



# A “One Health” strategy for building capacities for preventing and responding to disease outbreaks

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On behalf of RESPOND Partners:

DAI, Tufts, UMN, TRG & E&E

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# Acknowledgements

- “One Health” Microbes
  - HIV/AIDS virus
  - Ebola virus
  - SARS virus
  - Influenza A subtype H5N1
  - Influenza A subtype H1N1
- Molecular epidemiologists
- Medical anthropologists

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**FAO/OIE/WHO. 2008.** Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface.

**Jones, K.E., et al. 2008.** Global trends in emerging infectious diseases. *Nature* **451**:990-994.

**WCS. 2004.** The Manhattan Principles. One World, One Health: Building Interdisciplinary Bridges to Health in a Globalized World Conference. New York. 29 September 2004.

**Taubenberger JK, et al. 2005.** Characterization of the 1918 influenza virus polymerase genes. *Nature*. **437**(7060):889-893

**Hewlett, B.S. & Hewlet, B.L. 2007.** Ebola, Culture and Politics: The Anthropology of an Emerging Disease. Thomson Wadsworth Publishing, Belmont.



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# Major challenges



- How do we **transform systems and professions** to respond more efficiently and sustainably to disease prevention and control requirements?
- How do we **work with industries** currently active in locations where animal-human-environment interface is a daily reality?
- How do we **enable disciplines to work together?**

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# One Health



- An interdisciplinary strategy to address health from an integrated perspective rather than a discipline-based fragmented perspective ....
- Is not a discipline, it's an approach

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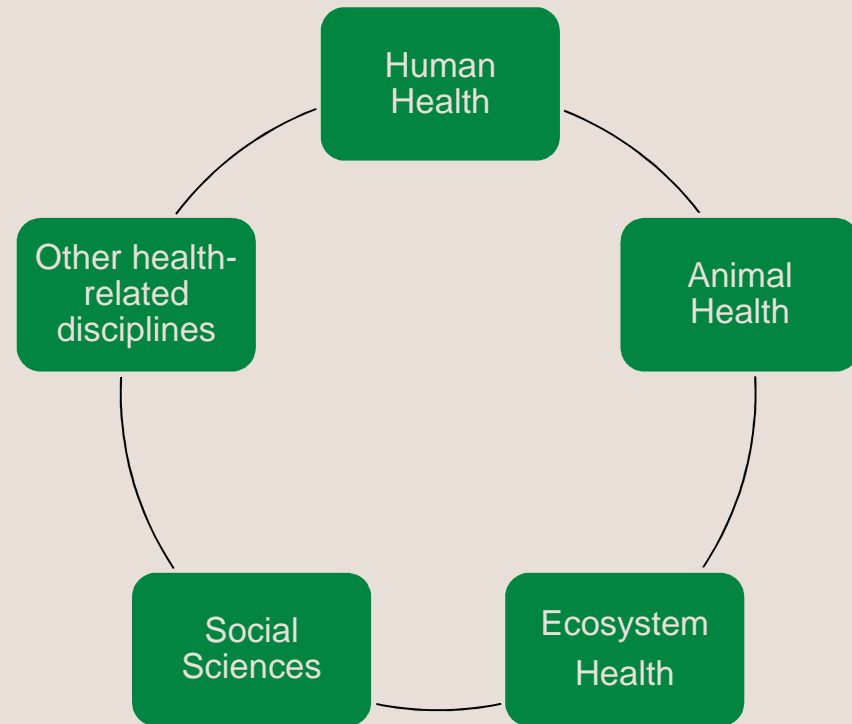
# One Health Competencies



Support the development of **skills for efficient and effective collaboration** among disciplines for solving shared health challenges.

Such skills include:

- sharing of information, knowledge and data
- strengthening the relationships and interdependencies.



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Moving from ideas to action –  
operationalizing a One Health  
approach to disease prevention  
and control is challenging

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# Barriers to implementing One Health in general



- History
- Professional biases
- Policies
- Jurisdiction
- Resources
- Culture
- Inertia

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Different organizational structures ...

Different surveillance systems ...

