PREVENTING DISEASES IN WILDLIFE MANAGEMENT:

Sharing guidance and insights to support practice

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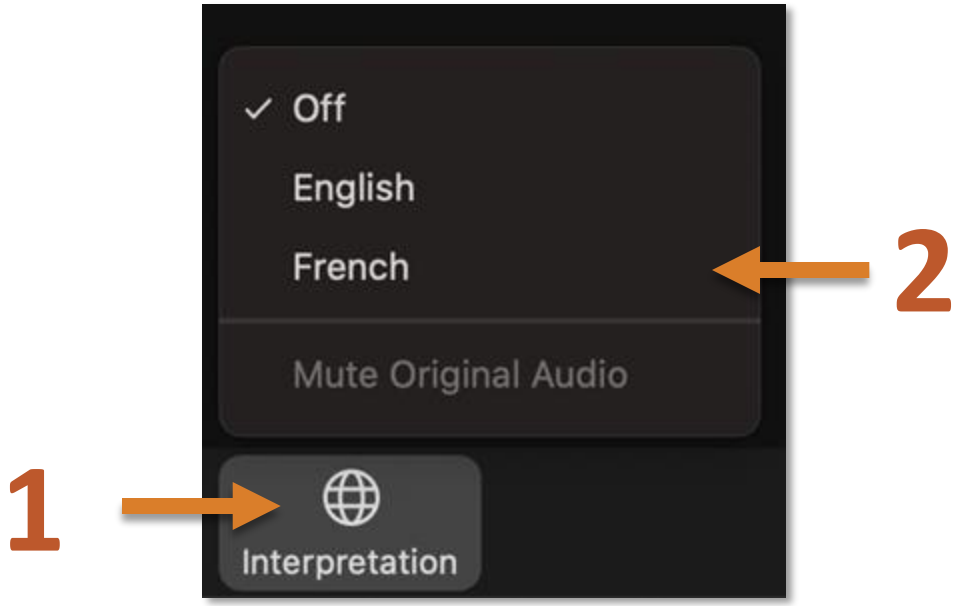


SESSION 1

Setting the Scene

Franck Berthe

Senior Health Specialist and One Health Lead, The Pandemic Fund, World Bank

Preventing diseases in wildlife management

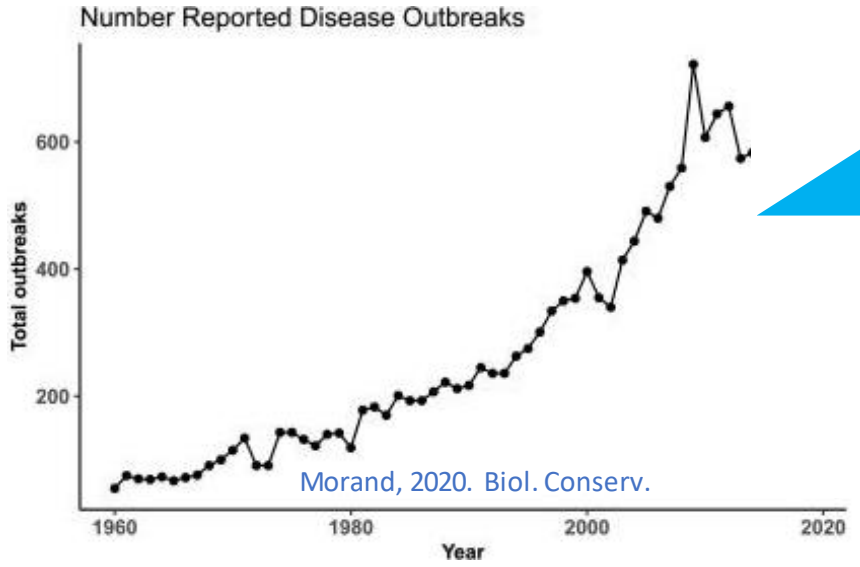
Drivers and the economic case for prevention

