

# Breaking Barriers > Making Wildlife Count

Sarah H. Olson, Director of Health Research, WCS Health Program

*Breaking Barriers, 12 October 2023, Berlin*



# WCS MISSION & VISION

## Mission

WCS saves wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature.

## Vision

WCS envisions a world where **wildlife thrives in healthy lands and seas**, valued by societies that embrace and benefit from the diversity and integrity of life on earth.



**Wildlife  
Conservation  
Society**

# Wildlife health surveillance has no systematic approach

- No disease monitoring for vast majority of species
- Outside of WOAHA listed diseases (mostly livestock-related) – **no requirement for wildlife disease reporting**
- Voluntary reporting is minimal (75% from Europe)
- Response to mortality events are **reactive, not preventative**
- No international organization integrates wildlife into disease risk reduction efforts
- 25% of mammals threatened with extinction
- Extinction rates are 1000x above background levels

**Urgent  
Needs for  
Global  
Wildlife  
Health**



# Reality check

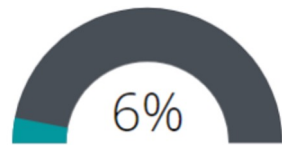
## Gaps in health security related to wildlife and environment affecting pandemic prevention and preparedness, 2007–2020

Catherine Machalaba,<sup>a</sup> Marcela Uhart,<sup>b</sup> Marie-Pierre Ryser-Degiorgis<sup>c</sup> & William B Karesh<sup>a</sup>

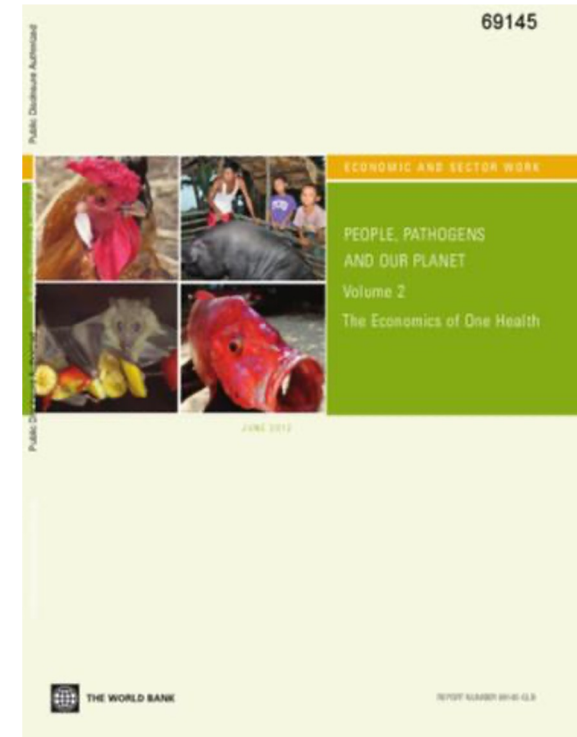
Among 107 countries (based on published reports):



No functional wildlife health surveillance program



Mention wildlife health or zoonotic disease activities in a published National Biodiversity Strategy and Action Plan