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Thanks to H5N1

Inter-Ministerial & Multi-Disciplinary Commission

Ministry of Health

Ministry of Agriculture

Ministry of "Environment"

Province

Province

District

District

National  
Parks

Reserves

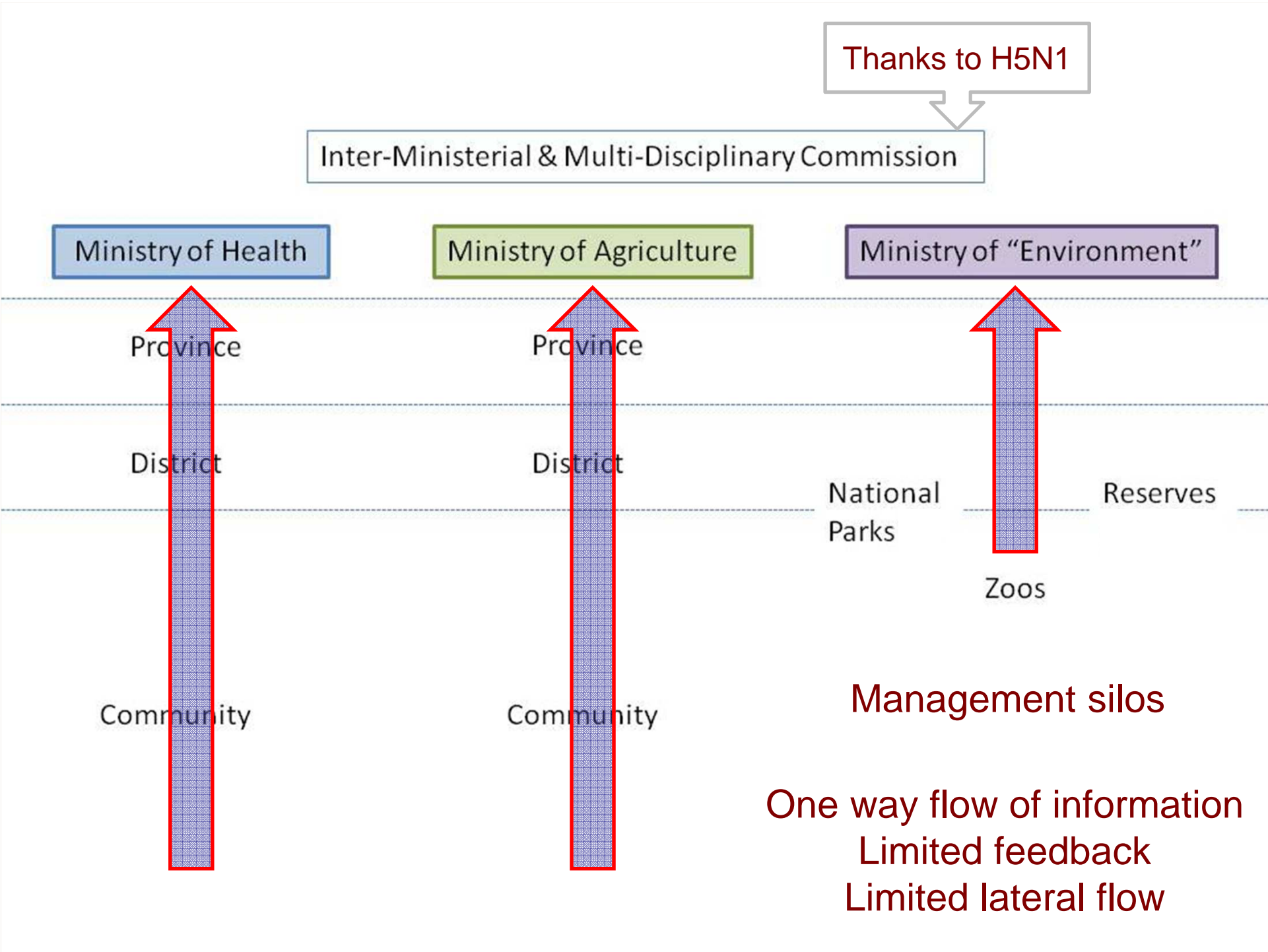
Zoos

Community

Community

Management silos

One way flow of information  
Limited feedback  
Limited lateral flow





Unequal human resource capacity ...  
... lack of front line responders from  
all health professions

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# per 100,000 people	DRC	Lao PDR	USA
Medical doctors	8.7	59	304
Veterinarians	1.5	0.001	29

Ministry of Health

Ministry of Agriculture

Ministry of "Environment"

