.
8. Communication should be a separate chapter in the Contingency Plan.

Discussion and questions that followed the presentation emphasized that veterinarians need to recognise that there are staff with specific skills in the area of communication and public awareness. These skills need to be harnessed and supported. Veterinarians generally do not have the necessary expertise or skills to design and implement effective communication strategies for emergency animal disease events.

Part three of this session involved a quick review of the trends that the results compiled from the pre-incursion checklist revealed. The summarised output from the checklist is included in Appendix B. The areas for attention vary by country, but there is clearly general room for improvement in areas focused on communication and SOPs for market closures, especially in higher priority countries.

Day 1 closed with a homework task for participants. Specifically, attendees were asked: With respect to H7N9, what are the drivers or issues causing most concern for a high priority country?

2.5 Day 1 reflection

Day 2 commenced with a reflection exercise designed to encourage participants to re enter the thinking space that had been created on day 1. The exercise consisted of asking all participants to individually reflect and identify any specific issues which either:

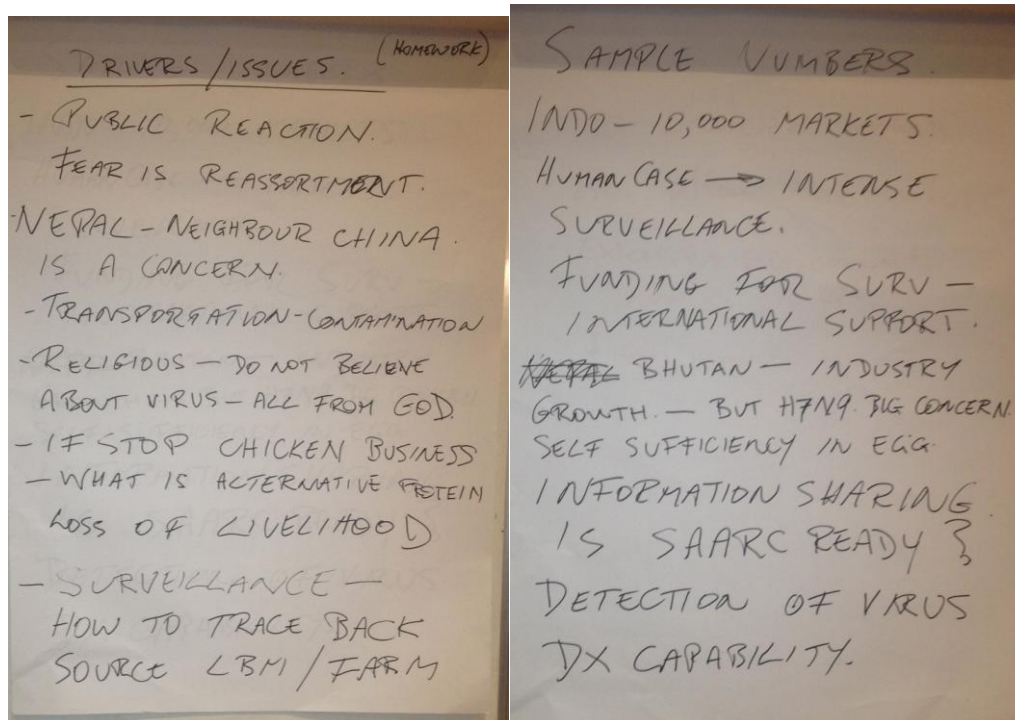
- a) surprised them or
- b) made them feel uncomfortable (i.e. concerned them).

This reflection was first performed in private and then their ideas were shared within their group at respective tables. The issues raised included surprise about the extent of LBM issues, the difficulty of linking market chain analysis information to LBM closures and the fact that although no H7N9 had been detected in wild birds (at this time), documented surveillance strategies still referred to the need to have surveillance activities at the wild bird interface. These issues were not all directly and completely addressed at this stage, but the process did successfully and quickly move participants back into the thinking space from day 1.

2.6 Day 1 homework

The drivers or issues causing most concern for a high priority country were collated from the participants. A range of issues was listed as shown below.

This process serves to check where the thinking if the group seems to be focused. Many of the issues were technical (as expected from a group of veterinarians), but there is already an indication that some participants are thinking about broader economic and social issues too.



2.7 Session 5 Country reports from Vietnam, Laos PDR, Myanmar and Nepal.

This session was included to give participants an improved understanding of what high priority countries are currently doing and of the policy challenges that H7N9 control poses for animal health authorities.

Each country representative had 15 minutes allocated to cover the following topics:

- Actions undertaken by the veterinary service since H7N9 was reported in PR China
- Basis for such action (is there a legal basis that allowed these actions)
- Steps that would be taken if H7N9 was detected in human
- Steps that would be taken if H7N9 was detected in poultry market system

The presentations were useful to workshop participants to understand some of the challenges and work undertaken to date in these high priority countries. However, the priority given to targeted surveillance in some presentations meant that some other issues were covered in a more superficial manner. Nevertheless, as a group of four presentations, most of the core issues were touched upon and this certainly laid a useful platform for the following scenario session.

2.8 Session 6 Scenario exercise

The scenario exercise was designed as the lynchpin of the whole workshop. During the time given for this exercise, participants were expected to develop a draft contingency plan framework with details about what would be done following detection of H7N9 under one of the scenarios. Following this exercise, participants should be much more familiar with components of the required contingency plan and be prepared to complete a detailed plan for their country on return. Issues discussed during the exercise will also highlight the challenges of implementing a contingency plan (as distinct from simply writing the plan). In particular, a set of prompting questions (detailed in Appendix C) was available to each group facilitator to ensure that a range of elements would be considered when deciding what to do. The relevance of poultry chain analysis, risk assessment and surveillance were also to be highlighted as important components of the plan.

Group work

1. Four groups (2 ASEAN and 2 SAARC)
2. One scenario per group. ASEAN and SAARC cover both scenarios.

Scenario 1. H7N9 human death is reported by health department in country described. The case was confirmed by RT-PCR. The person lived in a small community outside the capital city and had a history of poultry exposure at a local live bird market. What does the animal health department of the country do?

Scenario 2. An environmental sample from the poultry market system returns a positive result for H7N9 as part of routine surveillance. What does the animal health department of the country do?

3. The country in question for the scenario was described as:
 - Country is neighbour to H7N9 infected country.
 - Country has high quality human health system with good capacity for H7N9 surveillance and diagnosis.
 - Country has high quality animal health system with good capacity for H7N9 surveillance and diagnosis.
 - Country has legislation that supports control of animal imports, disease control procedures (including quarantine, animal movement control, entry powers, cleaning and disinfection, market closures).
 - Country has border controls (but illegal movements are known to occur)
 - Country has extensive surveillance of poultry market system.
 - Country has about 50 wholesale markets and 250 other bird markets.
 - There is extensive movement of poultry within the country, mostly toward the larger cities where most poultry is consumed.
4. Groups were encouraged to record their plans on a computer and had to be ready to report back by 3 pm on day 2.
5. Each group had a facilitator who kept the process moving and use the prompting questions if necessary, to ensure that the broad range of issues was considered when answering the scenario question.

