

# The AsiaFluCap Project: Evaluation Report

Supported by:



Prepared by: Amena Ahmad<sup>1</sup>, Ralf Krumkamp<sup>1</sup>, Piya Hanvoravongchai<sup>2</sup>, Richard Coker<sup>2</sup> and Ralf Reintjes<sup>1</sup>

<sup>1</sup>Hamburg University of Applied Sciences - Germany

<sup>2</sup>London School of Hygiene & Tropical Medicine, Communicable Diseases Policy Research Group – Bangkok Office.

For correspondence: [amena.ahmad@ls.haw-hamburg.de](mailto:amena.ahmad@ls.haw-hamburg.de)

Hamburg, March 2011



Lao PDR  
National Avian  
and Human  
Influenza  
Coordination  
Office

## *Acknowledgements*

This report has been prepared as part of "AsiaFluCap: Health system analysis to support capacity development in response to the threat of pandemic influenza in Asia", a European Commission project funded within the Seventh Framework Programme (FP7/2007-2013). Grant Agreement Number: Health-F3-2008-201823

We sincerely thank our Asian project partners from Thailand, Indonesia, Vietnam, Lao PDR, Cambodia and Taiwan and the European partners from the Netherlands, the United Kingdom and the Bangkok based London School of Hygiene and Tropical Medicine team for their valuable comments and unfailing support towards the preparation of this report.

# Table of Content

- 1 Executive Summary ..... 1
- 2 Introduction ..... 4
- 3 Assessment objectives and methodology ..... 4
  - 3.1 Mid-term Evaluation ..... 5
  - 3.2 Final Evaluation ..... 5
- 4 Results and Suggestions ..... 6
  - 4.1 Results and Suggestions - Mid-term Evaluation ..... 6
    - 4.1.1 General Experiences..... 6
    - 4.1.2 Strategy for Dissemination of Project Results ..... 6
    - 4.1.3 The Rapid Situational Analysis..... 6
    - 4.1.4 Resource Characterisation and Mapping..... 6
    - 4.1.5 Stakeholder Analysis..... 7
    - 4.1.6 Internal Communication among Project Partners ..... 7
    - 4.1.7 Administrative Issues ..... 7
    - 4.1.8 External Communication..... 8
  - 4.2 Results and Suggestions - Final Evaluation ..... 8
    - 4.2.1 Health System’s Operational Capacity Assessment ‘Toolkit’ ..... 8
    - 4.2.2 Composition of the ‘Toolkit’ Instruments..... 8
    - 4.2.3 Major policy implementation barriers..... 9
    - 4.2.4 Areas where further information, research and training are needed ..... 9
  - 4.3 Skills and expertise developed in the AFC project ..... 12
  - 4.4 New co-operations developed through the AFC project..... 15
  - 4.5 Impact of AFC project results on policy decisions ..... 16
  - 4.6 The AsiaFluCap project outputs..... 17
- Annex 1 - Mid-term Evaluation Questionnaire..... 26
- Annex 2 - Final Evaluation – Questionnaire – Part 1 ..... 35
- Annex 3 - Final Evaluation – Questionnaire - Part 2 ..... 42
- Annex 4 - The AsiaFluCap Project Workshops ..... 46
- Annex 5 – AsiaFluCap – Evaluation Poster..... 47

## *1 Executive Summary*

The AsiaFluCap (AFC) Project brought together countries and people of diverse political, cultural, social, socio-economic and research backgrounds from Asia (6 countries) and Europe (3 countries) with the common aim of assessing and supporting the operational capacity of national health systems to respond to the threat of pandemic influenza in Asia. Two questionnaire based evaluations accompanied this project with the aim to assess whether the project achieved what it set out to achieve. The purpose of the evaluation was to ensure a good quality scientific outcome, maximum utilization and implementation of results and to facilitate sustainability of the tools used and the expertise developed through the different project activities.

The evaluation of this 3 year international project which commenced in April 2008 was conducted in two steps i.e. a mid-term and a final evaluation. The mid-term evaluation which was conducted 18 months after the initiation of the project aimed to find out more about the experiences made, the organisational and communication problems encountered or anticipated and to obtain suggestions for improving further project work. Suggestions on how to facilitate dissemination of results and their incorporation into national policies were also asked for. The final project evaluation focused on the usefulness of an assessment “Toolkit” for conducting periodic health care system capacity assessments, based on the instruments used in the AsiaFluCap project. In addition the partners were asked how the country benefited from the activities in this project, whether the results are likely to influence ministerial policy making and areas where further research, training and support is needed.

All Asian partner countries remarked that the activities in the AFC project have provided them a valuable new and in-depth insight into their national health systems pandemic management and response capacity as a whole and that of neighboring Southeast Asian project countries. It has enabled an evidence based estimate of where and to what extent gaps exist and where crucial gaps need to be filled. In general the partners noted the working together with different countries in the region for a common purpose and the methodology of the project master plan as very positive. The regular teleconferences, the face to face meetings with all partners and the workshops were described as being very helpful for understanding and coordinating the project work. The emergence of a common platform for communication among the project countries was noted to be very constructive. In addition the diverse background of the project members i.e. researchers, policy makers and ministerial representatives was highlighted to be very beneficial for the project work and subsequent utilization of results.

The project has shown new ways of how to systematically collect and assess information on the capacity and preparedness of national health system to respond to the threat of an influenza pandemic. The rapid situational analysis (RSA), the questionnaire based resource characterization, the mathematical simulation model based resource gap and needs analysis, its graphic visualization in form of maps and the qualitative interview based stakeholder analysis were the approaches used to provide a very comprehensive picture. A ‘Toolkit’ for the periodic assessment of the national health systems pandemic preparedness and response capacity, based on the instruments used in the project was considered beneficial by all partners.

The rapid situational analysis (RSA) provided an understanding of the national health systems context within which a pandemic response must function and identified influencing factors, challenges and constraints likely to be faced during a pandemic. The results were taken up positively by national ministries and involved officials. Taiwan took into consideration the conclusions drawn while preparing for the 2009 A/H1N1 pandemic.

Vietnam used the findings to help inform the planning of health projects in the north central and south central coastal regions. However it was consensus that the results should be disseminated to a wider audience including policy makers to set the stage for effecting change.

Valuable data on the quantity and distribution of currently available resources, which are critical for managing a pandemic response were collected both at the district and hospital level. However the collection process was accompanied by many challenges like obtaining prior permissions to give information, difficulty in collecting data from the private health care sector and difficulty in filling out the questionnaire in general. Some difficulties were overcome by employing provincial coordinators, conducting individual surveys or organizing workshops to explain the questionnaires.

The mathematical simulation tool, provided quantitative estimates of the resources required under different pandemic severity scenarios and the potential gaps in relation to the actual resources currently available. The AFC project partners found the tool to be a very useful and practical device for application by governments and policy makers at the national level. They remarked that it will support the process of evidence informed investment and redistribution decisions of limited resources in terms of the most effective and feasible options for reduction of crucial resource gaps.

The project work led to numerous bilateral and multilateral contacts being established not only to institutions dealing with pandemic preparedness activities in the region but also with national institutions in all the AFC partner countries. At the regional level, co-operations with neighbouring countries, universities, national ministries of health, communicable disease networks, NGOs, research networks, international and regional health organizations and foundations across Asia and Europe developed during the course of this project. At the national level the project facilitated the development of new contacts as well as the strengthening of cooperation and information exchange with national ministries and government institutions, national communicable disease control institutions, policy makers, district health care administrations and hospital administrations.

The internal communication among all the project partners was generally described as good and the challenge of communication in a non native language was gradually overcome. The Asian project partners noted that the EU auditing and reporting requirements are challenging and remarked that explanations and support are needed, which was given in the form of several face to face sessions during the meetings.

All project partners remarked that they acquired valuable new research skills. The GIS (Map Window) training workshop showed how to use the program for quick visualization of resource data on a map, to detect apparent spatial patterns and to visualize geographical clustering of resource needs and gaps. Such graphical illustrations are good tools for informing policy makers and presentation of results. In order to conduct good quality comparable stakeholder interviews for the analysis, local interview teams from each country were trained in the art of conducting objective and impartial interviews and subsequent report writing. The partners also mentioned having gained experience in conducting systematic reviews and writing scientific papers.

Project results including those of the RSA and the resource gaps analysis were presented to researchers, government ministries, policy makers and communicable disease networks at high profile international and various national meetings. It was remarked that the WHO, the World Bank, the USAID and other international donor agencies were also informed about the project findings as they influence many decision made by policy makers in certain countries (Laos, Cambodia). The project countries also remarked that they want to publish the main

findings not only in international journals but also in their language in local journals in order to reach the domestic audience.

### **Major policy decision barriers**

The resource gap analysis helped to inform governments and policy makers about the major resource needs in the project countries and also about the unequal distribution of resource gaps among different regions within the country. This calls for policy decisions of redistribution and new investments yet policy makers face many constraints in responding to the identified resource gaps. Competing resource demands on very limited health care budgets and the lack of harmonization of donor resource allocation within countries were major barriers mentioned. Weak and uncoordinated organisational and administrative managements, lack of coordination among different national sectors, highly centralised health systems and the shortage of skilled health care and administrative staff were additional factors. The fact that policy makers would be held accountable for taking drastic decisions with wide ranging consequences was also mentioned as a hindrance.

### **Areas for further training and research**

All Asian project partners mentioned the evaluation of the post A/H1N1 pandemic response as an area requiring further research. The AFC resource simulation tool although considered to be very useful, was described as difficult to use. Training workshops on how to apply it were suggested. Lao PDR remarked that research on how best to deal with the identified resource gaps, in view of the highly limited national resources, is needed. Research on equity of distribution of vaccines and anti-virals and the quality of the anti-viral stockpiles was mentioned as an additional area where information is needed. Cambodia remarked that training of hospital management skills among physicians and training on primary precaution measures against infectious diseases at community level are required. Both Taiwan and Thailand mentioned that they need to further explore and improve their risk communication skills.

