System-wide Approach to Wildlife Health Capacity Enhancement in Southeast Asia

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https://doi.org/10.3389/fvets.2024.1462280

Ecosystem Degradation, Emerging Infectious Diseases, and the Need for National Wildlife Health Programs

- Global environment favoring the emergence of infectious diseases

- Many emerging disease threats to human, animal and ecosystem health are of wildlife origin

- Increasing the need for national-level wildlife health programs

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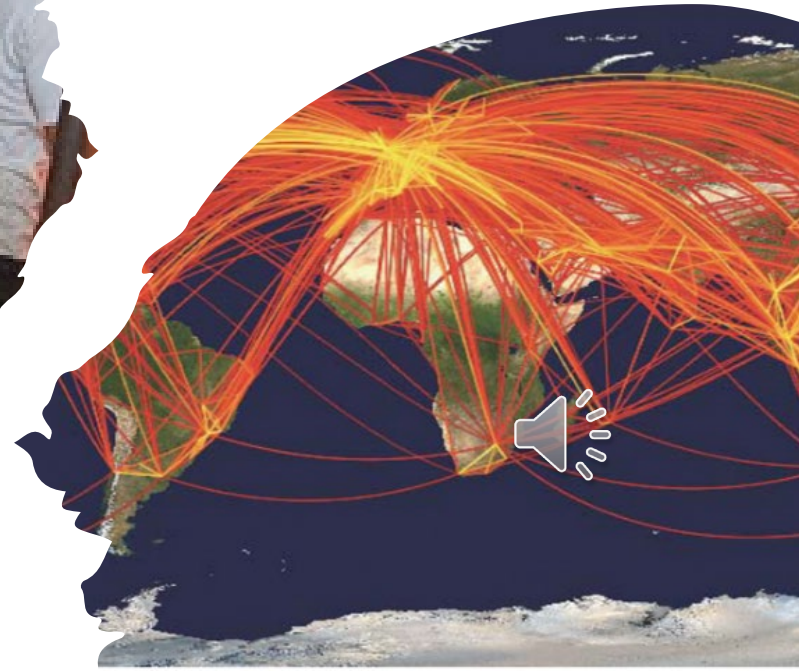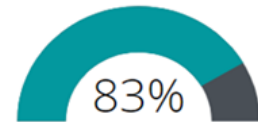
Gaps in Wildlife Health Program Capacity

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

Catherine Machalaba,[a] Marcela Uhart,[b] Marie-Pierre Ryser-Degiorgis[c] & William B Karesh[a]
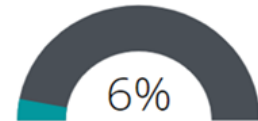
Among 107 countries:
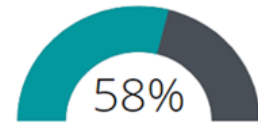
58% No evidence of functional wildlife health surveillance program

83% Reported gaps in operations, coordination, scope, or capacity.

6% Wildlife health or zoonotic disease activities in published a National Biodiversity Strategy and Action Plan

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US Geological Survey National Wildlife Health Center formally twinned

with **Mahidol University/Thailand National Wildlife Health Cente**r

through the **World Organisation for Animal Health** to enhance expertise

and create a WOAH Collaborating Centre for the Asia Region

System-wide Approach

Enabling environment

Institutional dimension

Individual capacity

Wildlife Health Program Needs Assessment

| Detection of pathogens and diseases	Identification of pathogens	Information management	Analysis and communication
• Network of people who are likely to encounter dead or sick, wild animals and collect samples	• Laboratory and personnel experienced with wildlife pathogens	• Data storage and standards	• Information relayed to those who can take action (e.g., disease management and prevention)