GWP Webinar

April 20th, 2023

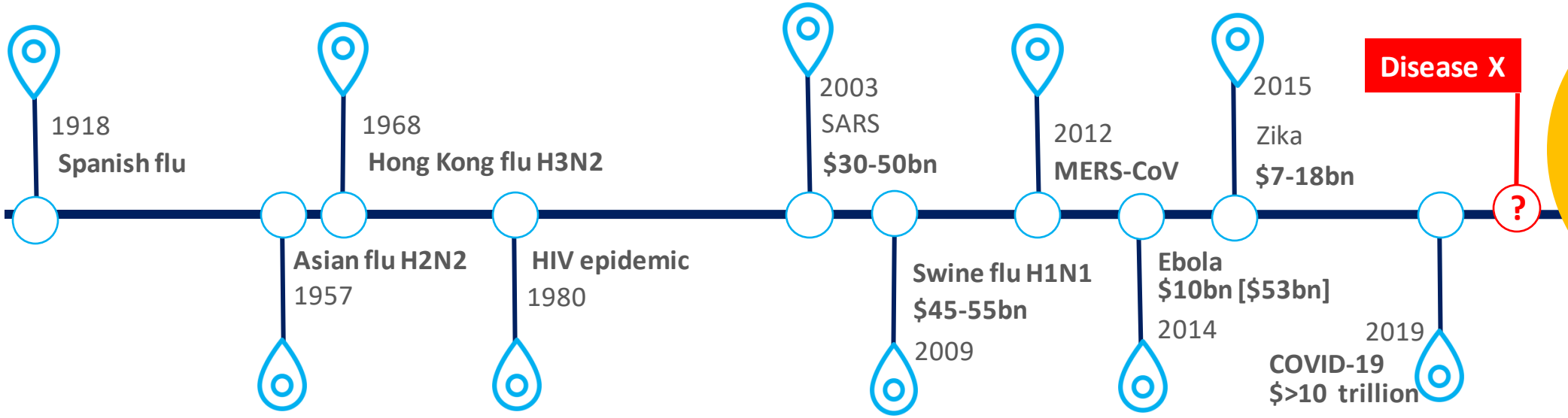
Approximately 75 percent of emerging infectious diseases in humans have their origin in animals (domestic or wild)

- The pace of emergence has accelerated over the past 70 years from less than a hundred outbreaks per year until the 1980s to more than 4 hundred since 2000
- Increasing trend of costs and economic impact



Marani et al., 2021. PNAS

The yearly probability of occurrence of extreme epidemics can **increase up to threefold** in the coming decades



Even **known pathogens can mutate**, *e.g.*, Zika mutation before the 2015 epidemic **enhanced disease** and **transmission**

