



PRINCE MAHIDOL AWARD CONFERENCE

CONFERENCE | 2013

# A World United Against Infectious Diseases: Cross-Sectoral Solutions

Prince Mahidol Award Conference 2013

1<sup>st</sup> Global Conference on Regional Disease Surveillance Networks

2<sup>nd</sup> International One Health Congress

Centennial Commemoration of the Rockefeller Foundation

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CENTARA GRAND & BANGKOK CONVENTION CENTRE  
AT CENTRALWORLD, BANGKOK, THAILAND  
28 JANUARY – 2 FEBRUARY 2013

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(As of 15 October 2012)

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## BACKGROUND

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The Prince Mahidol Award Conference is an annual international conference hosted by the Royal Thai Government, the Prince Mahidol Award Foundation, and other relevant International Organizations, Foundations and Civil Society Organizations. The Conference serves as an international forum for sharing evidence for health related policies and strengthens social commitments for health development. This conference is linked to the annual Prince Mahidol Award for public health and medicines, one of the most prestigious international health awards.

The Conference in 2013 is jointly organized for the **Prince Mahidol Award Conference 2013**, the **1<sup>st</sup> Global Conference on Regional Disease Surveillance Networks**, the **2<sup>nd</sup> International One Health Congress**, and the **Centennial Commemoration of the Rockefeller Foundation**. The 2013 Conference with the theme **“A World United Against Infectious Diseases: Cross-Sectoral Solutions”** is dedicated to transparent and progressive resolve to reduce the threat of infectious diseases through cross-sectoral and international cooperation and communication.

The 2013 Conference will prove to be one of the most significant assemblages of infectious disease experts in the world, who will meet to advance the “One Health” agenda beyond the theoretical to the practical, and bring much-needed attention to the policy and operational issues that ultimately determine the impact and success of these cross-sectoral efforts.

We expect vanguard moments with a positive impact on global solidarity for a *world united against infectious disease*.

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## OBJECTIVES

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- To foster cooperation and communication across sectors and across borders to mitigate the threat of infectious diseases, existing or emerging, at the human-animal-ecosystems interface.
- To review and share experiences among low, middle and high-income countries with different degrees of health system capacity as defined within the International Health Regulations and the OIE PVS pathway, leading to knowledge sharing, strengthening of health systems, establishment of sound policies, and positive social action.
- To identify the human suffering and economic cost if we fail to build appropriate human and institutional capacities and fail to exploit available technologic innovations in countering health threats.
- To provide opportunities for a group of experts - utilizing multidiscipline country teams - to dialogue, learn, create solutions, and provide leadership in applied one-health concepts.
- To provide a platform for international, regional, and national disease surveillance systems and networks to demonstrate best practices, forward-looking concepts, management of political challenges, and cross-border cooperation in response to health threats at the human-animal-ecosystem interface.

- To identify those policies and other higher-level factors that either constrain or enable effective cross-sectoral collaboration at the country, regional and global level and the formulation of an action agenda that draws on these insights to promote successful cross-sectoral solutions to infectious disease threats.

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## STRUCTURE OF THE CONFERENCE

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The conference will be convened during **28 January – 2 February 2013**.

### PRE-CONFERENCE ACTIVITIES

Monday 28 – Tuesday 29 January 2013

Morning and afternoon: Registration and Conference Special Events (side meetings) convened by interested co-hosts and all concerned partners.

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Wednesday 30 January 2013

Morning and afternoon: Field visits to expose to Thai experiences on One Health

### MAIN CONFERENCE

Thursday 31 January – Saturday 2 February 2013

The main conference consists of 5 plenary sessions (PL) and 21 parallel sessions (PS).

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## VENUE

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The conference will be held at the

**CENTARA GRAND & BANGKOK CONVENTION CENTER  
AT CENTRALWORLD, BANGKOK, THAILAND.**

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## CONFERENCE PARTNERS

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The conference is co-hosted by 8 organizations, namely the Prince Mahidol Award Conference, the World Health Organization (WHO), Connecting Organizations for Regional Disease Surveillance (CORDS), One Health Congress, U.S. Agency for International Development (USAID), the Rockefeller Foundation, the Japan International Cooperation Agency (JICA), and the British Medical Journal (BMJ) with the support from other key related partners.

## CONFERENCE PROGRAM IN BRIEF

### PRE-CONFERENCE ACTIVITIES

#### MONDAY 28 - TUESDAY 29 JANUARY 2013

09:00-17:30	Conference Special Events (Side Meetings)
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#### WEDNESDAY 30 JANUARY 2013

06:30-18:00	Field Trip
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### MAIN CONFERENCE

#### THURSDAY 31 JANUARY 2013

09:00-10:30	<b>Opening Session by HRH Princess Maha Chakri Sirindhorn &amp; Keynote Address</b>
10:30-11:00	Break
11:00-12:30	<b>PL1 One Health: Meeting the Challenge of “A World United Against Infectious Diseases”</b>
12:30-14:00	Lunch
14:00-15:00	<b>PL2 National to Regional to Global Surveillance – A Path to One Health</b>
15:00-15:30	Break
15:30-17:30	<b>PS2.1 Achievements and Gaps in One Health Surveillance PS2.2 Ecosystems, Wildlife and One Health PS2.3 Making Regional Networks Work PS2.4 Measuring the Impact of Cross-sectoral Collaboration on Disease Prevention and Control at the Human-Animal-Ecosystems Interface PS2.5 Innovations Advancing Health Surveillance at the Human-Animal Interface PS2.6 Transforming the Global Workforce for One Health Approaches PS2.7 Preparedness for Nipah Virus Outbreaks in At-Risk Countries</b>
18:30-20:30	Welcome Dinner

## Friday 1 February 2013

09:00-10:00	<b>PL3 Policies and Strategies to Meet the Challenge of Emerging Disease Threat through Prevention, Preparedness and Response</b>
10:00-10:30	Break
10:30-12:30	<p><b>PS3.1 Cross-sectoral Solutions: Challenges and Best Practices from Country and Regional Experiences</b></p> <p><b>PS3.2 Managing Pandemic Disease Threats in the International Extraction Industry</b></p> <p><b>PS3.3 People, Practices and Policies –Designing and Implementing Effective Multisectoral, Trans-disciplinary Interventions to Reduce Risk and Mitigate the Negative Impact of Infectious Diseases under One Health</b></p> <p><b>PS3.4 Successful Collaboration: Trust and Transparent Data Sharing and Communication</b></p> <p><b>PS3.5 Identify Gaps/Barriers that Impede Effective Cross Border Preparedness and Response Planning and Execution for Infectious Diseases</b></p> <p><b>PS3.6 Contribution of the One Health Paradigm to Food Security</b></p> <p><b>PS3.7 Is Technology or Failure of the Imagination the Bigger Challenge for Disease Detection?</b></p>
12:30-14:00	Lunch
14:00-15:00	<b>PL4 The Paradigm Shift Towards Cross-Sectoral Collaboration: Policy, Tools and Empowering Factors for Health Systems Strengthening</b>
15:00-15:30	Break
15:30-17:30	<p><b>PS4.1 Stories from the Ground</b></p> <p><b>PS4.2 The Evolutionary Process of Risk Determination to Define Surveillance Strategies and Target Resources for Efficient Prevention and Control</b></p> <p><b>PS4.3 Unprecedented Move toward a More Coherent Approach Among Sectors for the Strengthening of National Human-Animal-Ecosystem Health Capacities</b></p> <p><b>PS4.4 Going Viral #Strategic Public Communication to Affect Practices and Livelihoods: <a href="http://PMAC">http://PMAC</a></b></p> <p><b>PS4.5 Controlling Antibiotic Resistance through the One Health Approach</b></p> <p><b>PS4.6 Enabling Policy Environments for a One Health Approach</b></p> <p><b>PS4.7 Enhancing One Health: To Cultures, Add Culture</b></p>

## SATURDAY 2 FEBRUARY 2013

09:00-10:00	<b>Synthesis: Summary, Conclusion &amp; Recommendations</b>
10:00-10:30	Break
10.30-12.00	<b>PL5 Sustainable Effective Cross-sectoral Collaboration for Bio-secured World</b>
12.00-13.00	Closing Session
13:00-14:00	Lunch

## OPENING SESSION & KEYNOTE ADDRESS

### OPENING SESSION

Opening Session by Her Royal Highness Princess Maha Chakri Sirindhorn

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## KEYNOTE ADDRESS

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**BACKGROUND**

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**We are now in an era of new, re-emerging and recurring global health threats that argue for a longer-term, more strategic approach to global health preparedness. Underlying the increase in new infectious diseases has been the growing interaction between human and animal populations** driven by growth in human population, new trends in animal production practices, changing patterns of wildlife populations, human intrusion on new ecosystems, and trans-border mobility of humans, animals, food and feed products. The speed with which these diseases can surface and spread, as illustrated by the recent H1N1 pandemic virus, presents serious public health, economic, security and development concerns. It also underscores the global interdependence of human and economic security and the need for a more systematic effort to identify and respond to sudden global public health emergencies.