Stephen et al. Attributes of National Wildlife Health Programs, 2018
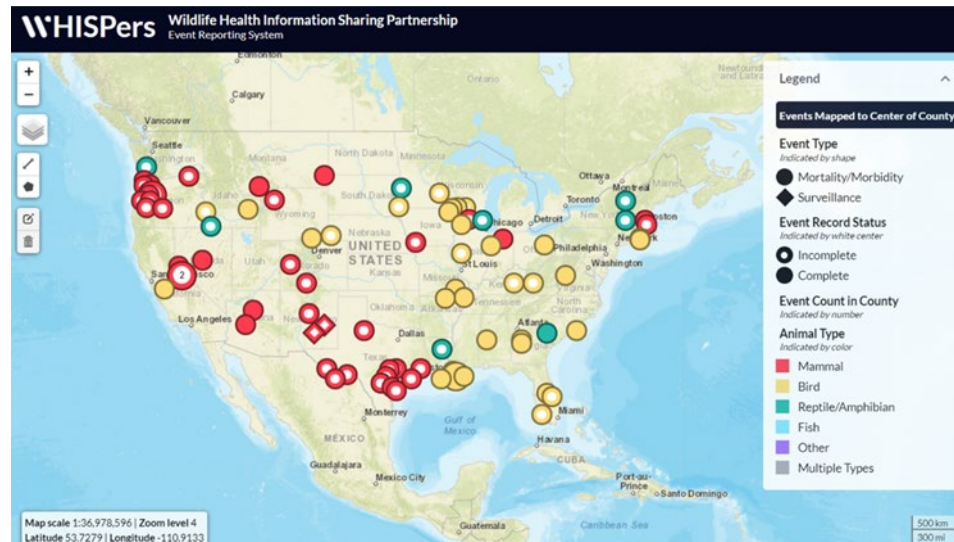
Needs Assessment for the Thailand National Wildlife Health Center

- Project initiated with a needs assessment during October 2019.
- Key needs identified included:

- *Development and implementation of a diagnostic and surveillance data and information management system*

- *Enhancement of the general (morbidity and mortality) wildlife disease surveillance system and partner network*

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Workshops 1 and 2

Data and Information Management

Explored data needs and purpose

November 2020, March 2022

Virtual, 54 people

Goals of Data Collection

Provide early detection of disease threats, including threats to wildlife, livestock, and humans.

Direct disease control and prevention actions

Increase situational awareness, i.e., knowledge of current disease risks and assessment of these risks to wildlife, livestock, and people

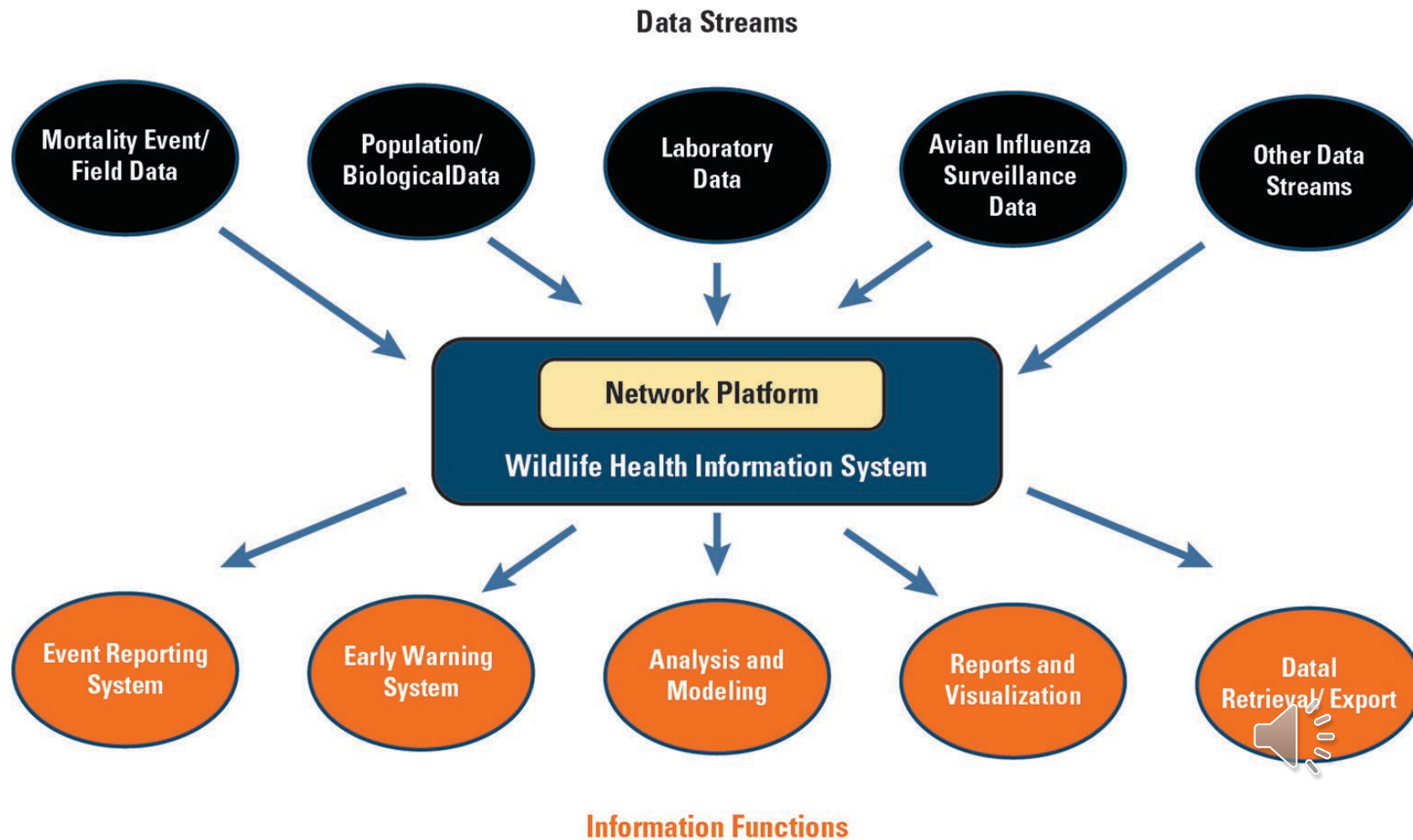Guide allocation of resources through knowledge of priority species, locations, and diseases