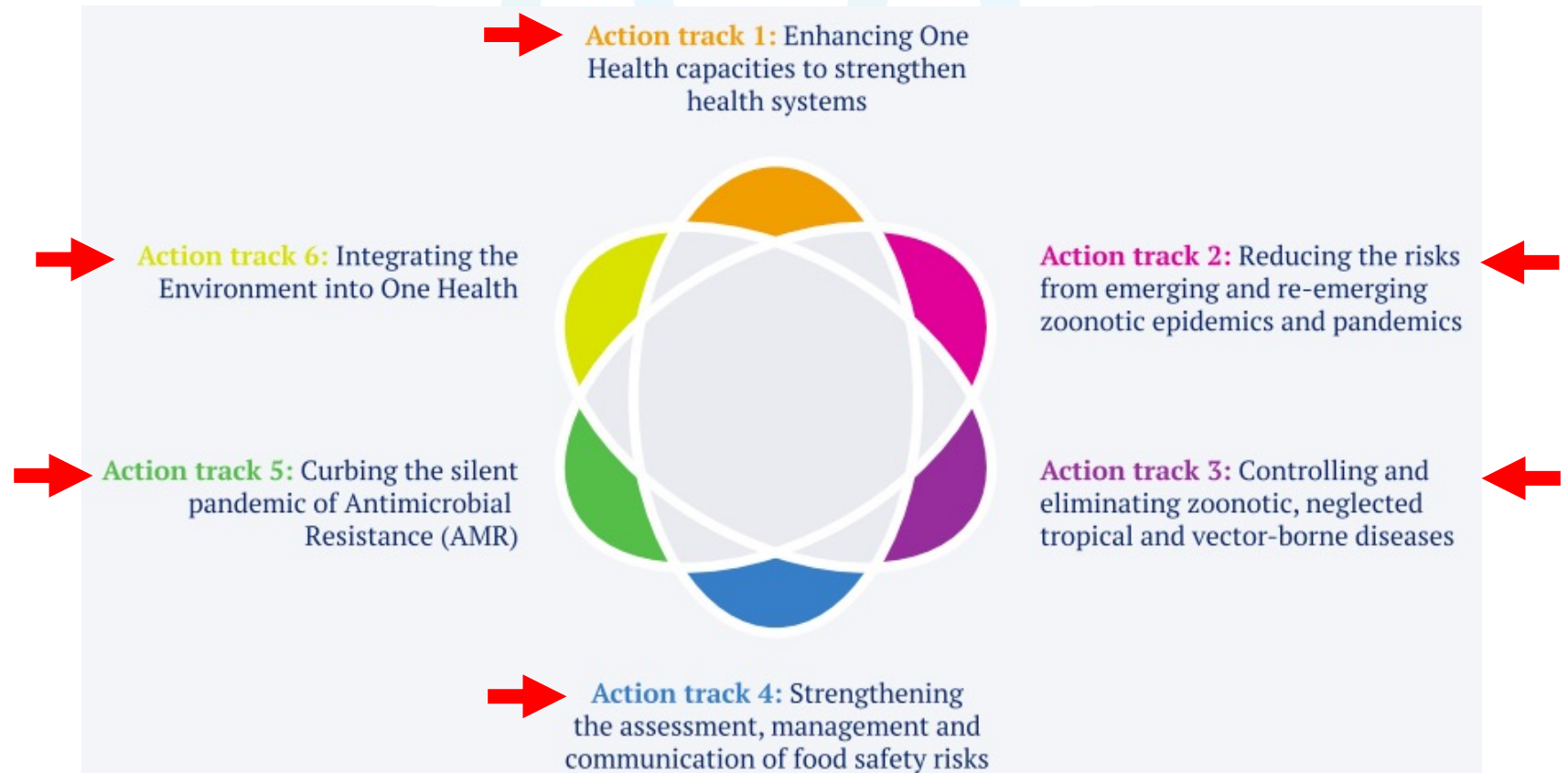


World Bank report: "*Government investment in wildlife health services is minimal*"