Reducing the threat posed by new emergent infectious diseases requires a “One Health” strategic approach that (1) builds on the understanding that the future well-being of humans, animals and the environment are inextricably linked, (2) promotes cross-sectoral coordination that spans the animal health , public health, educational, environmental and conservations communities, (3) targets promotion of those policies and the strengthening of those skills and capacities critical for both minimizing the risk of new disease emergence and the ability to limit their social, economic and health impact, (4) uses a “risk” based approach to target investments to those places, populations, times and situations where the likelihood of disease emergence is greatest.

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**OBJECTIVES**

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Contribute to better understanding of:

- Emerging disease dynamics in the 21st century
- What is “One Health” and its role in addressing emerging disease threats
- Challenges faced in the “institutionalizing” One Health
- The way forward towards meeting these challenges.

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**TOPICS TO BE DISCUSSED**

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This session will provide a broad overview of definitions and support for One Health (OH); paradigms and interventions, policy framework and policy constraints; intimate connectivity between sectors and institutions; how to translate an OH vision to address infectious disease threat and human resources for the 21<sup>st</sup> century.

**MODERATOR**

**Dennis Carroll**, Director, Pandemic Influenza and other Threats,

U.S. Agency for International Development, USA

**SPEAKERS**

**Larry Brilliant**, President, Skoll Global Threats Fund, USA

**David Nabarro**, Senior Coordinator for Avian and Pandemic Influenza, UNSG’s Office, Switzerland

**David M. Serwadda**, Professor, Department of Disease Control & Environmental Health, School of Public Health, Makerere University, Uganda

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## GOAL

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Advance global solidarity on surveillance by illuminating challenges, solutions and promoting policies that lead to actions and a way forward to build a world united against infectious disease.

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## OBJECTIVES

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1. Introduce the overarching theme of infectious disease surveillance from a national, regional and global perspective
2. Build global solidarity around effective actions to promote cross sectoral and cross border surveillance
3. Present concrete examples of knowledge, policies and innovation and action that can be taken based upon successes at the national, regional and global level.
4. Identify and define policies that promote cross sectoral and cross border work
5. State recommendations to overcome barriers to effective OH surveillance

## MODERATOR

**Elizabeth Mumford**, Human-Animal Interface, Department of Food Safety and Zoonose, World Health Organization, Switzerland

### 1. Current State of Global Surveillance

WHO global event based surveillance /OIE/FAO formal and informal systems

**Elizabeth Mumford**, Human-Animal Interface, Department of Food Safety and Zoonose, World Health Organization, Switzerland

### 2. Two Real Implementation Cases Panel

These two zoonotic disease case events are good example of the interface of human-animal (wildlife/domestic)-ecosystems and will provoke discussion of cross-sectoral and cross border surveillance. Lessons learnt from these case studies will facilitate us to establish effective OH surveillance systems for other diseases.

#### Case #1 HPAI (Global and national surveillance of animal influenza)

**Yoshihiro Sakoda**, Associate Professor,  
Graduate School of Veterinary Medicine, Hokkaido University, Japan

#### Case #2 Brucellosis (OIE Brucellosis Network)

**John McGiven**, Department of Statutory and Exotic Bacteria,  
Veterinary Laboratories Agency, United Kingdom



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**BACKGROUND**

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One Health - is a collaborative, international, cross-sectoral, multidisciplinary approach (or concept) to address threats and reduce risks of detrimental infectious diseases at the animal-human-ecosystem interface. Surveillance systems are designed to reduce disease burden and poverty at the animal/human/ecosystem interface. Encouraging communication among users of those systems is vital, so that they see the impact, knowledge, power and benefits that the analysis of surveillance data can provide.

Defining and adopting compelling incentives and understanding disincentives should be integral to participation at every level of the surveillance systems. Surveillance is a key way of making use of the “One Health” (OH) concept to provide more efficient and effective health outcomes for human and animal populations.

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**OBJECTIVES**

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- Understand what is meant by One Health surveillance, and options of conducting surveillance and sharing surveillance data or information that achieve early detection and One Health outcomes: assist in prevention and rapid response
- Understand benefits from conducting joint surveillance and sharing surveillance data or information, and review diseases/situations where such surveillance could be maximally beneficial to human and animal populations
- Highlight existing reporting and notification systems at global level (WHO-IHR, OIE-WAHIS/WAHID, INFOSAN) for countries, encourage transparency and notification of outbreaks and emerging events and Global Surveillance and Early Warning initiatives such as the Joint FAO/OIE/WHO Global Early Warning System (GLEWS).
- Learn from success histories of OH surveillance at the animal/human/ecosystem interface
- Identify gaps or challenges in implementing OH surveillance programs (at national regional and global levels)

**MODERATOR**

**Peter Black**, Director, Emergency Animal Disease Preparedness,  
Department of Agriculture, Fisheries and Forestry, Australia

**Two presentations on experiences on OH surveillance**

1. Surveillance of the viral hemorrhagic fevers in the Democratic Republic of Congo  
**Justin Masumu**, Researcher, Southern African Centre for Infectious Disease Surveillance (SACIDS),  
Democratic Republic of the Congo
2. (TBD)

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**PANEL DISCUSSION**

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- **Armando Gonzalez**, Professor, Faculty of Veterinary Sciences,  
National University of San Marcos, Peru
- **Karin Schwabenbauer**, Chief Veterinary Officer, Federal Ministry of Food,  
Agriculture and Consumer Protection, Germany

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**BACKGROUND**

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The ultimate challenge of the 21<sup>st</sup> century is to protect biodiversity and ecological services through proper resource management while meeting the needs of people and safeguarding their health; this is a significant global challenge in light of the increasing global demographics, resource consumption, and the proposal to provide food security and nutrition through further expansion, intensification and increased efficiencies of farming systems. Other areas of importance and relevance, also associated with driving disease emergence and spread include communities and settlements encroaching on natural habitats, development, construction, extractive industries, water management (dams, inland and coastal-run-off, etc), deforestation, habitat fragmentation, loss of biodiversity, waste and garbage management, climate change, to name a few. Unless human activities are carefully planned and managed, valuable ecosystems will continue to be impaired or destroyed and disease will continue to jump species, expand geographically, or become entrenched in animal populations which have significant implications to the health and survival of all creatures on the planet, including humans.

To date, among the global community, One Health efforts to combat infectious diseases has primarily engaged medics and veterinarians with limited inputs from the wildlife and ecology experts, and limited discussion of biodiversity conservation and ecosystem services. This gap in the One Health approach can be attributed to multiple factors that include, but are not limited to: 1) a platform not being in place to encourage and facilitate exchange of information across disciplines; 2) a lack of understanding the mutual benefits of collaborating on health and disease issues; 3) and a lack of understanding what each discipline needs from the other. Further to this is a basic training and “language” issue. Biomedically trained people refer to health and disease when referring to patients or populations of animals while natural resource managers refer to services and function when referring to ecosystems. In the One Health context, we often refer to healthy livestock, wildlife, people and ecosystems and in general, ecologists and natural resource managers would not use the terminology “healthy ecosystem” but instead, “ecosystem resiliency” or ecosystems providing optimal services.

Ecosystem services are the processes by which the environment produces resources that we often take for granted such as clean water and air, pollination of crops, fruits, and native plants, production of medicinal plants, regulating disease carrying organisms, and timber production. Whether people live in urban, rural, agricultural, or natural places, the ecosystems in which humans live provide goods and services that are essential to their health.

This session will be dedicated to broadening the discussion around One Health and creating an opportunity to hear perspectives from ecologists and natural resource managers. The session will also serve as an opportunity for the biomedical One Health community to inform the ecologists and natural resource managers on how their contributions can significantly improve efforts to address infectious disease management and prevention.

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## OBJECTIVES

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- Provide a better understanding to biologists, ecologists, and natural resource managers on how they can contribute to One Health efforts focused on infectious diseases;
- Provide a better understanding to medics and veterinarians on how biodiversity conservation and ecosystem services ensure human health & contribute to One Health;
- Develop a statement that can be included in the definition of One Health, reflecting the interests and perspectives of biologists, ecologists, and natural resource managers.