### **Impact of the AsiaFluCap project on policy decisions**

In Thailand the identified resource gaps led to the purchase of additional ventilators for the Ministry of Public Health's hospitals. The identified human resource shortages, non-material infrastructure gaps and the inadequate risk communication will also influence future policy decisions. In Cambodia the identified resource gaps have informed the World Bank Avian Influenza Project which is considering the support of infrastructure and resource improvement processes. In Indonesia the AFC project results have informed the development of the country wide 'Health Facility Framework Survey', which is to be carried out in all Indonesian districts in 2011. In Vietnam the inadequate logistics of anti-viral distribution, the shortage of isolation rooms and the lack of trained human resources will be the subject of future policy decisions. In Lao PDR the ministry of health has been informed about the identified resource gaps and needs which will be the basis of discussion with international donor organizations. In Taiwan inadequate risk communication before and during pandemics was identified as a weakness. Policy decisions to train and improve risk communication skills are planned. In the project Taiwan also learned about the nature and degree of resource gaps in the AFC project countries, which led to the decisions that it wants to support their efforts towards strengthening the national and regional pandemic management and response capacity.

## ***2 Introduction***

The AsiaFluCap (AFC) Project which aims to assess the operational capacity of health systems to respond to the threat of pandemic influenza and to support capacity development in 6 Asian countries has brought together people from diverse political, cultural, social, socio-economic and research backgrounds from Asia and Europe. Two questionnaire based evaluations and discussions accompanied this project through its different phases in order to assess whether the project achieved what it set out to achieve. The purpose of this evaluation was to ensure a good quality scientific outcome and a high degree of satisfaction among the project partners. The aim is also to facilitate the sustainability of the tools used and the expertise developed through the different activities in the AFC project and to promote maximum utilization and practical application of the results as considered useful by the Asian partner countries and to promote a broad dissemination of the findings in the region.

The evaluation of this 3 year international project which commenced in April 2008 was conducted in two steps i.e. a mid-term and a final evaluation.

The mid-term evaluation was conducted in November 2009, 18 months after the initiation of the AFC project. The aim was:

- To assess the satisfaction of the project partners with the progress made in the AFC project
- To obtain information on the difficulties faced and anticipated including organizational and communication issues and to get suggestions for improving further project work
- To get suggestions from country partners on the best strategy to publicize results to researchers and policy makers and facilitate their incorporation into the actual policy making process

The final project evaluation conducted in November 2010 and February 2011 aimed:

- To assess whether a „Toolkit“ for the periodic evaluation of the national operational pandemic preparedness capacity, would be a useful resource
- To identify the tools that should be included in such a „Toolkit“ based on the instruments used in the AFC project
- To identify areas in this field where the partners see need for further research, training and support
- To inquire how the AFC partners benefited from the activities in the project and whether and where the findings are likely to influence national policies
- To name new contacts and collaborations established in the wake of this project
- To compile a comprehensive list of all the AFC project outputs and resources (papers, training workshops, meetings, presentations etc)

## ***3 Assessment objectives and methodology***

The two project evaluations were based on questionnaires which were developed by the Hamburg University of Applied Sciences (HAW) Team in a process of discussion and feed-

back with the project co-ordination team of the London School of Hygiene and Tropical Medicine (LSHTM) – CDPRG - Bangkok group. The main issues covered in the questionnaire surveys were as follows:

### **3.1 Mid-term Evaluation**

The mid-term evaluation questionnaire (Annex 1) had four main assessment objectives

1. General experiences
2. Workpackage specific experiences
  - Rapid Situational Analysis
  - Resource characterization & mapping
  - Stakeholder analysis
3. Internal communication (among project and country partners)
4. External communication (with domestic audience, policy makers and researchers)

Each collaborating partner was requested to answer the questionnaire on behalf of the team members of the workpackage (WP). The answers and comments were compiled and jointly discussed at the consortium meeting in November 2009 in Bangkok.

### **3.2 Final Evaluation**

Two questionnaires (Annex 2 & 3) covering with the following evaluation objectives were developed for the final project evaluation

- Should an assessment „Toolkit“ be developed
- What should be included in it?
  - Rapid Situational Analysis
  - Resource characterisation & mapping
  - Resource modelling tool
- Country specific areas where policy makers require additional information
- Potential areas for further research
- Country specific benefits from the AFC project work
- New contacts and collaborations developed
- List of project outputs

The questionnaire (Annex 2) was sent by email to the six Asian project partners with the request to discuss and answer the questions within their team. The answers were compiled and discussed at the consortium meeting in November 2010 in Luang Prabang – Laos. The questionnaire (Annex 3) was sent by email to all AFC project partners in February 2011, with the request to answer all relevant questions. The compiled answers are part of this report and will be presented at the final meeting in Bangkok in March 2011.

The answers and suggestions collected and the issues discussed at the meetings are presented below, separately for the mid-term and the final evaluation.



## **4 Results and Suggestions**

### **4.1 Results and Suggestions - Mid-term Evaluation**

#### **4.1.1 General Experiences**

The overall satisfaction with the progress made in the project so far was described as – “satisfied” or “fully satisfied” by the country partners in 10 of 11 returned questionnaires, while one partner was satisfied with reservations. In general the partners noted the working together with different countries in the region for a common purpose; the methodology of the project master plan; the regular workshops, meetings (Annex 4) and teleconferences as positive. The emergence of a common platform for communication among the project countries was noted to be very constructive. In addition the diverse background of the project members i.e. researchers, policy makers and ministerial representatives was highlighted to be very beneficial for the project work.

The country partners suggested that the results from the different Workpackages in the individual project countries should be shared among all project partners. Another criticism made by a partner was that they found the current format of division of work into WPs occasionally hampered a more convenient sequential workflow and also disturbed the recruitment of personnel as new personnel had to be hired for each WP assignment which required time. The adaptation of the ongoing project work to incorporate the A/H1N1 pandemic was perceived as a challenge.

#### **4.1.2 Strategy for Dissemination of Project Results**

As regards publicizing plans during the next 18 months, the Project coordinators (London School of Hygiene & Tropical Medicine – CDPRG) discussed a publication strategy for disseminating RSA, resource characterization and mapping results in academic papers of peer reviewed journals. In addition the resource characterization and analysis data is to be compiled in form of reports and presented to the Ministries of health of the partner countries. Presenting results to researchers and policy makers as well as international donor organizations at high profile international and national meetings was also discussed. The partner countries also remarked that they want to publish the main findings in their language in local journals to reach the domestic audience. The writing of briefing notes to regularly inform about the research results was also agreed upon.

#### **4.1.3 The Rapid Situational Analysis**

The results of the Rapid Situational Analysis (RSA) were taken up positively by national ministries and involved officials yet the project partners remarked that they should be disseminated to a wider audience including policy makers to set the stage for effecting change. Since the WHO, the World Bank, the USAID and other international donor agencies influence many decision made by policy makers in some countries (Laos, Cambodia) they should be specially informed about the results. Vietnam remarked that the results were presented at several national and regional conferences and donor meetings and that they want to use the results to help inform the planning of health projects in the north central and south central coastal regions. Taiwan also mentioned that the conclusions drawn from the RSA were taken into consideration while preparing for the A/H1N1 pandemic.

#### **4.1.4 Resource Characterisation and Mapping**

A systematically developed hospital questionnaire and a district questionnaire were used to collect quantitative and qualitative information on the existing resources, essential for the management of influenza cases. Many project countries faced difficulties in collecting data on

available resources, in some countries institutions required prior permission and approval to fill in the resource questionnaires or were in general reluctant to do so. Vietnam, Cambodia and Thailand expressed difficulty in collecting data from the private health care sector. To obtain good quality data Vietnam and Indonesia conducted individual surveys directly. Thailand used provincial coordinators for coordinating resource data collection, except for Bangkok and for private hospitals where institutions were contacted directly. In Cambodia and Laos people faced difficulties in filling out data on medical equipment and drugs as people were unfamiliar with technical terminology, hence Laos conducted workshops to explain the questionnaire. Cambodia remarked that it was also difficult to collect accurate human resource data on account of staff overlap between public and private health care sectors. The lack of GIS data for Cambodia was also mentioned as a problem. Vietnam mentioned that the district questionnaire was not very suitable for its situation as the administrative responsibilities are organized differently (central, provincial, district, commune). Missing data and lack of key identifiers for data analysis was mentioned as a challenge and possible solutions discussed.

#### **4.1.5 Stakeholder Analysis**

For the Stakeholder analysis high level decision makers and experts are to be interviewed, the country partners voiced their concern about possible difficulties in getting appointments for interviews and also in recruiting competent interviewers acceptable to the interviewees, which may result in delays. In addition willingness and freedom to answer on behalf of the interviewees was also voiced as a concern by some of the partners. Taiwan being responsible for the stakeholder analysis also discussed methodological issues on how to collect information on governance arrangements and was concerned about the challenge of obtaining results from all project countries that are comparable.

#### **4.1.6 Internal Communication among Project Partners**

Internal communication among all the project partners was generally described as good. The monthly teleconferences were described as very helpful yet sometimes difficult to coordinate with respect to finding a time slot. The communication in a non native language was described as one of the initial challenges which improved over time. The newsletter was found to be a good source of information on the current project status and future work plans. It was suggested to the country partners that placing a link of the AFC website on relevant national websites would facilitate publicity, discussion and utilization of the AFC results. The assembling of a comprehensive contact directory of all involved partners was suggested as a useful resource for work in future and also for regional cooperation. The steady technical and problem solving support extended by the LSHTM (CDPRG) – Bangkok Team was highly appreciated.

#### **4.1.7 Administrative Issues**

The project partners noted that the EU auditing and reporting requirements are difficult to understand, the fact that local finance managers do not attend the meetings makes it even more difficult. Countries have dollar accounts, spend in local currencies and have to report in Euros which creates confusion. The technicalities of the 75% EU budget contribution and 25% own contribution and the 60% overheads were found to be confusing by some partners. Requests for face to face meetings and explanations on how to correctly manage financial and audit requirements were made. One session to explain the EU reporting requirements was held at the meeting in Bangkok and future sessions planned.

#### **4.1.8 External Communication**

For effective communication of the project results to a wider national and regional audience the project partners suggested to inform relevant national ministries specifically the ministries of health, education, interior, transport and agriculture. Communicable disease control authorities of neighbouring Asian countries who are not part of the project should also be informed about the pandemic preparedness situation and resources. In addition international organisations like the WHO and its regional offices, UNSIC, FAO, ASEAN, and the APEIR network were suggested as receivers of information. Apart from academic conferences face to face meetings with national stakeholders were also suggested as effective means for dissemination of results. Briefing notes and short communications written in the local languages with a clear national and regional focus were also suggested.

