

BRINGING TOGETHER SUSTAINABILITY, HUMAN, ANIMAL, AND PLANETARY HEALTH



ONE HEALTH CENTER
OF EXCELLENCE

UNIVERSITY OF FLORIDA

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Applying One Health thinking

- “One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment”
- Successful public health interventions require the cooperation of human, animal, and environmental health partners.

The One Health Triad



Learn more at <https://onehealth.phhp.ufl.edu/>

<https://www.cdc.gov/onehealth/basics/index.html>

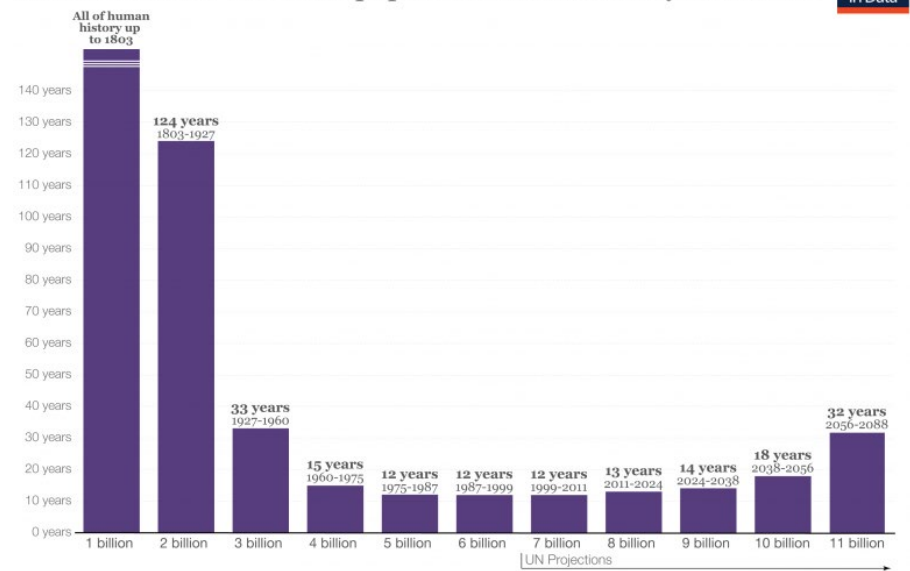
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Why One Health – wicked problems

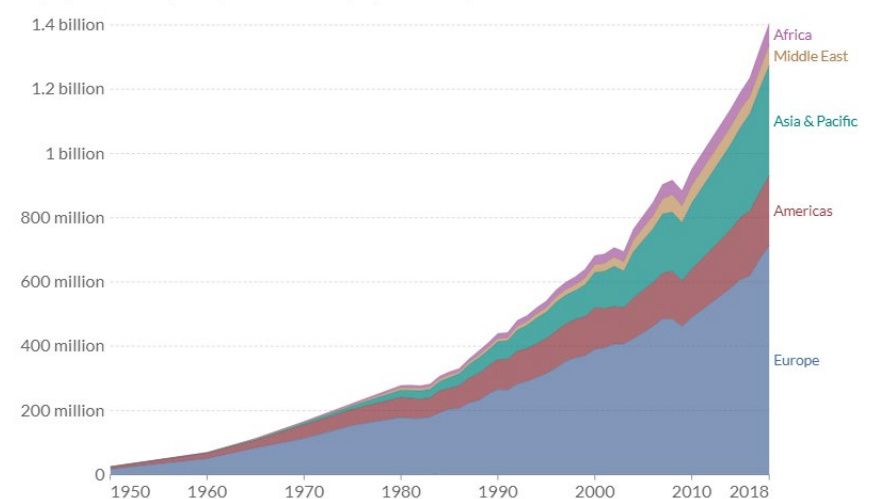
- ~60 to 75% of emerging infections are zoonotic in nature
- Global population of ~8 billion
- Drastic changes in agricultural practices
- Climate change