Group work output

Each group produced a document or PowerPoint that summarised the actions that would be taken by the animal health department. The output is reported in the form of a word document in Appendix D.

Each group tackled the scenario in slightly different ways. This reflected the different levels of experience and confidence of the participants with detailing what actions would be taken to address the scenario.

2.9 Session 7 part 1 Contingency plan clicker exercise

Session 7 was in two parts. The first part held on the afternoon of day 2 was designed to simply gather information from each country about the level of maturity of their contingency plans. The clicker process was used to compile the individual country self-assessments against the contingency plan checklist.

However, the checklist was extensive and this was the last session of a long day. Although the facilitator had requested that participants be at least a little familiar with the checklist (which had been handed out the night before), it was apparent that a number of countries found the task difficult. The format of the checklist used headings from the

GEMP reference document pages 60 to 64. Summary of the output from this exercise is included in Appendix E.

Main findings from this process were that the majority of countries have legislation but that there is a general lack of policies and financial arrangements (according to the attendees present) in dealing with H7N9 associated scenarios involving either humans or poultry. A fully ready communication group exists in only two countries and key public awareness messages are apparently poorly developed.

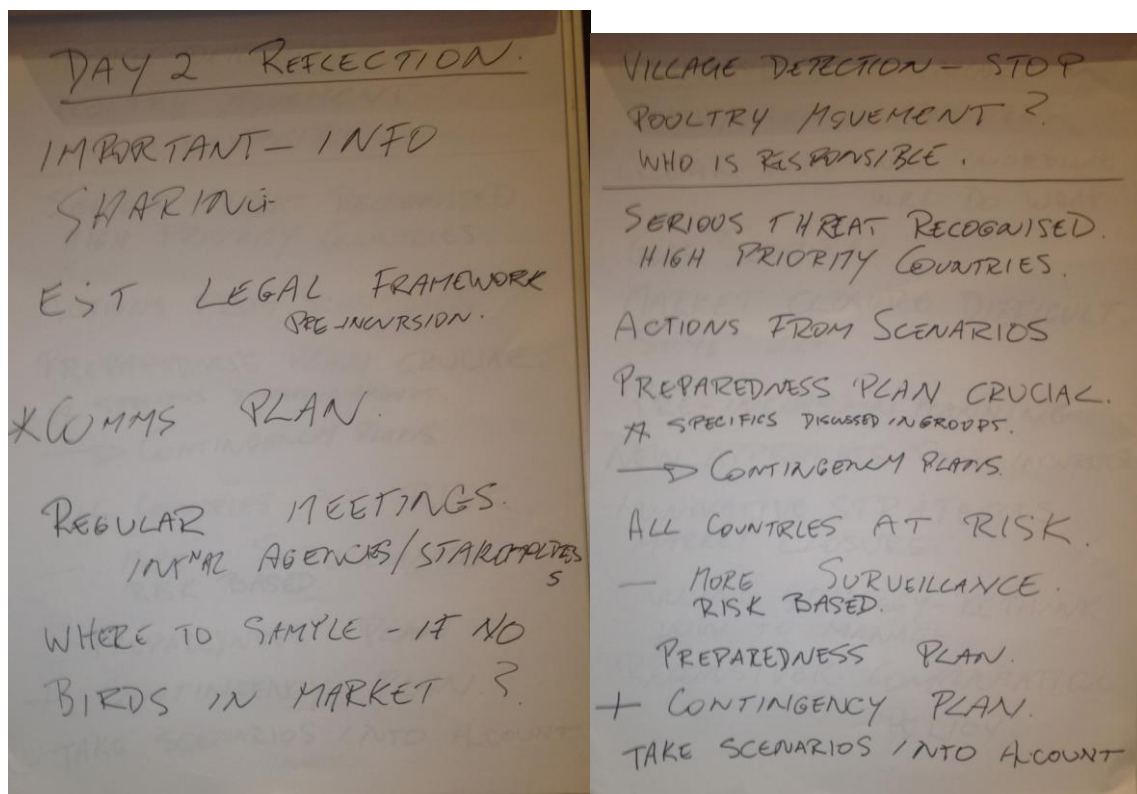
The second part of session 7 was held on day 3.

2.10 Reflections on day 2

Day 3 started with individual reflections using the same process of private reflection for at least a few minutes before sharing insights with the group at the table. The focusing question for reflection was:

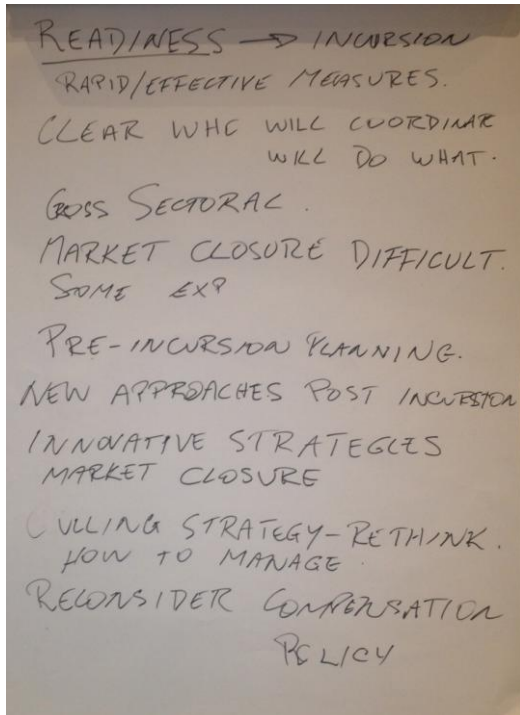
Generally - what did you learn from yesterday, and more specifically - What two take home messages did you learn from yesterday.

The feedback during discussion of the issues raised was captured on the flipchart by the facilitator as below:



The discussion highlighted some of the difficulties identified from day 2 such as: How is poultry movement to be stopped and who is responsible? Market closure raised a number of difficult issues and there was discussion about what could be innovative strategies to deal with market closures and to think about what approaches might be necessary post incursion.

The importance of pre-incursion planning was also made clear by a number of workshop participants and this reflection session fed directly into the formal continuation of session 7.