### **4.2 Results and Suggestions - Final Evaluation**

#### **4.2.1 Health System's Operational Capacity Assessment 'Toolkit'**

All six Asian project partners expressed that a compact "Toolkit" based on the instruments used in AFC project, would be useful for the periodic assessment of the national health system's operational pandemic response capacity. While three partners suggested that such an assessment should be repeated every three years, one partner was of the opinion that it should be repeated every two years, the other every four years and one suggested that a full scale assessment should be carried out every five years.

#### **4.2.2 Composition of the 'Toolkit' Instruments**

In the AFC Project the national health systems operational capacity to respond to the threat of a pandemic was assessed with the help of three major instruments i.e. the rapid situational analysis (RSA), a characterisation of the existing medical and non-medical resources and a modelling tool developed to estimate the resource gaps under different scenarios. Five of the six partners expressed that selected components of the RSA i.e. those which are subject to rapid change should be included in the toolkit. For a periodic characterisation of existing resources five partners voted to carry out a sample survey while one was in favour of carrying out a full survey at longer intervals. The reasons mentioned in favour of a sample survey were feasibility, less time and resource consuming and that infrastructure resources don't change so rapidly. In addition Cambodia and Thailand mentioned that the information on existing resources can to some extent also be obtained from other routine sources (Cambodia: the health coverage plan, Thailand: the VMI system). Population size and density, geographic location (e.g. bordering areas), economic importance, level of resource gaps identified and bed size in case of private hospitals were the criteria suggested for selecting the sample for conducting the periodic resource characterization sample survey.

The resource modelling tool was considered a practical and useful tool for application by policy makers and was suggested to be included in the toolkit by five partners, one partner was undecided. In general the tool was considered very useful for informing policy makers at the national level and major hospitals but unpractical for application at the local level. The partners however voiced that it needs to be more user friendly and that training workshops on how to use the modelling tool would be needed. In addition a regular update of the parameters underlying the tool on the basis of which the calculations are made will be necessary. It was also criticised that the tool does not take into account the intangible (non health) resources available at the community level and in the private sector.

### **4.2.3 Major policy implementation barriers**

The resource gap analysis helped to inform policy makers about the major resource needs in the project countries and the unequal distribution of resource gaps among different regions within the country. This calls for policy decisions of redistribution and new investments yet policy makers face many constraints in responding to the identified resource gaps. The barriers mentioned were:

- Personalisation of risk for policy makers
- Lack of harmonization of donor resource allocation within the country
- Budget and administrative constraints on account of competing investments, economic barriers
- Lack of skilled staff
- Lack of coordination between different sectors
- Centralised health system as in Vietnam make decisions more difficult

### **4.2.4 Areas where further information, research and training are needed**

The partners were asked to specifically name areas from their country's perspective where the need for additional implementation oriented research is seen or where policy makers require more supportive information to take concrete steps and make decisions leading towards an improvement of the health systems operational pandemic management and response capacity. The following areas were mentioned by the individual countries:

#### **Cambodia**

- Hospital management skills among physicians need to be improved in many Cambodian hospitals.
- More information on the economic impact of other investments apart from the pure economic impact of the pandemic itself is needed.
- Training on primary precaution measures against infectious diseases at community level is needed.
- Community readiness to protect themselves against emerging infectious diseases requires attention

#### **Indonesia**

- The dynamicity of the resource gap estimation model is needed, in order to give a more realistic estimate of the real situation, since the consequence would be a significant mobilization of resources by the public sector
- The resource modeling (AFC Simulator) tool is good for informing policy makers, yet more expertise in its use is required.
- Further research on health policies, health systems and disease outcome in the region to strengthen regional and global response is needed
- The equity of distribution of vaccines and anti-viral drugs among receiver countries and the quality of the anti-viral stockpiles should be assessed

## **Lao PDR**

- Recommendations and solutions on how to deal with the resource gaps should be adapted to the national economic conditions and resources
- The balance between social factors and the economic consequences of health care investments related to H5N1, H1N1 and new emerging infections need to be further explored
- The resource modeling tool is very useful yet policy makers and other stakeholders require to be trained in its use.

## **Vietnam**

- Resistance against anti-viral drugs and the necessity to import other sensitive drugs needs to be explored

## **Taiwan**

- Risk communication skills on how to effectively communicate with the media and the public need to be improved
- Modelling the cost effectiveness of investments in pandemic preparedness on account of the reduced number of potential deaths and disabilities etc. would yield more information on the economic consequences

## **Thailand**

- Decisions specially during an uncertain crisis situation requires evidence based on epidemiologic figures and disease severity

In addition a list of areas where capacity gaps have been envisaged by international agencies and donor organisations was given. The partners were asked to specify the extent of importance of each area from their country's perspective on a scale of 1 (not important) to 4 (highly important). The evaluation of the post A/H1N1 pandemic response was considered a priority by all partners. A table showing the extent of importance of different pandemic preparedness issues to the individual countries is given below.

Table: 1 –A list of potential areas where national pandemic preparedness and response capacity gaps have been envisaged by international agencies and donor organisations and the importance of attention towards these issues from the AFC partner countries perspective.

Questions on Potential areas which require further attention	Country Response					
	Thailand	Vietnam	Indonesia	Taiwan	Cambo dia	Lao PDR
Meeting the core capacity requirements of the IHR	++	+	+	+	++	+
Weak animal and human disease surveillance systems at the local level, inadequate communication among these systems and with the higher level		++		+	++	+
Developing triage guidelines as a means of dealing with scarce resources equitably during pandemics	++	++	+			+
Primary prevention measures based on knowledge transfer & capacity building at the community level, to deal with infectious disease threats	++	+		+	++	+
Pre-defined procurement and distribution pathways for anti-virals, essential medicines & PPE during pandemics	+	+			+	
Barriers to practical implementation of pandemic plans at the local level		++	+		+	++
Linkage of pandemic preparedness with local and national emergency (disaster management) plans	++	++	+		++	++
Evaluating the post A/H1N1 pandemic response to generate lessons learned	++	++	++	++	++	++

+ : of importance      ++ : of utmost importance

### **4.3 Skills and expertise developed in the AFC project**

All Asian partner countries remarked that the activities in the AFC project have provided them a valuable new insight into their national health systems pandemic management and response capacity as a whole and enabled an estimate of where and to what extent gaps exist and where crucial gaps need to be filled. The project has shown new ways of how to systematically collect and assess detailed health system resource data related to pandemic influenza preparedness using the rapid situational analysis and the questionnaire based resource characterization. This project has also helped the partner countries to develop human resource capacity by acquiring new research skills.

The GIS (Map Window) 2 day short training course held in July 2009 by the LSHTM/Mahidol University in Bangkok showed the participants from all AFC partner countries how to use the program for quick visualization of data (e.g. number and spread of cases, number and geographic distribution of ventilators) on a map, to detect apparent spatial patterns e.g. resource excess or gap clusters and to visualize resource needs and gaps.

The Taiwan team responsible for conducting the stakeholder interviews received comprehensive interview training. They went to all AFC partner countries introduced the aims of the stakeholder analysis and trained the local interview teams in the art of conducting objective and impartial interviews and subsequent report writing. They also accompanied them as observers during the first few interviews and discussed problems that arose. This improved the interview and research skills of the local staff and ensured good quality and comparable results.

A country wise account of the how the countries benefited individually from the activities of the AFC project, beyond gaining insight into the pandemic preparedness capacity itself, is given below:

#### **Vietnam:**

- Getting an overview of the panorama of pandemic preparedness in the whole country and learning an approach to assess national pandemic preparedness capacity
- Able to assess health systems and health resources and analyse the gap aspects and consequences.
- Learned to conduct a GIS analysis for visualizing health resources.
- Improving the research skills of staff
- Providing information from the resource calculation model and data from the health care facilities to the MoH and MOST etc. to prepare for a pandemic influenza response.
- Information gained from the health system analysis and the resource need and gap analysis helped to inform and prepare the project master report on health support for the North Central Coastal Region in Vietnam 2009. Project Health Support for NCCR, VN MoH and WB 2009-2015

#### **Lao PDR:**

- Working together with other national ministries on pandemic preparedness issues
- Benefited from human resource capacity development opportunities

- Ability to assess the availability of human resources and medical equipment in health care facilities at all administrative levels, required to operationalize the national pandemic preparedness plan
- Gained information and assessed the health surveillance system
- Benefited from the lesson learned on disease prevention and control in neighboring and other Asian countries
- Gained important information on the current situation of human resources and health care facilities in Laos. This information will be shared with international partners and provide a base for further assistance in filling the gaps identified so far.

#### **Cambodia:**

- The country team and the stakeholders at provincial level gained significant insight and learned both from the process and the results of the AsiaFluCap Project in Cambodia.
- The key themes of the AFC project has helped to see pandemic preparedness not only as a national issue but also as a regional concern. This will help pave the way for policy makers and health partners at national, regional as well as global levels to systematically see the gaps and strategically fill them.

#### **Indonesia:**

- The Indonesian team learned how to collect detailed health system resources related to pandemic influenza preparedness, based on scientific evidence (systematic reviews). We also learned how to conduct good systematic reviews for this topic.
- The approach of systematic review has been utilized as a core topic in the graduate courses on Health Policy Analysis and Making Health Policy.
- Policy makers have started consulting researchers to obtain evidence based information and consequently base their decisions on the best available evidence rather than on prevailing opinions and beliefs. The modeling tool is a good tool for informing policy makers.
- We also learned how to utilize the GIS for resource needs and gaps.
- We benefited from writing manuscripts for scientific publications.
- We are also improving our regional & global research networking.

#### **Thailand**

- We learned to assess Thailand's national pandemic influenza preparedness in terms of the health systems response capacity, the resource availability and gaps and the stakeholders views and constraints.
- We learned to use new tools and methods for collecting detailed information on health care resource availability and gaps.
- We benefited from working together with other partner countries in the region



## **Taiwan**

- Taiwan learned from the rapid situational analysis and resource characterization methodology
- We benefited from the findings of the resource characterization and resource gap analysis, in that mobilization of resources is a good option for Taiwan to make better use of the available health system resources when responding to pandemic influenza in future.
- We learned how to conduct interviews with high level stakeholder such as policy makers, local health leaders, private agencies, and experts. We have learned from the experiences of these stakeholders and used the knowledge to improve our pandemic response capacities.