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## MODERATOR & PANELIST

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### MODERATOR

Scott Newman, Wildlife Health & Ecology Unit Coordinator and Co-Convener of the Scientific Task Force on Wildlife & Ecosystem Health, Food and Agriculture Organization of the United Nations, Italy

### PANELISTS

1. **United Nations Environmental Program - Convention on Migratory Species**  
**Bert Lenten**, Officer in Charge of the Secretariat of the Convention on Migratory Species, United Nations Environment Program, Germany
2. **The Convention on Biological Diversity**  
TBD
3. **The Convention on Wetlands (Ramsar)**  
**Nick Davidson**, Deputy Secretary General, Ramsar Convention Secretariat, Switzerland
4. **The International Union for Conservation of Nature (IUCN)**  
**Julia Marton-Lefevre**, Director-General, IUCN, Switzerland
5. **Biomedical and Veterinary Perspective**  
**William Karesh**, Executive Vice President for Health, EcoHealth Alliance, USA
6. **The Food & Agriculture Organization of the United Nations**  
**Modibo Traore**, Assistant Director-General for Agriculture and Consumer Protection, Food and Agriculture Organization of the United Nations, Italy

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**BACKGROUND**

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Less formal non-treaty non-regulation trust based disease surveillance networks represent the “art of the possible” with respect to responding in diverse ways to real needs and challenges. However, the networks are not yet fully developed in their expertise and also face the challenges of synergizing with the more formal systems such as the WHO International Health Regulations (IHR) framework and those by OIE and FAO for animal health. Nevertheless there are clear advantages of this less-formal approach and opportunities for systematization, building on the achievements of Regional Disease Surveillance networks; Middle East; Mekong Basin; Southern Africa; Southeastern Europe and East Africa. The balancing act is to maintain the nimble less formal nature of this distributed network resource while harmonizing and synchronizing efforts with the formal mechanism so that a robust response to globalized infectious disease is present anywhere and everywhere always.

This is what the modern world requires for population security; it will require work to accomplish. Part of the systematizing and synergizing of all these newly emerging less-formal trust based networks involves building multi sectoral and cross network connections; CORDS is doing that. By linking regional disease surveillance networks and intergovernmental agencies in various sectors, CORDS exemplifies the shifting patterns of international collaboration that will be needed to prevent, detect, and fight all types of biological dangers. CORDS combines informal trust based bottom-up and top-down solutions-oriented approaches, which together are re-shaping the global disease surveillance landscape. By pursuing a common vision where disease no longer threatens the well being of communities and prosperity of nations, CORDS is revitalizing international efforts against biological threats and helping to build ‘A World United Against Infectious Disease’.

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**GOAL**

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To strengthen regional disease surveillance networks and CORDS by illuminating the concept of trust and providing solutions to promote global policies to build solidarity for cross border cooperation and a world united against infectious disease.

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**OBJECTIVES**

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- Introduce the evolution and varying models of regional disease surveillance networks that compliment the existing global surveillance architecture
- Present innovations of cross border cooperation in surveillance using examples of regional networks and CORDS
- Identify political influences faced by regional surveillance systems that challenge and promote cross sectoral / cross border work
- Discuss forward thinking concepts to strengthen applied OH concepts on a global level using the example of CORDS and laboratory networks
- Record recommendations to expand regional and global cooperation

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## PANEL

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Critical analysis of Networks and creation of trust using some material from Emerging Health Threats Journal Supplement. How they started cooperation, what policies were created, reality of working across conflicted borders; what is needed to sustain, how they add value to surveillance and to IHR, models of networks.

### MODERATOR

**Nigel Lightfoot**, Executive Director, CORDS

### PANELISTS

- **Nigel Lightfoot**, Executive Director, CORDS
- **Alex Leventhal**, MECIDS
- **Bounlay, Phommasack**, Chair of MBDS and Deputy Director General of DOHP, Ministry of Health, Lao PDR
- **Dominic Kambarage**, SACIDS
- **Stanley Sonoiya**, EAIDSNet
- **Silvia Bino**, SEEHN
- **Pongpisut Jongudomsuk**, APEIR
- **Christophe Longuet**, Fondation Merieux

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## AUDIENCE DISCUSSION

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### ANALYSES AND RECOMMENDATIONS.

Other networks will be given the opportunity to share their experiences by contributions from the audience. Identify the actions to increase global cooperation and overcome the barriers to effective cross border/ cross sectoral disease surveillance. How and where do we build the next regional networks of CORDS?

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## MOVING FORWARDS

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Reflections. How can regional networks move forward, financing, getting governments involved in sustainability and new networks.

### MODERATOR

**Mark Rweyemamu**, Executive Director, SACIDS

### PANELISTS

- **Pierre Nabeth**, WHO
- **Benoit Miribel**, Fondation Merieux
- **Kumnuan Ungchusak**, ASEAN+3 Field Epidemiology Training Network
- **Martyn Jeggo**, GOAHL
- **Nigel Lightfoot**, CORDS

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## SUMMATION

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## BACKGROUND

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Health threats at the human-animal-ecosystems interface have increased over the past few decades. These health threats are caused by multiple drivers, many of which are associated with human behavior, including the effects of modified landscapes, and changes in agricultural practices. With approximately 60% of emerging infectious diseases originating from animals, and of those, 70% deriving from wildlife, we are challenged to establish robust, global animal health systems. The recent efforts to control highly pathogenic avian influenza (HPAI) reflect the need for reducing risks associated with zoonotic pathogens and other diseases of animal origin. Reducing these risks cannot be done by one sector alone, therefore international organizations and their member states are increasingly converging towards a One Health approach that incorporates a collaborative, cross-sectoral, multidisciplinary mode of addressing threats and reducing health risks at the human-animal-ecosystems interface.

It is often assumed that disease prevention is more cost-effective than response, however it is difficult to quantify the benefits of prevention. This leads to difficulty in attracting the required investment to implement activities that address disease emergence, maintenance or spread. This session will be dedicated to broadening the discussion around indicators used to evaluate the impact of cross-sectoral collaboration in various sectors (health and non-health related) and poses the question: How can we meaningfully measure the impact of One Health in the next decade? During High Level Technical Meeting held in Mexico City in November 2011 (convened by the government of Mexico, with support from FAO, OIE, WHO and UNSIC) the following key operational elements of effective cross-sectoral collaboration were identified:

- Joint cross-sectoral coordination mechanisms
- Routine communication
- Joint simulation exercises
- Data sharing
- Joint risk assessment
- Active cooperation on disease prevention/control programmes

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## OBJECTIVES

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- Provide a specific country example where the One Health approach has been successfully adopted;
- Examine other domains that have established indicators for measuring similar collaborative programs;
- Identify options for measuring the impact of cross-sectoral collaboration on disease prevention, taking into consideration the key elements, but not limited to them;
- Discuss how we can meaningfully measure the impact of One Health in the next decade.

## MODERATORS

**Katinka de Balogh**, Senior Officer

Veterinary Public Health, Food and Agriculture Organization of the UN, Italy

**Debra Olson**, Professor,

School of Public Health, University of Minnesota, USA

## **SPEAKER**

**Nitish Debnath**, National Consultant, FAO ECTAD Bangladesh

## **PANELISTS**

- **Penelope Mavor**, Consultant, Impact International, Italy
- **Paul Williams**, Director, Agriculture, Food and Veterinary Programs, Georgia Office of Homeland Security, USA
- **Wilhelm von Trott**, Partner, Convaero GmbH, Germany
- **Frans van Kappen**, Head of the Veterinary Public Health Division, Institute for Risk Assessment Sciences, Utrecht University, The Netherlands
- **Ruth Cromie**, Head of Wildlife Health, Wildfowl & Wetland Trust, United Kingdom

## BACKGROUND

Understanding the connections among people, domestic animals and wildlife will help to improve the forecasting of disease outbreaks and facilitate surveillance and response. By exploring the methodological and technological innovations in the presented cases, planners of national and regional surveillance programs or networks can benefit from lessons learned and evaluate applications that may dramatically advance disease recognition and control.

## OBJECTIVES

Provide a thorough exploration of innovations in cross-sectoral surveillance tools through case presentations and panel discussion. Offer policy makers examples of effective on-the-ground applications of cross-sectoral surveillance that may be considered for inclusion in national and international systems to advance disease recognition and control. Topics include: advances in field simulation exercises, practicalities of One Health integrated disease investigations, advantages of sentinel surveillance, innovations in diagnostics for undiagnosed diseases, application of mobile technologies in participatory disease surveillance, and integration of information systems and mathematical modeling to control expansion of disease.