Shan et al., 2020. PNAS

The next pandemic may already be on the horizon

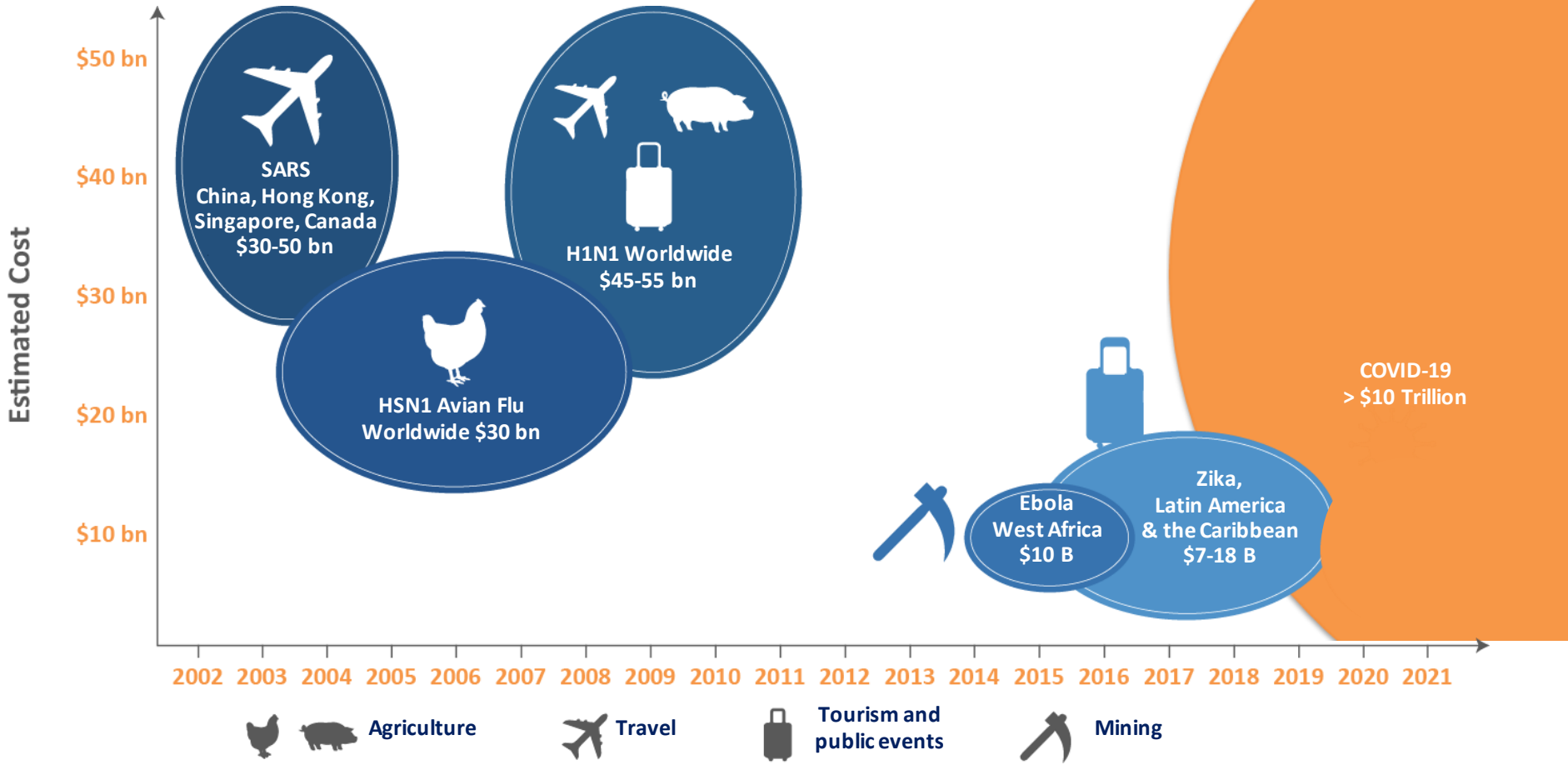
The global economy contracted by 4.3% in 2020 due to COVID-19

That amounts to about $3.6 trillion worth of goods, services and other output lost. Projected cumulative output loss due to the pandemic (2020 to 2025) ~ $22 Trillion.

This does not include the different ways people suffered the downturn through death, illness, loss of livelihood or disruption of schooling, for example.

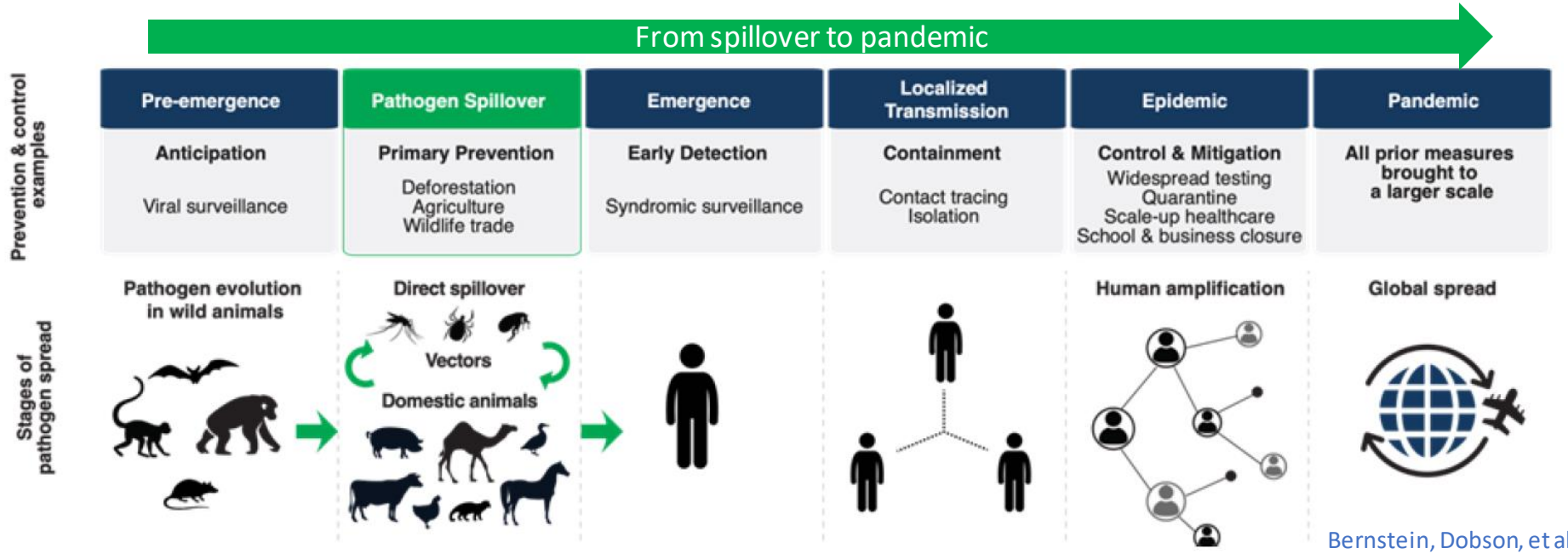
The economy is increasingly impacted through different sectors, e.g., tourism, transport, food, education.