## **Netherlands:**

- The Netherlands team has learned a lot from the rapid situational analysis methodology
- We used the simulator in order to assess gaps in the regional preparedness capacity in the Netherlands

## **Germany:**

- The project helped us to expanded our network of research contacts and health system experts in Asia
- We learned a lot about organization of international projects and cross cultural communication.
- The HAW University was able to build on this network, establish cooperation among different AFC project partners and the German Technical Cooperation (GIZ) and initiate new projects under the GIZ's pandemic preparedness initiative
- We learned from the model development and intend to use modified versions in other projects

## **LSHTM – UK & Bangkok**

- Gained expertise in project management and co-ordination
- Acquired an in-depth insight into the operational pandemic preparedness and response capacity across countries in SE -Asia
- Learned the art of communication across different cultures
- Developed report-writing and new research skills. Learned how to conduct a rapid situational analysis and how to synthesize evidence from different (primary and secondary) data sources.
- The GIS workshop taught and showed the benefits of a new way of presenting research results by using maps. It is easier to understand and provides an additional perspective towards resource availability analysis. The technique to identify geographical clustering or mismatch of resource across neighbouring areas is also useful for practical policy recommendations on resource sharing across administrative boundaries.

#### **4.4 New co-operations developed through the AFC project**

The partners were asked to name any new contacts which were established with international organizations, institutions, government ministries or networks involved in the field of pandemic management within and outside the country, as a result of the activities in the AFC project. An individual country wise responses is given below:

##### **Cambodia**

The Cambodian team, in collaboration with AFC project partners and the support of policy makers in Cambodia developed a proposal based on the results of the AFC project to conduct economic evaluations. The proposal has been sent to the GIZ for consideration and support

##### **Lao PDR**

Lao PDR has remarked that this project has helped to strengthen cooperation with different ministries at the national level (Ministry of Agriculture and Forestry, Ministry of information and Culture). In addition contacts with international organizations (WHO , FAO , US CDC , USIAD, UNDP, OIE, AED, Care International etc.) were either established or strengthened. The project also helped to develop new contacts with countries in the region and with research and teaching institutions in Europe, such as the London School of Hygiene and Tropical Medicine, and the Hamburg University of Applied Sciences in Germany

##### **Vietnam**

Vietnam established new contacts and shared experiences with other Asian countries in the project. The project has fostered the interaction and information exchange among authorities responsible for pandemic preparedness and response to the H1N1 and H5N1 pandemics in Vietnam namely MoH, MOST and MoARD. The weaknesses identified through the health system analysis and the data on the health care resource gaps, have and will be the subject of presentations and discussions by the MoH and MOST at international meetings.

##### **Indonesia**

Indonesia has developed networks, at the local and national government level within the country, in Southeast Asia, and internationally. We are now linked to international and regional organizations such as WHO, FAO, CIDA, IDRC, Rockefeller, AusAID, APEIR network, GTZ, USAID, US Government, Australian government, and ASEAN who are concerned with pandemic preparedness management.

##### **Thailand**

Thailand benefited from working together with other partner countries in the region. In Thailand, the project team established close contact with the Department of Disease Control and collaborated with the researcher Mr\_Porntip, who was one of members in the war room during the A/H1N1 2009 pandemic. We also consulted the Bureau of Epidemiology who provided us the national data set on influenza cases and the guidelines.

##### **Taiwan**

Taiwan established many contacts with institutions in Asia and Europe:

- National Institutions: Academia Sinica, Taiwan and Yang Ming University, Taiwan
- Regional institutions: National EID Coordination Office, Ministry of Health, Laos PDR, other AFC partner countries, Japan.

- European institutions: 1) Influenza National Reference Laboratory, Medical University of Vienna, 2) AGES in Austria, 3) Ministry of Health, Austria, 4) Ministry of Health, Welfare and Sport, Netherlands, 5) RIVM in Netherlands, 6) Netherlands Institute for Health Services Research, 7) Bernhard Nocht Institute for Tropical Medicine in Germany, 8) The National Institute for Infectious Diseases “L. Spallanzani in Italy, 9) Health Protection Agency in UK, 10) InVs in France.

### **United Kingdom – London (LSHTM)**

As a result of this EU Project numerous contacts were established, specially with universities, national ministries of health, communicable disease networks, NGO’s, research networks and foundations across Asia and Internationally. A comprehensive list of institutions is given below:

MBDS, National Ministries of Health, UNSIC, WHO SEARO and WPRO, USAID, ‘Predict’, ‘Respond’, National University of Singapore, Duke-NUS, University of Udayana - Bali, Burnet Institute – Australia, RSIS – Singapore, Chinese University of Hong Kong, Hong Kong University, CelAgrid - Cambodia NGO, GIZ – Germany, Cabinet Office – UK, US CDC, CDC Thailand, APEIR, IDRC, ASEF

In addition the new collaborations resulted in the application and initiation of new projects as listed below:

- Research proposal on: evidence based investment options to improve pandemic preparedness in Cambodia and Laos. Proposal submitted to GIZ – Germany. Involved AsiaFluCap partners (HAW, LSHTM, MoH - NEICO)
- Surge capacity proposal for Indonesia. Involved institutions: (University of Indonesia and LSHTM with Indonesia’s MoH -NIHRD)
- Biomedical surveillance project in Bali. Involved institutions: (University of Indonesia and LSHTM with Duke-NUS)
- Contact patterns in Asia: Study funded by WHO. Involved institutions: (University of Indonesia, IHPP- Thailand, LSHTM, Oxford Clinical Research Unit in Hanoi-Vietnam and International Vaccine Institute in Seoul Korea)

### **4.5 Impact of AFC project results on policy decisions**

The findings of the health system, the resource gap and the stakeholder analysis revealed different degrees of weaknesses and shortages in the national pandemic management and response capacities which have and will hopefully continue to trigger policy decisions to improve pandemic preparedness. The countries mentioned the following areas where policy decisions were or are likely to be influenced.

#### **Lao PDR**

The outcomes of the AFC Project were presented to the National Emerging Infectious Disease Coordination Office – Laos (NEIDCO), who in turn informed the MoH in Laos about the identified pandemic preparedness resource gaps and needs in the country. This will form the basis of discussions for further assistance through international donor organisations.

#### **Vietnam**

A sufficient quantity of 30 million doses of anti-viral drugs like Tamiflu/Oseltamivir, have been stockpiled by Vietnam as an important pandemic preparedness measure. The logistics of the rapid and adequate distribution has however be identified as a problem which will be

addressed. The identified shortage of isolation rooms at most levels of the health system and the lack of trained human resources specially at district level significantly influence national pandemic preparedness and will be the subject of future policy decisions.

### **Indonesia**

The results of the health system resource needs & gaps analysis and the model simulation are contributing to the development of the new Healthcare Facility Framework Survey which will be conducted by the Ministry of Health to cover all districts in Indonesia, in 2011.

### **Cambodia**

As the project objectively identified the resource gaps and needs in Cambodia, the World Bank AI project is now considering the renovation of isolation wards in the provincial hospitals, procurement of pick up cars, motorbikes and laptops with modems for rapid response team (RRT) members, thermo-scanners for major points of entry and ventilators for designated hospitals in the country.

### **Thailand**

In Thailand policy makers were informed about the findings on the shortage of ventilators which led to acquirement of additional ventilators for the Ministry of Public Health's hospitals. Resource shortages in particular the improvement of human resources and infrastructure resources (rather than material resources) will be subject to future policy decisions. The stakeholder analysis revealed public risk communication during the A/H1N1 2009 pandemic as one of the weaknesses which we intend to improve.

### **Taiwan**

The findings of the rapid situational analysis informed the pandemic planning and response activities during the A/H1N1 2009 pandemic. Policy makers in Taiwan learned about the nature and degree of resource gaps in the AFC project countries, they want to collaborate with these countries and support their national and regional pandemic management and response capacity. The project work also identified risk communication during the A/H1N1 2009 pandemic, as a weakness, policy decisions to improve risk communication will be made in the near future.

## **4.6 The AsiaFluCap project outputs**

### **Published Papers**

- Hanvoravongchai P, Adisasmito W, Chau PN, Conseil A, de Sa J, Krumkamp R, Mounier-Jack S, Phommasack B, Putthasri W, Shih CS, Touch S, Coker R; AsiaFluCap Project. **Pandemic influenza preparedness and health systems challenges in Asia: results from rapid analyses in 6 Asian countries.** BMC Public Health. 2010 Jun 8;10:322.
- Wiku Adisasmito. **Health System and Pandemic Influenza Preparedness: Results from Rapid Situation Analysis (RSA) in Jakarta and Bali.** Journal OSIR.
- J de Sa, S Mounier-Jack, C Darapheak, LK Narann, R Phetsouvanh, N Chanthakoumanne, S Touch, B Phommasack, R Coker: **Responding to Pandemic Influenza in Cambodia and Lao PDR: Challenges in Moving from Strategy to Operation.** Southeast Asian Journal of Tropical Medicine and Public Health, 2010

Sep;41(5):1104-15. Available at: <http://www.tn.mahidol.ac.th/seameo/journal-41-5-2010.html>

- Krumkamp R, Mounier-Jack S, Ahmad A, Reintjes R, Coker R. **Evaluating health systems' preparedness for emerging infectious diseases: a novel conceptual and analytic framework.** Health Policy. 2010;98(2-3):91-7.
- Krumkamp R, Kretzschmar M, Rudge JW, Ahmad A, Hanvoravongchai P, Westenhoefer J, Stein M, Putthasri W, Coker R. **Health service resource needs for pandemic influenza in developing countries: a linked transmission dynamics, interventions and resource demand model.** Epidemiol Infect. 2011;139(1):59-67.

