

Surveillance Advances  
Progrès dans le domaine de la surveillance

# One Health Approach to Risk Assessment

## L'Approche « Une seule santé » en matière d'évaluation des risques

June 25, 2024

12:00 – 1:00pm CT / 1:00 – 2:00pm ET

### Speaker

Dr. Sharon Calvin

Head of One Health Risk Assessment  
Risk Assessment Division, Public Health Agency of  
Canada



National Collaborating Centre  
for Infectious Diseases  
Centre de collaboration nationale  
des maladies infectieuses



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada



# Land Acknowledgment: NCCID



The National Collaborating Centre for Infectious Diseases is hosted by the University of Manitoba. Both the University of Manitoba and I are situated on Treaty 1 Territory, the original lands of the Anishinaabe, Cree, Oji-Cree, Dakota, and Dene peoples, and homeland of the Métis Nation. I am thankful for these lands that I live and work upon as a descendant of settlers with European ancestry and with inherited responsibilities for the lands' protection.

As an organization, NCCID recognizes the systemic inequities and treaties that have been implemented as part of the process of colonization intended to benefit some while harming others. We are committed to working with our partners towards reconciliation and we strive to honour the lands and their original caretakers in our work.

# Housekeeping



- Seminar recording and presentation slides will be available shortly after the seminar at the NCCID website: <https://nccid.ca/>
- If you have technical problems with Zoom, please email us at [nccid@umanitoba.ca](mailto:nccid@umanitoba.ca)
- The chat box for participants has been disabled for this session. We will use the chat box to share additional information.
- Please use the Q&A tab to submit your questions for our speakers. You can “like” other people’s questions to push them up in priority



# Accreditation



Surveillance Advances is a self-approved group learning activity (Section 1) as defined by the Maintenance of Certification Program of the **Royal College of Physicians and Surgeons of Canada**.

The seminar series is also approved by the Council of Professional Experience for professional development hours for members of the **Canadian Institute of Public Health Inspectors**.

If you would like a letter of participation, please complete the survey which will be shared after the seminar.



# Land Acknowledgment: PHAC



I would like to take this time to acknowledge the land that I live and work on is the traditional territory of the Wendat, the Anishnaabeg, Haudenosaunee, Métis, and the Mississaugas of the Credit First Nation.

It is home to many First Nations, Métis, and Inuit peoples. I am grateful for the opportunity to share their home.

# Today's speakers



**Dr. Sharon Calvin**

DVM, MSc

- Head of One Health Risk Assessment, Risk Assessment Division, Public Health Agency of Canada
- A veterinary epidemiologist who has worked in wildlife health, domestic animal health, and public health in Canada.
- Her expertise is in risk assessment, epidemiology, zoonotic diseases, and One Health approaches.



# ONE HEALTH APPROACHES:

## Lessons learned from development of the One Health Approach to Risk Assessment (OHARA) Framework

**Sharon Calvin**

DVM, MSc

Head of One Health Risk Assessment

Risk Assessment Division, Public Health Agency of Canada



# Conflicts of interest

I have no COI's to declare





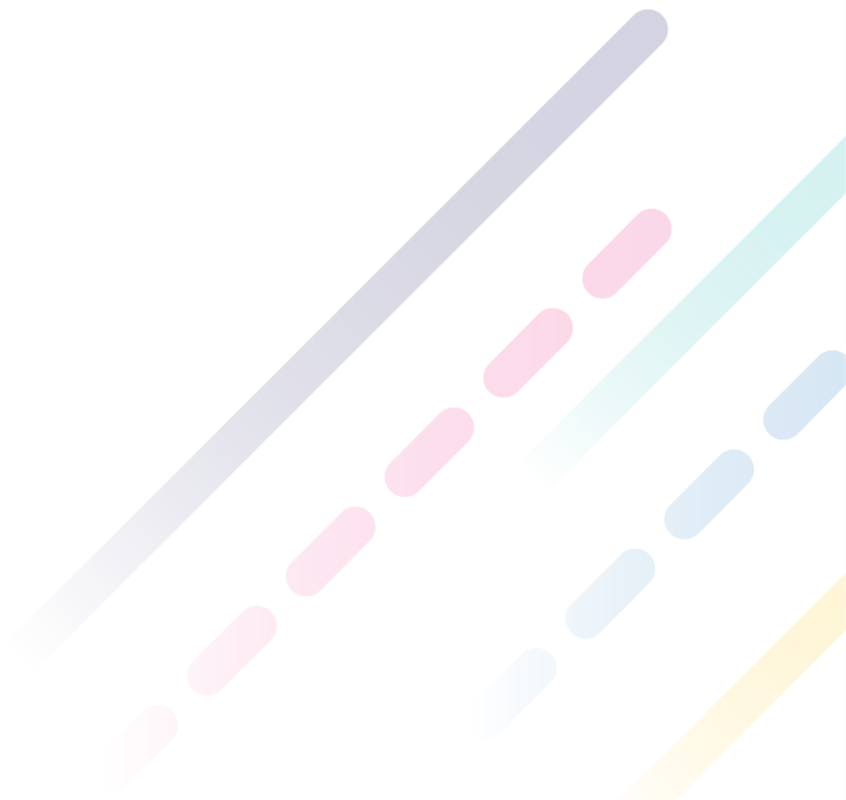
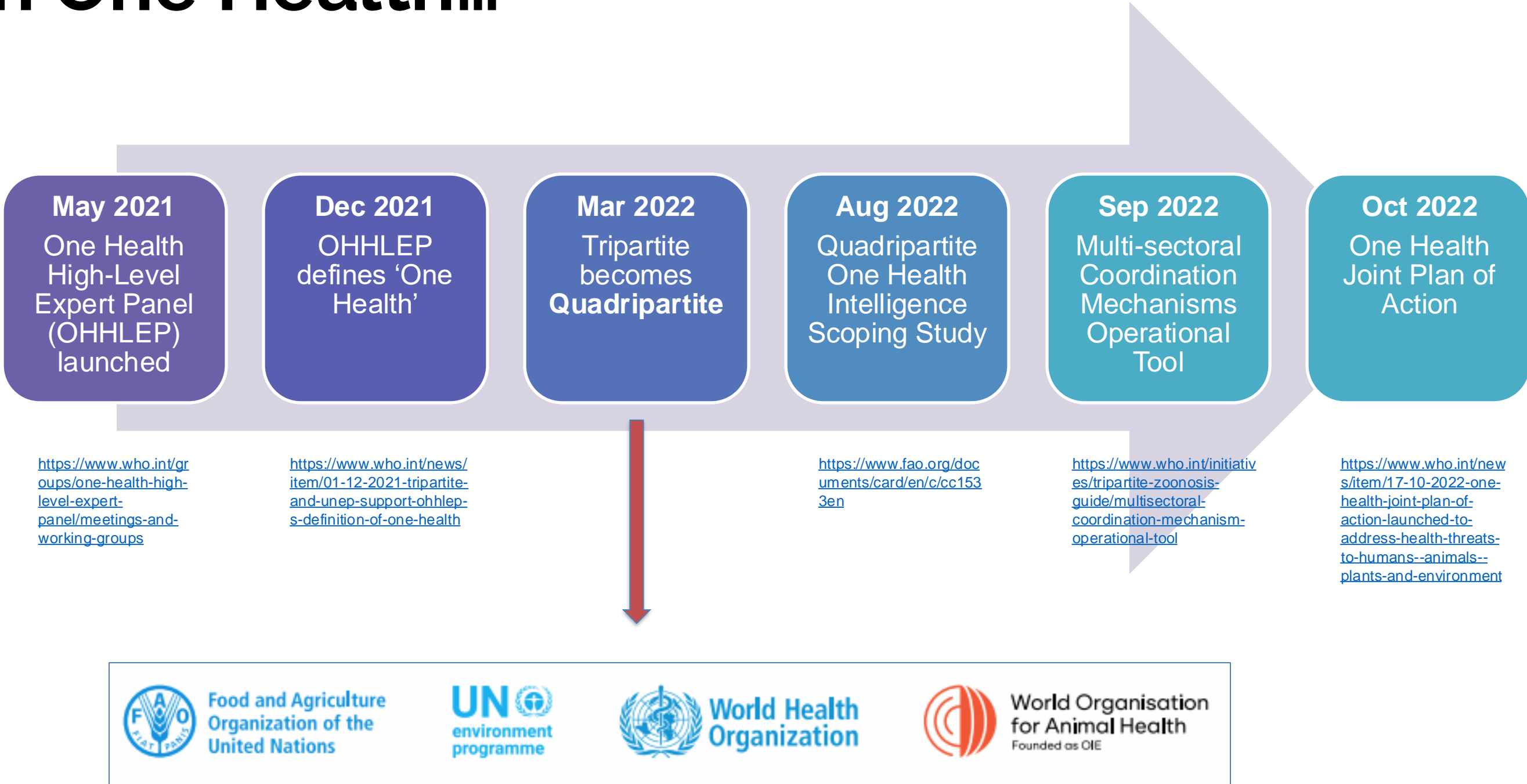
# Learning Objectives