# Impetus for wildlife surveillance

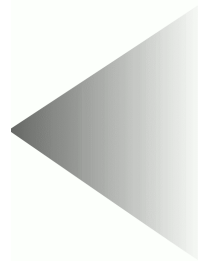


## ONE HEALTH JOINT PLAN OF ACTION (2022-2026)





**Wild  
Health  
Net**



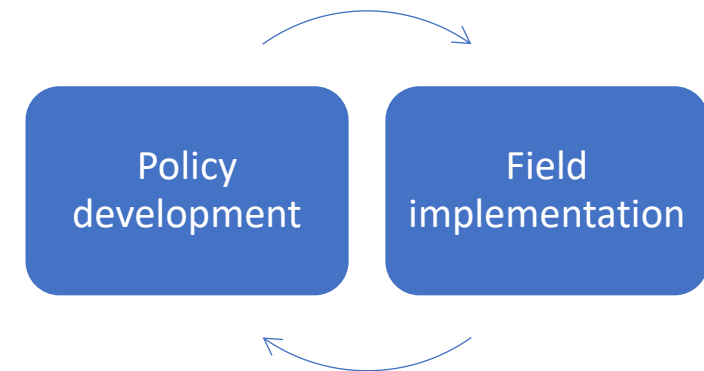
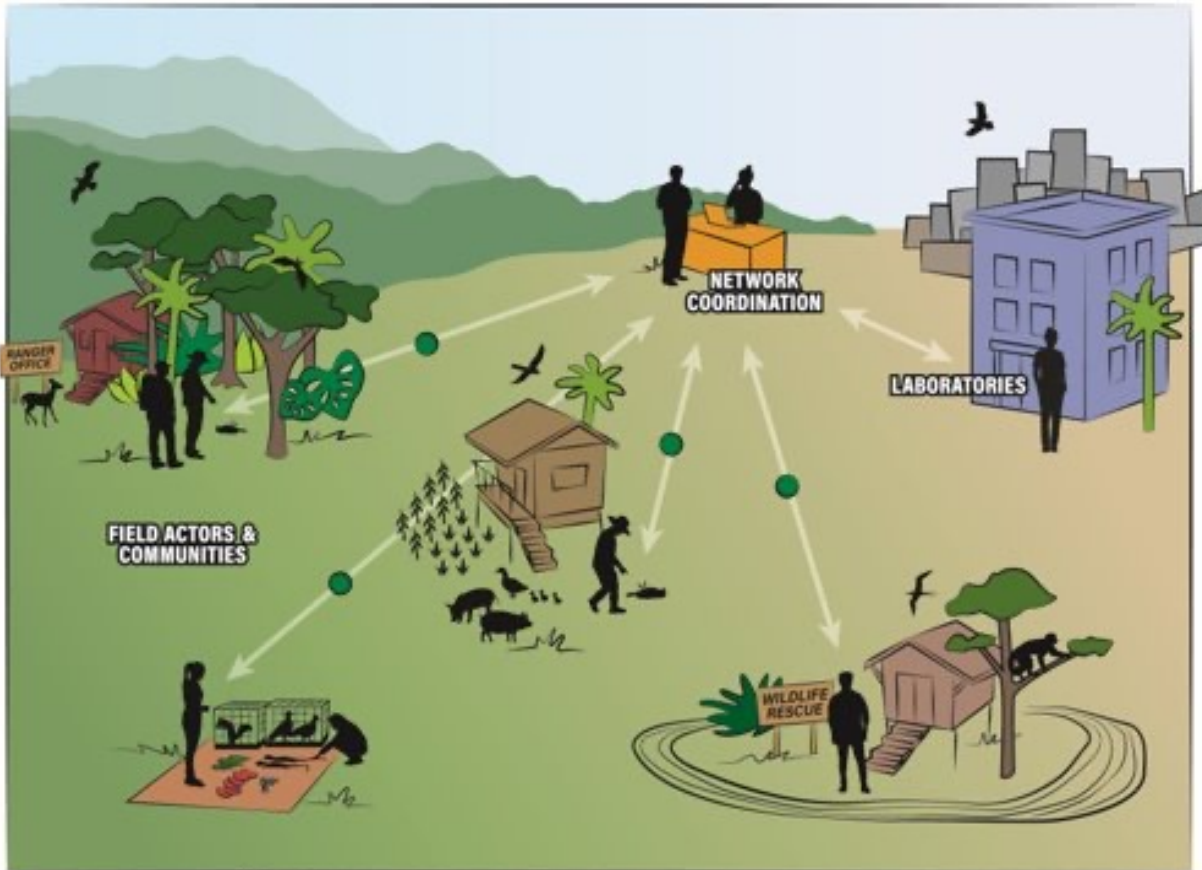
WildHealth**Build**  
WildHealth**Skills**  
WildHealth**Tech**  
WildHealth**Response**



WildHealth**Build**  
WildHealth**Skills**  
WildHealth**Tech**  
WildHealth**Response**

