PMAC | PRINCE MAHIDOL AWARD CONFERENCE 2018

PARALLEL SESSION 3.4

SHIFTING LANDSCAPES – REAL AND FIGURATIVE: UNDERSTANDING HOW ALTERED LAND USE IS DRIVING DISEASE EMERGENCE

| BACKGROUND

From urban growth to natural resource extraction and agricultural intensification, anthropogenic land use change is leaving an indelible mark on the planet. Globally, from 2000 – 2012, net forest cover loss totaled 1.5 million square kilometers, 32% of which occurred in tropical rainforest ecosystems. This radical alteration in our natural environment is contributing to an acceleration in the pace and diversity of vector-borne and zoonotic disease emergence, as humans, their livestock, and wildlife are placed into increasingly greater contact. This session will provide a forum for exploration of the mechanics of land use change-associated zoonotic disease emergence and novel, practical solutions to address this challenge.

| OBJECTIVES

- Understanding the various pathways that are transforming landscapes—from agricultural intensification to extractive industries and infrastructure development—as economically driven
- Enhanced understanding of the mechanisms through which land use change enables infectious disease emergence and/or re-emergence, including inter-related factors of biodiversity and human population change dynamics
- Reviewing the data on how various land use scenarios—including fragmentation of wildlife habitats—are linked to both vector-borne and non-vector-borne zoonotic disease transmission dynamics
- Highlighting proven models for addressing land use-associated disease emergence

Speaker

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Dr. Xianyan Tang, an associate professor of epidemiology & biostatistics at Guangxi Medical University in China, has worked as a visiting scholar in University of Franche-Comté and French Center for Disease Surveillance with the funding of XU Guangqi Program in 2011. During 2013-2016, he received the scholarship from China Medical Board (CMB) Rural PhD Training program to pursue the degree of Doctor of Philosophy (Epidemiology) at Prince of Songkla University in Thailand. He mainly focuses on the fields of Spatio-temporal epidemiology and Eco-epidemiology. Particularly, he conducts researches on the impact of eco-environmental factors on the spread of emerging & re-emerging infectious diseases. So far, he has worked as principal investigators (PIs) of the Open Competitive Research Grant of China Medical Board (CMB-OC), the Young Scientists Fund of National Natural Science Foundation of China (NSFC) and the Young Scientists Fund of Guangxi Provincial Natural Science Foundation, etc. Currently, he is the director of research & education department and the executive director of geographic information systems (GIS) research laboratory at Public Health School of Guangxi Medical University. Additionally, he is the peer-reviewer of several international and regional journals.