- Understand the scope and importance of One Health
- Recognize challenges to multi-sectoral work and some best practices for overcoming these
- Foster the ability to think outside organizational mandates for the greater good



# COVID stimulated a wave of international activities on One Health...



# Why is One Health important?



Canada needs the capability for early detection, understanding and action to address One Health threats and reduce their potential wide-reaching impact on human, animal, plant and ecosystem health.

Hoffman, S.J. 2022. Addressing Challenges at the Intersection of Human, Animal and Environmental Health through a One Health Approach. Canadian Institutes of Health Research (CIHR).  
[Quadripartite One Health Intelligence Scoping Study \(fao.org\)](https://www.fao.org/one-health-intelligence-scoping-study/)

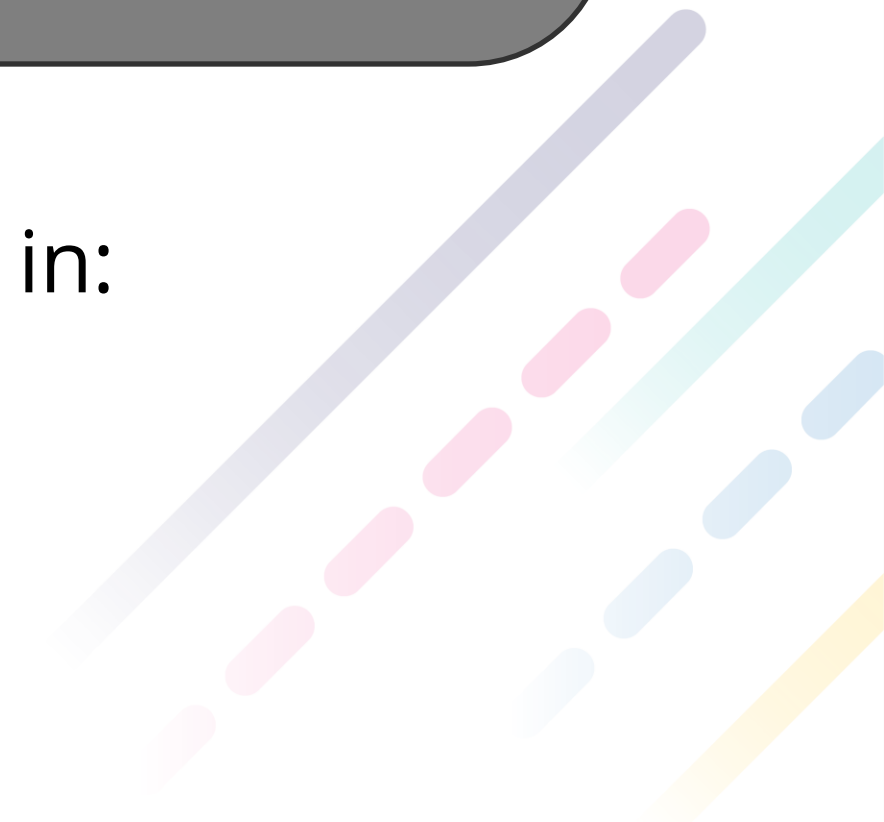


The need for strengthened One Health approaches is also recognized in:



The World Health  
Organization Pandemic  
Instrument

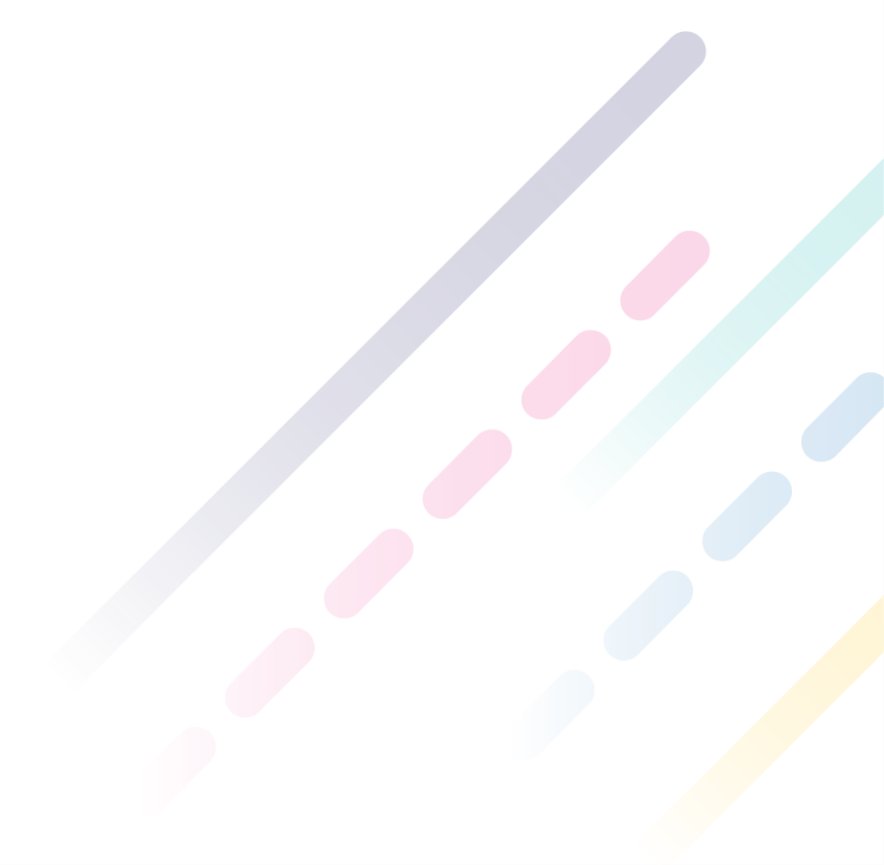
<https://www.who.int/news-room/questions-and-answers/item/pandemic-prevention--preparedness-and-response-accord>