#### **Papers in press**

- Phetsouvanh R, Phommasack B, Menorath S, Chanthakouman N., Chanthapadith C, and Vannachone B.: Status of health resources availability and readiness to combat H1N1 pandemic in Lao PDR: Lao Medical Journal

#### **Papers submitted**

- CP van der Weijden, ML Stein, AJ Jacobi, MEE Kretzschmar, R Reintjes, JE Steenbergen, A Timen. **Understanding variation of pandemic parameters and their consequences for preparedness: a study of prediction models versus the real 2009 pandemic.**
- James W. Rudge, Piya Hanvoravongchai, Ralf Krumkamp, Irwin Chavez, Wiku Adisasmito, Pham Ngoc Chau, Bounlay Phommasak, Weerasak Putthasri, Chin-Shui Shih, Mart Stein, Aura Timen, Sok Touch, Ralf Reintjes and Richard Coker on behalf of the AsiaFluCap project. **Health system resource gaps and associated mortality from pandemic influenza across six Southeast Asian territories.**
- W Adisasmito, BMO Hunter, R Krumkamp, K, JW Rudge, P Hanvoravongchai, R Coker. **Pandemic influenza and health system resource gaps in Bali: an analysis through a resource-transmission dynamics model.**

#### **Master Thesis submitted**

- Duong Manh Hung, Pham Ngoc Chau. **Knowledge, attitude and practice of health staffs on preparedness for pandemic of influenza type A in Ha Tay general hospital in 2009.** Thesis of master, VMMU, 2009.
- Nguyen Thi Thu Thuy, Hoang Van Luong. **The Knowledge, attitude and practice of health staff for preventing of nosocomial infection in hospital Chương Mỹ in 2009.** Thesis of master, VMMU 2009.

#### **Papers in preparation (to be submitted within the next 6 months)**

##### Netherlands

- ML Stein, MEE Kretzschmar, CP van der Weijden, JE van Steenbergen, AA Bonacic Marinovic, R Krumkamp, JW Rudge, P Hanvoravongchai, R Coker, A Timen. **Using a simulation model to identify critical health care resources for effectively**

**decrease the public health impact of resource gaps during an influenza pandemic outbreak.**

Vietnam

- **The key finding of survey on stakeholder analysis for preparedness pandemic influenza type A in Vietnam in 2010.** Journal of Military Pharmaco-medicine, Medical Military University, ISSN 1859-0748.

Taiwan

- **Pandemic influenza preparedness and health system challenges in Asia: health system resource allocation for responding to 2009 H1N1 influenza pandemic**
- **Pandemic influenza preparedness and health system challenges in Asia: cross study on stakeholder analysis in 6 Asian countries**

Thailand

- Chulaporn Limwattananon, Weerasak Putthasri, Jongkol Lertiendumrong, Pornthip Chompook, Joia de Sa, Piya Hanvoravongchai, Viroj Tangcharoensathien, Richard Coker. **Health system resource needs in SE Asia for pandemic influenza: Systematic review and delphi consensus study.** The Southeast Asian Journal of Tropical Medicine and Public Health.

**Brief communications (e.g. policy briefs, short communications, newsletters)**

- The Asia FluCap Project: Health system analysis to support capacity development in respond to the threat of pandemic influenza in Asia. Available at: [http://www.asiaflucap.org/asiaflucap\\_poster\\_small.pdf](http://www.asiaflucap.org/asiaflucap_poster_small.pdf)
- Krumkamp R. The AsiaFluCap Project: Influenza Outbreak Models and Pandemic Response – Mathematical Tools to Inform Pandemic Preparedness Planning. 2009. Available at: [http://www.cdprg.org/admin/editor\\_files/downloads/AsiaFluCap\\_Briefing\\_\\_RK1.pdf](http://www.cdprg.org/admin/editor_files/downloads/AsiaFluCap_Briefing__RK1.pdf)
- Krumkamp R. The AsiaFluCap Project: Resource needs in pandemic influenza control – Simple epidemic models to guide policy planning. 2009. Available at: [http://www.cdprg.org/admin/editor\\_files/downloads/AsiaFluCap\\_Briefing\\_RK\\_2.pdf](http://www.cdprg.org/admin/editor_files/downloads/AsiaFluCap_Briefing_RK_2.pdf)
- ML Stein, JW Rudge The AsiaFluCap Simulator, electronic leaflet with key information about the AsiaFluCap Simulator.
- Lao PDR: Newsletter for H5N1 and H1N1 prevention and Control
- Vietnam: The primary result of health systems analysis in Vietnam in 2010 – AsiaFluCap Project. Available at: [www.vmmu.edu.vn/](http://www.vmmu.edu.vn/)
- Indonesia: Press Release: Professorship Inauguration in Health Policy, Faculty of Public Health University of Indonesia.

## Conference Presentations

### Bangkok - LSHTM

- Hanvoravongchai P. **Pandemic influenza preparedness in Asia**. Joint International Tropical Medicine Meeting, December 2009, Bangkok, Thailand

### Germany

- Krumkamp, R, Putthasri, W, Rudge, JW, Ahmad, A, Reintjes, R, Hanvoravongchai, P, Coker, R. **Pandemic influenza response capacities in Thailand: modelling health service resource gaps**. German Epidemiological Association, Sep 2010, Berlin/Germany.
- Krumkamp, R. **Cost-effective strategies to improve pandemic infectious disease response in South-East Asia**. Meeting of the GTZ's Pandemic Preparedness Initiative, 2010, Frankfurt a.M./Germany.
- Ahmad A and Reintjes R. **The EU-Project – AsiaFluCap**. Presentation of the project work, the tools used and the project results. Meeting with the coordinator (Mrs. H. Richter-Airijoki) of the GTZ's Pandemic Preparedness Initiative, December 2009, Frankfurt a.M./Germany.
- Ahmad A. **Pandemic planning in south-east Asia – The international project AsiaFluCap**. Presentation of the project rationale and outline, the tools used and the preliminary results at the Health research conference at the Hamburg University of Applied Sciences, October 2009, Hamburg, Germany

### Indonesia

- Wiku Adisasmito. **Development of Avian Influenza Policy, Lesson from One Health**. Presented at 1st International One Health Congress, 14-16 February 2011, Victoria, Australia.

### Vietnam

- Le Minh sat. **Some experiences of preparedness for pandemic influenza in Vietnam**. The International Ministerial Conference: “Animal and Pandemic Influenza: The Way Forward” Hanoi, Vietnam, 19-21 April 2010. IMCAPI Hanoi – Vietnam 2010.
- Pham Ngoc Chau. **Results of Stakeholder analysis on H1N1pandemic influenza outbreak in Vietnam 2009**. Results presented at the AFC consortium meeting in Luang Prabang – Lao PDR – Nov.2010.
- Pham Ngoc chau, Nguyen Duc Thanh, Le Tran Ngoan, Nguyen Tuan Anh, Dieter Nassler. **Project on Health Support in North Central Costal Region in Vietnam**. Presentation based on: Report on influence of aspects of Eco-socio and natural condition to health of NCCR and prevention pandemic. VN MoH, World Bank, 2008.

### Thailand

- W. Putthasri. **Assessment of Pandemic Human Influenza Preparedness**. The 2nd Thailand Human Influenza Research Meeting. 21-22 October 2009 at Sheraton Grande Sukhumvit Hotel Bangkok.

### Poster Presentations

- Krumkamp R, Westenhöfer J, Ahmad A, Coker R. **A simple calculator to determine health system resources needed to respond to different pandemic influenza scenarios**. Presented at the Annual meeting of the German Association for Epidemiology, 2009, Münster/Germany.
- Ahmad A. **A novel methodological approach to systematically analyse pandemic influenza response programs within health systems**. Presented at the Annual meeting of the German Association for Epidemiology, September 2010, Berlin, Germany.
- ML Stein, CP van der Weijden, M Kretzschmar, AA Bonacic Marinovic, M Alkadhimi, R Krumkamp, JW Rudge, P Hanvoravongchai, I Chavez, A Jacobi, R Coker, A Timen. **Development of a model to determine resource depletion during a pandemic: the AsiaFluCap Simulator**. Presented at: EU Conference, Lessons Learned from H1N1 pandemic, June/July 2010, Brussels, Belgium.
- Piya Hanvoravongchai, Irwin Chavez, Weerasak Putthasri, James W. Rudge, Ralf Kraumkamp, Wiku Adisasmito, Pham Ngoc Chau, Bounly Phommasak, Chin-Shui Shih, Mart Stein, Aura Timen, Sok Touch, Richard Coker. **Availability of Health system resource for pandemic responses in six Asian territories**. Thailand Conference on emerging infectious and Neglected Diseases 2010.
- Pham Ngoc Chau, Hoang Van Luong, Le Minh Sat. **The AsiaFluCap Project – activities and result in Vietnam**. Poster will be presented at Bangkok final AFC Meeting on March 30, 2011, Thailand.
- W. Putthasri, P. Chompook, J. Lertiendumrong, R. Coker, V. Tangcharoensathien. **Resources Mobilization and Inter-organizational Communication during an Influenza Pandemic in Thailand**. International Meeting on Emerging Diseases and Surveillance. Vienna, Australia, 13-16 Feb 2009.