## MODERATOR

Charlanne Burke, Senior Associate, The Rockefeller Foundation, USA

## SPEAKERS

1. Advances in field simulation exercises: Highly Pathogenic Avian Influenza control (simulated) between Kenya and Uganda  
**Maurice Ope**, East African Community (East Africa Integrated Disease Surveillance Network-EAIDSNet), United Republic of Tanzania
2. Practicalities of One Health integrated disease investigations: Q fever in livestock, wildlife and people Chiang Mai, Thailand  
**Teerasak Chuxnum**, Bureau of Epidemiology, Thailand
3. Advantages of sentinel surveillance: Detection of emerging infectious diseases at the human-animal interface  
**Clement Meseko**, National Veterinary Research Institute, Vom., Nigeria
4. Innovations in diagnostics for undiagnosed diseases: New paradigm for novel virus detection being implemented in 20 countries with varied resource availability to evaluate for application globally  
**Tracey Goldstein**, University of California, Davis, USA
5. Application of mobile technologies in participatory disease surveillance: Evaluation of mobile phone technology use for integrated disease surveillance in India  
**Vivek Singh**, Public Health Specialist, Indian Institute of Public Health (IIPH), India
6. Integration of information systems and mathematical modeling to control expansion of disease: Conciliating disparities between health systems, cultures, languages, socioeconomics, politics, animal management strategies and ecosystems, and designing strategies for controlling the spread of infection in surrounding areas of the USA – Mexico frontier  
**Rafael Villa-Angulo**, University of Baja California, Mexico



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## BACKGROUND

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Implementing One Health approaches globally requires transformation of the workforce driven by a new pre-service and in-service educational paradigm. The new workforce is exemplified by dynamic, transdisciplinary professionals and paraprofessionals working together to address the systemic determinants of health issues at the human, animal and environment interface. The paradox of One Health capacity development is the need for both depth and breadth of knowledge, skills, aptitude and experience. The critical competencies for the One Health approach include the ability to deal with dynamic challenges through active stakeholder engagement and resiliency. A coalition of traditional and non-traditional partners must be actively involved to shape student learning experiences and in-service training.

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## OBJECTIVES

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- Policy recommendations for transforming global workforce capacity-development by:
- Creating a new educational paradigm for pre-service and in-service training
- Establishing global one health priorities as key drivers for academic curriculum development and continuing educational programs
- Catalyzing cross-sectoral capacity development to implement One Health approaches

### MODERATOR

**William Hueston**, Professor,  
Veterinary Medicine and Public Health, University of Minnesota, USA

### SPEAKERS

- Enhanced learning capturing the power of global communications technology  
**Willem Vink**, Senior Research Officer, EpiCentre, Massey University, New Zealand
- Experiential field training and active simulations  
**Sopon Iamsirithaworn**, FETP Director, Ministry of Public Health, Thailand
- Integrating health priorities and engaging workforce employers in curriculum development  
**William Bazeyo**, Dean, School of Public Health, Makerere University, Uganda
- Inter-professional education approaches  
**Brandon Hayes**, Veterinarian, Western University of Health Sciences, USA
- Private sector speaker (TBD)

## BACKGROUND

Nipah virus (NiV) is a lethal bat-borne paramyxovirus that first emerged in Malaysia in 1998-9, killing pigs and people. It is now known that Nipah virus is distributed widely across South and southeast Asia, with related henipaviruses found in Australia and Africa. In Malaysia NiV moved from bats into pig farms close to fruit bat habitat, then into people, suggesting that countries with large pig populations where this virus occurs are at-risk of future outbreaks. However, in Bangladesh, NiV has repeatedly been transmitted directly from bats to people as a food-borne infection. Furthermore, it has shown capacity to move person-to-person. The wide distribution of the virus and its reservoir hosts, the large human population in these countries and diverse farming and cultural practices suggest that the risk of future outbreaks is high.

## OBJECTIVES

To demonstrate the value of a One Health approach to dealing with the emergence of henipaviruses in 3 different countries, with different impact and involving wildlife, livestock and humans. Each speaker will tell the 'story' of how NiV or HeV emerged in their country, how they mobilized resources to deal with it, and what this means for preventing the risk of emergence in the future. Each talk will touch on:

- how open communication and sharing of reagents and samples among countries helped rapid identification of cause and limited the size of outbreaks
- the public perception of these viruses in their countries

## MODERATOR

**Jon Epstein**, EcoHealth Alliance

## SPEAKERS

- Emergence of Nipah virus in Malaysia  
**Dato' Dr Abd. Aziz Jamaluddin**, Director General,  
Dept of Veterinary Services, Government of Malaysia
- Assessing the risk of Nipah virus emergence in Thailand  
**Supaporn Wacharapluesadee**, WHO Collaborating Centre for Research and  
Training on Viral Zoonoses, Faculty of Medicine, Chulalongkorn University, Thailand
- Repeated emergence of Nipah virus in Bangladesh via novel pathways  
**Stephen Luby**, Professor, Stanford University, USA
- High-profile, repeated spillover of Hendra virus in Australia  
**Hume Field**, Principal Scientist, Queensland Centre  
for Emerging Infectious Diseases, Australia

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## BACKGROUND

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The speed with which emergent infectious diseases can surface and spread, as illustrated by the 2009 H1N1 pandemic influenza virus, presents serious public health, economic, security and development concerns. It also underscores the need for the global community to act pre-emptively and systematically to improve international, regional and individual countries' abilities to identify and mitigate the severity of health threats arising within their borders. Over the past decade, particularly in response to the threats posed by Severe Acute Respiratory Syndrome (SARS), Avian Influenza H5N1, and the 2009 H1N1 pandemic influenza virus there has been a significant increase in support for building national, regional and global capacities related to zoonotic disease emergence, including disease surveillance, detection, diagnosis, reporting, and control, while simultaneously supporting efforts to mitigate the risk of emergence. This experience has led to increased understanding of the drivers that underlie disease emergence and an appreciation of the factors (i.e. policies), institutional capacities, and social conditions that contribute to its prevention and control. Among the most fundamental insights has been that the future well-being of humans, animals and the environment as inextricably linked and that any effort to mitigate the impact of future emergent disease threats requires an equally comprehensive and cross-sectoral approach. This session will explore the policy and institutional challenges to forging a One Health response.

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## OBJECTIVES

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Examine the broad policies unique to One Health that strengthen preparedness and response; and highlight existing cases/examples (global, regional, and national) of One Health preparedness and response and how they address cross-sectoral collaboration, joint risk assessment of emergent potential threats, innovation, and systems strengthening.

### MODERATOR

**Ximena Aguilera**, Director, Center of Epidemiology and Public Health Policy, Universidad del Desarrollo, Chile

### SPEAKER

**David Heymann**, Head, Centre on Global Health Security, Chatham House, United Kingdom

### PANELISTS

- **Dilys Morgan**, Head, Gastrointestinal, Emerging and Zoonotic Infections, Health Protection Agency, United Kingdom
- **Pierre Formenty**, World Health Organization, Switzerland
- **John Mackenzie**, Professor of Tropical Infectious Diseases, Curtin University, Australia
- **Jeff Waage**, Director, London International Development Centre, United Kingdom

## BACKGROUND

At country level, implementing One Health requires a genuine and effective collaboration across different government sectors, in particular those responsible for human health, animal health (mostly focused on domestic animals and animals for food) and health and illnesses of wild life. Such effective collaboration aims to fostering the containment of infectious diseases crossing between human and animals. Government sectors are often built up in silo where sectoral plan and annual budget are used by individual sector, joint planning and budgeting across sectors to tackle a common challenge is often difficult for which sometimes a special coordinating committee was applied.

At supra-national or regional level, implementing One Health faces further similar huge challenges, this requires trust and effective collaborative works across sovereign Nations, where sometime trade interests such as sanction on export of poultry and cattle are at stake that frank and accurate infectious diseases in animal are often obscured or not promptly reported. Collaborative surveillance and effective responses, experienced by Mekong Basin Diseases Surveillance (MBDS) is invaluable in the past decades how these challenges are overcome. Further challenges are efforts to mobilize adequate, and sustain in long term where third party funding such as Rockefeller Foundation plays significant role, funding to keep the network effective.

## OBJECTIVES

Such global public goods as One Health, fostering diseases surveillance and response require redouble efforts ensuring on cross-sectoral action and regional actions are taken place effectively. This parallel session contributes to the understanding how challenges were overcome at country and regional levels and how development partners support to overcome such challenges.