# One Health Joint Plan of Action (JPA)



FAO / UNEP / WHO / WOAHA, 2022



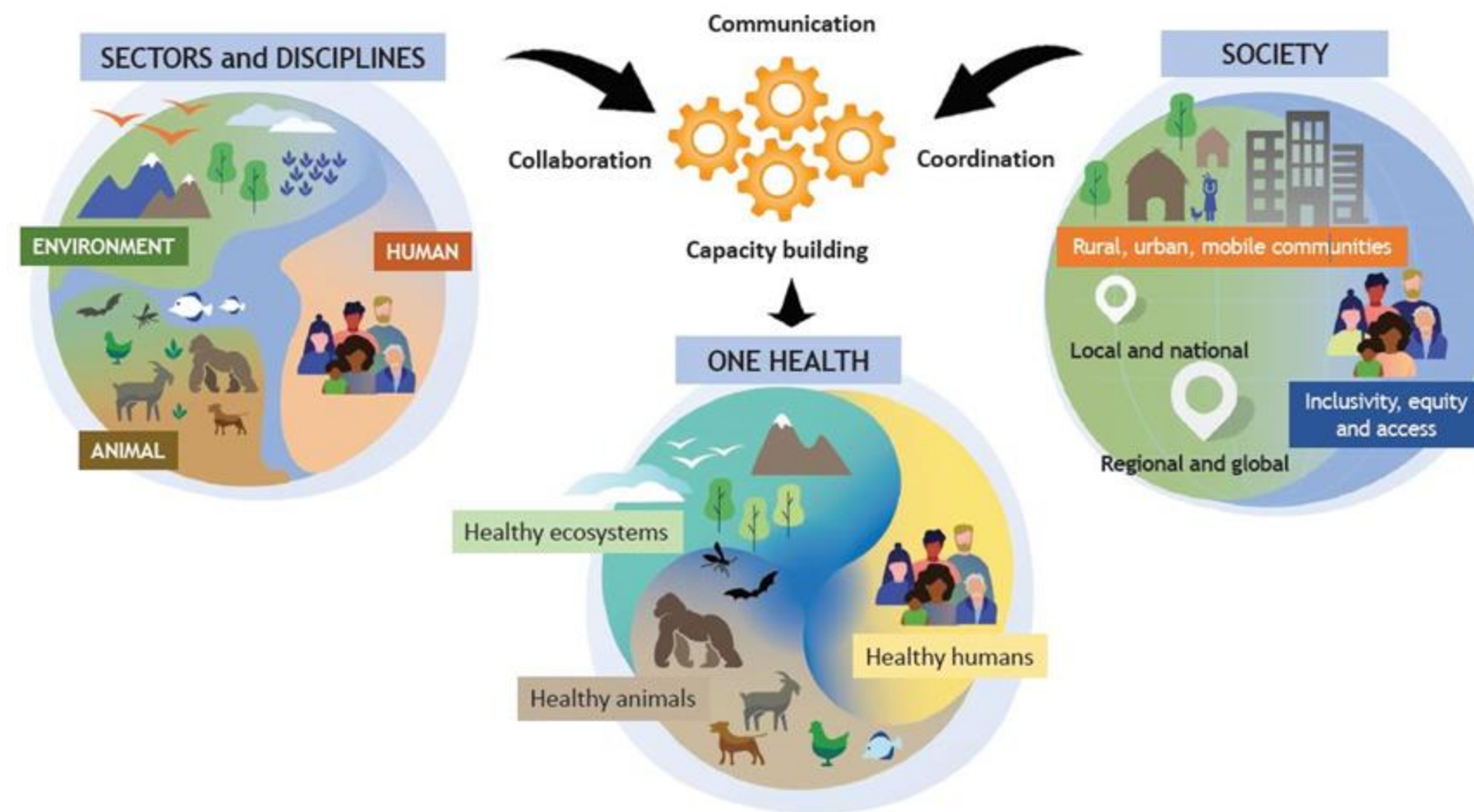


# What is One Health?



## One Health High-Level Expert Panel Definition

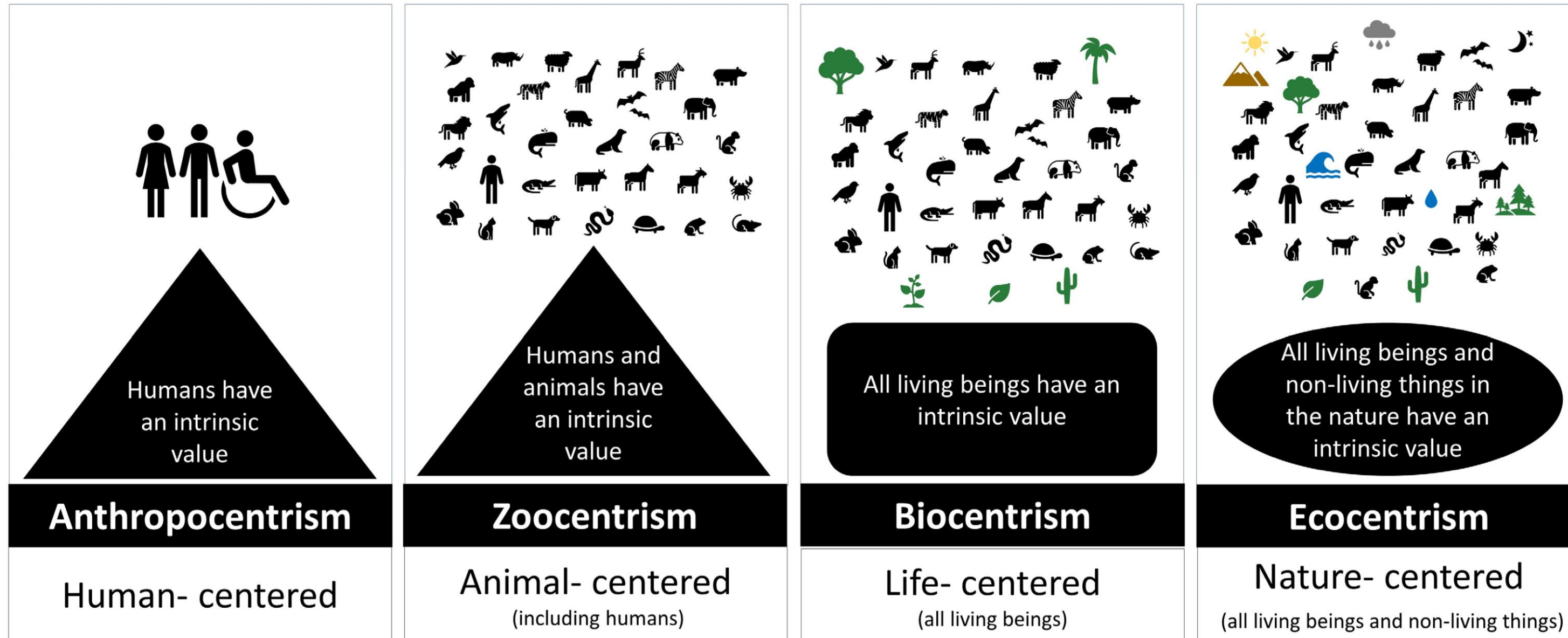
- One Health is an integrated, unifying approach that aims to sustainably balance and optimize the **health of people, animals and ecosystems**.
- It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.
- The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and **tackle threats to health and ecosystems**, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.