### Reports

- Sandra Mounier-Jack, Joia de Sa, Ralf Krumkamp and Richard Coker. **SYSTEMIC RAPID ASSESSMENT TOOLKIT (SYSRA): A toolkit for rapid assessment of health systems and pandemic influenza preparedness and response**. (Draft) Sep. 2008. Available at:



[http://www.cdprg.org/admin/editor\\_files/downloads/Pandemic\\_Flu\\_RSA\\_Toolkit\\_Draft\\_26\\_Sept.pdf](http://www.cdprg.org/admin/editor_files/downloads/Pandemic_Flu_RSA_Toolkit_Draft_26_Sept.pdf)

#### Rapid Situational Analysis – Country Reports (<http://www.asiaflucap.org/resources.php>)

- Chau Darapheak, Joia de Sa, Sandra Mounier-Jack, Ly Khunbunn Narann and Touch Sok. **Cambodia: Health System and Pandemic Preparedness. Rapid Situational Analysis Report.** April 2009. Available at:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Cambodia\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Cambodia_RSA_Report_June_2009_Noname.pdf)
- Nyphonh Chanthakoummane, Richard Coker, Joia de Sa, Sing Menorath and Rattanaxay Phetsouvanh **Lao: Health System and Pandemic Preparedness. Rapid Situational Analysis Report.** April 2009. Available at:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Lao\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Lao_RSA_Report_June_2009_Noname.pdf)
- Pham Ngoc Chau, Alexandra Conseil, Nhan La, Sandra Mouier -Jack, Le Minh Sat. **Vietnam Health System and Pandemic Preparedness. Rapid situational analysis report.** April 2009. Results presented at consortium meeting in Bali 2009. Available at AsiaFluCap website:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Vietnam\\_\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Vietnam__RSA_Report_June_2009_Noname.pdf)
- Adisasmito W, Coker R, de Sa J, Hanvoravongchai P, Iljanto S, Llanadewi N, Suudi A and Latied K. **Indonesia: Health System and Pandemic Preparedness. Rapid Situational Analysis Report.** April 2009. Available at:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Indonesia\\_\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Indonesia__RSA_Report_June_2009_Noname.pdf)
- Alexandra Conseil, Yu-Chen Hsu, Ralf Krumkamp, Sandra Mounier-Jack and Chin-Shui Shih. **Taiwan: Health System and Pandemic Preparedness. Rapid Situational Analysis Report.** January 2009. Available at:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Taiwan\\_\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Taiwan__RSA_Report_June_2009_Noname.pdf)
- Pornthip Chompook, Joia de Sa, Piya Hanvoravongchai, Jongkol Lertiendumrong and Weerasak Putthasri. **Thailand: Health System and Pandemic Preparedness. Rapid Situational Analysis Report.** January 2009. Available at:  
[http://www.asiaflucap.org/admin/editor\\_files/downloads/Thailand\\_\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiaflucap.org/admin/editor_files/downloads/Thailand__RSA_Report_June_2009_Noname.pdf)

#### Stakeholder Analysis – Country Reports

- Pham Ngoc Chau, Le Minh Sat, Hoang Van Luong, Nguyen Van Chuyen, Shu-Mei Chou, Yi-Li Shih, Chiu Po Ju. **The AsiaFluCap Project: Stakeholder analysis**

**report on the H1N1 pandemic influenza outbreak response in Vietnam 2009.**  
November 2010.

- W Adisasmito, A Suwandono, DN Aisyah. **2009 H1N1 Influenza Pandemic Stakeholder Analysis Report. Stakeholder Analysis of H1N1 Pandemic Response in Indonesia.** September 2010.

**Meetings / Discussion of AsiaFluCap findings with representatives of regional organizations (e.g. SEARO, WPRO, MBDS, APEIR, ASEAN)**

Indonesia

- Pandemic avian influenza comparative policy analysis. Kunming, 12-16 January 2010. Participants: Steering Committee APEIR, countries regional policy makers, international media, funding agencies, APEIR researchers, Asian universities, WHO.
- Contributing to One World One Health: A strategic framework for reducing risks of infectious disease at the animal human interface. Expert consultation on One World One Health. Winnipeg, Canada, 16-19 March 2009. Participants: Countries, development agencies, financial institutions, industry, academia, NGO, regional and international organization.
- Fourth APAIR regional meeting and 3rd face to face partnership steering committee meeting, Research result and partnership in Emerging Infectious Disease. Siem Reap, Cambodia. 5-7 November 2008. Participants: APAIR Steering Committee, Funding agencies, NGOs, Universities, regional Government officials, international organizations.
- APEIR steering committee meeting. Policy brief for Asian ministerial forum. Ho Chi Minh City, Vietnam, 2-3 May 2009. Participants: APEIR Steering Committee, international organizations, funding agencies.
- The 1st eco Health Network Meeting. Field building leadership initiative. Kohchang, Thailand, 29-31 January 2011. Participants: Regional ministries of Health, WHO, regional universities, funding agencies.

**Presentations/Discussions of AsiaFluCap results at International Meetings – e.g. WHO, UN etc.**

Indonesia

- Wiku Adisasmito. Antiviral Policy responding to Avian Influenza Pandemic Preparedness in Indonesia. 8th International Con Antiviral (ICAV). Corsica, France, 3-6 October 2009.

## **Presentation / Discussion of AsiaFluCap results with local policy makers/experts e.g. national ministry of health**

### Cambodia

- Dissemination of AsiaFluCap results in SiemReap province, Cambodia on 24-25 June 2010 involving LSHTM representative, MoH central and provincial levels, NIPH Director, Rapid response team from provincial level. Representatives from other organizations: WHO, World Bank, Institut Pasteur du Cambodge and Health Sector Support Program Phase II (HSSP2)

### Lao PDR

- National advocacy meeting to inform ministry of health officials and stakeholders

### Netherlands

- Workshop AsiaFluCap Simulator with Regional Consultants Communicable Disease Control (The Netherlands) use of the AsiaFluCap Simulator by local policy makers/advisors, RIVM, 15 October 2010.

### Indonesia

- AsiaFluCap Review: Development of Basic Health Care Research Questionnaire. NIHRD MoH, Jakarta, 13 January 2011. Participated by: National Institute of Health Research and Development officials, Senior Researchers Ministry of Health.
- Dissemination of Stakeholder Analysis Result. Bali, 25-27 November 2010. Participants: Bali Provincial Health Office, Universities, International researchers.

### Taiwan

- Yu-Chen Hsu presented the results of AsiaFluCap on WP2, WP3, WP5 and process of WP4 at the CDC R&D meeting on July 12, 2010 in Taipei. 45 participants joined the meeting for discussion. The participants included a professor from the National Taiwan University School of Medicine, advisors for CDC, Director-General/Deputy Director-Generals/Secretary General/Division Directors/Researchers of the CDC.

### Thailand

- National Committee on Pandemic Influenza Preparedness. Venue: Thai Health Promotion, SM Tower Bangkok, 14 September 2009.
- Community Medicine Department, Ramathibodi Hospital, Venue: Mahidol University 20 July 2009

## **Other outputs (e.g. electronic resources)**

- AsiaFluCap Project Website: <http://www.asiaflucap.org/>

- The AFC Simulator. Innovative and user-friendly tool built in MS Excel® for assessing health system capacity for responding to various pandemic influenza scenarios.
- The AFC Simulator video guide: [http://www.youtube.com/watch?v=2VX\\_eQpT4tM](http://www.youtube.com/watch?v=2VX_eQpT4tM)
- Video about The AsiaFluCap project, The AFC Simulator and GIS:  
<http://www.youtube.com/watch?v=W9BNHot1eLg>
- The AsiaFluCap Project related information can be accessed via the CDC intranet:  
<http://intranet.cdc.gov.tw/asiaflucap/>

## Annex 1 - Mid-term Evaluation Questionnaire

### Mid-term Evaluation

In this mid-term evaluation we would like to find out more about your positive and negative experiences in the AsiaFluCap project so far with the aim to further improve future project work with your suggestions. We would like to obtain information on how satisfied you are with the work accomplished until now, on areas where major difficulties were faced, on organisational problems, on issues of internal communication (with project partners) and external communication (with domestic audience, policy makers), and on ideas for disseminating project results and facilitating their incorporation into the actual policy making process. For this we request each collaborating partner to answer the questionnaire on behalf of the team members of the workpackage. Your answers and comments will be compiled and presented for discussion at the up-coming consortium meeting. Your answers will be dealt with confidentially and discussed in general.

**Please submit the completed questionnaire to Amena Ahmad or Ralf Krumkamp on 25.11.09 at the meeting**

#### **Instructions:**

1. Please discuss the questionnaire with your team members and answer the questions on behalf of your country's workpackage team, based on your experiences with the project in general and your workpackage related work in specific.
2. Please provide an answer to each question/statement and make comments on any issue

#### **1. General Experiences in the AsiaFluCap Project**

- a) Have your expectations been satisfied with the overall work progress made in the project so far?

Fully Satisfied

Satisfied

Satisfied with reservations

Unsatisfied

- b) Please specify your positive experiences, what should be continued:

---

---

---

---

c) Please specify you reservations, what should be changed:

---

---

---

---

d) What are your plans for the next 18 months in terms of publicizing the results (conferences, articles, workshops etc.) of the project to a wider audience?

---

---

---

---

**2. Workpackage Specific Experiences**

Since the inception of the AsiaFluCap project, considerable progress has been made. Major milestones have been the rapid situational analysis and the recently carried out resource mapping from national/central down to district/hospital level in your country. In this context we would like to ask the following questions:

***Rapid Situational Analysis (RSA)***

a) The results of the RSA have been communicated to policy makers in the country. Were they communicated adequately to key policy levels and decision makers to influence change, would you like to suggest additional institutions or experts for whom you consider these findings useful? Have they triggered discussion, specially after the spread of the A/H1N1 pandemic, what feed back did you receive?

---

---

---

---

---

---

---

---

---

---

***Resource Characterization and Mapping***

Experiences gained and problems encountered during the data collection phase (questionnaire session) both at district and hospital level with regard to

- a) Identifying and establishing contact with relevant person/institution to fill in the questionnaire

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy in >90%	Easy in 70 – 90%	Easy in 50 – 70%	Easy < 50%

Comment: \_\_\_\_\_  
\_\_\_\_\_

- b) Willingness of identified persons/institutions to fill in the questionnaire

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Readily in >90%	Readily in 70 – 90%	Readily in 50 – 70%	Readily in < 50%

Comment: \_\_\_\_\_  
\_\_\_\_\_

- c) How do you judge the diligence in general with which the questionnaires were filled in?

---

---

---

d) What were the major difficulties you encountered during the resource mapping process?

Please specify the major issues:

---

---

---

---

---

---

***Stakeholder analysis***

A stakeholder analysis is to be conducted in the coming months to understand the importance of pandemic planning in the political context, and to identify the roles, responsibilities and power of key institutions and individuals in the decision making process. In this context we would like to ask you which difficulties you anticipate in accomplishing the Stakeholder analysis?

Issues:

- Identifying interviewees
- Getting appointments
- Willingness and freedom to answer
- Consent to use results for the project
- Others

---

---

---

---

---

---



### ***Technical Support***

From your experience with the project work so far, do you require any clarifications or technical support for your further project work? Are there any specific areas related to the project where you would wish to have more information, for e.g. in form of a workshop organized within the project?

Please specify:

---

---

---

---

### **3. Internal Communication**

As this project is a collaborative effort strongly dependent on team work, the issue of communication among all the project partners is of utmost importance. Please let us know your experiences so far and where and how you suggest things could be improved or changed by reflecting on the following issues:

a) Communication with the project co-ordinators with respect to:

- Accessibility and response of the project co-ordinators

---

---

- Support and guidance extended by the project co-ordinators

---

---

- Clear understanding on how to proceed in each project phase

---

---

b) Project administration

- Clear understanding on how to manage the financial and audit requirements.