Improved understanding of disease dynamics (understanding the etiology of outbreaks and transmission) to direct management actions.

Direct law enforcement actions

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Information Management Prototype Developed

Prototype Wildlife Health Information Management System for Thailand

Data Streams

Mortality Event/ Field Data

Population/ BiologicalData

Laboratory Data

Avian Influenza Surveillance Data

Other Data Streams

Network Platform

Wildlife Health Information System

Event Reporting System

Early Warning System

Analysis and Modeling

Reports and Visualization

Datal Retrieval/ Export

Information Functions

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Workshop 3

General Wildlife Disease Surveillance

Provide a road map for the future desired state
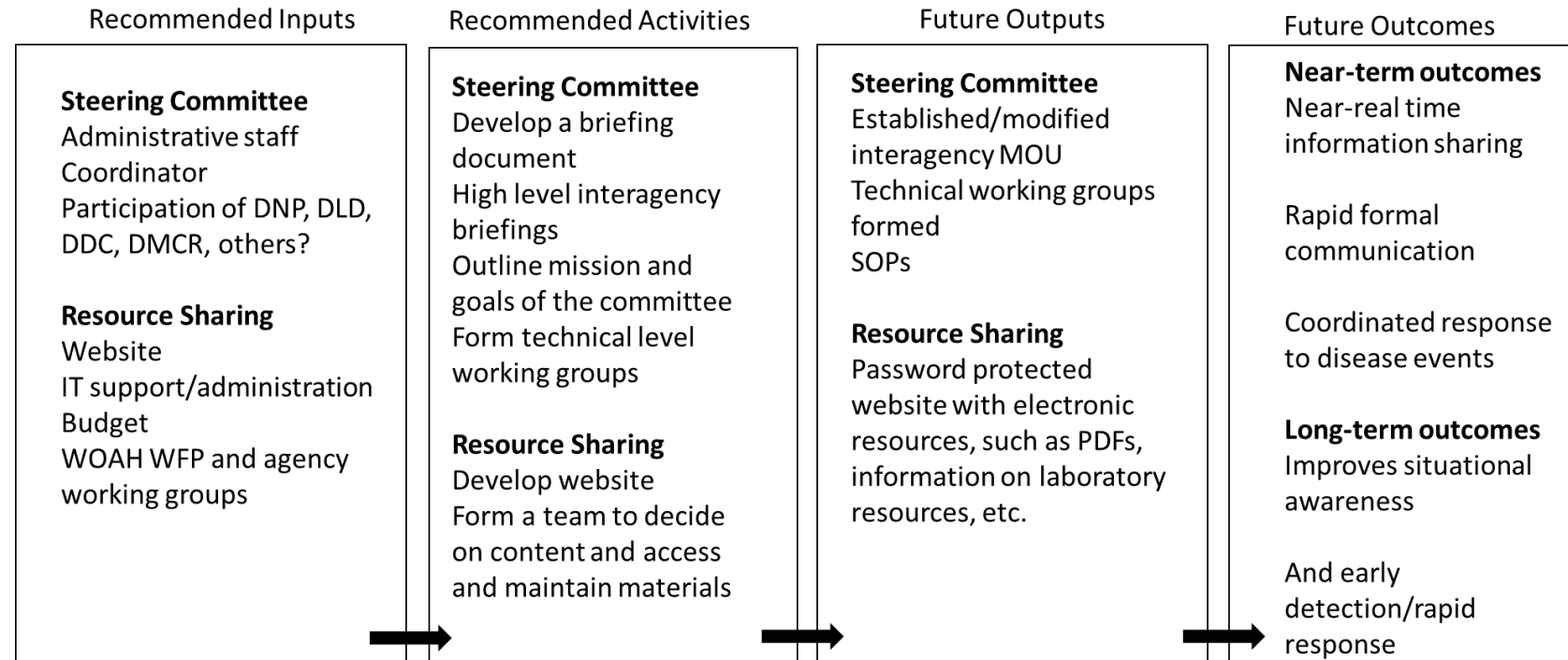
June 2022