<https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohlep-s-definition-of-one-health>



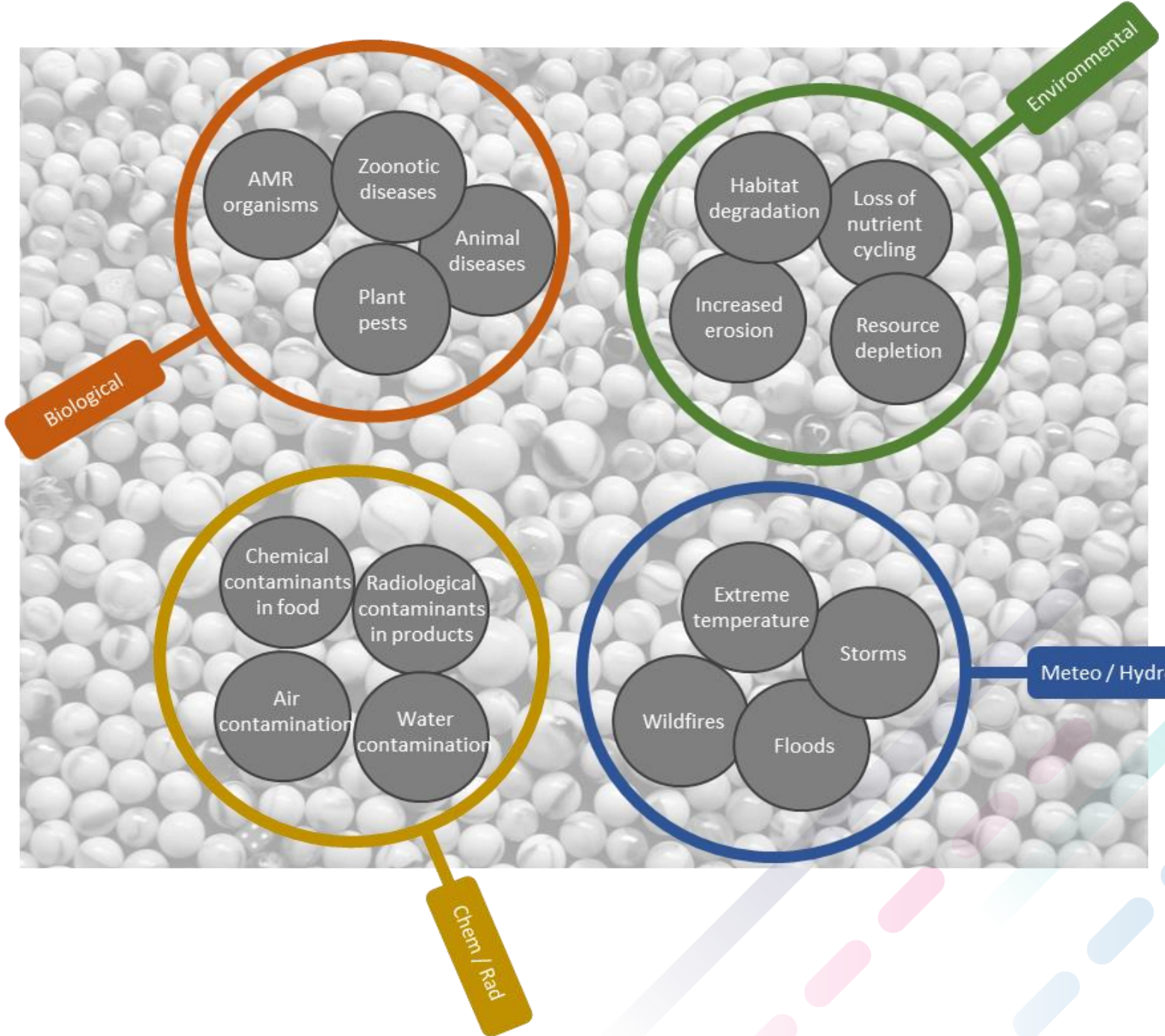
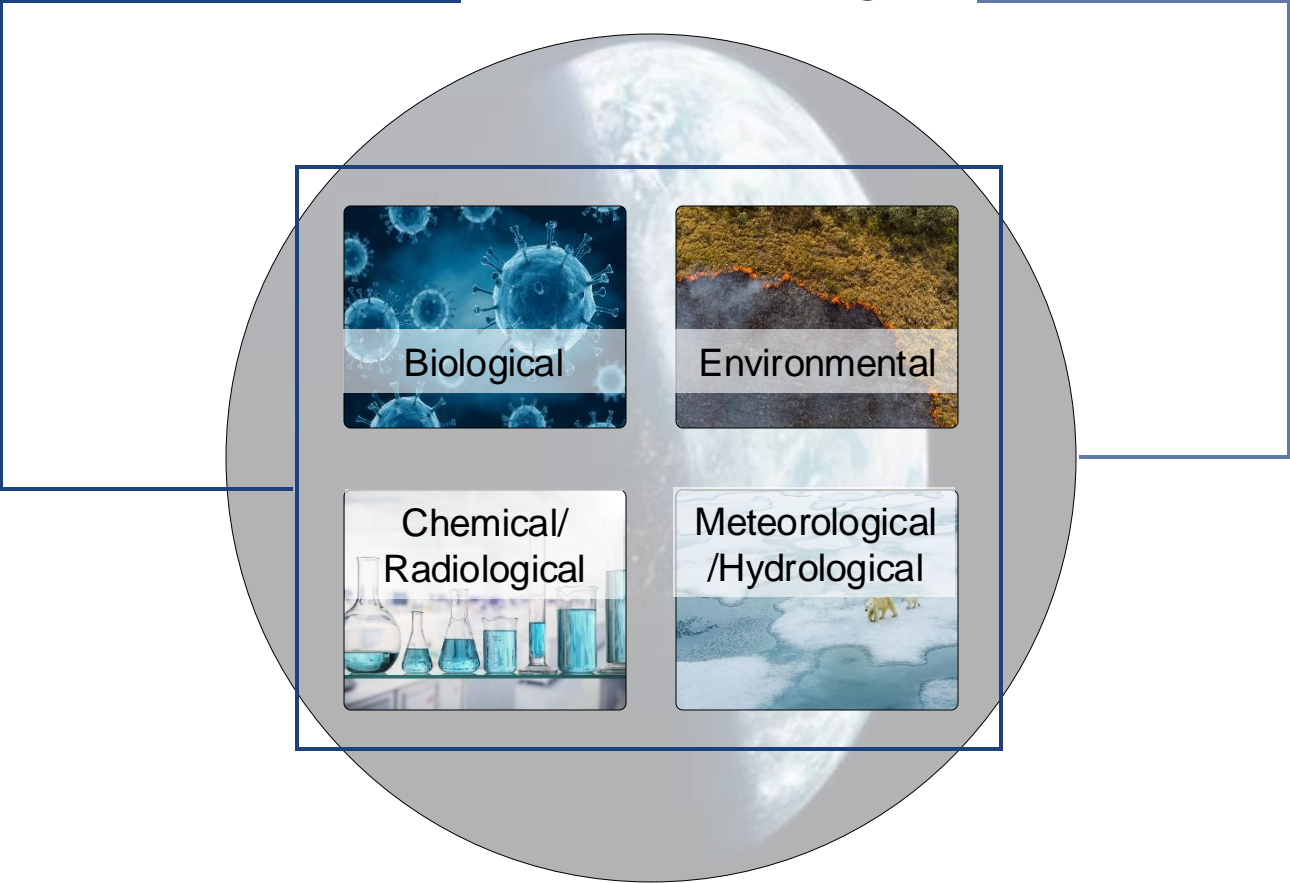
# A definition with an Ecocentric perspective