## MODERATOR

[TBD]

## COUNTRY EXPERIENCES

1. One Health approach to curb anthrax in Bangladesh  
**Baizid Khorshid Riaz**, Assistant Professor,  
National Institute of Prevention & Social Medicine, Bangladesh
2. Effectiveness of control measures for highly pathogen Avian influenza in Thailand  
**Suvichai Rojanasthien**, Associate Professor,  
Faculty of Veterinary Medicine, Chiang Mai University, Thailand
3. One Health collaborative mechanism at the international level in Vietnam  
**James Kile**, Veterinary Medical Epidemiologist,  
U.S. Centers for Disease Control and Prevention, Vietnam

## REGIONAL EXPERIENCES

4. MBDS  
**Bounlay Phommasack**, Chair of MBDS and Deputy Director General of DOHP,  
Ministry of Health, Lao PDR
5. Overcoming challenges: role of development partners fostering One Health  
**World Bank representative (TBD)**

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**BACKGROUND**

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Over the past several decades, nearly three-quarters of emerging infectious diseases have emerged from animal reservoirs – zoonotic diseases. Environmental and social changes that affect how people, pets, livestock, and wildlife interact can create conditions that favor the emergence infectious diseases such as Lassa fever, Marburg fever, Ebola and SARS. Potential disease outbreaks present a significant public health threat, and economic, security and development concerns at a global level.

Of particular concern is the surge in extractive industry operations –namely mining, petroleum and logging operations– into previously remote wildlife areas worldwide. By cutting down forest areas, building roads or rail lines, establishing temporary and permanent labor camps, and encouraging migration into previously uninhabited areas, the activities of the extractive industries fragment wildlife habitats and can unintentionally increase the interaction between wildlife and humans and therefore the risk of disease transmission. Areas abundant in wildlife with massive reserves of natural resources, and under intensifying population pressures –such as the larger Congo Basin, South-East Asia, India’s Gangetic plain, the Amazon Basin and the island of New Guinea– are now emerging as hotspots for infectious disease outbreaks.

While there is a growing concern that the activities associated with extractive industries could lead to increased incidence of disease outbreaks among workers and communities, these risks can be easily minimized by ensuring worksites and settlements follow simple measures to reduce exposure risk. Companies should already be familiar with such precautionary measures to address other public health threats facing the extractive industry and associated settlements in new areas, including water-borne diseases, or infectious diseases caused by poor sanitation and food hygiene.

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**OBJECTIVES**

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Contribute to better understanding of:

- The risks of zoonotic disease emergence as an unintended consequence of extractive industry operations and facilitate discussion around potential mitigation measures. Examine the roles and responsibilities of the public and private sectors, particularly those of the extractive and international finance industries, and opportunities for partnerships
- A framework for global response, including policy, technical guidance, implementation planning and support

**MODERATOR**

**Steven Phillips**, Senior Fellow, Chatham House  
(Royal Institute of International Affairs), United Kingdom

**SPEAKERS**

(TBD)

**PANELISTS**

(TBD)

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**BACKGROUND**

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The risks of disease emergence, transmission and spread is increasing and being driven by complex factors. Globalization, increased urbanization, demand for and trade in animals and animal products, and increased need for land, food and natural resources is creating an environment for disease emergence and is spreading disease faster and wider. Environmental exploitation and degradation, poor environmental management and increased interaction between wildlife, domestic animals and people provide the ideal opportunity for pathogens and their vectors to potentially mutate into more formidable forms. Poverty, overcrowding, population displacement, weak health systems with limited capacity for timely identification and response to epidemics, inadequate access to safe water and sanitation, and the underlying health conditions of populations all provide the right environments for the proliferation of infectious diseases.

It is clear that mitigating endemic disease and preventing and managing emerging infectious diseases is highly complex and challenging and human behavior is at the core of many of these issues. The traditional approach has been to either focus on “changing” the behaviours of individuals to make better choices or addressing the environmental, policy or legal context in which individuals make decisions and take action. What is clear is that investments in prevention, preparedness and response strategies need to move beyond a reliance on bio-medical models combined with one-way information dissemination approaches. Increasing importance is being given to the strategic and considered design and implementation of multilevel and multisectoral actions that address the underlying causes of disease emergence and intensifies collaboration between wildlife, domestic animals and human health sectors.

This session will focus on understanding the role human behavior plays within the dynamics of endemic as well as newly emergent diseases and why it has been so difficult to address by any single intervention. It will explore current deeply-held paradigms and assumptions that underpin many “behavioral and social change programs” that render them ineffective and will explore how these assumptions goes against much of what science is telling us about the way we need to think about ourselves and about our relationships to each other and the world around us. It will consider what the range of approaches and interventions needed to address human behavior need to include and will suggest how these can be effectively harnessed within One Health.

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**OBJECTIVES**

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The objective of this session is to provide an opportunity to share the latest scientific evidence and discoveries concerning human behavior and to debate the policy and programmatic implications for behavioral and social change programs relevant to infectious disease emergence, transmission and spread.

**MODERATOR**

(TBD)

**SPEAKERS**

(TBD)

## BACKGROUND

A successful collaboration in response to infectious diseases requires effective communication and timely sharing of information among different sectors working on the problems. Many challenges including delays in sharing accurate data and lack of transparency pose significant barriers to effective control of infectious diseases. It is necessary to build trust among stakeholders and to develop transparent system for timely data sharing within and between agencies involve in the preparedness and response. This session highlights importance, gaps and solutions to improve communication and data sharing in response to infectious disease problems by using case studies and experiences from developing and developed countries.

## OBJECTIVES

- To emphasize the importance of effective communication and timely data sharing among different sectors in a country (or a region) to fight against infectious diseases
- To promote trust-based collaboration and transparent data sharing and communication with a focus on intra- and inter-agency communication
- To identify gaps, common pitfalls and solutions for improving cross-sectoral communication, transparency and timely sharing of information

## MODERATOR

**Wantanee Kalpravidh**, FAO RAP

## PANELISTS

1. “Highly Pathogenic Avian Influenza H5N1 in Egypt”
  - **Samir Refaey**, Executive director of national surveillance unit, Egyptian Ministry of Health and Population (MOHP)
  - **Soheir Abdelkader**, Head of Preventive Medicine, Egyptian General Organisation for Veterinary Services (GOVS)
2. “Experiences from Hendra outbreaks in Australia”
  - **Peter Black**, Director, Emergency Animal Disease Preparedness Department of Agriculture, Fisheries and Forestry, Australia
  - **Brad McCall**, Brisbane Southside Population Health Unit, Queensland, Australia
3. “Rabies”
  - **Pudjiatmoko**, Director of Animal Health, Directorate General of Livestock and Animal Health Services, Ministry of Agriculture, Indonesia
  - **Rita Kusriastuti**, Director of Vector Borne Disease Control, Directorate General of Disease Control and Environmental Health, Ministry of Health, Indonesia

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**BACKGROUND**

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The recent emergence and rapid global spread of the zoonotic highly pathogenic avian influenza has served to highlight many factors that contribute to cross border and international spread of infectious diseases. Global movement of people, cross border trade in livestock and livestock products, trade and seasonal migration of wild animals are some of the major methods of disease spread. With increased globalization and greater connectivity among countries through improved road infrastructure and air and ship travel this trend will continue to rise.

In order to minimize disease incursion events and cross border impacts of infectious diseases effective border preparedness and response capacity are necessary. Currently many countries and regions in the world lack this capacity and the complex issues that contribute to this state include inadequate resources, untrained manpower, poor cross border checks, inadequate understanding of the market chains for livestock and livestock movements, poor or no cross border collaboration, lack of transparency in sharing disease information, and poorly defined policy and legislation to address cross border spread of disease. While some of the constraints and challenges relate to socio-political and economic development, there are also a number of other issues that can be addressed in the short to medium term. For example, accepting that addressing cross border, regional and international spread of disease is a global public good, what is the role of the international community and regional organizations in supporting cross border and regional preparedness for disease detection and response? What policies and mechanisms need to be put in place to improve cross border sharing of disease information? What other stakeholders such as farmers, traders, community health workers, NGOs, cross-border immigration and customs departments can contribute to improved border preparedness?

The session will examine what are the main political, social and technical barriers and constraints to effective implementation of cross border preparedness and response, and also attempt to identify how these challenges can be met. In order to address this issue, an international group of panelists with policy and technical expertise from a range of background, sectors, and regional and international agencies will be invited to present their views and participate in a discussion with the audience.