# WildHealthBuild:

- ✓ Identify, connect, and integrate actors into operational networks
- ✓ Map communication and build durable relationships among network actors
- ✓ Formalize responsibilities with partners
- ✓ Government adoption of protocols





Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

## Standard Operating Procedure For Wildlife Health Surveillance in Lao PDR

ລະຫັດມາດຕະຖານ: ມກປ-ລປ-2022-00018  
STDCODE: AFSTD-LF-2022-00018

Published by:  
Department of Livestock and Fisheries, Ministry of Agriculture and Forestry







WildHealth**Build**  
WildHealth**Skills**  
WildHealth**Tech**  
WildHealth**Response**

# WildHealthSkills:

- ✓ Identify existing capacity, knowledge gaps, and available human resources across network
- ✓ Deliver targeted and context-specific training
- ✓ Evaluate training effectiveness
- ✓ Train the trainers and provide teaching resources





WildHealth**Build**  
WildHealth**Skills**  
WildHealth**Tech**  
WildHealth**Response**

# WildHealthTech:

- ✓ Identify technology needs
- ✓ Deploy appropriate and sustainable solutions
- ✓ Facilitate field data collection
- ✓ Support effective and standardized data management and analysis to supports decision making



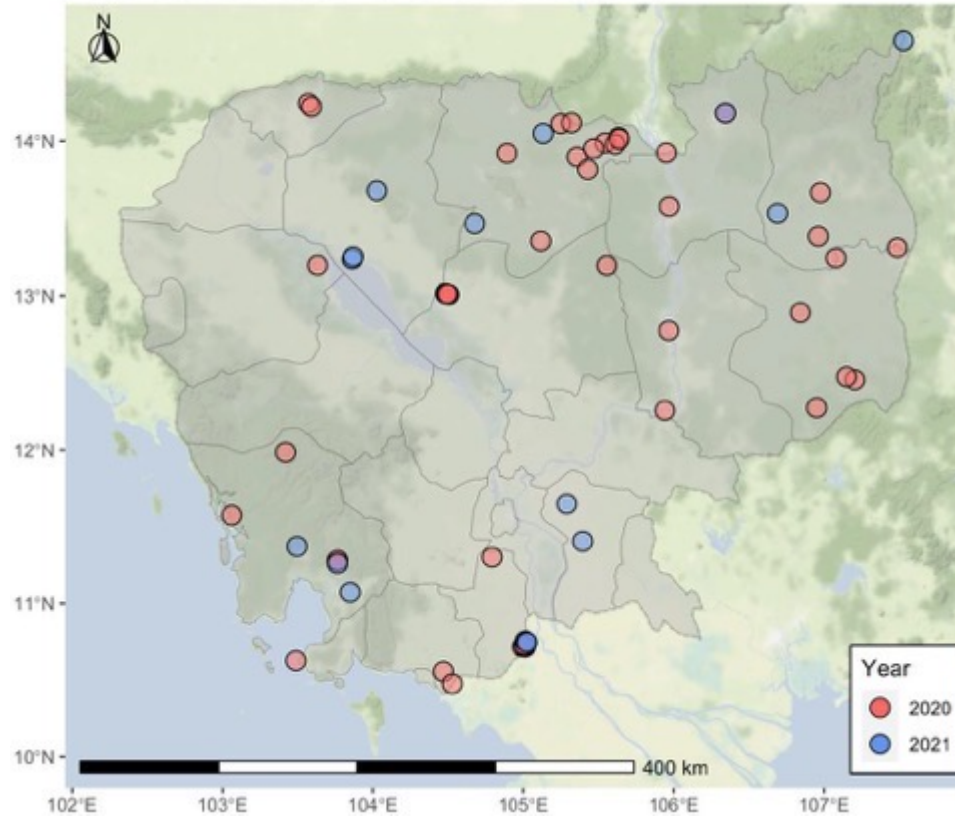


WildHealth**Build**  
 WildHealth**Skills**  
 WildHealth**Tech**  
 WildHealth**Response**