- 
- 
- Problems encountered with management and transfer of finances

- 
- 
- Suggestions for meeting venues for the next consortium meetings

---

---

c) Communication amongst the project partners of the different workpackages

Please reflect on:

- Exchange of information on common project issues like problems and solutions surrounding data collection and use, obtaining official permissions from national authorities, provision of data to be used for further analysis (e.g. in resource mapping, resource modelling), project administration and organisation issues etc.
- 
- 
- 
- 
- 
- 
- 
-

- d) Do you like the AsiaFluCap newsletter? Please give suggestions on what should be added or changed?

---

---

---

For project co-ordinator and workpackage leaders only

How satisfied as project co-ordinators (LSHTM) and workpackage leaders are you about the communication with the different workpackages in terms of a timely response to organisational matters, data provision and other issues? Where do problems exist and how could they be solved, please specify:

---

---

---

---

---

---

---

---

---

---

#### **4. External Communication and dissemination of results**

The ultimate success of the project will be determined by the effective communication of the findings to a wider audience both nationally and in the region. The Project goals and the initial RSA results have been communicated to policy makers in the countries and presented at regional conferences. Please give your suggestions on who should receive information and how a more effective communication and co-operation can be achieved.

- a) Which institutions/individuals should be targeted among the:

Domestic audience

---

---

National ministries

---

---

Neighbouring countries

---

---

Regional Organisations

---

---

b) Which results should be communicated and in what form (e.g. reports, scientific articles, short communications, meetings, conferences, workshops)

---

---

---

c) Please share with us the expectations expressed by the interviewees during the RSA and the resource data collection process with respect to communication and utilization of results.

---

---

---

d) Have you been able to establish new contacts to other experts/ networks/ institutions in the field while working for this project?

If yes, please state which contacts and in which field

- At National level


- At Local level


- With other countries in the project


- With countries not part of the project


- Please share your experiences and give suggestion on how you think this could be further expanded in a sustainable manner.

---

---

---

---

---

## Annex 2 - Final Evaluation – Questionnaire – Part 1

### AsiaFluCap Project Evaluation

The AsiaFluCap project which has as its foremost objective, the assessment of the health systems operational capacity to respond to the threat of an influenza pandemic in the project countries, is now approaching its completion phase. One thought was to develop a compact toolkit using an abridged version of the instruments used in the project (i.e. rapid situational analysis, resource availability questionnaires and resource demand modelling) with the aim to rapidly conduct periodic evaluations and thereby provide policy makers with the information needed for future health policy and investment decisions. In this questionnaire we would like to ask you whether such an assessment “Toolkit” for conducting periodic health systems capacity assessments would constitute a useful resource and what should be included in such a “Toolkit” considering both feasibility and also information which policy makers require. In addition we would like to know your view on whether results from this project have so far influenced ministerial policy making, where you see major barriers and where you see demand for additional research, information and support. For this we request each collaborating partner to answer the questionnaire from your country’s perspective. Your answers and comments will be compiled and presented for discussion at the up-coming consortium meeting.

**Please send the completed questionnaire by Email to Amena Ahmad & Ralf Krumkamp by 23.11.2010**

Email: [amena.ahmad@ls.haw-hamburg.de](mailto:amena.ahmad@ls.haw-hamburg.de)  
[ralf.krumkamp@haw-hamburg.de](mailto:ralf.krumkamp@haw-hamburg.de)

**Instructions:**

4. Please discuss the questionnaire with your team members and answer the questions from your country’s perspective.

Country Name: \_\_\_\_\_

**Q. 1** Do you consider a compact „**Toolkit**“ (comprising of instruments used in the AsiaFluCap project – Rapid Situational Analysis, resource availability questionnaires and resource demand modelling) useful for the periodic assessment of the health systems operational pandemic response capacity in your country?

- yes
- no

**Q. 2** How often should such a **periodic assessment** using the toolkit be repeated – considering costs, feasibility and probability of obtaining new results (given that no extraordinary event taxing the health system occurs)?

- every 2 years
- every 3 years
- every 4 years
- every 5 years
- Other: \_\_\_\_\_

### **What should be included in the compact “Toolkit”**

#### **Rapid Situational Analysis**

**Q. 3** The Rapid Situational Analysis (RSA) through an analysis of available data and documents and key informant interviews, gave a comprehensive overview on the overall health system and the disease specific pandemic programme contexts of your country within which a pandemic response has to function. Do you think selected subcomponents of the RSA which are subject to rapid time-related change should be included in the toolkit?

- yes
- no
- don't know

**Resource Characterisation Survey**

**Q. 4** Taking into account the resource characterisation survey results obtained from the hospital and district questionnaires – do you consider a **full survey** (all hospitals and districts as in the AFC Project) or a smaller **sample survey** of some hospitals and district administrations a more suitable approach for periodic assessments in future?

- full survey
- sample survey

Comments:

**Q. 5** If you think a smaller scale sample survey should be conducted, what should be the basis for choosing the hospitals and district administrations for conducting the survey (e.g. population size, economic importance, resource gaps, geographical location)?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

**Q. 6** The resource gap analysis revealed that for responding to an influenza pandemic different degrees of resource gaps depending on the severity of the pandemic exist. It also showed an unequal distribution of resource gaps within different regions (rural/urban) /districts of your country. Have these resource availability/gap results helped in informing future resource allocation policies?

- yes
- no



**Q. 7** In your opinion what are the major barriers ( e.g. economic constraints, other areas which require more urgent attention etc.) in reacting to these gaps from the policy / decision makers perspective?

**Q. 8** Would it be useful to expand the resource characterisation questionnaire to include some other essential health care resources (e.g. for the management of other major diseases) and thereby increase the utility of such a survey? If yes in which direction (diseases, resources) would you consider expanding the questionnaire

yes

no

Comments:

### **Resource Modelling Tool**

**Q. 9** Do you consider the resource modelling tool developed for estimating resource needs, a practical and feasible tool for application by public health personnel?

yes

no

don't know

If yes, for whom do you consider this tool useful (local/ district/ national level) and where do you see difficulties in its application?

Comments:

**Q. 10** Should the resource calculation model developed for estimating resource needs under different severity scenarios be included in the toolkit?

- yes
- no
- don't know

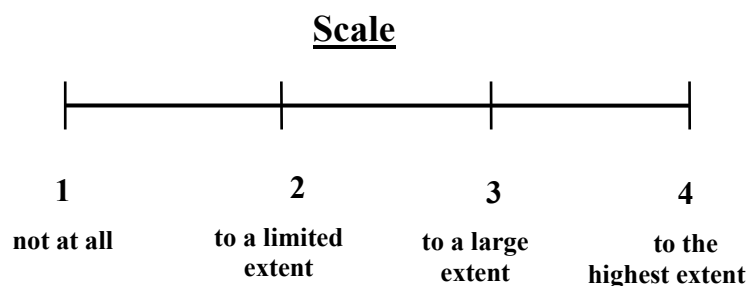
**Pandemic Policy**

**Q. 11** Is there additional information which policy makers in your country have remarked they would need or which you feel is still required to make decisions, leading to an improvement in the health systems operational pandemic management capacity? Please elaborate on this

- yes
- no
- don't know

Comments:

**Q. 12** Listed below you will find a number of areas where capacity gaps have been envisaged by international agencies and donor organisations. From your country’s perspective please specify the extent of importance of each item on a scale of: 1 (not at all) to 4 (to the highest extent) for focusing further research and capacity strengthening efforts. Please insert a number from 1 to 4 (see scale) in the space provided in the table.



Extent of importance on a scale of 1 to 4	Potential areas for focusing pandemic and other emerging infectious disease control actions
---	---

— In 2005 WHO revised the “**International Health Regulations**” (IHR) which require member states to meet certain core capacities for e.g. surveillance and reporting obligations. Implementing the IHR requires certain infrastructure resources e.g. national contact points, surveillance systems, laboratories, border control measures etc. Have these core capacity requirements been largely met, to what extent do you see a need for further efforts to ensure complete operationalisation of the IHR?

— Weak, fragmented and uncoordinated **human and animal disease surveillance systems**, particularly at the district and local level, and the timely exchange of information among these two surveillance sectors have been labelled as a challenge. Disease and events based surveillance at the local level requires skills and infrastructure. In addition communicating information on infectious disease outbreaks from the local/community level to the national level and also among different ministries is often slow and inadequate for many reasons. To what extent do you see an extended need to focus on this area of surveillance and communication?

— During a pandemic health care resources will generally be scarce due to the enormous demand for e.g. of patients seeking medical care at the hospital or at the local health care centre. An option to deal efficiently with **scarce resources** and ensure maximum and equitable benefit is to develop specifically tailored triage guidelines and protocols on how to manage patient flow, patient diagnosis, selection of appropriate treatment options etc. To what extent do you consider the development of such **triage guidelines** important?

Primary prevention measures which include basic hygiene measures, distance between animal and human housing etc. are considered to be easy and feasible measures, which can be practiced by everyone regardless of rural or urban residence and resources. However limited knowledge transfer and capacity for **primary prevention** of infectious disease threats **in communities** has been labelled as a weakness. To what extent do you think this is true for your country and requires further attention?

---

Rapid response capacity during a pandemic requires not only the stockpiling of a certain amount of **anti-virals**, other **essential medicines** and PPE, it also requires pre-defined **systems** in place which ensure their **rapid procurement** (from international organisations, companies etc.) and **distribution** in addition to trained health care personnel who can provide these to the affected population. To what extent do you think these conditions are fulfilled in your country or require attention and further development?

---

The rapid situational analysis revealed that the practical implementation of the pandemic preparedness plans at the local/community level is weak. There are numerous barriers to operationalisation of pandemic plans at the local level. To what extent do you think these barriers need to be addressed?

---

Do you think that **pandemic preparedness and control** is adequately incorporated into and **linked with local and national emergency plans** for disaster management? To what extent do you think these two areas require a better integration to enhance synergistic effects and improve efficiency and resource use?