2.11 Session 7 Part 2 – Emergency preparedness plan priorities

In this session, it had originally been intended to identify the main priorities to develop or enhance contingency plans for high priority countries. However, during the workshop and especially following the scenario exercise and reflections on day 2 by participants, it was apparent to the facilitator and to FAO staff that more effort needed to be focused on immediate action i.e. pre-incursion emergency preparedness planning. On this basis, the second part of session 7 aimed to identify the main priorities to develop or enhance emergency preparedness plans (i.e. pre-incursion of H7N9) for high priority countries. The group session was conducted in the same way as session 3.

Group Work

The specific question to be addressed was:

Identify the main priorities to develop or enhance emergency preparedness plans for high priority countries.

The Group work steps:

1. Same four groups as in session 2.
2. To encourage interactive participatory discussion, metacards were provided to each participant so that he/she was able to freely contribute his/her ideas. One main issue/challenge per card
3. Participants were asked to discuss the question within the group
4. One person to report back on the main issues identified on the metacards from the group.

The output from this session is documented in Appendix F. The output shows that the participants were thinking much more about what needs to be done before an incursion. This session laid the ground work for the final session which focused on actions in the near term.

2.12 Session 8 Specific actions that will be undertaken over the next 4-6 weeks

This session was designed to have countries commit to follow-up actions after the training workshop. This expectation was included purposefully on the agenda that all participants received i.e. the expectation was transparent.

As this session was specifically requesting participants to identify actions relevant to their country, the work was not performed in groups, but in country teams or individually if there was only one representative from a country. Participants were asked to not only identify the actions, but also to report on how they could influence these actions being undertaken in their country. Participants were requested to record all the specific actions on the meta-cards for collection. In addition, the main actions identified were captured on the flipchat during the reporting back process so that the whole group could see the types of actions being identified. The session was short and sharp (about 20 minutes in total before reporting back) to drive participants toward an action end point for the training workshop.

Outputs from this session are reported in Appendix G. Some countries were very optimistic about what would be achieved within the following 4 to 6 weeks. Others were more realistic about their capacity and listed a few achievable actions for the time period.

3. Recommendations

If a similar workshop is held for other countries or other officers from ASEAN or SAARC countries, then the following recommendations will usefully inform future planning. These recommendations are based on the workshop evaluations completed by participants and the observations of the facilitator.

Popular and valuable sessions

The sessions which were most highly rated by participants were in order:

Session 6 (Scenario exercise)

Session 4 (EPP and CP includes communication)

Session 3 (Strategic thinking and planning)

Session 1 (Background and context)

Except for session 1, these sessions were also the topics that most participants indicated could be extended in similar workshops.

Sessions to reconfigure

The only sessions which participants indicated could be excluded from future workshops were the clicker exercise (that collected information on contingency planning) and homework in general. The clicker session tried to collect too much information quickly and many attendees were not familiar enough with the content of the GEMP to answer all questions with confidence (where as the pre-incursion checklist gave countries the opportunity and time to confer with colleagues before completion). Hence in this workshop report, it was considered prudent to only report on broad interpretations of the data. If a process is to be used to assess the level of contingency plan capacities, a shortened version of the questionnaire is recommended. Based on the experience during this workshop, questions should also be designed so that less subjective assessment is required. In essence, keep it short and keep answers to 'yes, no or not sure'.

Homework was only mentioned by two respondents and it is recommended that the option of including homework in the workshop be maintained.

Value of scenarios

With a three-day workshop, it would be possible to expand some sessions including the EPP and CP session. However, the real value of the workshop is revealed most clearly by the work that most participants put into the scenario exercise. This is where they were required to turn the theory into some action (and most did this well). Good scenario work is only possible though with capable and dedicated facilitators—and the workshop was blessed with these for the scenario exercise.

4. Conclusions

Over the two and a half days of the workshop, participants gained a better appreciation of the elements that make up both emergency preparedness and contingency plans. Just as importantly, participants seemed to have developed a more rounded understanding of the challenge that H7N9 will pose with respect to both disease control and communication with a wide range of stakeholders. The STEEPLE mnemonic will be remembered by at least some participants

This workshop will ideally be followed up with more direct interaction from FAO ECTAD officers to ensure that at least high priority countries do indeed make the necessary preparations in the short term. This will mean preparing for:

- Prevention – keeping the virus out of the respective countries for as long as possible
- Detection – ensuring surveillance strategies are up to date with the latest intelligence about the behaviour of the virus
- Responding to an incursion
- Managing the disease when it becomes more wide spread within the country.

Finally, discussion during the workshop showed that at least some of the participants are now thinking about the longer-term changes that will be required in terms of marketing and producing poultry, so that the continued emergence of avian influenza viruses can be better managed. In essence, for real progress to be made in dealing with disease challenges like those caused by the influenza A (H7N9) virus, a fundamental shift in thinking will need to become more widespread in the region.

Appendix A – List of training workshop attendees

	Name	Country	Position
1.	Mr. Mesbah uddin Khandaker	Bangladesh	Upazila Livestock officer
2.	Mr. Shaheenur Islam	Bangladesh	Upazila Livestock officer, L/R
3.	Mr. Tashi Dorji	Bhutan	Chief Veterinary Officer
4.	Mr. Jambay Dorjee	Bhutan	Head, Laboratory Services Unit (Focal Point)
5.	Mr. Holl Davun	Cambodia	Deputy Director National Veterinary Research Institute
6.	Ms. Ren Theary	Cambodia	Head of Microbiology Lab National Veterinary Research Institute
7.	Mr. Muhammad Azhar	Indonesia	National Coordinator, Rapid Response Unit for Strategic and Infectious Animal Disease
8.	Ms. Melia Dwi Shantiningsih	Indonesia	Staff, Disease Investigation Centre (DIC) Wates
9.	Mr. Sounthone Vongthilath	Laos PDR	Director of Veterinary Legislation Division
10.	Ms. Rozanah Asmah Binti Abd Samad	Malaysia	Chief Assistant Director Biosecurity and SPS Management Division
11.	Ms. Nurhidayati Binti Sabuan	Malaysia	Veterinary District Officer Kelantan
12.	Mr. Dinesh Prasad Parajuli	Nepal	Programme Director Directorate of Animal Production
13.	Mr. Laxman Prasad Ghimire,	Nepal	District Livestock Development Officer
14.	Mr. Umer Khan	Pakistan	Secretary Livestock and Dairy Development
15.	Mr. Khalid Naeem	Pakistan	Senior Director Animal Sciences Institute
16.	Ms. Arlene Asteria Vytiaco	Philippines	Head, Veterinary Quarantine and Inspection Services Section
17.	Ms. Edna A. Felipe	Philippines	Senior Agriculturist Philippine Animal Health Center
18.	Ms. Jan Yong	Singapore	Veterinarian Agri-Food and Veterinary Authority
19.	Ms. Wong Yelin	Singapore	Veterinarian Agri-Food and Veterinary Authority
20.	Mr. C P Wickramasinghe	Sri Lanka	Veterinary Investigation Officer (Focal Point)
21.	Mr. Hemal Kothalawala	Sri Lanka	Assistant Director & Head of Virology Division
22.	Khemmapat Boonyo	Thailand	Senior Veterinary Officer Bureau of Disease Control and Veterinary Service
23.	Ms. Ho Thu Huong	Vietnam	Officer of Planning Division, Department of Animal Health
24.	Mr. Nguyen Dang Tho	Vietnam	Head of Virology Section National Center for Veterinary Diagnosis
25.	Mr. Pawin Padungtod	US CDC	Veterinary Medical Officer US CDC SE Asia Regional Office
26.	Mr. Daniel Schar	USAID/RDMA	Regional Emerging Infectious Disease Advisor
27.	Ms. Sudarat Damrongwatanapokin	USAID/RDMA	Regional Animal Health Advisor
28.	Mr. Abdul Baqi	FAO Bangladesh	Animal Health Expert
29.	Dr. Than Htun	FAO Myanmar	Project Coordinator-H7N9
30.	Mr. Baikuntha Parajuli	FAO Nepal	National Consultant