Time it took for the world population to increase by one billion 



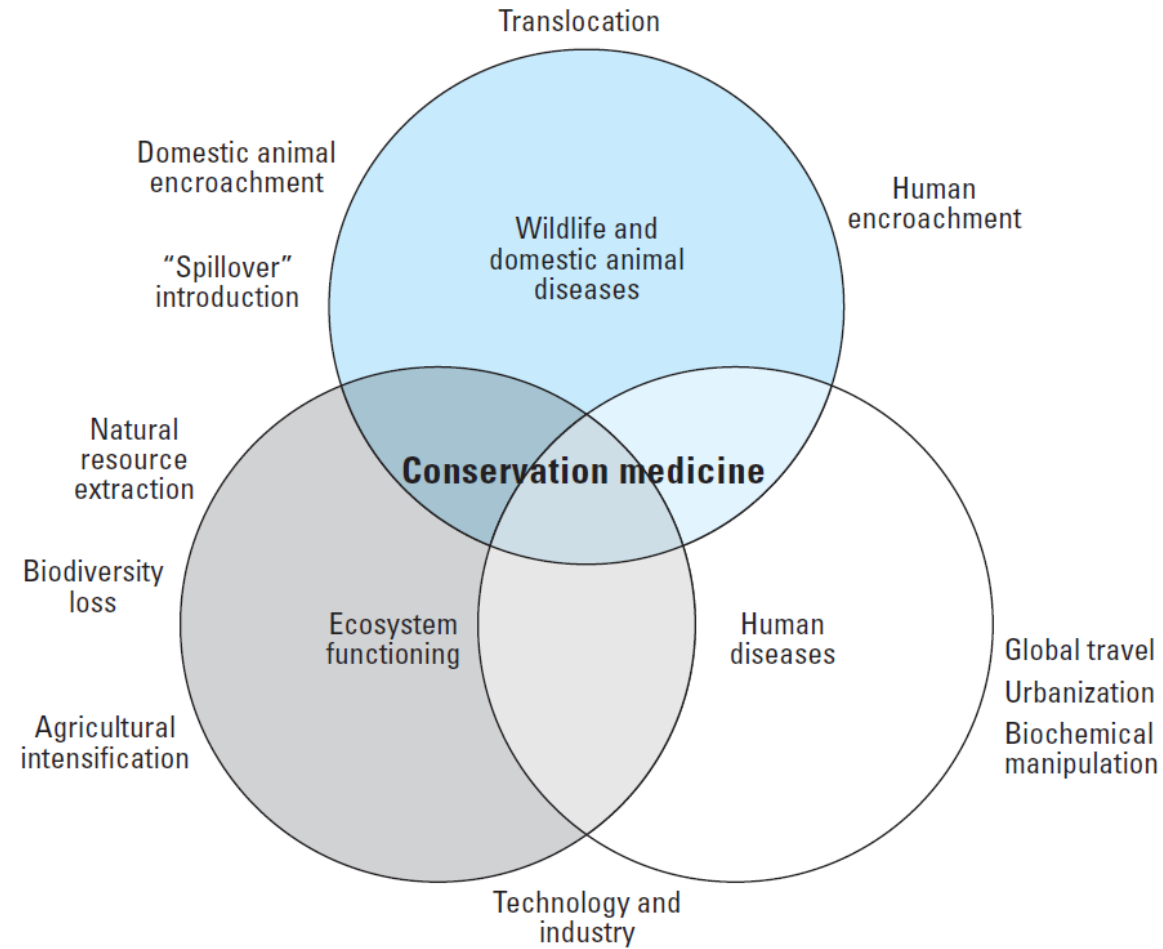
International tourist trips by destination region 

Trips by those who stay overnight and whose main purpose for visiting is not commercial.