Adapted from the World Bank Operational Framework for One Health, 2018



Major outbreaks can reverse years of progress in development

Spillover of pathogens from animals into humans



Bernstein, Dobson, et al. (2022)

More than 250 viruses are known to have already spilled over from animals to humans, SARS-CoV-2 being the latest known example
1.7 million undescribed animal viruses, 50% have potential to spill over into humans and could result in a future Disease X

PREVENTION

Systems, policies and procedures to assess, avoid, mitigate, and reduce public health threats, reduce the likelihood or consequences of spillover events at the human, animal, ecosystem interfaces.

PREPAREDNESS

Capacities and capabilities put in place at every level to prevent, detect, contain and respond to the spread of disease and other hazards, mitigating social disruptions and limiting risks to international travel and trade.

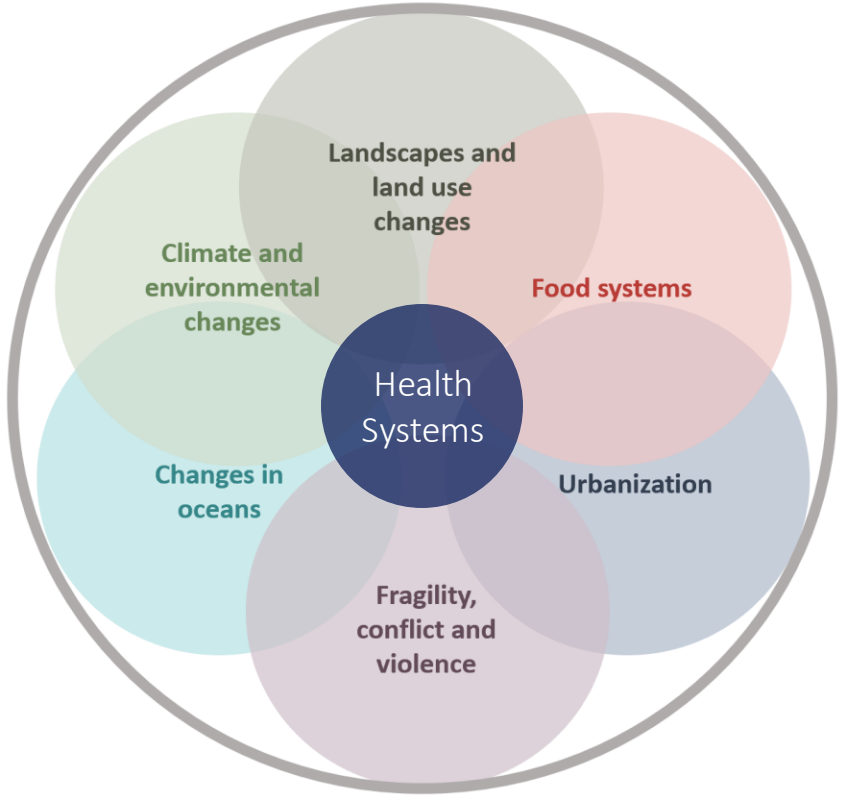
Crises are not inevitable, and appropriate interventions can mitigate pandemic risks, avoiding crises and containing adverse shocks.