31.	Mr. Subhash Morzaria	FAO ECTAD RAP	Regional Manager
32.	Ms. Wantanee Kalpravidh	FAO ECTAD RAP	Regional Project Coordinator
33.	Ms. Carolyn Benigno	FAO-RAP	Animal Health Officer
34.	Mr. David Castellan	FAO ECTAD- RAP	Senior Veterinary Epidemiologist
35.	Mr. Jan Hinrichs	FAO ECTAD- RAP	Animal Health Economist
36.	Mr. Chitoor Gopinath	FAO ECTAD- RAP	Communication officer

Appendix B – Results from pre-incursion checklist questionnaire for H7N9

	ASEAN									
	Country	ASEAN	yes =2	Not sure =1	no=0					
	Viet Nam	Laos	Myanmar	Cambodia	Indonesia	Thailand	Malaysia	Philippines	Singapore	
1 Quarantine border controls in place	2	2	2	0	2	2	2	2	2	2
2 Legal trade greater than undocumented trade	2	1	0	0	2	2	2	2	2	2
3 High-risk poultry markets identified	2	2	2	1	2	2	2	2	na	
4 Surveillance program in high-risk markets agreed	2	2	2	2	2	2	2	0	na	
5 Surveillance in high risk markets being undertaken	2	2	2	2	2	2	2	0	na	
6 Relationships with market management and traders established in high risk markets	0	2	2	1	2	0	1	2	na	
7 Traders registered with names, average trading volume and trade partners	0	1	2	1	2	2	1	2	2	
8 Likely Animal Health policies for disease control if incursion occurs developed	0	0	2	1	1	2	2	2	2	
9 Regular meetings are held with Ministry of Health	2	2	2	2	2	2	2	2	2	
10 Regular meetings are held with poultry association or poultry traders association or equivalent	0	1	2	0	1	2	2	2	2	
11 Policy of Department of Health is known if H7N9 human case detected	2	2	2	1	1	2	2	2	2	
12 Politicians/Ministers have been advised and are engaged on the H7N9 threat	2	2	2	1	0	2	2	2	2	
13 Standard operating procedures have been developed for market closures and communicated with involved stakeholders.	0	0	0	0	0	1	2	2	na	
14 Regular market closures for cleaning and disinfection are now being considered as part of best practice management	1	0	2	0	2	1	0	0	na	
15 On-farm biosecurity programs are being implemented through public private partnerships	0	1	2	1	2	2	2	2	2	
16 Communication strategies have been developed in collaboration with major stakeholders e.g. private sector, marketers and traders, Ministry of Trade	0	2	0	0	2	1	2	2	2	
17 Spokespersons for communication strategies have been identified	0	0	0	1	2	2	2	2	2	
Preparation for decreased demand for poultry complete-Specifically:										
18 a) Communication strategy is detailed	0	0	1	1	2	1	1	1	0	
19 b) Business continuity planning to assist industry to cope with decreased poultry consumption is complete	0	1	0	1	1	1	1	0	0	
20 Detailed contingency plan in case of incursion is documented	2	1	0	0	1	2	2	2	2	

	SAARC					
	Country	SAARC	yes =2	Not sure =1	no=0	
	Nepal	Bhutan	Bangladesh	Pakistan	Sri Lanka	Maldives
1 Quarantine border controls in place	2	2	2	2	2	2
2 Legal trade greater than undocumented trade	2	2	2	2	2	2
3 High-risk poultry markets identified	2	2	2	2	2	2
4 Surveillance program in high-risk markets agreed	2	2	2	2	2	2
5 Surveillance in high risk markets being undertaken	2	2	2	2	2	0
6 Relationships with market management and traders established in high risk markets	2	0	2	2	2	2
7 Traders registered with names, average trading volume and trade partners	0	0	2	0	2	2
8 Likely Animal Health policies for disease control if incursion occurs developed	2	2	0	2	2	2
9 Regular meetings are held with Ministry of Health	2	2	2	0	2	0
10 Regular meetings are held with poultry association or poultry traders association or equivalent	2	0	2	2	2	0
11 Policy of Department of Health is known if H7N9 human case detected	2	2	2	2	1	2
12 Politicians/Ministers have been advised and are engaged on the H7N9 threat	2	2	1	2	1	0
13 Standard operating procedures have been developed for market closures and communicated with involved stakeholders.	0	2	0	0	2	1
14 Regular market closures for cleaning and disinfection are now being considered as part of best practice management	2	2	2	2	1	2
15 On-farm biosecurity programs are being implemented through public private partnerships	2	0	2	2	2	2
16 Communication strategies have been developed in collaboration with major stakeholders e.g. private sector, marketers and traders, Ministry of Trade	0	0	0	0	2	2
17 Spokespersons for communication strategies have been identified	2	0	0	2	2	2
Preparation for decreased demand for poultry complete-Specifically:						
18 a) Communication strategy is detailed	2	0	0	0	1	0
19 b) Business continuity planning to assist industry to cope with decreased poultry consumption is complete	0	0	0	0	1	0
20 Detailed contingency plan in case of incursion is documented	0	2	0	0	0	0

Appendix C – Prompting questions for Session 6 scenario exercise.

Scenario 1.

H7N9 human death is reported by health department in country described. The case was confirmed by RT-PCR. The person lived in a small community outside the capital city and had a history of poultry exposure at a local live bird market.

What does the animal health department of the country do?

Implementation

Does a national emergency or equivalent need to be formally declared (in some countries this may give extra powers during the emergency)

How do you set up levels of command and control?