---

To what extent do you see a need for support in **evaluating post epidemic response** in your country for e.g. after the A/H1N1 pandemic in order to generate lessons learned for improving future pandemic management?

---

**Q. 13** From your country's perspective do you see additional areas where research and implementation projects could lead to an improvement of the operational pandemic response?

## Annex 3 - Final Evaluation – Questionnaire - Part 2

Country Name: \_\_\_\_\_

1. How did you and your country benefit from the activities of the AsiaFluCap Project in terms of skills developed (e.g. training workshops), expertise acquired and systematic insight gained into the operational pandemic management capacity in your country?

2. Have new contacts or co-operations developed with other organizations, ministries and networks involved in pandemic management activities within your country, with neighboring countries and internationally as a result of this project? If yes, please name the organizations?

3. The findings of the stakeholder and the resource gap analysis revealed different degrees of weaknesses and shortages in the national and regional pandemic management and response capacity. In Thailand for instance policy makers were informed about the findings on the shortage of ventilators which led to acquirement of additional ventilators for the Ministry of Public Health's hospitals.

Can you give similar examples where the findings of the AFC analysis directly influenced policy decisions in your country in a specific manner? If not, can you name concrete areas where the project results will most likely influence policy decisions in the near future?

4. Please list the written, electronic and other outputs produced during the AsiaFluCap Project under the headings given below:

**Published papers/articles**

For e.g.

*Hanvoravongchai P, Adisasmito W, Chau PN, Conseil A, de Sa J, Krumkamp R, Mounier-Jack S, Phommasack B, Putthasri W, Shih CS, Touch S, Coker R; AsiaFluCap Project. Pandemic influenza preparedness and health systems challenges in Asia: results from rapid analyses in 6 Asian countries. BMC Public Health. 2010 Jun 8;10:322.*

1.

**Papers in press**

1.

**Papers submitted**

1.

**Papers in preparation (to be submitted within the next 6 months)**

1.

**Brief communications (e.g. policy briefs, short communications, newsletters)**

For e.g.

*The Asia FluCap Project: Health system analysis to support capacity development in respond to the threat of pandemic influenza in Asia. Available at: [http://www.asiaflucap.org/asiaflucap\\_poster\\_small.pdf](http://www.asiaflucap.org/asiaflucap_poster_small.pdf)*

1.

**Presentations at Conferences – (Name of presenter, Topic of presentation, Name of conference, Venue& Date)**

For e.g.

*Hanvoravongchai P. Pandemic influenza preparedness in Asia. Presented at: Joint International Tropical Medicine Meeting, December 2009, Bangkok, Thailand*

1.

**Poster Presentations - (Name of presenter, Topic of poster, Conference/Event at which presented, Venue & Date)**

For e.g.

*Ahmad A. A novel methodological approach to systematically analyse pandemic influenza response programs within health systems. Presented at: Jahrestagung der Deutschen Gesellschaft für Epidemiologie, September 2010, Berlin, Germany.*

1.

## **Reports**

For e.g.

Adisasmito W, Coker R, de Sa J, Hanvoravongchai P, Iljanto S, Llanadewi N, Suudi A and Uddinlatief K. **Indonesia: Health System and Pandemic Preparedness.** Rapid Situational Analysis Report. April 2009. Available at: [http://www.asiafluicap.org/admin/editor\\_files/downloads/Indonesia\\_RSA\\_Report\\_June\\_2009\\_Noname.pdf](http://www.asiafluicap.org/admin/editor_files/downloads/Indonesia_RSA_Report_June_2009_Noname.pdf)

1.

**Meetings / Discussion of AsiaFluCap findings with representatives of regional organizations (e.g. SEARO, WPRO, MBDS, APEIR, ASEAN) (Main meeting participants, Topic of discussion/presentation, Meeting venue, Date)**

1.

**Presentation / Discussion of AsiaFluCap results with local policy makers/experts e.g. national ministry of health (Main meeting participants, Topic of discussion/presentation, Meeting venue, Date)**

1.

**Presentations/Discussions of AsiaFluCap results at International Meetings – e.g. WHO, UN etc. (Name of presenter, Topic of presentation, Type of meeting, Venue& Date)**

1.

**Other outputs (e.g. electronic resources), please specify**

For e.g.

*AsiaFluCap Project Website:* <http://www.asiafluicap.org/>

1.



## Annex 4 - The AsiaFluCap Project Workshops

Workshop	Date	Description	no. of participants
Rapid Situation Analysis Workshop, Hanoi, Vietnam	15-16 September 2008	The objective of the Rapid Situation Analysis Workshop was to discuss the methodological framework for data collection i.e. viewing of documents and conducting interviews and to discuss the practical aspects of how to conduct the Rapid Situation Analysis (RSA). In addition questions on obtaining information on governance arrangements and choice of key informants for the interviews were discussed	23
AsiaFluCap Workshop, WP5: Scenario Development	7-8 July 2009	The objective of the Scenario Development workshop was to discuss and finalize the construction of the mathematical simulation models for predicting resource needs and gaps under different severity scenarios during a pandemic.	21
GIS Short Course for AsiaFluCap Work Package 3	9-10 July 2009	The objective of the GIS workshop is to provide necessary skills and techniques on resource mapping to the AsiaFluCap country collaborators. Content of the workshop: <b>GIS component</b> - Basic GIS concepts i) Introduction to MapWindow ii) MapWindow exercise iii) Data management iv) Thematic mapping v) Map layout and vi) Analyses of GIS Data	17
Stakeholder Analysis Workshop(WP4) - Taipeh - Taiwan	4-May-10	In the Stakeholder Analysis workshop, Taiwan presented the preliminary results of its Stakeholder Analysis for the 2009 A/H1N1 pandemic outbreak - in Taiwan. The final objectives of the Stakeholder Analysis were discussed and a common methodological framework for conducting the Stakeholder interviews and the subsequent analysis in order to ensure comparability of results was agreed upon. Other related issues including the stakeholder analysis report format, the timeline, organisational issues, logistics, country interview teams and the choice of interviewees were discussed.	34

# The AsiaFluCap Project

## Benefits, challenges and policy implications of a 3 year international research collaboration

Amena Ahmad, Ralf Krumkamp, Piya Hanvoravongchai, Richard Coker and Ralf Reintjes

This project is supported By the European Commission and the Rockefeller Foundation



**Project objectives:**

- \* to provide a strategic framework to evaluate operational capacity in countries at risk of influenza pandemic
- \* to determine systematically operational capacity gaps in order support containment and mitigate the consequences of pandemic influenza in these countries and elsewhere

**Study countries:**  
Cambodia, Indonesia, Lao PDR, Taiwan, Thailand, and Vietnam

**Project timeline:**  
May 2008 to April 2011

**Project Co-ordinator:**  
Prof. Richard Coker

**Contact Information:**  
Communicable Diseases  
Policy Research Group, LSHTM,  
9th Floor, Anek Prasong Bldg.,  
420/6 Rajvithi Road, Bangkok  
10400 Thailand  
Tel/Fax: +66 2 354 9195  
Email: bkk@cdprg.org  
http://www.asiafluicap.org

### Background and Methodology

The AsiaFluCap (AFC) Project brought together countries and people of diverse political, cultural, social, socio-economic and research backgrounds from Asia and Europe with the common aim of assessing and supporting the operational capacity of national health systems to respond to the threat of pandemic influenza in Asia. Two questionnaire based evaluation and discussion rounds accompanied this project with the aim to assess whether the project achieved what it set out to achieve. The purpose of the evaluation was to ensure a good quality scientific outcome, maximum utilization and implementation of results and to facilitate sustainability of the tools used and the expertise developed through the different project activities.

### Evaluation Results

#### Overall benefits as reported by the AFC Project countries

- Acquired in-depth insight into the national health system's operational pandemic preparedness and response capacity and that of neighboring Southeast Asian countries
- Obtained evidence based information on resource gaps and needs for future policy decisions
- Learned new approaches for assessing national pandemic preparedness and collecting health systems data
- Learned to use a GIS (Map Window) program for quick visualization of health resources on a map
- Improved research, scientific paper writing, report writing and interview skills
- At regional level: developed numerous bilateral and multilateral contacts with neighboring countries, universities, national ministries of health, communicable disease networks, NGOs, research networks, international and regional health organisations and foundations across Asia and Europe
- At national level: established contact and strengthened cooperation and information exchange with national ministries and government institutions, national communicable disease control institutions, policy makers, district health care administrations and hospital administrations
- New projects have been applied for, in Indonesia, Lao PDR and Cambodia in cooperation with national, regional and European institutions.
- A Toolkit for the periodic evaluation of national pandemic preparedness, based on the instruments used in the AFC Project is considered useful by all partners
- The mathematical simulation tool (AFC Simulator) developed, is a useful and practical device for use by policy makers at the national level, it will support decisions based on evidence and not opinions

#### Impact of AFC project results on policy decisions

- **Thailand:** identified resource gaps led to the purchase of additional ventilators for hospitals
- **Cambodia:** identified resource gaps have informed the World Bank AI Project which is considering infra-structure improvement aid
- **Indonesia:** AFC project results have informed the development of the 'country wide Health Facility Framework Survey', to be carried out in 2011
- **Vietnam:** inadequate logistics of anti-viral distribution, shortage of isolation rooms and lack of trained human resources will be the subject of policy decisions.
- **Lao PDR:** the MoH has been informed about the identified resource gaps which will be the basis of discussion with international donor organizations
- **Taiwan:** identified risk communication as a weakness, which will be the subject of future policy decisions.
- **Taiwan:** wants to collaborate with the AFC partner countries and support their pandemic preparedness efforts

#### Major barriers for policy makers

- Budget and administrative constraints
- Lack of harmonization of donor resource allocation within the country
- Personalisation of risk for policy makers
- Shortage of skilled staff
- Lack of coordination between different national sectors and centralised health systems

#### Areas for further research & training

- Research on equity of distribution of vaccines and AVs and quality of stockpiles
- Training of hospital management skills among physicians in Cambodian hospitals
- Training on primary precaution measures against infectious diseases at community level
- Research on the economic and cost/benefit impact of investments in health care
- Training on how to use the AFC Simulator tool
- Recommendations adapted to national conditions in Lao PDR on how to deal with resource gaps
- Research and training of risk communication skills
- Evaluation of the post A/H1N1 pandemic response