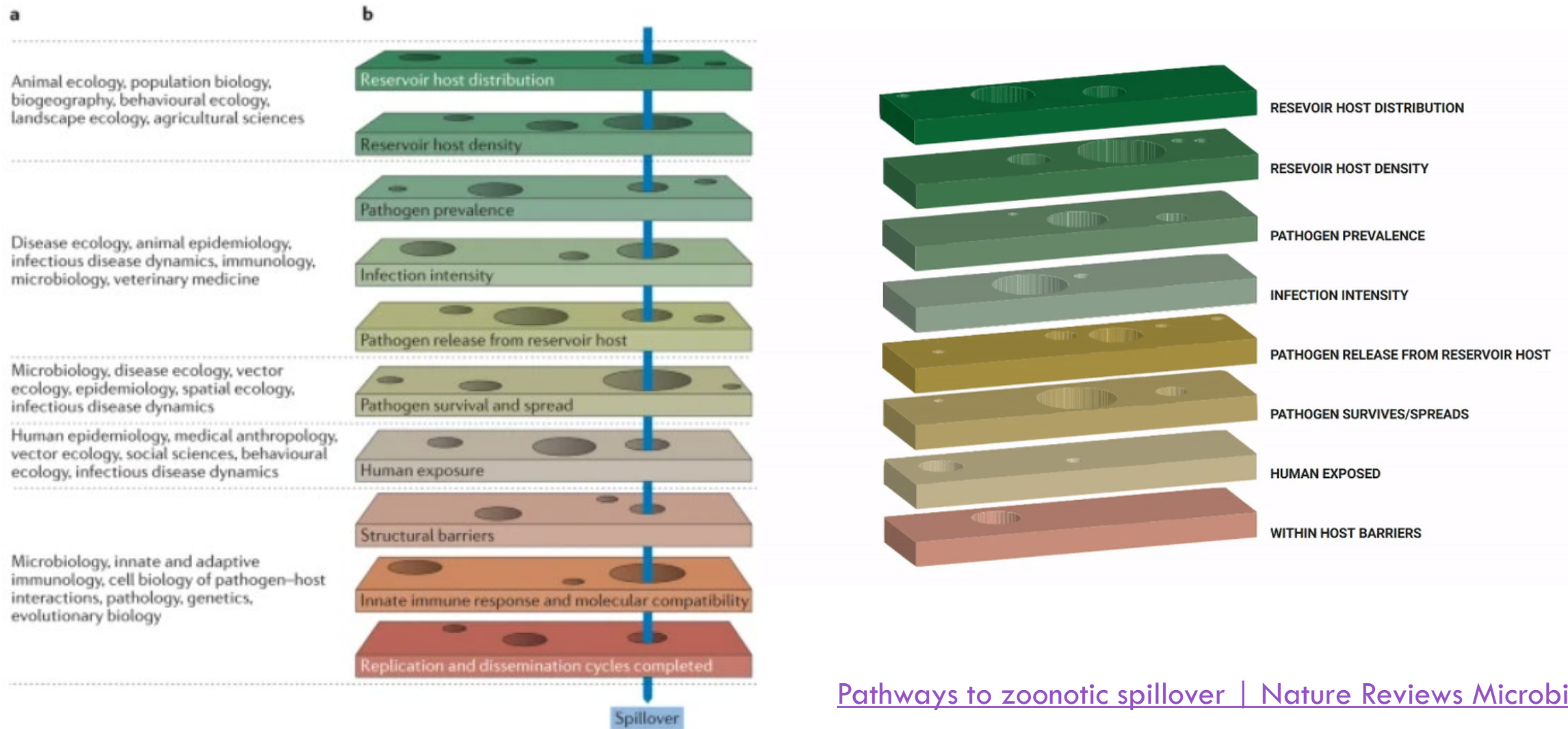


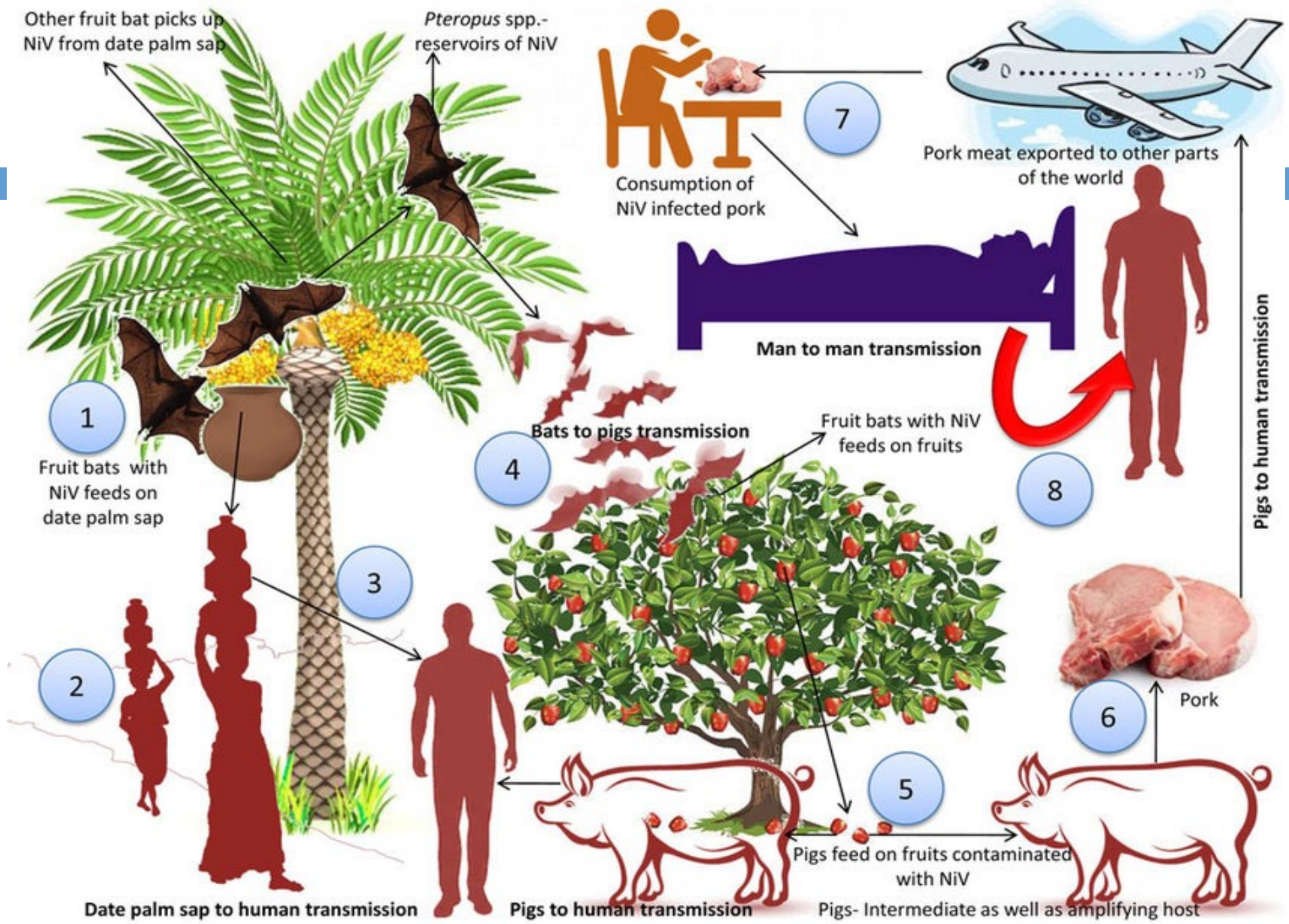
Data source: United Nations World Tourism Organization - World Tourism Barometer (2019)
[OurWorldInData.org/tourism](https://ourworldindata.org/tourism) | CC BY

One Health Intersections



Another way to think of intersections





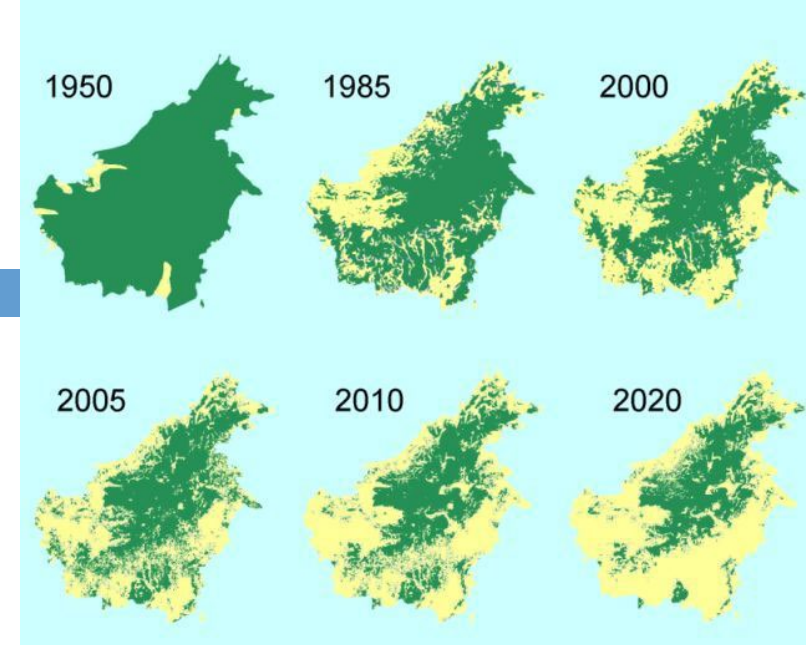
Agricultural practices

- Concentrated Animal Feeding Operations (CAFOs)
 - Millions of tons of manure every year
 - When improperly managed – poses serious environmental and public health risk
 - Manure lagoon – mix of antibiotics, estrogens, pesticides, parasites, and bacteria
 - Mixing ground for antibiotic resistance and gene transfer between bacterial DNA
 - When overflows have cracks or improper construction can leak into water table