How do you ensure all government departments are working toward same goal?

Communication

How do you ensure that all relevant government departments are sending the same messages to all relevant stakeholders including Ministers, and the general public (i.e. implement communications strategy)?

Will there be a press release?

(Detail: Talking points agreed and spokespeople identified)

Implement interdepartmental communication processes –includes sharing of data, information and knowledge.

How will updates on the overall situation be communicated to those who need to know? (e.g. daily situation reports via incident command system)

International notification of disease event/s – who does it and how?

Policy

What is policy of health department once H7N9 is detected in a human? Will market closure or closures happen automatically?

For how long?

Or is there a formal process that needs to be initiated? E.g.

Which government body has the legal authority to require closures of poultry markets and other parts of the poultry marketing system?

How would the decision to require market closure be made?

How would the decision be communicated to all affected stakeholders?

Which documents are needed to verify closure and re-opening of the affected market site?

Tracing

Do you have good records that will allow tracing of movements to market?

If not, how do you collect that information now?

Will any follow up testing of traces be undertaken?

What will happen if a positive trace is detected (i.e. H7N9 is confirmed elsewhere - farm or other market etc)

Tracing and testing will take place?

Establish likely source of infection (what exposure to poultry is known? Which market?)

Incentives

How can incentives be made available for initiation and maintenance of market closure including measures for poultry that are due to be slaughtered?

What if markets are closed - for how long?

At the markets identified - what will happen?

E.g. culling, disposal, cleaning and disinfection.

Does a culling action plan exist detailing who will be responsible and how culling will be conducted?

How would worker health and safety be ensured during culling and processing operations?

Does an action plan exist detailing how dead poultry be managed on site?

How and who would manage and verify effective poultry market or collection site cleaning and disinfection?

What is the minimum time period required before restocking can occur?

Resources

How are resources (human and financial) for these activities mobilized?

Specifically:

What financial arrangements are in place to cover these costs? How does the approval for expenditure happen?

Expenditure may include incentive payments for those affected by market closure. If it is included, would you have a list of registered traders in the market (contact details, trade volume, trading contacts, etc.)

Do you have arrangements for labour to be made available for culling, disposal, cleaning and disinfection? (this includes ensuring health and safety guidelines for people undertaking this work are in place)

Prompting questions during scenario 2 exercise.

Scenario 2. An environmental sample from the poultry market system returns a positive result for H7N9 as part of routine surveillance.

What does the animal health department of the country do?

Some may answer - Implement emergency response (contingency) plan. (yes and - what is in it? – what does it tell you needs to be done now?)

Communication

How do you ensure that all relevant government departments are sending the same messages to all relevant stakeholders including Ministers, and the general public (i.e. implement communications strategy)?

Will there be a press release?

(Detail: Talking points agreed and spokespeople identified)

Implement interdepartmental communication processes –includes sharing of data, information and knowledge.

How will updates on the overall situation be communicated to those who need to know? (e.g. daily situation reports via incident command system)

International notification of disease event/s – who does it and how?

Implementation

Does a national emergency or equivalent need to be formally declared (in some countries this may give extra powers during the emergency)

How do you set up levels of command and control?

How do you ensure all government departments are working toward same goal?

Policy

Or is there a formal process that needs to be initiated? E.g.

Which government body has the legal authority to require closures of poultry markets and other parts of the poultry marketing system?

How would the decision to require market closure be made?

How would the decision be communicated to all affected stakeholders?

Which documents are needed to verify closure and re-opening of the affected market site?

Tracing

Do you have good records that will allow tracing of movements to market?

If not, how do you collect that information now?

Will any follow up testing of traces be undertaken?

What will happen if a positive trace is detected (i.e. H7N9 is confirmed elsewhere - farm or other market etc)

Tracing and testing will take place?

Establish likely source of infection (what exposure to poultry is known? Which market?)

Incentives

How can incentives be made available for initiation and maintenance of market closure including measures for poultry that are due to be slaughtered?

What if markets are closed - for how long?

At the markets identified - what will happen?

E.g. culling, disposal, cleaning and disinfection.

Does a culling action plan exist detailing who will be responsible and how culling will be conducted?

How would worker health and safety be ensured during culling and processing operations?

Does an action plan exist detailing how dead poultry be managed on site?

How and who would manage and verify effective poultry market or collection site cleaning and disinfection?

What is the minimum time period required before restocking can occur?

Resources

How are resources (human and financial) for these activities mobilized?

Specifically:

What financial arrangements are in place to cover these costs? How does the approval for expenditure happen?

Expenditure may include incentive payments for those affected by market closure. If it is included, would you have a list of registered traders in the market (contact details, trade volume, trading contacts, etc.)

Do you have arrangements for labour to be made available for culling, disposal, cleaning and disinfection? (this includes ensuring health and safety guidelines for people undertaking this work are in place)

Appendix D – Scenario exercise in Session 6

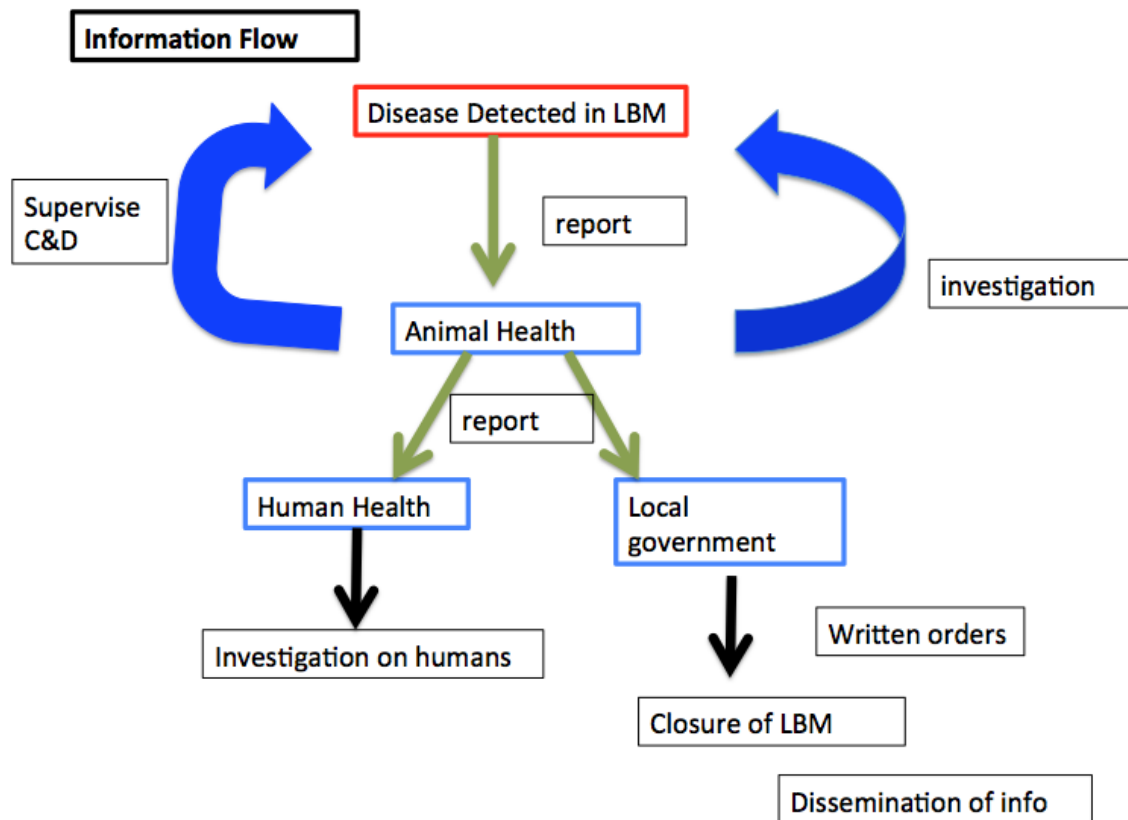
Group 1 Scenario 1. Facilitator - Pawin Padungtod.