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**OBJECTIVES**

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- Identify major factors involved in cross border introduction and spread of infectious diseases and highlight the importance of cross-border dialogue and collaboration in addressing this problem
- Identify key players at country, regional and international levels that are involved in the control and spread of diseases and define their specific roles in supporting cross border preparedness
- Identify constraints to cross border collaboration and how these constraints can be addressed
- Identify existing programs that are involved in regional control of infectious diseases and recommend how they can support improved cross border preparedness and response to infectious diseases



## **MODERATOR**

**Subhash Morzaria**, Regional Manager,  
Emerging Centre for Transboundary Animal Disease,  
FAO Regional Office for Asia and the Pacific, Thailand

## **PANELISTS**

- **Solomon Benigno**, Senior Officer, Agriculture Industries and Natural Resources Division (AINRD), ASEAN Economic Community Department, Indonesia
- **Ferdinal M. Fernando**, Head, Division of Health and Communicable Diseases (HCDD), The ASEAN Secretariat, Indonesia
- **Vincent Martin**, EMPRES, FAO Headquarters, Italy
- **James Hopkins**, Senior Program Manager, Regional Public Health Program, Kenan Institute Asia, Thailand
- **Moe Ko Oo**, MBDS Foundation Secretary, MBDS Foundation
- **Mahmudur Rahman**, Director, Institute of Epidemiology Disease Control and Research and National Influenza Centre, Bangladesh
- **Jonathan Rushton**, Senior Lecturer in Animal Health Economics, Royal Veterinary College, United Kingdom

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**BACKGROUND**

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Human health, welfare and security are dependent healthy animals and functioning ecosystems. The One Health approach aims to bring together the three sectors of human, animal and ecosystem health to work together to prevent or mitigate the potential negative impacts of their interactions. By working together in partnership they can maximize social and economic benefits while protecting biodiversity and natural resources.

Zoonotic diseases, which are passed from animals to humans, are of great concern because of their potential rapid spread and pandemic threat. They cause human illness and production losses and reduces the ability of people to benefit from their food. Many zoonoses also affect wildlife (e.g. rabies) – including endangered species.

Zoonoses impact on food production, rural economy and levels of poverty especially among people who are already vulnerable. Livestock make a major and growing contribution to economic development and livelihoods of rural poor and are a source of nutritious food especially animal protein. The demand for livestock will continue to grow as population growth increases especially in developing countries. And in turn this will bring with it new threats of human diseases. Around 75 percent of emerging infectious diseases have been zoonotic.

Good husbandry practices usually prevent emerging zoonotic diseases and also contribute to environmental sustainability. However, effective zoonosis control relies on intersectoral collaboration between animal health, public health and environmental health groups at district, national and regional levels. International organizations and donors can help increase capacities when they work in support of national preparedness policies. Interdisciplinary collaboration, especially in the field of emerging zoonotic diseases, is also critical to achieve One Health outcomes. Improved collaboration and integration requires breaking the silos and boundaries between sectors and disciplines toward more societal and ecological perspectives. The ultimate goal is to build resilience to anticipate, withstand and recover from risks at the interface including diseases threats, economic shocks and natural disasters including climate change related extreme events.

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**OBJECTIVES**

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Contribute to better understanding of:

- The linkages between One Health and Food and Nutrition Security
- Challenges to address this link
- The way forward to build individuals, households and communities' resilience to health risks at the animal-human-ecosystem interface.

**MODERATOR**

**David Nabarro**, Special Representative of the UN Secretary General on Food Security and Nutrition, and the UN System Influenza Coordinator

## PANELISTS

- **Government** : Alan Reilly, Chief Executive, Food Safety Authority, Ireland
- **UN : FAO on behalf of the Tripartite partnership** (FAO, WHO and OIE) - Modibo Traore, Assistant Director-General for Agriculture and Consumer Protection, Food and Agriculture Organization of the United Nations, Italy –How the three agencies work together to address the interactions between One Health, Food Security and Nutrition, to tackle zoonoses and to sustain food production systems (FAO), food safety (WHO) and animal health (OIE).
- **World Bank** : Francois Le Gall, Livestock Advisor, World Bank, USA – Livestock global agenda for action: Livestock for Livelihoods in the Next Decade
- **Academia** : Craig Stephen, Director, Centre for Coastal Health, Canada

## BACKGROUND

This session will discuss and debate the potential contribution of emergent technologies (surveillance and diagnostics) to improve/accelerate detection and assessment of familiar and new/uncharacterized risks. Together with participation from the audience, the panels will discuss/debate what is needed to reduce the collective global risk from microbial threats to health.

In a world of finite resources, where should we focus our efforts on detection?

How fast can we find emerging infections that threaten the globe?

How fast do we need to be to stop a potential pandemic?

How can regional disease surveillance networks and one health approaches lead the way?

## OBJECTIVES

- Discuss innovative approaches to disease surveillance using digital data through on line media sources, social networks, and Internet searching.
- Explore the role of point-of-care diagnostics in rapid verification of threats.
- Explore the role of mobile technologies in disease alerts, syndromic surveillance, and direct transmission of observations.
- Discuss how a one health approach could lead to earlier detection.

## MODERATOR

**Mark Smolinski**

### PANEL ONE:

- **John Brownstein**, Co-founder and Director of HealthMap, Harvard University, USA
- **Channe Suy**, Director, Cambodia's iLab, InSTEDD, Cambodia
- **Eson Karimuribo**, Senior Lecturer, Sokoine University of Agriculture and Southern African Centre for Infectious Disease Surveillance, United Republic of Tanzania
- **Carl E. Koppeschaar**, Editor / creative director, Science in Action, Netherlands
- **Juan Lubroth**, Chief Veterinary Officer, FAO, Italy
- **Patipat Susumpow**, Co-Founder, Opendream Co., Ltd., Thailand
- **Karl Brown**, Associate Director of Applied Technology, The Rockefeller Foundation

### PANEL TWO:

- **Margaret A. Hamburg**, Commissioner, U.S. Food and Drug Administration, USA
- **Dionisio Jose Herrera Guibert**, Director, TEPHINET, USA
- **Ann Marie Kimball**, Senior Program Officer, Epidemiology and Surveillance, Bill and Melinda Gates Foundation, USA
- **Peter Daszak**, President, EcoHealth Alliance, USA
- **Larry Madoff**, Editor, ProMED-mail, USA
- **Rosanna Peeling**, Professor & Chair, Diagnostic Research, London School of Hygiene and Tropical Medicine, United Kingdom

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## BACKGROUND

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Diseases at the human-animal-ecosystems interface pose continual threats to animal health, public health, environmental health, food safety, and food security. The global health community, including the Tripartite of FAO, OIE, and WHO and other partners (e.g. World Bank) are increasingly shifting the focus of both individual and collaborative work towards national health systems strengthening. Strong, resilient national health systems can respond quickly and flexibly to many existing and emerging – as yet unknown - health concerns. When strong sector-specific health systems are coordinated and aligned and given the tools, policy mandates, and mechanisms to work cross-sectorally, they can optimally address health threats at the human-animal-ecosystems interface. Political will and resources are crucial to development of the systems and their associated technical infrastructure. However, a shift in paradigm is necessary for true implementation of cross sectoral approaches to systems strengthening. All of these aspects to systems strengthening are applicable at the international, regional, and national level, although ultimately national level systems are understood to be the focus.

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## OBJECTIVES

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To come to a common understanding of the new and unique policies, tools, empowering factors, and constraints for systems strengthening that will support the new paradigms necessary to globally implement cross-sectoral collaboration to decrease health risks at the human-animal-ecosystems interface.

### MODERATOR

**Mary Kathleen Glynn,**

Epidemiologist, US Centers for Disease Control and Prevention, USA

### SPEAKERS

Tripartite representative (TBD)

**Peter Maina Iphondeka,** Chief Veterinary Officer, Kenya

### Panelists

- Public health/medical sector: **Dilys Morgan,** Head, Gastrointestinal, Emerging and Zoonotic Infections, Health Protection Agency, UK
- Agro/veterinary sector: **Hugo Fragoso Sanchez,** Director General, SENASICA, Mexico
- Environmental sector: **UNEP**
- Wildlife sector: **William Karesh,** Executive Vice President for Health, EcoHealth Alliance, USA

## BACKGROUND

The concept and theory behind One Health would not be completed without the ‘learning from the real experience of implementing it’. These stories from the ground session allow different sectors to tell their side of stories from the real actions at the national/subnational level. It aims at demonstrating, from the field, how different sectors, and how the policy, social, and intellectual actors, interact to tackle the threats from emerging infectious diseases (EIDs). It will focus on how ownership and management capacity can be created and sustained jointly at the country level. Interactive learning through action, by all partners, not only allows more effective synergism, but also builds trusts among them.