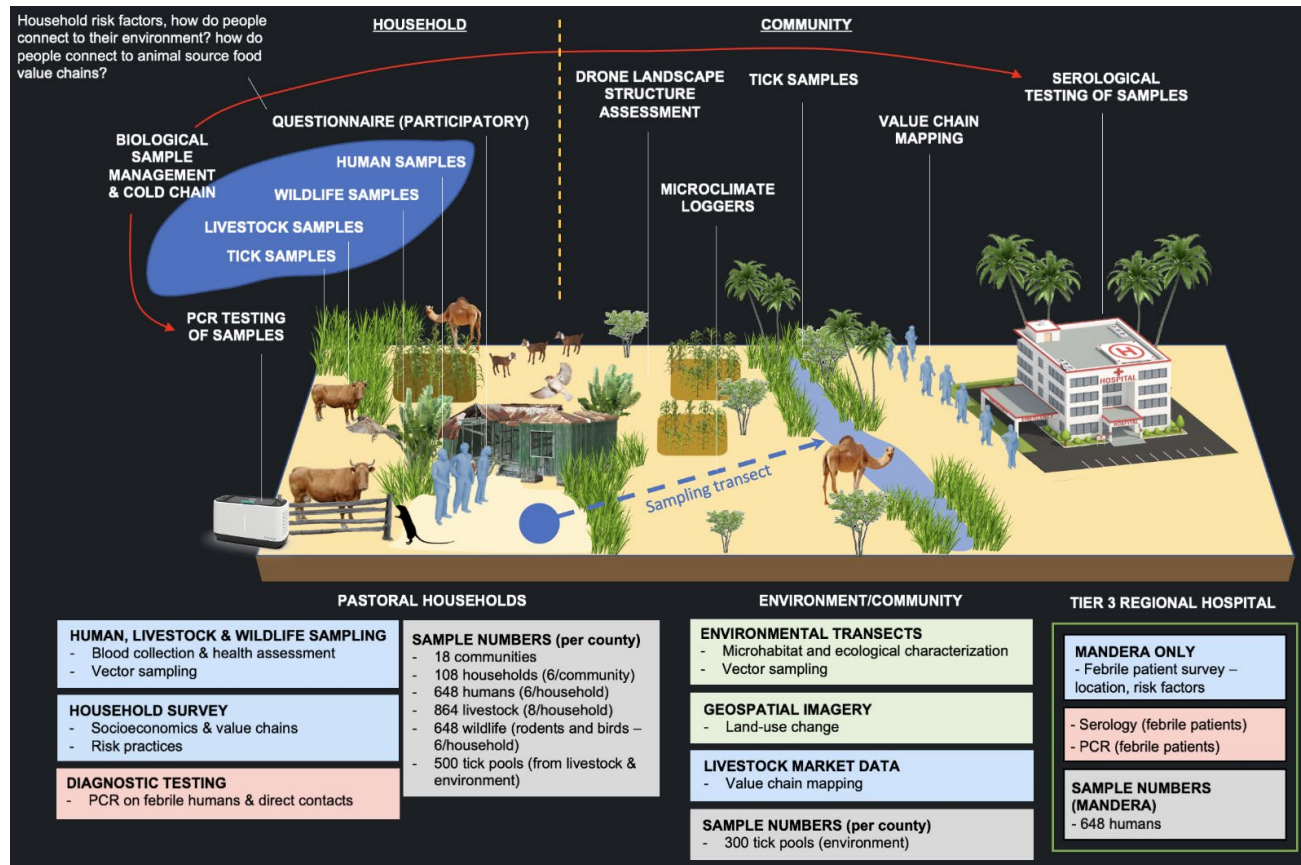


Agriculture processes

- Settlements of untouched territory for farming
Palm oil deforestation in Borneo
- Deforestation of rainforests
 - Brings humans into greater contact with new species of animals
 - Disrupts existing ecosystem allowing for the emergence of disease
- Human activity can lend competitive advantage to certain species
 - Increases in rodent, mosquito, fly etc populations, paired with decrease in natural predators
 - Increased viral shedding by distressed wildlife



The importance of understanding value chains



- We must adopt systems thinking that include stakeholders across sectors
- Taking holistic approaches to our research that include social and economic drivers of decision making
- Finally, we must continue to think Globally, but act locally
 - ▣ It adds up!

One Health Center of Excellence

- Happy to engage offline with students, faculty and attendees!
- Email: mvonf@ufl.edu
- Follow the One Health Center on Instagram – **onehealth_uf**

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