In Person, 58 people
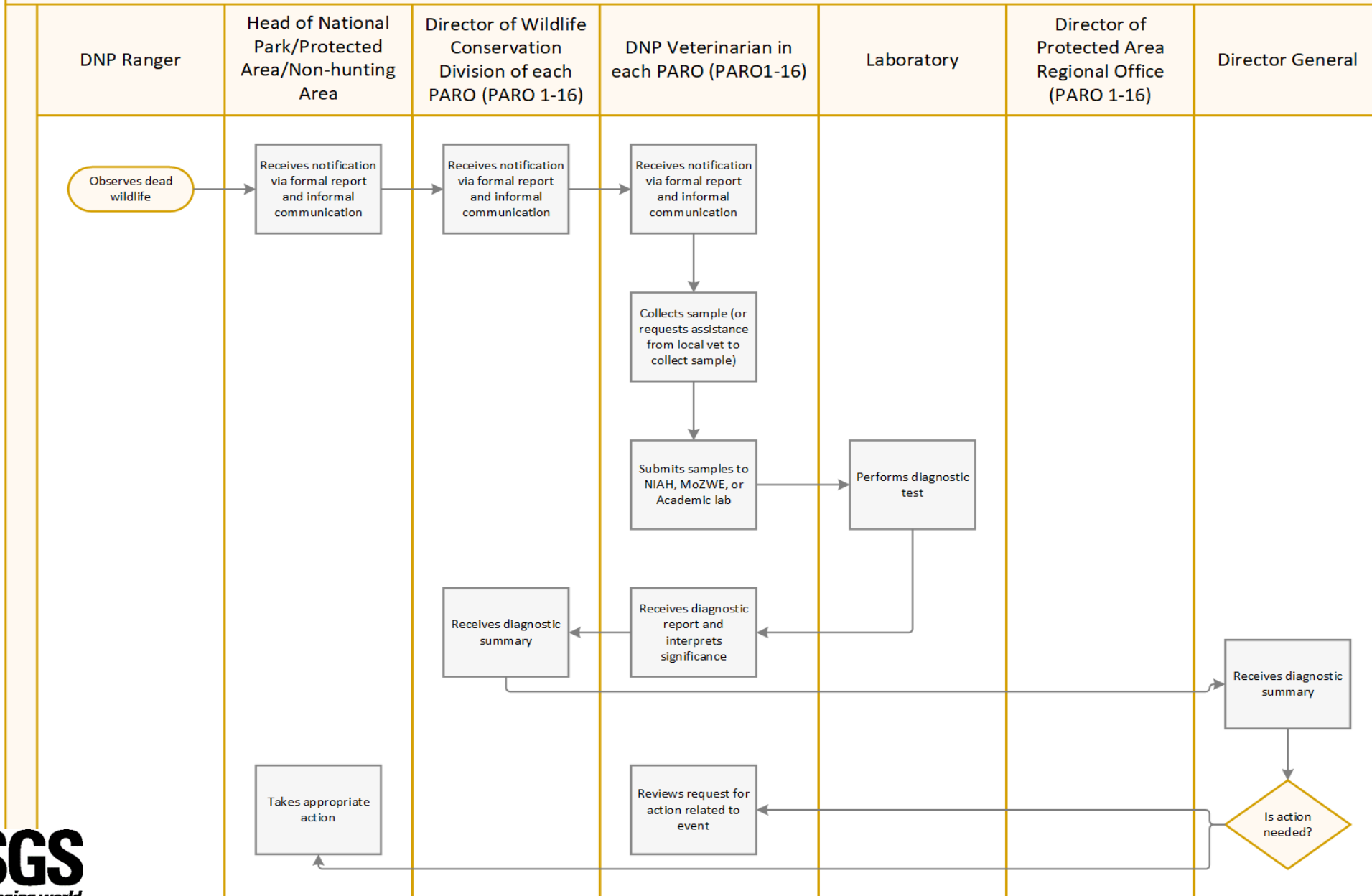
Logic Model/Theory of Change