## OBJECTIVES

- Sharing of experiences from the real interactive learning through collective actions at the National/Subnational level
- Summarize the factors and actors involved and how they interact towards successful/failed One Health concept, in creating ownership and adequate capacity.
- Provide recommendations for further actions by relevant partners

## CHAIR/MODERATOR

**Yojiro Ishii**, Senior Health Sector Advisor, Japan International Cooperation Agency, Japan

**Fiona Godlee**, Editor-in-Chief, British Medical Journal, United Kingdom

## SPEAKERS

1. Development of scalable and sustainable surveillance systems for Chagas disease in Central America
  - **Kota Yoshioka**, Technical Advisor, JICA Nicaragua Chagas Disease Control Project, Nicaragua
1. Rabies control initiative in Tamil Nadu, India: a test case for the One Health approach
  - **Syed Abbas**, Research Fellow, Public Health Foundation of India, India
1. Community preparedness for Pandemic influenza on Bali and Lombok, Indonesia: An interprofessional, mixed methods study
  - **Hudson Birden**, Senior Lecturer, University Centre for Rural Health, North Coast (University of Sydney), Australia
1. Thailand Emerging Infectious Diseases Strategic Plan: a platform for improved preparedness and response to EIDs under One Health concept
  - **Rungrueng Kitphati**, Director, Bureau of Emerging Infectious Diseases, Thailand
1. One Health approach for assessing impacts of anthrax on the human-animal interface in rural Uganda using participatory epidemiology tools
  - **Jeanne Coffin**, Tufts University, USA
1. The Global Early Warning System addressing health threats and emerging risks at the human-animal-ecosystems interface: GLEWS+
  - Representative from Tripartite (FAO/OIE/WHO)

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## BACKGROUND

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Emerging diseases are a significant global threat to public health, trade, and economic growth. Among the most significant of these are diseases that emerge from animals, either wildlife (e.g. SARS) or livestock (e.g. influenza A/H1N1). Preventing and controlling emerging diseases requires significant global resources. Targeting the use of these resources requires a deep understanding of the geographical origins of new diseases, the human populations at the highest risk of being infected, and the animal populations with the highest potential for a pathogen to jump host into people. In this session, we will review the very latest techniques and approaches to better understand the high-risk interfaces where surveillance can best be targeted.

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## OBJECTIVES

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To present different approaches that determine the risk of emerging infectious diseases and how these might be used to best allocate global resources for prevention and control. Each speaker will cover:

- The biological/ecological nature of the risk (e.g. transmission among wildlife or livestock)
- The socio-economic aspects of the risk (e.g. cultural approaches to farming)

## MODERATOR

**Jonna Mazet**, Professor & Director, One Health Institute, University of California, Davis, USA

## SPEAKERS

1. A unifying framework for the risk of pandemic emergence
  - **Peter Daszak**, President, EcoHealth Alliance
2. RVC Risk assessment framework for H5N1 avian influenza in SE Asia, with special reference to the human-livestock-wildlife interface
  - **Dirk Pfeiffer**, Professor of Veterinary Epidemiology, Royal Veterinary College, United Kingdom
3. Assessing risk of Rift Valley Fever outbreaks using GIS, vegetation and climate
  - **Pierre Formenty**, World Health Organization, Switzerland
4. Spatial epidemiology of Highly Pathogenic Avian Influenza H5N1 in poultry: What have we learned? What can be improved?
  - **Marius Gilbert**, Universite Libre de Bruxelles, Belgium

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## BACKGROUND

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The WHO International Health Regulations (2005) (IHR) is a framework to prevent the international spread of disease and includes obligations for States Parties to review and strengthen their national public health capacities. The OIE Performance of Veterinary Services Pathway (PVS) is a framework to assess the performance of Veterinary Services and its compliance with the international standards on quality linked to a capacity building pathway. The application of these evaluation processes jointly at the country level can optimize strengths and reduce gaps in the control of zoonotic diseases, and increase the benefits of capacity building investments in both sectors. OIE and WHO have initiated efforts to harmonize these tools, and present the efforts for greater synergy between WHO and OIE, at headquarters and national levels. More than just the adjustment of tools, this reflects the sharing of concept and strategies, also supported by FAO in implementation projects at country and regional settings as well as policies, as described in a tripartite concept note published in 2010. To add to this discussion, FAO promotes the incorporation of environment, a fundamental part of the One Health concept, into this governance discussion. This session will present the last developments in this efforts, also use example from the countries to highlight the benefits of synergies between sectors, and will open a discussion between the floor and the key players.

The session is intended to address the following questions:

- How can the PVS and IHR offer a more coherent approach to the development of national core capacities?
- How can they contribute to country-level governance at the human-animal interface?
- What is the contribution of the Tripartite (FAO, OIE, WHO) to One Health and its role in establishing key principles and actions at the international level and in supporting countries in development of practical policies and programs?

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## OBJECTIVES

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Through the description of the current effort to bridge the approaches and methods used in the respective sectors, the main objective is to increase awareness on some of the fundamental principles guiding the collaborative work between FAO, OIE, WHO, i.e. the importance of strengthening human and animal institutions as well as partnership, alignment and coherence in standards and protocols when appropriate, “good governance and (strengthening of) official services, since they ensure an early detection and a rapid response to biological threats, facilitate trade flows and contribute to global food security” (G20 Agriculture Ministers, Paris, 22-23 June 2011).

The discussion should provide recommendations to the establishment of key principles and actions and the support to develop and implement practical national policies and programs. This would address particularly the importance of strengthening human and animal institutions and health systems and the partnerships among them; the central role of the national strategies in the approach and the alignment and coherence in standards and protocols.

### MODERATOR

**Maged Younes**, Senior Policy Advisor,  
Committee on World Food Security at FAO, Germany



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## OPENING

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1. Brief introduction – What are we talking about, what is the challenge?  
Challenges that have previously identified
  - **Mary Kathleen Glynn**, Epidemiologist, US Centers for Disease Control and Prevention, USA
2. How to find a common ground? (Elaboration of One Health Strategy and the program for control zoonoses in Cameroon)
  - **Severin Loul**, Ministry of Livestock, Cameroon
3. Brief overview of IHR and OIE Standards/PVS
  - **Cathy Roth**, Policy Advisor, Head Security and Environment, World Health Organization, Switzerland
  - **Alejandro Thiermann**, President, Code Commission, OIE, France

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## PANEL PRESENTATIONS

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- IHR and implementation framework and experience of a member country
  - **Rajesh Sreedharan**, Medical Officer, World Health Organization, Switzerland
  - **Stela Gheorghita**, Deputy Director, National Center for Public Health, Republic of Moldova
- OIE standards and the PVS Pathway and experience of a member country
  - **Herbert Schneider**, Senior OIE PVS Evaluator & Consultant, Agrivet International Consultants, Namibia
  - **Country Representative, Philippines**
- Toward a more coherent approach in national capacity assessment for zoonotic disease management using the IHR and PVS frameworks
  - **Stephane De La Rocque**, Technical Officer, World Health Organization, Switzerland
- Approaches related to environmental health and governance
  - **FAO Representative**
- Strategies for filling financial gaps
  - **Francoise Le Gall**, Livestock Advisor, World Bank, USA

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## BACKGROUND

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Reports of an *e.coli* outbreak in Germany went viral even though the virus was contained leading to drops in food product sales in several countries and loss of consumer confidence; 2009 H1N1 influenza virus in Mexico led to mandated quarantines that kept tourist and business travelers away thus devastating the Mexico economy; and social media are under fire and are being scrutinized by governments and international organization over privacy and ownership issues. Germany and Mexico's strategic public communication were integral in managing volatile situations and providing the correct information to respond to rumors and misinformation as well as redirect the conversation to what to do to safeguard health and livelihoods. What we belatedly learned during Mexico and Germany outbreaks is that social media are now mainstream communication strategies although underutilized in public health planning and response. For emergency it is an excellent method of communication with a major down-side is social media are loosely regulated and there are critical policy issues that need to be considered as public health officials begin to integrate it into their communication strategies. Parallel Session 16 hears from an expert in the social media field about its positives and its dark side; a policy expert on ramifications of the underregulated media; and two seasoned health communication professionals that managed the *e.coli* and H1N1 influenza outbreaks. The panel will be moderated by an expert in program management in Southeast Asia that included social media applications.

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## OBJECTIVES

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Social media have gone mainstream and strategic communication as an integral component of any successful One Health Program needs to strategically embrace it but with eyes' wide open.

### MODERATOR

**Anton Schneider**, Social Marketing and Communication Advisor, FHI 360, Indonesia

### PANELISTS

- **Joseph Trippi**, President, Trippi & Associates, USA
- **Ljubica Latinovic**, Social Marketing & Health Communication Coordinator,
- **Ministry of Health**, Mexico
- **Klaus Riedmann**, Ministry of Health, Germany (TBC)
- **Dee Bennett**, Director, FHI 360, USA

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## BACKGROUND

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Antibiotic resistance is a threat to the efficacy of medical and veterinary care, especially in view of the declining flow of new antibiotics. There is widespread evidence of the overuse and inappropriate use of antibiotics in both human and veterinary medicine. There is debate over the use of antibiotics for non-clinical purposes in agriculture.