# One Health has a broad scope

One Health  
= Multiple types of hazards + Occurring in complex systems





# The Environment and One Health



## One Health

 Overview  Coordination  **Resources**  Highlights Partners Get involved 

Breaking Barriers: Advancing the One Health agenda with a focus on environment

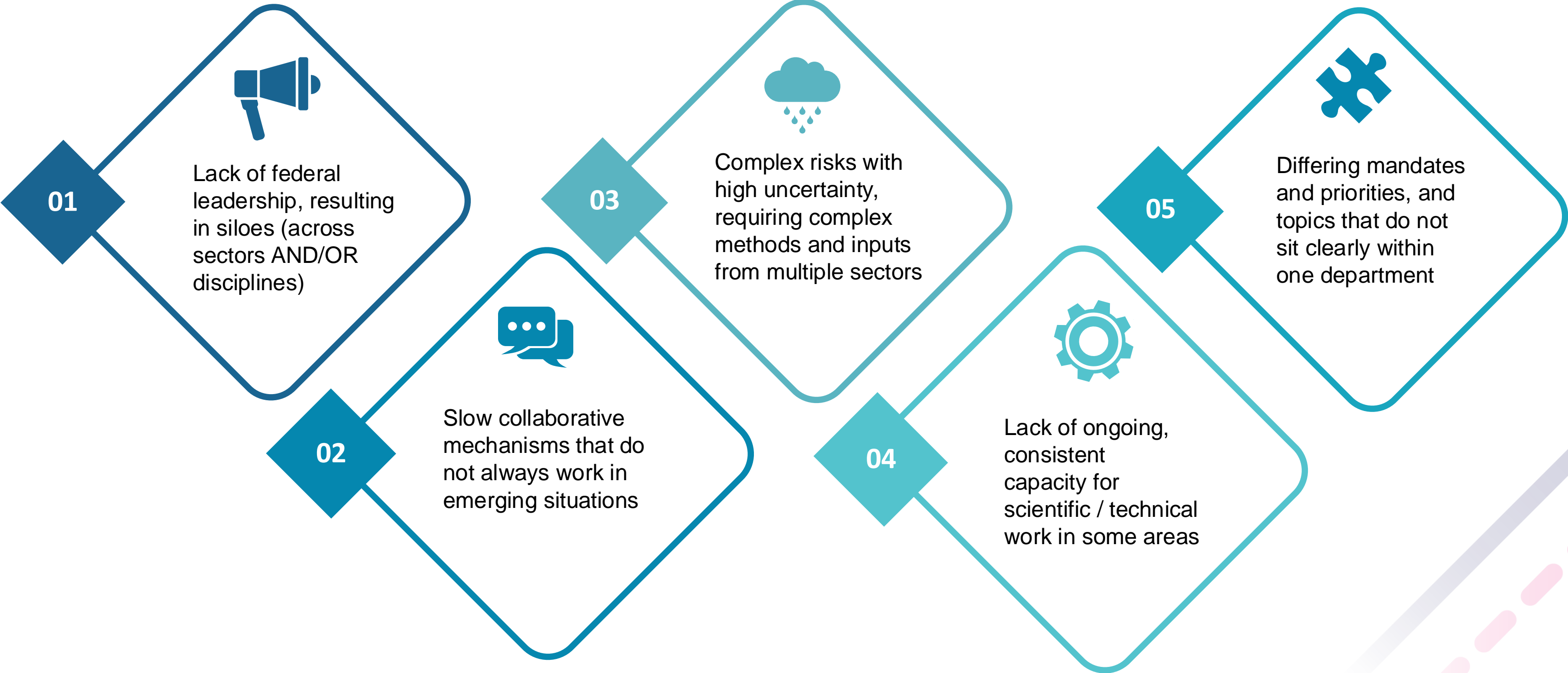
 Berlin (Germany), 12/10/2023 - 13/10/2023



“...with issues of **pollution, soil health, forest health, management of invasive alien species** impacting food security and global biodiversity, all given particular attention. One Health is so much more than zoonoses and AMR, with plant and ecosystem health and biodiversity at high risk and where multisectoral action is essential.” CVO, FAO (LinkedIn)



# Challenges to multi-sectoral work







## Module 6: Collaboration

Development of a Framework is one step in the OHARA initiative. Moving forward, ongoing collaborative and strategic activities (i.e., in addition to risk assessments) will be required to ensure the continuation of a robust One Health approach to risk assessment in Canada. As outlined in Module 3, the OHARA Core Team, in collaboration with partners, will provide leadership for this collaboration.