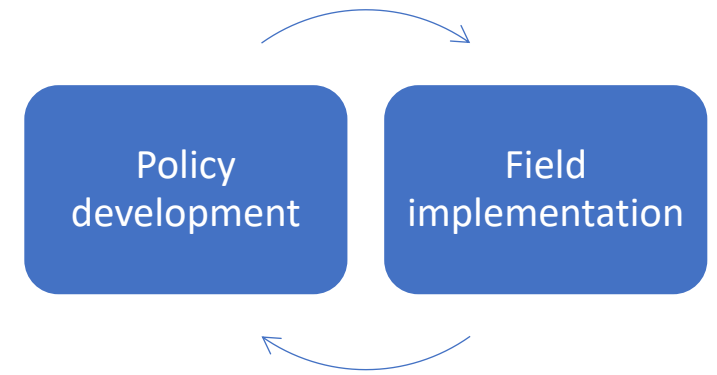
# WildHealthResponse:



## Events in Cambodia



107 Morbidity/Mortality Events; 97 carcasses collected



Porco et al. (2023) Case report: Lumpy skin disease in an endangered wild banteng (*Bos javanicus*) and initiation of a vaccination campaign in domestic livestock in Cambodia, *Frontiers in Veterinary Science*

Global wildlife health surveillance is  
bigger than one single institution

# Working Group Challenge



## Global

- International organization
- National organizations with international mandates



## National

- National Laboratories
- National Parks & Preserves
- Universities



## Ministerial

- Livestock, Forestry, Animal Health, Environment Departments & Ministries



## Provincial

- Provincial Offices
- Wildlife Rescue Centers/Zoos



## Local

- Community Members
- Local NGOs
- International NGOs

Environmental

Animal Health

Human Health

# Working Group Challenge



Global

WHO  
WOAH  
FAO



National

Thailand (MoZWE)  
Canada (CWHC)  
US (USGS)



Ministerial

WCS



Provincial

Livestock (USDA & ILRI)  
Australia (WHA)  
Academic partners



Local

• Community  
• M Samson  
• Cree  
• Nation

Environmental

Animal Health

Human Health

## Vision for wildlife health surveillance:

- everywhere at all times particularly where it matters most
- where risks are higher
- where populations are more vulnerable

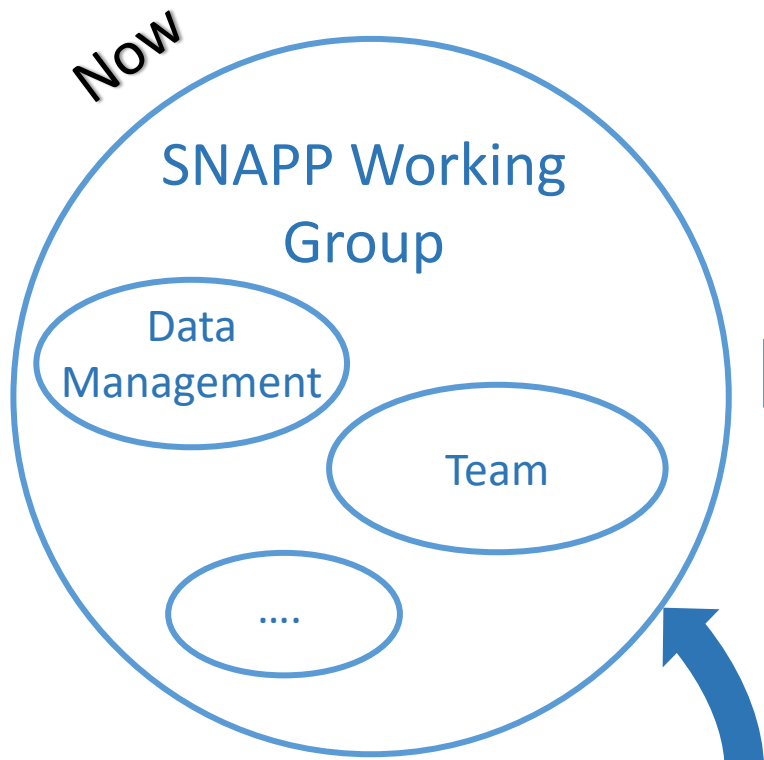
## SNAPP Working Group objectives:

- 1) Coordinated approach to wildlife health surveillance developed and formalized as a consortium
- 2) Data-driven synthesis and a Theory of Change to support implementation of wildlife health surveillance



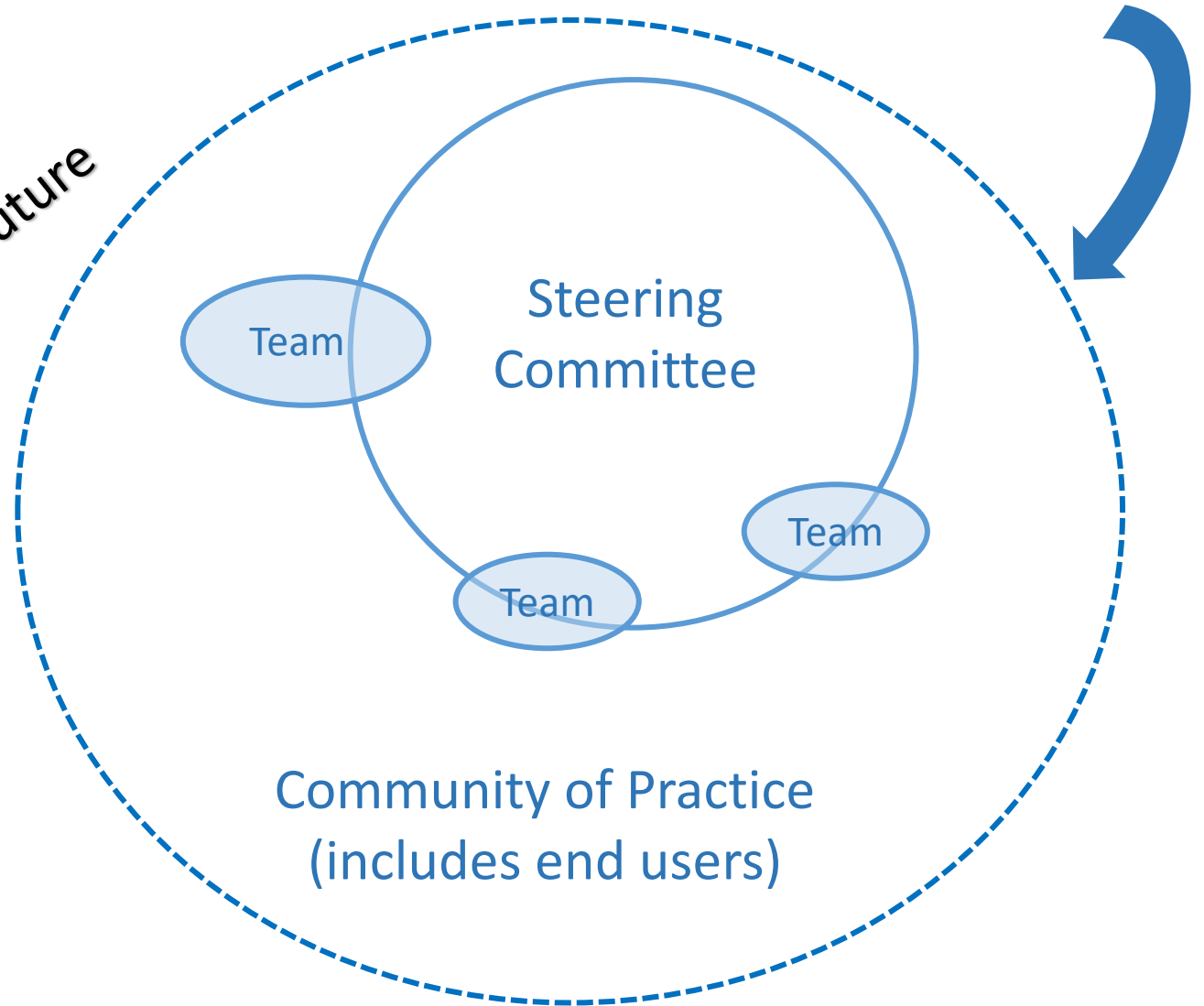
Working group participants, July 2023, at WOH Office in Paris