· Inputs, activities, outputs, outcomes for

- Field detection network
- Laboratory network
- Information management system
- Analysis and communications
- governance

Recommended Inputs	Recommended Activities	Future Outputs	Future Outcomes
Steering Committee Administrative staff Coordinator Participation of DNP, DLD, DDC, DMCR, others? **Resource Sharing** Website IT support/administration Budget WOAH WFP and agency working groups	**Steering Committee** Develop a briefing document High level interagency briefings Outline mission and goals of the committee Form technical level working groups **Resource Sharing** Develop website Form a team to decide on content and access and maintain materials	**Steering Committee** Established/modified interagency MOU Technical working groups formed SOPs **Resource Sharing** Password protected website with electronic resources, such as PDFs, information on laboratory resources, etc.	**Near-term outcomes** Near-real time information sharing Rapid formal communication Coordinated response to disease events **Long-term outcomes** Improves situational awareness And early detection/rapid response

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High-Level Meeting

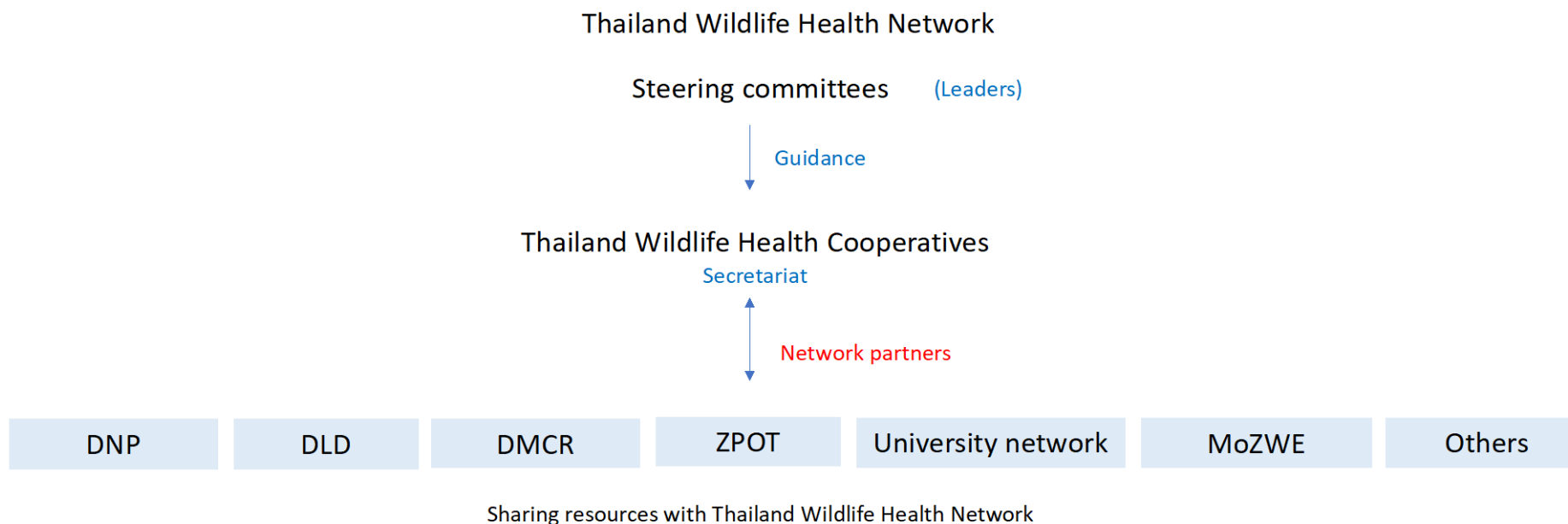Policy Forum

Key partners agreed to form a network

September 2022

In-person, 22 people

Model Thailand National Wildlife Health Network

Best practice model: Thailand Wildlife Health Network

Thailand Wildlife Health Network

Steering committees   (Leaders)