Four countries: Cambodia, Laos PDR, Myanmar and Vietnam

Summary of actions:

1. National Steering Committee Meeting to share information to facilitate collaboration among ministries and resource mobilization
2. Inform the local authority and animal health sector
3. Identify area which was the source of infection
4. Increase biosafety practice and implementing biosecurity measures (cleaning, disinfection).
5. Conduct epidemiology investigation
 - a. Case history confirmation
 - b. Tracing back/forward poultry to identify source of infection and risk factors
6. Communication to raise public awareness in community
7. If H7N9 positive in poultry consult with group 2
8. If H7N9 negative
 - a. expand investigation area
 - b. Biosafety and cleaning, disinfection & communication

5 countries: Indonesia, Philippines, Malaysia, Singapore and Thailand.



- Assumption Preparedness plan already in place
 - just need to activate (level of command and control)
 - Regular C&D of LBM

Resources

Activate the Emergency / Disaster Fund (Incentive, supplies, overtime pay)

Steps

- Shut down the market + Cleaning and disinfection
 - Local government coordinated with human health & animal health
 - Close for 21 days (C&D), resample on 22 day & restock on 23 day
- Trace the animal origin
 - Permit movement
 - Health cert
 - Interview Market management. Owner
- Communicate with relevant ministries
- Increase public awareness aspect
 - Hygiene
 - How to detect symptoms
 - Media (TV, Radio)
 - SOP for biosafety & biosecurity personel workers
- Movement control (Poultry, Poultry products & by products) infected area of suspected to be infected
- 24 hrs. Patrolling (check point)
- International notification
- Take samples from the farms

- Surveillance at nearby markets + epi link
- Determine area at risk
- Stamping out poultry from infected market Include
- Genetic sequencing of the isolates
- Expand the testing for H7N9 from H5N1 testing samples
- Collect new samples from oro-pharyngel swabs specifically for H7N9
- Strengthen import control

STEEPLE considerations

- Socio-economics:
 - Provide alternative sources of income
 - Compensation “incentives” – pay vendors, farmers
 - Business continuity
 - Outsource for other protein – diet shift
 - Consumer scare
- Environmental
 - Remodelling LBM
 - Zoning in the market
 - Collaborate with environment agency for proper disposal of carcasses (incinerator or burial)
- Political and Legislation
 - Advocate technical issues to policy makers
 - Regular updating on H7N9/occurrence and measures
 - Emergency decree
 - Dissemination to relevant ministries and other stakeholders
- Ethical
 - Religion (engage religious leaders)
 - Animal welfare



Group 3 Scenario 1. Facilitator - David Castellan

2 countries: Nepal and Bangladesh

SL No	Activities/ Action to taken
1	Policy:
	<p>Task 1: Emergency Directives- Review of existing HPAI Policy and Practices (Need to revise for H7N9)</p> <ul style="list-style-type: none"> (a) Disease prevention and control Act (b) Quarantine Act <p>Task-2: SOPs Market Closure period based on (1) Risk (2) Consequences: Market, Consumers Negotiated with 7 days as initial discussion at i) National and (ii) local level</p> <p>Task 3: Coordination with Public Health (PH) department</p>
2	Market Closure
	<p>Task 1: Routine Rest days (1/week)</p> <ul style="list-style-type: none"> • Local authority acts based on national directive-AH <p>Task 2: Emergency Closure</p> <ul style="list-style-type: none"> • Preparedness for PH to direct local Authorities <p>Task 3: Coordination with PH Task 4: Cleaning and Disinfection(C&D)</p>
3	Surveillance:
	<p>Task 1: Continue to reactivate National Avian Influenza Committee and Mechanism Task 2: Advocacy with AH & PH Task 3: Value Chain Mapping</p> <ul style="list-style-type: none"> • Capacity & resources-Start before emergency to identify risk points <p>Task 4: Methodology for sample selection eg: environmental</p> <ul style="list-style-type: none"> • Possible incentives for C&D in relation to food safety /consumers • Species of poultry <p>Task 5: wild bird interface with high risk poultry production and markets Task 6: Laboratory Capacity and Capability: needs to strengthen</p>
4	Tracing out the source of infection
	<p>Task 1: Trace the origin of human case (which market) Task 2: Identify possible source of poultry in the market based on previous data/records</p> <ul style="list-style-type: none"> (1) 1st time or (2) Update regularly (preventive action) <p>Task 3: Adopt National Culling Policy for positive farms/markets Task 4: (1) What will we do if this virus become endemic? (2) What will be policy for vaccination? Task 5: Share information</p>
5	Implementation
	<p>Task 1: Review & Modify existing SOPs for culling for:</p> <ul style="list-style-type: none"> • Culling • Disposal • C & D <p>Discuss post C& D monitoring/environmental testing Task 2: Training for new staff & refreshment training</p>
6	Communication (Advocacy)
	<p>Consumers Traders Farmers Market Cleaners PH personnel Media</p>

	<p>Task 1: Convenience Senior Govt Officials of the important of H7N9</p> <p>Task 2: IEC materials to be prepared</p> <p>Task 3: Notification to be included in the policy document Updates as per existing mechanism-CVO</p> <p>Task 4: Plan to establish emergency response communication with local traders/markets</p>
7	Incentives
	Task 1: Discuss who will provide the fund & mechanism for managing incentives
	Task 2: Discuss funding of operational expenses
	Task 3: Communicate the country decision to FAO related to sustainable action
8	Coordination
	Task 1: National Animal health – Local Government
	Task 2: Update technical & communications working group under the National Committee
	Task 3: Review and strengthen coordination for joint surveillance and investigation between AH & PH
9	Resources
	<p>Task: Time Resource mobilization</p> <p>**Discuss flexible ways to mobilize funds quickly from government and donor</p> <p>Labor resources contingent and funding</p> <p>Define National and LOA</p>