Province MD

Province Vet

District MD

District Vet/Vet Tech

National Parks

Reserves

Rangers

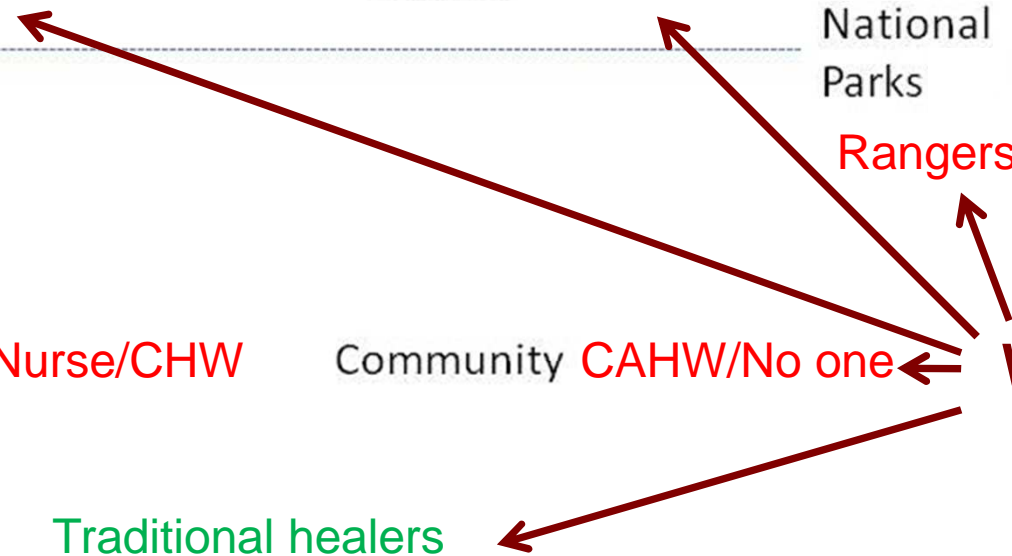
Zoos

Community Nurse/CHW

Community CAHW/No one

**Who are the first responders?**

Traditional healers





So, given that things are a little  
complicated ...

What approach are we taking?

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# Transforming what we understand “Public” Health to be....

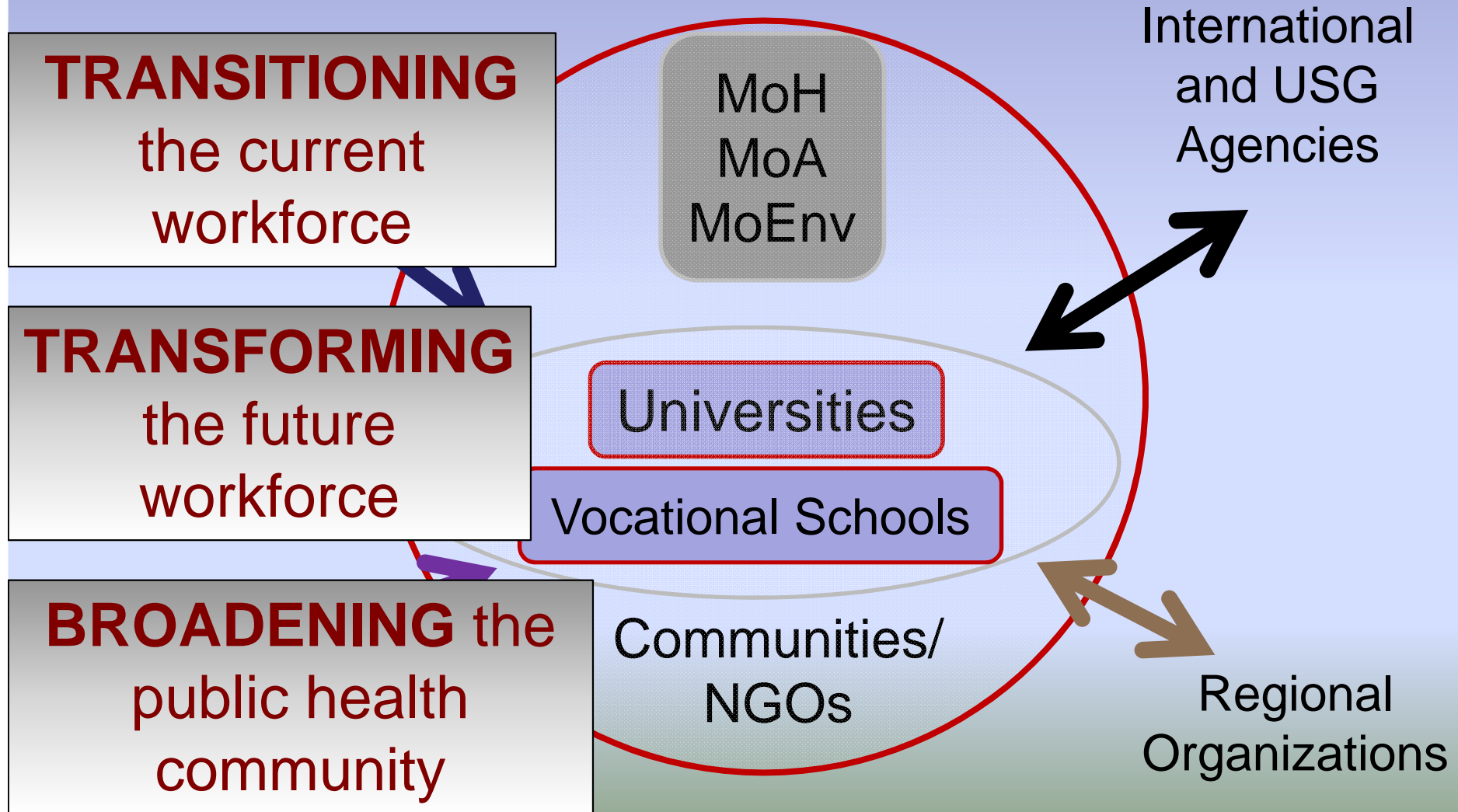
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# One Health Approach