Guidance

Thailand Wildlife Health Cooperatives

Secretariat

Network partners

DNP	DLD	DMCR	ZPOT	University network	MoZWE	Others

Sharing resources with Thailand Wildlife Health Network

Example: Thailand Wildlife Health Network: Wildlife conservation unit

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Workshop on Developing Strategy for Thailand Wildlife Health Network

July 13, 2023

Ideal vision "Wildlife network for one health, one planet"

- **Policy engagement to strengthen the network**
- **Life-long learning for sustainable development**
- **Sustainable wildlife health network**

Activity: *Venue: Partner institutes, Th*ailand (on-site)

Participants: Partners of Thailand-NWHC/MoZWE

Workshop 4

- Wildlife disease Surveillance training
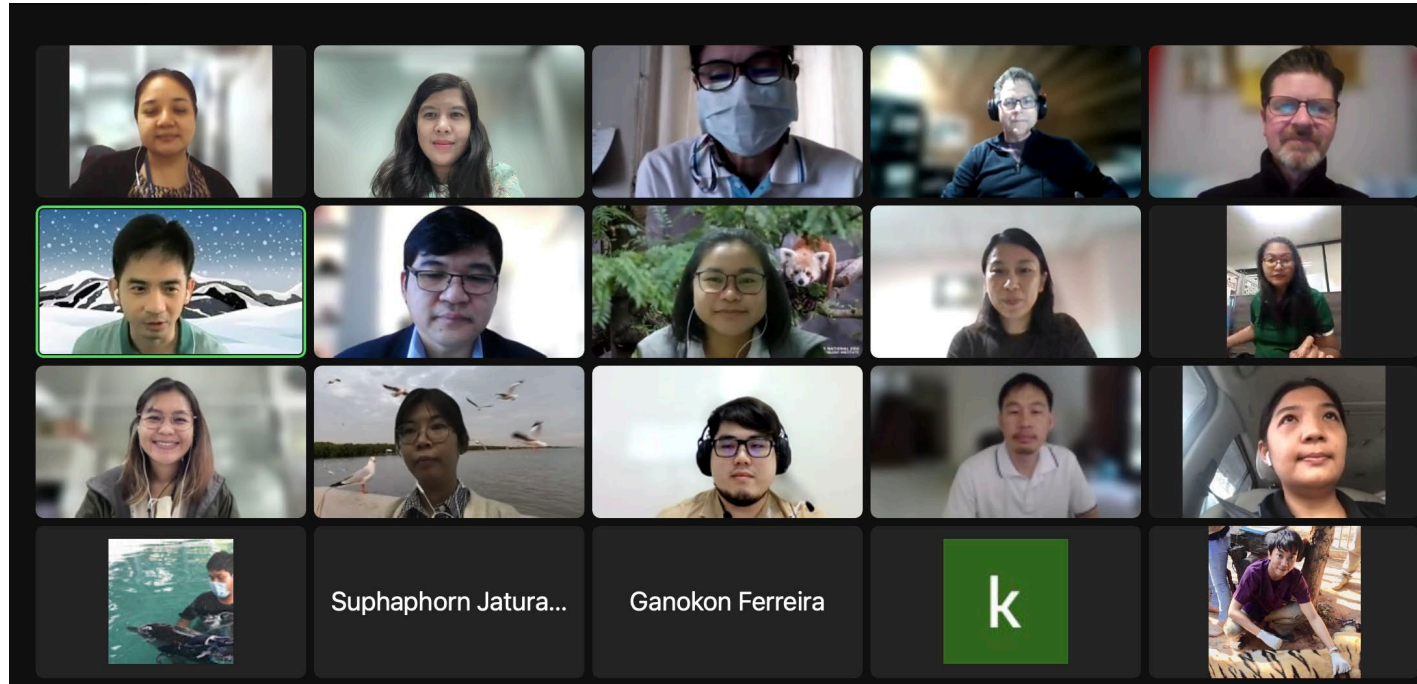- Outbreak investigation training
- December 2022
- In Person, 45 people

Workshop 5

Wildlife Health Leadership

Fostering Leadership Thinking

January 2023

Virtual, 22 people

Suphaphorn Jatura...