Group 4 Scenario 2. Facilitator – Jan Hinrichs

3 countries: Pakistan, Bhutan and Sri Lanka

Approach to handle this issue:

1. Lab diagnosis with local confirmation would lead to move further in accordance to action plan (However, in some situations, it may be appropriate to send samples to OIE Reference Lab)
2. This report has to be sent to CVO and he will notify to OIE and to National Task Force for AI/Disaster Management Department
3. This activates the National Contingency Plan.
4. The following post-incursion response will be initiated:
 - 4.1 Press release is issued along with bringing in communication plan (awareness material release for public, farmers, supply chain players)
 - 4.2 Activate rapid response unit (RRU) in the area (in consultation with local administration and also activating communication plan and share with market players in other markets in the area)
 - 4.3 Quarantining of the affected market (Affected Zone) and movement is controlled in this market with the help of local administration
 - 4.4 Investigation to trace back and forward to assess the extent of spread and to identify the origin of the affected flocks
 - 4.5 Put zoning around the affected farm (3 km); Surveillance zone.
 - 4.6 Surveillance to be carried out in both areas (at farm & market). Once confirmed culling to be carried out following standard SOP with compensation
 - 4.7 The affected market will be closed, depopulated, dis-infected for which RRU will get involved
 - 4.8 All the LBM in the area will have to be monitored and biosecurity at commercial farms in the surrounding/adjacent areas to be enhanced
 - 4.9 Market recovery plans to be offered
- 5-The following pre-incursion efforts will have to be made available:
 - 5.1 Regular disease surveillance for H7N9 to be enhanced
 - 5.2 Get information about location, linkage and throughput of markets along with administrative control mechanism of each LBM in the country
 - 5.3 Arrange sufficient work-force/law administration to enforce the action plan
 - 5.4 Stock piling of PPE, Disinfectants, cleaning and dis-infection equipment, culling equipment, Tamiflu supply for culling team, lab diagnostic material, sampling material etc
 - 5.5 SOPs for culling, reporting, sampling, compensation, surveillance, rapid response to be made available
 - 5.6 Arrangements to be made for compensation fund

**Appendix E – Summary of contingency plan checklist responses using the clicker exercise
(cross checked with hard copy responses)**

Questions	Number of countries		Total
	Yes	No	
1. Legislation			
1.1. H7N9 is included in list of notifiable diseases	10	4	14
1.2. Power to enter and take samples on suspicion	14	0	14
1.3. Powers to impose quarantine	13	1	14
1.4. Powers to impose movement controls	14	0	14
1.5. Powers to cull	10	0	10
1.6. Powers to regulate importation of animals, animal products	14	0	14
1.7. Compensation for culled animals	8	5	13

SCORES

	Not exist	Poor	Moderate	Fully ready	
2. Finance					
2.1. Legislation	3	3	5	1	12
2.2. Sources of funds for operations for H7N9 detection	5	6	0	3	14
2.3. Sources of funds for compensation	7	3	1	2	13
2.4. Mechanism to access funds for compensation	3	5	3	2	13

3. Command and control					
3.1. Command and control structure	0	4	3	4	11
3.2. Roles and responsibilities of National Emergency Committee (NEC) or equivalent	2	3	4	5	14

	Not exist	Poor	Moderate	Fully ready	
3.3. Roles and responsibilities of National Disease Control Centre (NDCC)	1	1	5	4	11
3.4. Roles and responsibilities of Local Disease Control Centre (LDCC)	2	2	4	3	11
3.5. Communication between command levels	0	4	4	6	14
3.6. Communication with other departments (e.g. Health)	0	1	8	5	14

4. Nature of disease Documentation available from FAO – no assessment required

5. Size, structure and trading patterns of poultry

5.1 Structure of population known and recorded	0	0	10	4	14
5.2 Distribution of population known and recorded	0	5	7	2	14
5.3 Marketing systems (formal and informal) for live animal and their products known and recorded	0	7	6	1	14
5.4 Movements of live animals and their products within the country known and recorded	2	5	5	2	14
5.5 Routes, sources and size of imports and exports of live animals and products known and recorded	0	5	3	6	14

6. Wildlife

6.1 Structure of known or likely susceptible population	5	6	2	1	14
6.2 Distribution of the population known and recorded	6	5	2	1	14
6.3 List of contacts (e.g. conservation groups, Ministry of Environment)	2	4	4	4	14

SCORING							
	Human case only	Poultry case only	Neighbour country Human case	Neighbour country Poultry case only	Human to Human transmission	None	
7. Policy (number of scenario with policy)	4	4	1	1	1		11
7.2 Policies for outbreak investigation and tracing	0	4	1	0	1	7	13
7.3 Policies for culling and disposal	0	2	0	0	1	8	11
7.4 Policies for cleansing and disinfection	0	4	1	0	0	6	11
7.5 Policies for surveillance and movement controls	0	5	1	0	1	5	12
7.6 Policies for compensation strategies	0	3	0	0	0	9	12
SCORES							
	Not exist	Poor	Moderate	Fully ready			
8. Resource plans for:							
8.1 Establishment of NEC, NDCC and LDCC or equivalent	4	2	4	4			14
8.2 Veterinary staff and equipment	4	2	2	6			14
8.3 Culling and disposal staff and equipment	2	3	4	3			12
8.4 Cleansing and disinfection staff and equipment	2	3	5	2			12

	Not exist	Poor	Moderate	Fully ready	
9. Laboratories					
9.1 Description of national Laboratory system	1	0	4	8	13
9.2 Diagnostic procedures for H7N9 complete and reliable	0	2	8	4	14
9.3 Sample transport instructions documented	0	2	6	5	13
9.4 Protocols for health and safety of lab staff in place	1	1	5	5	12
10. Public awareness					
10.1 Communication working group exists	4	7	0	2	13
10.2 Key public awareness messages to be used	6	3	3	2	14
	Yes	No			
10.3 Arrangements for coordination of messages with Ministry of Health confirmed	10	3			13

Appendix F – Priorities for emergency preparedness planning in high priority countries