# TRANSFORMATION - Training the leaders of tomorrow to:

- Transform ways of thinking about and providing public health services
- Strengthen existing regional pre-service and graduate programs in Public Health, Veterinary Medicine, Nursing, Wildlife Health, Medicine
- Link regional Human, Veterinary, and Wildlife Health training opportunities



Human - Wildlife



Wildlife - Domestic

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## TRANSITIONING the current workforce by:

- Building cross-sectoral skills and knowledge
- Creating One Health connections and networks
- Developing career paths for women and men
- Operationalizing One Health systems at all levels



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## BROADENING public health to improve disease control by:

- Catalyzing government linkages
- Expanding the community of front-line responders
- Linking university expertise and students to community needs
- Strengthening community front-line responder training
- Building trainee understanding by working with communities



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## Core Approach: One Health Alliances

### “One Health Central and Eastern Africa”

- Links schools of Public Health and Veterinary Medicine in 16 universities in 6 African countries (DRC, Ethiopia, Kenya, Rwanda, Tanzania, Uganda) and the US
- Supports and facilitates National One Health Coordinating Teams that bring government, communities and academic institutions together
- Evolving platform

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# Core Approach: Partner with extractive industries

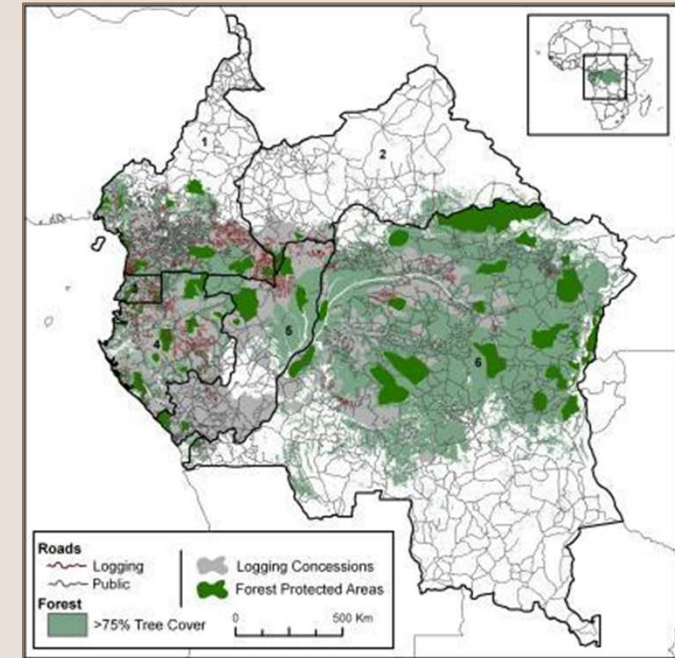
Why extractive industries?

**Problem:** Operate in remote, biodiverse regions

**Solution:** Equator Principles and International Finance Corporation's Performance Standards (environmental and social management plans)

Industries often fund Corporate Social Responsibility (CSR) programs

They are motivated to maintain a stable and healthy local community



**Laporte, et al. 2007.** Expansion of industrial logging in Central Africa. *Science* **316**(5830):1451

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# Extractive industries opportunity: Gabon

- Potential broad approach with engagement of Ambassadors, government departments and private companies
- Extensive extractive industry activities
- History of Ebola outbreaks
- Public-Private Partnerships to support community-level biosecurity activities



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# Vision



- Each One Health professional is well-trained for their roles, mandated and appropriately equipped
- Professions have improved skills to work collaboratively with each other and with government, the private sector and the community
- Health systems benefit from One Health efficiencies

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Healthy animals  
Healthy people  
Healthy communities



Asante sana  
Amesegnalehu  
Merci beaucoup  
Muito obrigada  
Terima kasih  
Thank you



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