



## **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







#### Moderator

# Jonathan Epstein

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