Group A

1. Engage farmers, vendors traders
 - Educate H7N9
 - Build good relationships / rapport
 - Good biosecurity/ hygiene measures
 - Sharing of contingency plans
2. Develop import control policies to prevent illegal import which may be source of incursion of H7N9
3. Explore alternatives to LBMs – introduce regular C & D of LBMs now
Revamp structures of LBMs
4. Improve biosecurity of farms
 - Increase surveillance and inspection of poultry farms NOW
5. Registration of LBMs/Farms
 - Farmers, vendors, traders
 - Need to already know information during peacetime for investigation during outbreak
6. Legal framework – develop legal framework now
7. Educating public
 - Alternative source of meat
 - Hygiene measures
 - Meat handling practices
 - H7N9

Group B

1. Strengthen coordination across sectors and stakeholders by implementing effective communication strategy
2. Intensify surveillance in more high risk area LBM
 - Identify high risk poultry markets
 - Surveillance program in high risk market agreed
 - Surveillance in high risk market should be done.
 - Traders registered with names, average trading volume and trade partners.
 - Policy of Department of Health is known if H7N9 human case detected
 - Politician/ ministers have to be advised on H7N9
 - SOPs for market closure
 - Detailed contingency plan on H7N9

Group C

1. Regional forum for SAARC policy makers on H7N9 (Ministers of Agriculture and Finance)
Awareness to poultry farmers/owners through value chain
2. Effective quarantine and border vigilance plan in place
3. Pre-empt risk reduction measures (pre-incursion plans - short terms and long term)
4. Develop guidelines /SOPs for:
 - Surveillance and test protocols
 - Compensation
 - Culling
 - Closure of LBMs

C& D

5. Develop communication strategies for H7N9
6. Develop Resource plans Command centres
 Manpower
 Fund mobilization
7. Strengthen capacities - manpower and diagnostic.

Group D

1. Ban on import of poultry and poultry products from affected countries.
2. Surveillance in high risk areas
3. Introduce biosecurity at LBMs and Wholesale Markets and poultry farms
4. Enhance the awareness among high officials and stakeholders

Appendix G – Specific actions in the next 4-6 weeks by country output from Session 8

ASEAN

Vietnam

For the next 4-6 months

- Mobilize human resources and physical resources for testing surveillance samples.
- Training lab staff for testing H7N9 samples and sampling protocol and technique for vet staff.
- Propose budget plan for H7N9 surveillance
- Complete the emergency preparedness and contingency plans

Myanmar

- Technical working group meeting has been planned to conduct at the Director General's office of LBVD. Senior technical people from LBVD, DOH, FAO, WHO and PREVENT will attend. This meeting is conducted mainly for preparations of emergency preparedness and contingency planning. I will be the key person to support preparing plan. This meeting will agree to points (criteria) with learning from this training workshop. I believe I will participate in preparation of this plan.
- Introduce biosecurity measures in markets (C&D)
- Communicate with Local authorities and conduct public awareness with relevant stakeholders.
- Work with partners to get technical and financial support.
- Draft the contingency plan for H7N9 - also preparedness for the CP

Laos

- Advocacy and communication
- Plan of resources and logistics mobilization
- Looking at options for Market closure
- Draft CP

Cambodia

- Inform the Director of department of Animal Health and Production
- Organise the meeting within the Department to discuss H7N9.
- Inform to Provincial Animal Health and Production offices and local authority about H7N9.
- Meeting with Ministry of Health about the impact of H7N9 and message for public awareness.
- Strictly control ban on import of poultry and poultry products from infected countries with H7N9
- Identify high risk area/markets
- Conduct surveillance program in the high risk areas/markets.
- Strengthen field and lab capacity.

Indonesia

- Review of LBM in high risk areas including value chain
- Surveillance plan
- Intensify C& D in pilot LBMs
- Support actions
- Coordination meeting lead by National Committee with related ministries (Communication dissemination to provinces)
- Coordination with FAO re funding support
- Provide document of preparedness and contingency plans - FAO and DAFF

Philippines – 4-6 week actions

- Draft an emergency preparedness plan (EPP) for H7N9
- Prepare legislation to support the EPP
- Presentation of the draft to BAI technical staff for comment and critique

Singapore

- Strengthen relationships with other ministries such as Ministry of Health so we can get the support we need. E.g MOH informs us when there is a human case providing Tamiflu to people from Animal health department.
- Coordinate common messages between different ministers to raise public awareness on H7N9. List of FAQs.
- Enhance lab capabilities by validating H7N9 tests.

Thailand

- Table top exercise
- Inform top management

Malaysia

- Enhance Crisis Management Centre (CMC)
- Improve disease investigation training.

SAARC

Nepal

Advocacy meeting about the threat of H7N9 at Dept level and communicate with MOAD, MOF, PH stakeholders

2. Review H5N1 preparedness plans in context of H7N9 and get approval from authority for table-top exercise – stakeholder meeting
3. Planning for Emergency preparedness and contingency plan - including pre and post incursion of H7N9 - also includes communication plan
4. SOPs – Animal Health Department, Public health
5. Start preparation of EPCP by Animal Health Department
6. Border control – quarantine and active surveillance Animal Health Department

Bhutan

1. Communication strategy
 - a) Advocacy program to policy makers /cabinet - 4th week February
 - b) form task force and develop material and talking points 1st week March
 - c) Awareness to poultry owners/actors along value chain 2nd-3rd week in March
2. Preparedness and CP development
 - a) workshop to revisit existing National influenza PPP 1st 2nd week March
 - b) Develop guidelines and SOPs 2nd -3rd week March
 - c) Develop EP& CP for H7N9 - 3rd -4th week March

Bangladesh

1. Brief to Department about the outcomes of this training.
2. Initiatives will be take for preparing a comprehensive contingency plan (supplying the inputs of the meeting/workshop)
3. Initiatives to be taken for list of LBMs (location on priority basis of LBM)
4. Assist to strengthen the market surveillance
5. Initiatives to be taken for meeting with Public Health Department

Pakistan

- Visit report to concerned Ministries (Ministry of Health and Ministry of Agriculture.
- Convene meeting of National Task Force of Avian influenza to brief about H7N9 situation and discuss related policy issues (Advocacy and future action plan - ban, regulatory issues)
- Potentiate and enhance ongoing AI surveillance and quarantine activities in border areas through existing AI surveillance network.
- Constitute a committee of experts to review and improve existing National Contingency Plan from H7N9 perspective. Develop new SOPs where required.
- Consultation with Pakistan Poultry Association to introduce voluntary measure for improving biosecurity as farms, LMBS and WSM (awareness)
- Study value chain in high risk LBMs (after 6 weeks)

Sri Lanka

Include the following points to preparedness plan

1. Pre incursion financial plan - compensation, physical activities, lab chemical C& D
2. Implementation of legislation on H7N9, culling disposal and market closure.
3. Communication plan – including awareness program for farmers and general public without creating panic.

Include H7N9 surveillance for H5 Program

Validation of test protocols

Capacity building on laboratory human response and technical person.