Ganokon Ferreira

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Leadership Workshop Topics

- Building and sustaining a network
- Building support for your theory of change
- Leadership and governance for collective action
- Inspiring support and action

Project Close Out Workshop

- Present the project's results and main outcomes
- Gather partner feedback on the execution of the project
- Co-create the next steps for implementation

We have reached the end of this project, but it is just the beginning

How can we build on this work to move forward to advance wildlife health in Thailand?

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Close Out Workshop Results

- 87% of the participants indicated that the project had met or exceeded their expectations.

- 74% of the participants self-scored as in the powerful quadrant of the Polak matrix, i.e., they believed that the situation was good and believed that it can get better and were confident in their ability to act and create a better future

- Priorities for implementation of the network was drafting a charter and implementation document

The Polak Game
Where do you stand regrading the future?
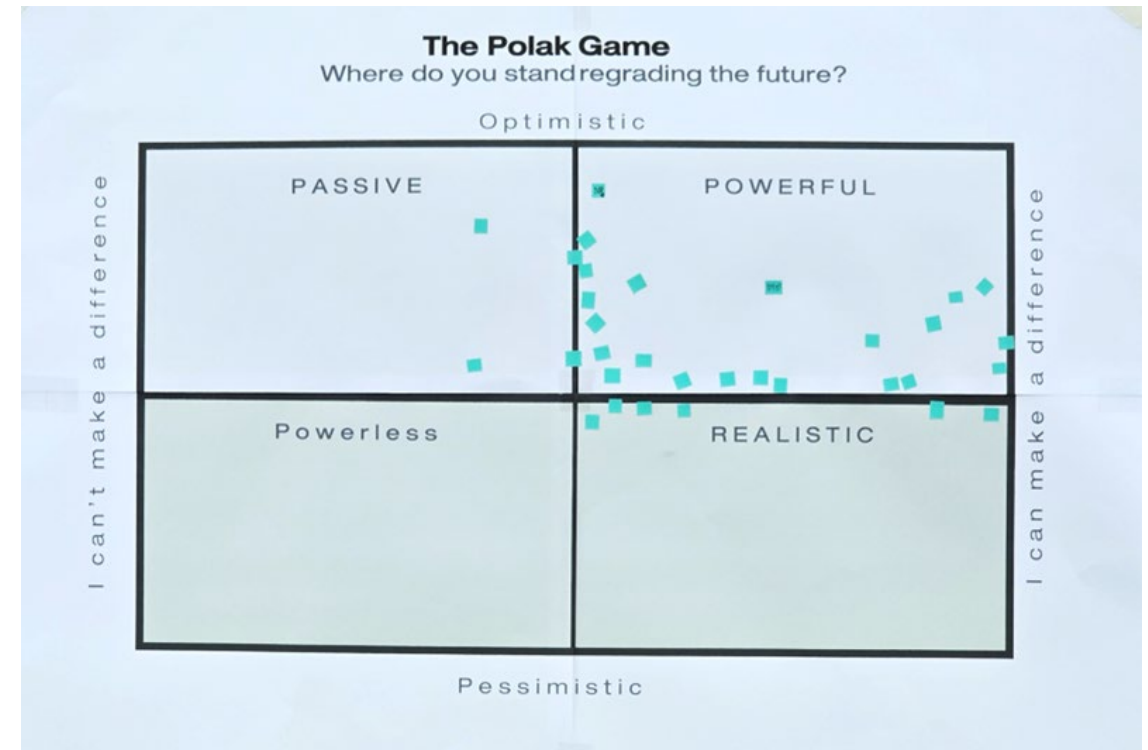
Discussion

Taking the system-wide approach allowed for the enhancement of technical and functional capacity, and the increased capacity for collective action, institutionalization of life-long learning, and engagement in policy and planning processes

Engagement of stakeholders at all levels, from frontline workers, technical professionals, and decision makers; continuous, bi-directional communication throughout the project; and using iterative and adaptive approaches, were key factors to the success of this project

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Discussion

Needs assessment proved to be an effective and efficient method to determine priority programmatic gaps and co-develop next steps

The priority needs of enhancing and formalizing a wildlife health network and developing an associated information management system were identified as priorities through the surveys, and the swim-lane and logic model exercises