### Best practices for ongoing collaboration were identified throughout the development of the Framework...

#### AWARENESS & ENGAGEMENT

One Health approaches require political will.<sup>1</sup> The value of a multi-sectoral approach must be communicated and understood widely so that all sectors embrace and implement it to prevent and mitigate risks.<sup>2</sup> In addition, risk assessment does not occur in a vacuum: linkages must be made with other One Health collaborative work.

#### NETWORKS

Building trust and relationships takes time; therefore, it is recommended to establish multi-sectoral, multi-disciplinary networks in 'peacetime' so that they are available when a crisis occurs.<sup>3</sup> Activities must be organized that regularly bring partners together. Links with various sectors need to be strengthened (e.g., environment health, companion animal health, social sciences).

#### METHODS

A large portfolio of risk assessment methods and tools are available for different hazards, contexts and risk questions, and require rapid accessibility to those in need. In addition, numerous methodological gaps were identified during Framework development that require collaborative efforts to address.

#### TRAINING

One Health approaches will only have the desired impact if each sector involved has strong and adequate capacity.<sup>4</sup> Training is crucial (both for those who lead risk assessments and those who participate) and sectors can learn from each other.

#### DOCUMENTATION

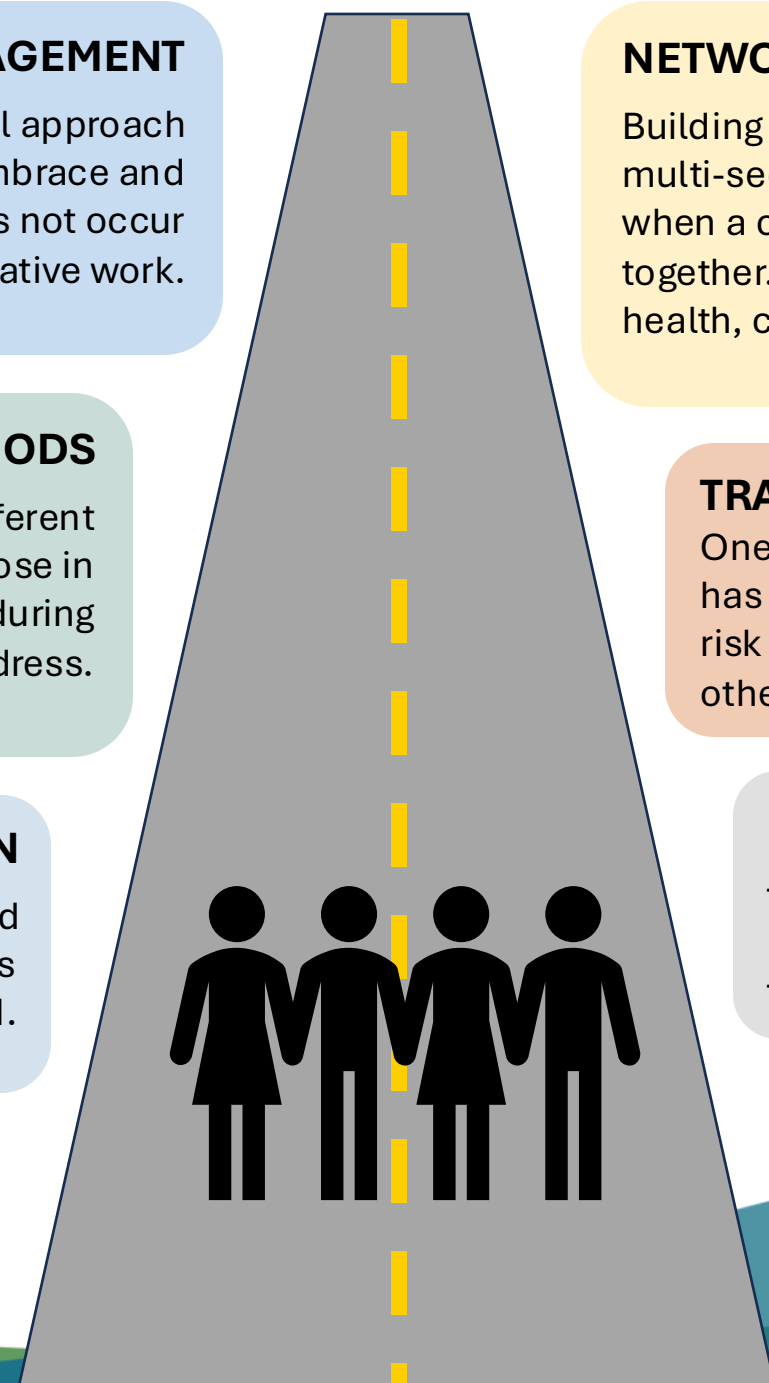
To reduce duplication and assist with future decision, discussions and decisions related to risk assessments must be documented in a way that is accessible to all partners, even if a risk assessment report is not produced.

#### EVALUATION

The challenges and conditions associated with a One Health approach to risk assessment will change over time and the system will need to adapt.<sup>5</sup> The OHARA Framework will undergo a periodic, formal review process.

#### AGREEMENTS

A One Health approach requires that written agreements are in place between organizations for sharing of information and, in some situations, also for collaborative work.