The rational and prudent use of antibiotics in medicine and agriculture is a 'global public good' in the sense that the implications of irrational and imprudent use extend beyond national boundaries and effective strategies for controlling antibiotic use require international coherence

We propose to examine the role of civil society and the private sector in responding to the One Health Challenge through a case study of the governance of antibiotic use in medicine and agriculture.

The stakeholders who have interests in antibiotic use and antibiotic resistance include powerful corporations, the medical and veterinary professions, farmers and communities.

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## OBJECTIVES

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We propose to explore the need and strategies for a more rational and prudent governance regime regarding antibiotic use in medicine and agriculture and to explore the role of civil society and the private sector in related disciplines, based on One Health concept, in working together towards such a regime.

### MODERATOR

**David Legge**, Associate Professor of School of Public Health, La Trobe University, Australia and People's Health Movement

### SPEAKERS

- Representative, ReACT
- **David Wallinga**, Senior Advisor in Science, Food and Health, Institute for Agriculture and Trade Policy, Minneapolis
- **Madeleine de Rosas-Valera**, Assistant Secretary of Health, MOH Philippines
- **Visanu Thammalikitkul**, Siriraj hospital, Mahidol University and Chairman of the Thai Network on antimicrobial resistance

### PANELISTS

- **Mira Shiva**, People's Health Movement
- Representative, Via Campesina

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## BACKGROUND

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Over the last several decades, tens of thousands of people have died from emerging pandemic zoonotic diseases, including over 18,000 human deaths from the 2009-H1N1 influenza pandemic, with over \$200 billion economic losses incurred. Disease emergence is facilitated by increased human, wildlife, domestic animal and ecosystem interactions. Strategic points of intervention are under multiple jurisdictions: public and private, health, agriculture, environment, labor, transportation, tourism, and other sectors.

Despite growing recognition that closer collaboration among sectors is necessary and often despite having leaders with the competencies and skills needed for such collaboration (See parallel session 6) obstacles (jurisdictional organizational lines, competing agendas, struggles for limited resources, and being steeped in differing disciplinary cultures) still exist. “Siloed” approaches to detecting, and responding early and effectively to these threats have often proved to be ineffective and disease outbreaks continue to emerge with humans, all too frequently, serving as sentinels. This has resulted in continued loss of human life and livelihoods, compromised nutrition, stressed health delivery systems, and threatened wildlife and ecosystem health.

This session is aimed at stimulating a frank and robust discussion among public health, animal health, and environmental health, and other officials and experts on innovative approaches and policy tools (see Appendix 1 for examples) that the public and private sectors can employ to achieve a strategic and robust multi-sectoral response.

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## OBJECTIVES

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To identify and discuss:

- barriers to multisectoral collaboration
- strategic approaches, policy interventions, instruments and tools that have been used to overcome these barriers
- essential characteristics of a one health workforce that will seek to develop political will and create new environments that enable and reward multi-sectoral collaborations

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## PANEL PRESENTATIONS

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### PANEL 1

**Enabling One Health Policy Environments – Views from the Public Sector**

### **MODERATOR**

**Marguerite Pappaioanou**, Senior One Health Technical Advisor, DAI, Inc., USA

- **Santanu K Bandyopadhyay,**  
former Animal Husbandry Commissioner, Department of Animal Husbandry, Dairying and Fisheries, India and currently Member, Agriculture Scientists Recruitment Board, India  
*Overview of effectiveness of multisectoral collaboration around detection and response to highly pathogenic H5N1 avian influenza virus outbreaks in West Bengal—challenges and opportunities for policies supporting multisectoral collaboration and policy tools that were employed to make a difference. Perspective of animal health official.*
- **Gervais Ondobo Andze,**  
Inspector in charge of health and former Director of Disease Control, Ministry of Public Health, Cameroon Topic, speaker and panelist  
*Development of a National Program to Control and Fight against Emerging and Re-emerging Zoonoses in Cameroon, based on multisectoral collaboration— The pathway to a plan based on multisectoral collaboration and what is needed to ensure multisectoral collaboration in its implementation.*
- **Nancy Cox**  
Director, Influenza Division, NCIRD, Centers for Disease Control and Prevention, USA Joseph Anelli, Director, One Health Coordination Office, Office of the Deputy Administrator Veterinary Services, Animal and Plant Health Inspection Service (APHIS), US Department of Agriculture  
*Achieving improved collaboration across human and animal health sectors to address complex health problems, including global zoonotic diseases, food safety, and other disease threats.*

## **PANEL 2**

### **Enabling One Health Policy Environments—Perspectives from Public –Public Sector Partnerships**

#### **MODERATOR**

**Parntep Ratanakorn,** Dean, Faculty of Veterinary Science, Mahidol University, Thailand

- **Michael Robach,**  
Vice President, Corporate Food Safety & Regulatory Affairs, Cargill, USA.  
*Issues around promoting stronger public-private sector policies for improved risk reduction, early reporting, and enhanced response—a global food producer’s perspective.*
- **Theerapat Prayurasiddhi,**  
Deputy Director General, Department of National Parks, Wildlife and Plant Conservation, Ministry of Environment and Natural Resources, Thailand  
*Policies that reinforce best practices in preventing risks of human exposure to emerging zoonotic disease threats in SE Asia.*
- **Steven Phillips,**  
Senior Fellow, Chatham House (Royal Institute of International Affairs), United Kingdom.  
*Extractive Industries Infectious Diseases Risk Assessment and Management. Formerly Medical Director for Global Projects at Exxon Mobil Corporation. A recap of the challenges and lessons learned—steps to move policies ahead that enable multisectoral collaborations for improved human, animal, environmental health.*

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## BACKGROUND

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What we know about risks of transmission of zoonoses across the animal-human interface comes from epidemiologic investigations of outbreaks or of endemic disease. These investigations focus primarily on characterization of the pathogen and description of the standard epidemiologic triad of time, place, and person. Unfortunately, most have restricted inquiries about person to general characteristics – age, sex, and overall reported exposure to sick or infected animals. The consequence of this very general level of inquiry is exemplified by the case of avian influenza, one of the most commonly occurring emerging zoonotic diseases. Despite more than 600 cases and more than 350 deaths from avian influenza worldwide since 2003, a recent systematic review of pathways of exposure states that “...the extent and frequency of risk behaviors and the relative risk of different behaviors is currently unknown” (Kerkhove et al., 2011). This lack of knowledge is a serious deterrent to development of effective preventive programs.

There are, however, a few examples of investigations and of containment that benefited from including social scientists on the team. We will ask several scientists involved in some of these investigations to share their experiences and discuss how One Health investigations might regularly benefit from including social scientists.

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## OBJECTIVES

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This session will make the case for

- Specific attention to prevention, and to characterizing the environmental, social, behavioral, and systems context in which disease transmission and amplification occur as means of identifying important preventive measures
- Explicitly including a broader, social science perspective in outbreak investigation and containment as well as in assessing risks of transmission of endemic diseases
- Identifying policy and systems changes needed to integrate this social science perspective as an integral part of a One Health approach

### MODERATORS

**Stephen Luby**, Professor, Stanford University, USA

**Susan Zimicki**, Director, Infectious Diseases, FHI360, USA

### PANELISTS

- **Jeffrey Mariner**, Research Scientist, International Livestock Research Institute, Kenya
- **Saiful Islam**, Assistant Scientist, ICDDR, B, Bangladesh
- **Julienne Ngoundoung Anoko**, International Consultant Culture and Health, Spain/Cameroon
- **Barry Hewlett**, Professor of Anthropology, Washington State University, Vancouver, USA
- **Lertrak Srikitjakarn**, Dean Faculty of Veterinary Medicine, Chiang Mai University, Thailand
- **Cynthia Hunter**, Sebior Lecturer, Anthropology and International Public Health, University of Sydney, Australia

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## BACKGROUND

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After four days of conference, side events, and field visits, this session will confirm the commitment from leaders in various sectors to work together. It will discuss the ways towards 'sustainable effective cross-sectoral collaboration'. It discusses the approaches to long term effectiveness, efficiencies and sustainability of One Health strategies (policy, financing, systems competencies, risk stratification, civil society and private sector roles).

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## OBJECTIVES

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### MODERATOR

**Mark Smolinski**, Skoll Global Threats Fund

### PANELISTS

- Minister of Agriculture of Cambodia
- **Ali Ghufron Mukti**, Vice Minister of Health of Indonesia
- Minister of Environment of Bangladesh
- **Keiji Fukuda**, ADG of WHO
- One lady speaker, may be from NGOs from developing countries or United Nations Environmental Program (UNEP) or International Union for Conservation of Nature (IUCN) or CMS
- **Mark Rweynemamu**, Executive Director of Southern African Centre for Infectious Disease Surveillance (SACIDS), Tanzania
- Representative from the private sector
- Representative from the World Bank