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Discussion

Swim-lane exercise revealed that the current system in Thailand of general wildlife health surveillance to be inefficient, and fragmented Formation of a wildlife health network was identified as a priority action to enhance the system
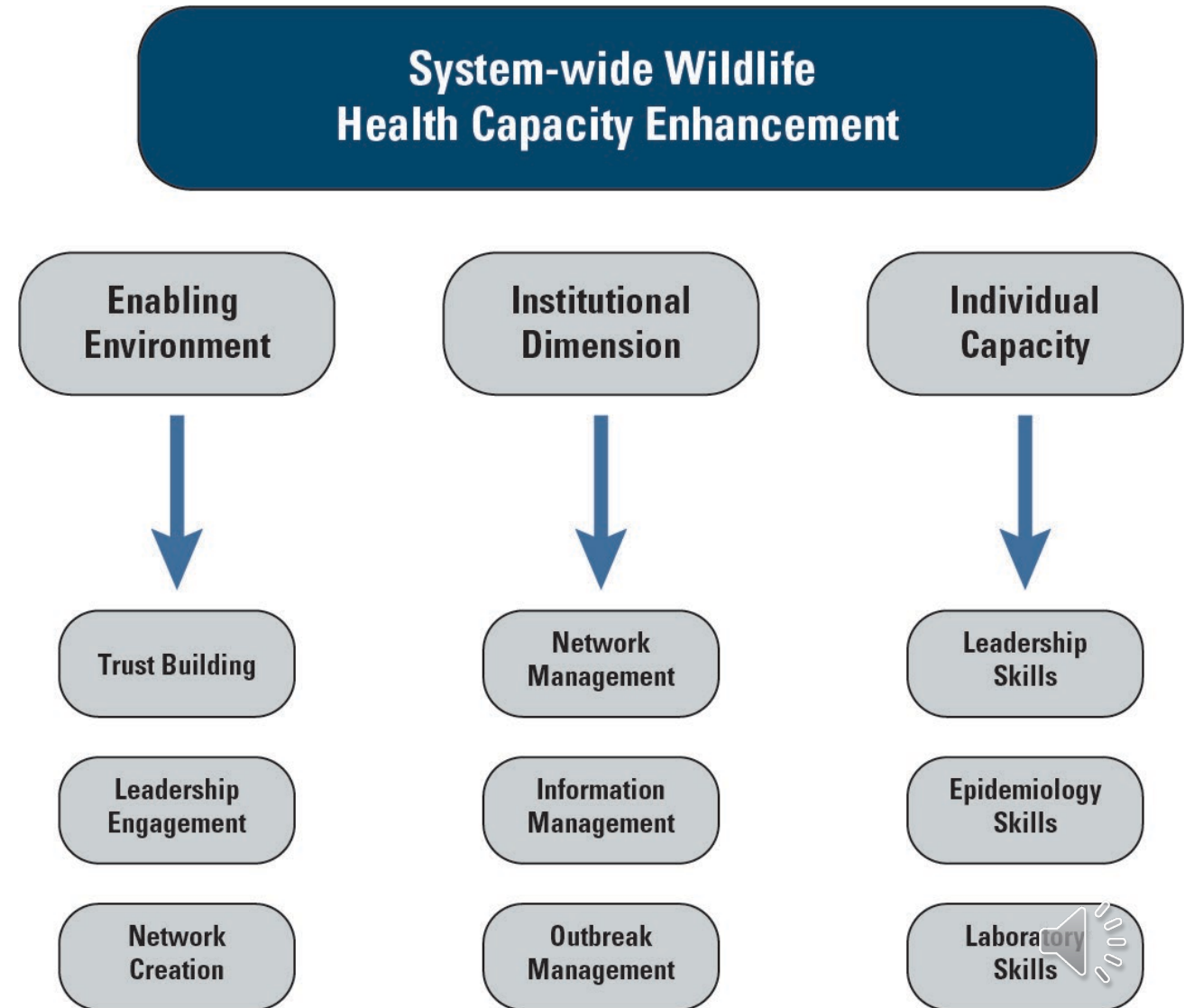
In situations where there are multiple partners with different missions, unclear legal authorities, and sensitivities such as data sharing, a network may help to enhance collaboration, increase coordination, resolve conflicts, and build trust

Conclusion

Using a system-wide approach ensured that capacity enhancement was co-created and context-specific from the outset of the project and focused on the priority needs

Enhancing institutional capacity and the enabling environment, in addition to individual and technical training, will help ensure success and sustainability

Questions?