#### References

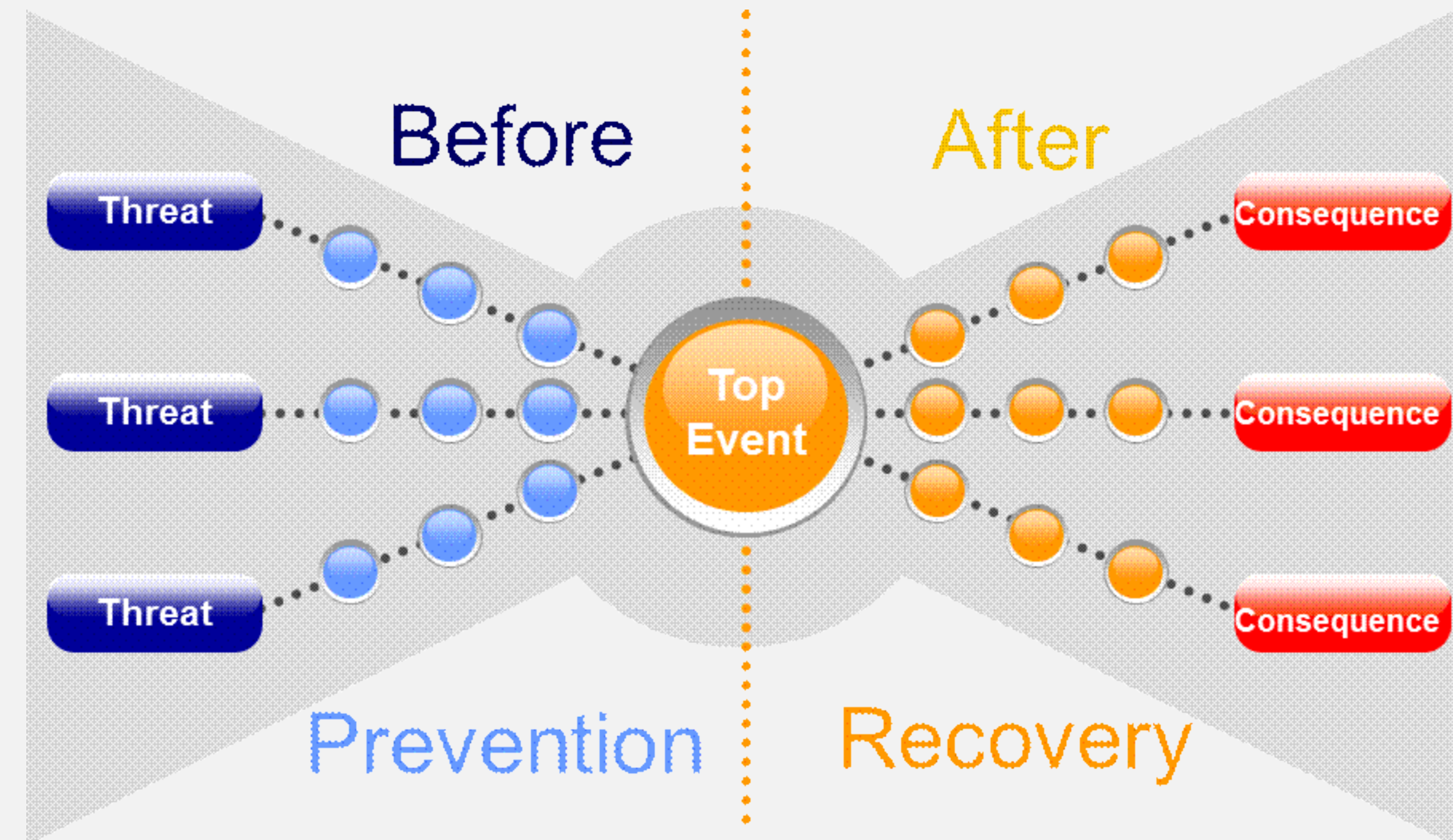
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# Thinking beyond organizational mandates



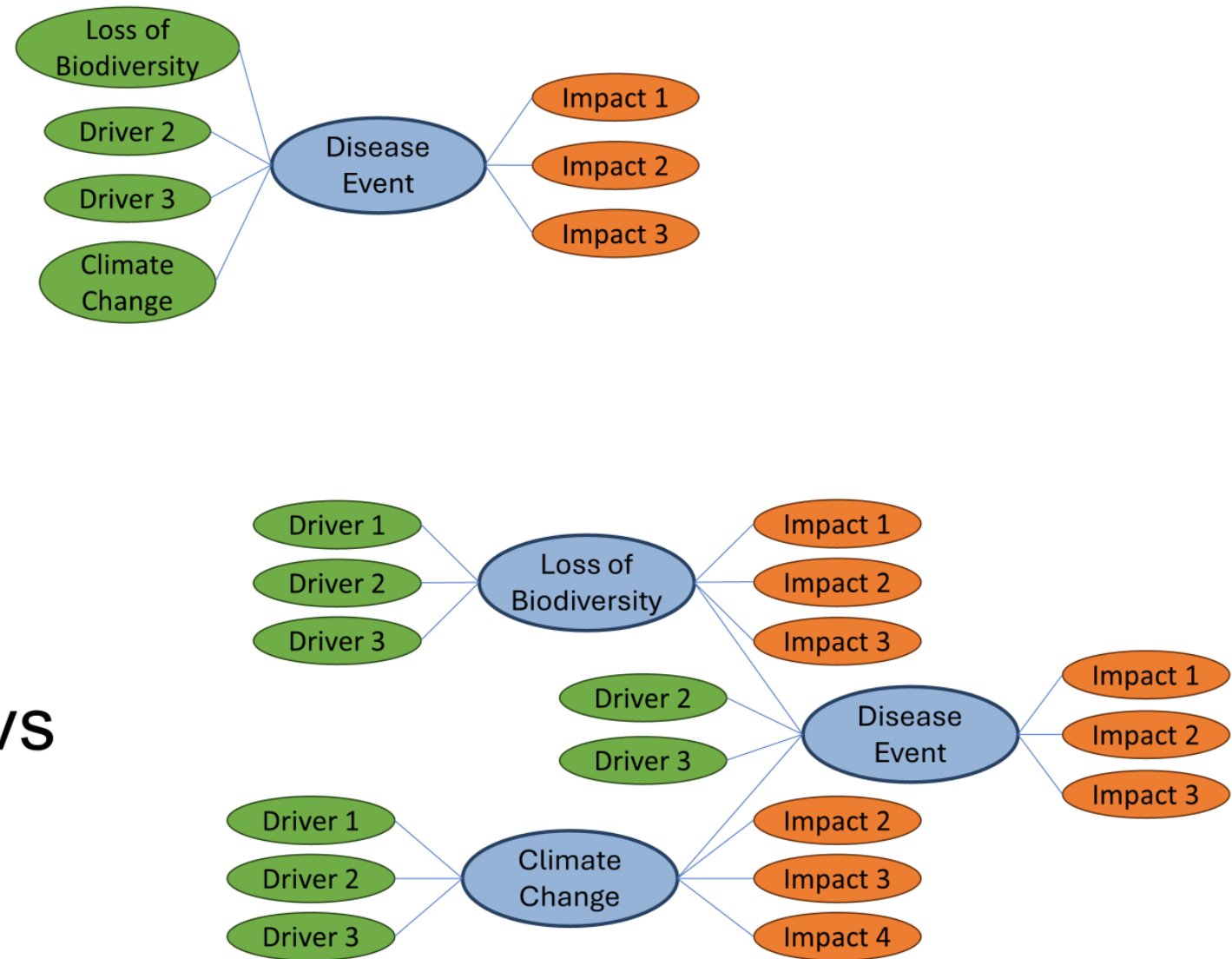
Risk bowtie diagrams can aid in systems thinking:

- Tool for illustrating risk pathways, both before and after an adverse event
- Used in high-risk industries for decades, but its application in environmental and health issues is increasing
- Drivers and causal pathways (i.e., a fault tree) presented to the left of a central adverse/unwanted event; cascading impacts (i.e., an event tree) on the right
- Barriers (or monitoring points) can be portrayed along the pathways