# Wildlife Health Intelligence Network (WHIN)



SNAPP Working Group =  
Interim Steering Committee

*Future*





# Thank you!

## Resources:

Olson, S. H., Fine, A. E., Pruvot, M., Keatts, L. O. & Walzer, C. Ground zero for pandemic prevention: reinforcing environmental sector integration. *BMJ Glob. Heal.* 8, e013600 (2023).

Denstedt, E. et al. Detection of African swine fever virus in free-ranging wild boar in Southeast Asia. *Transbound. Emerg. Dis.* 68, 2669–2675 (2021).

Pruvot, M. et al. WildHealthNet: Supporting the development of sustainable wildlife health surveillance networks in Southeast Asia. *Sci. Total Environ.* 863, 160748 (2023).

Porco, A. et al. Case report: Lumpy skin disease in an endangered wild banteng (*Bos javanicus*) and initiation of a vaccination campaign in domestic livestock in Cambodia. *Front. Vet. Sci.* 10, (2023).

<https://oneworldonehealth.wcs.org/Initiatives/WildHealthNet.aspx>



Commentary

BMJ Global Health

## Ground zero for pandemic prevention: reinforcing environmental sector integration

Sarah Helen Olson <sup>1</sup>, Amanda E Fine <sup>1</sup>, Mathieu Pruvot <sup>1,2</sup>, Lucy O Keatts <sup>1</sup>, Chris Walzer <sup>1,3</sup>

RAPID COMMUNICATION

WILEY

### Detection of African swine fever virus in free-ranging wild boar in Southeast Asia

Emily Denstedt<sup>1,2</sup>  | Alice Porco<sup>2,3</sup> | Jusun Hwang<sup>2,4,5</sup>  | Nguyen Thi Thanh Nga<sup>4</sup> | Pham Thi Bich Ngoc<sup>4</sup> | Sokha Chea<sup>3</sup> | Kongsy Khammavong<sup>1</sup> | Phonesavanh Milavong<sup>1</sup> | Sreyem Sours<sup>3</sup> | Kristina Osbjørn<sup>6,7</sup>  | Sothyra Tum<sup>8</sup> | Bounlom Douangneun<sup>9</sup> | Watthana Theppanya<sup>9</sup> | Nguyen Van Long<sup>10</sup> | Nguyen Thanh Phuong<sup>11</sup> | Le Tin Vinh Quang<sup>11</sup> | Vo Van Hung<sup>11</sup> | Nguyen Thi Hoa<sup>12</sup> | Dao Le Anh<sup>12</sup> | Amanda Fine<sup>2,4</sup>  | Mathieu Pruvot<sup>2,13</sup> 

Overview

About WildHealthNet | Vision Statement | Our Approach in Practice

### Case report: Lumpy skin disease in an endangered wild banteng (*Bos javanicus*) and initiation of a vaccination campaign in domestic livestock in Cambodia

Alice Porco<sup>1\*</sup>, Sokha Chea<sup>1</sup>, Sreyem Sours<sup>1</sup>, Vonika Nou<sup>2</sup>, Milou Groenberg<sup>3</sup>, Cain Agger<sup>1</sup>, Sothyra Tum<sup>1</sup>, Vanna Chhuon<sup>5</sup>, San Sorn<sup>2</sup>, Chamnan Hong<sup>6</sup>, Ben Davis<sup>7</sup>, Sharyn Davis<sup>7</sup>, Sereyrotha Ken<sup>11</sup>, Sarah H. Olson<sup>8</sup> and Amanda E. Fine<sup>8\*</sup>

Sarah Olson, Director, Health Research  
WCS Health Program, [solson@wcs.org](mailto:solson@wcs.org)