# Illustrating sectoral perspectives

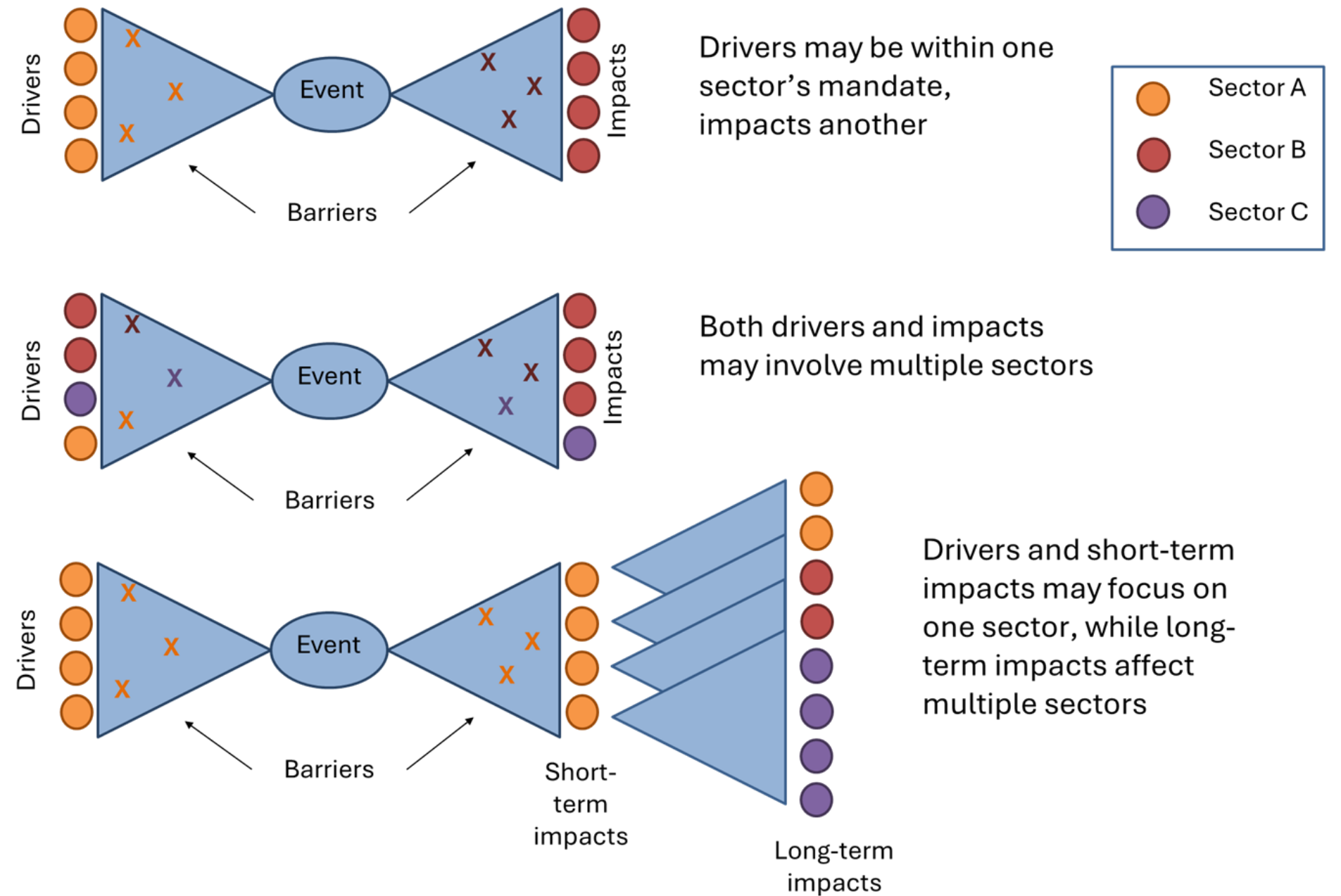
## Sector Perspective & Systems Thinking



VS

## The Intersection of Human-Animal-Plant-Ecosystem Health

There are different ways that risks may be at the intersection between sectors, and this can be illustrated with risk bowtie diagrams (a method of illustrating risk pathways).<sup>1</sup>

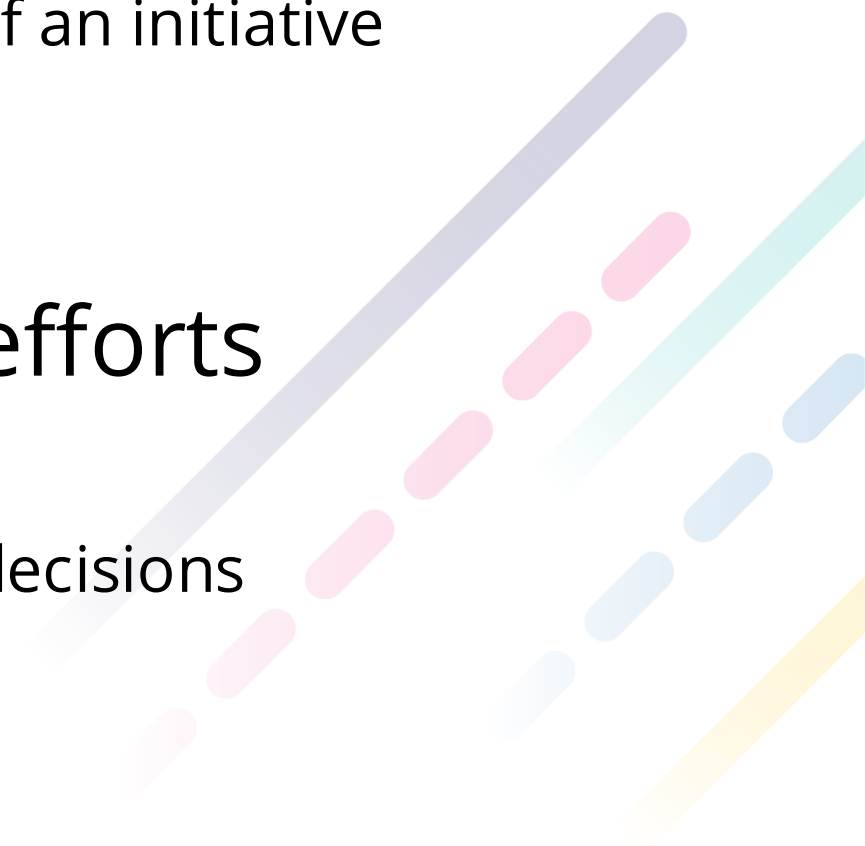




# Conclusions



- One Health approaches require awareness, endorsement and willingness to collaborate by all partners
  - Senior management must:
    - Agree for technical staff to participate
    - Be aware that it may at times require effort from technical staff outside of the traditional mandates of their organizations for the sake of the greater good
  - Technical staff must:
    - Be willing to share, consult, and collaborate from the early conceptual phase of an initiative
    - Appreciate and learn from others' perspectives
- One Health approaches are not easy and require ongoing efforts to:
  - Maintain networks, advance methods, train each other, document activities and decisions



**Thank You!**



## Discussion Period

### Any questions?

Please use the **Q&A tab** to submit your questions for our speaker. You can “**like**” other people’s questions to push them up in priority.



# Closing Remarks



# Thank You!

Join us on Tuesday, August 27, 2024 (1:00-2:00pm ET) for the next seminar!

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