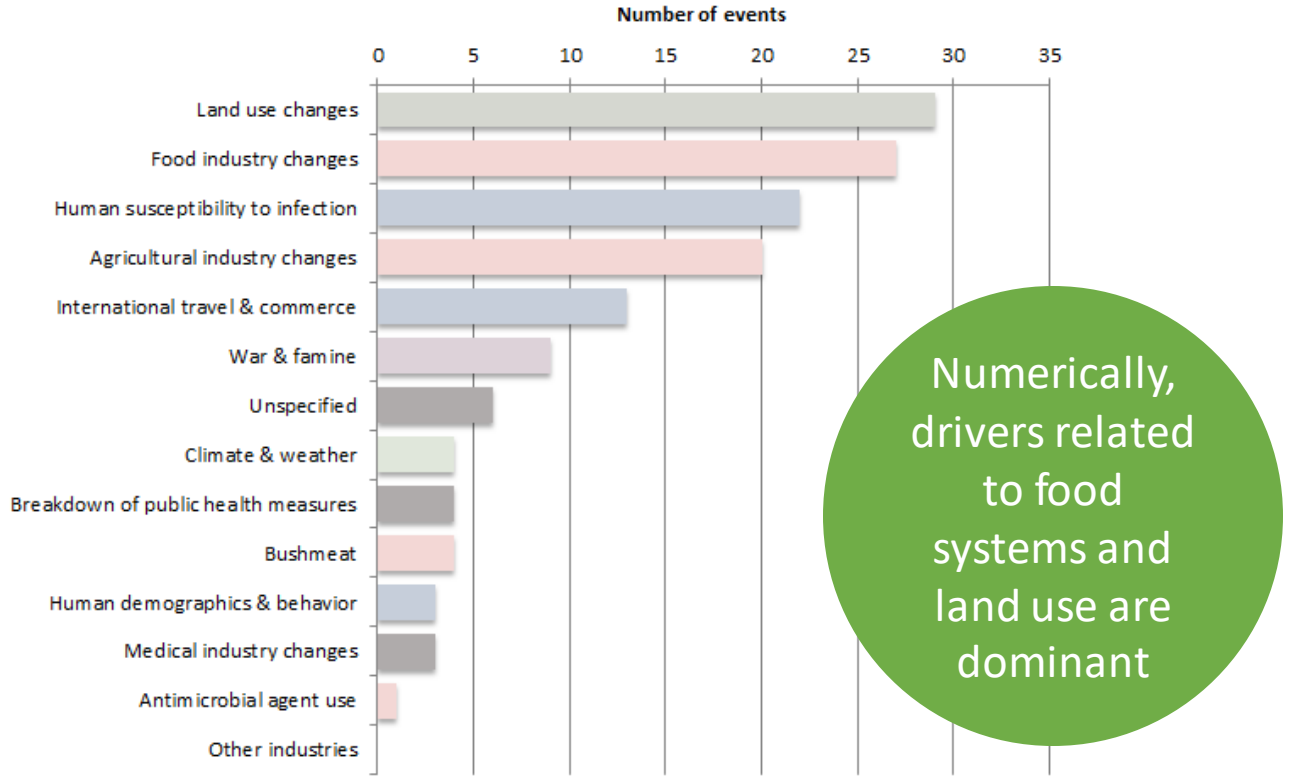
Prevention and preparedness are critical to ex-ante risk reduction and to ultimately strengthen resilience to health emergencies.

Prevention and preparedness are critical to risk reduction

Pandemic risks are mainly driven by human activities

- Drivers lead to spillovers and disease outbreaks, through a wide variety of mechanisms
- Coupled with weak health systems and public health institutions, drivers can lead to epidemics and pandemics
- Good development is likely to have an impact on emerging infectious diseases, reducing their pace of emergence





Source: EcoHealth Alliance/Loh et al. VBZD, Jones et al. 2008 Nature

Reducing pandemic risks touches upon many aspects of development

Prevention of Epidemics and Ecosystem health

Deterioration of ecosystem health augments the risk of spillovers through expanded interaction between humans or livestock with wildlife, as well as changes in reservoirs and host population dynamics

Prevent habitat loss or degradation. Creating or maintaining protected areas, promoting sustainable natural resource management, and strengthening the landscape planning

Wildlife consumption & commerce. Decreasing the local population reliance on "bushmeat", and ensuring legal and safe commerce of wildlife

Climate Change. Increasing the resilience of communities and natural areas to extreme weather, sustainable agriculture, restoring areas, and preventing human health spillovers as part of Nature-Based solutions

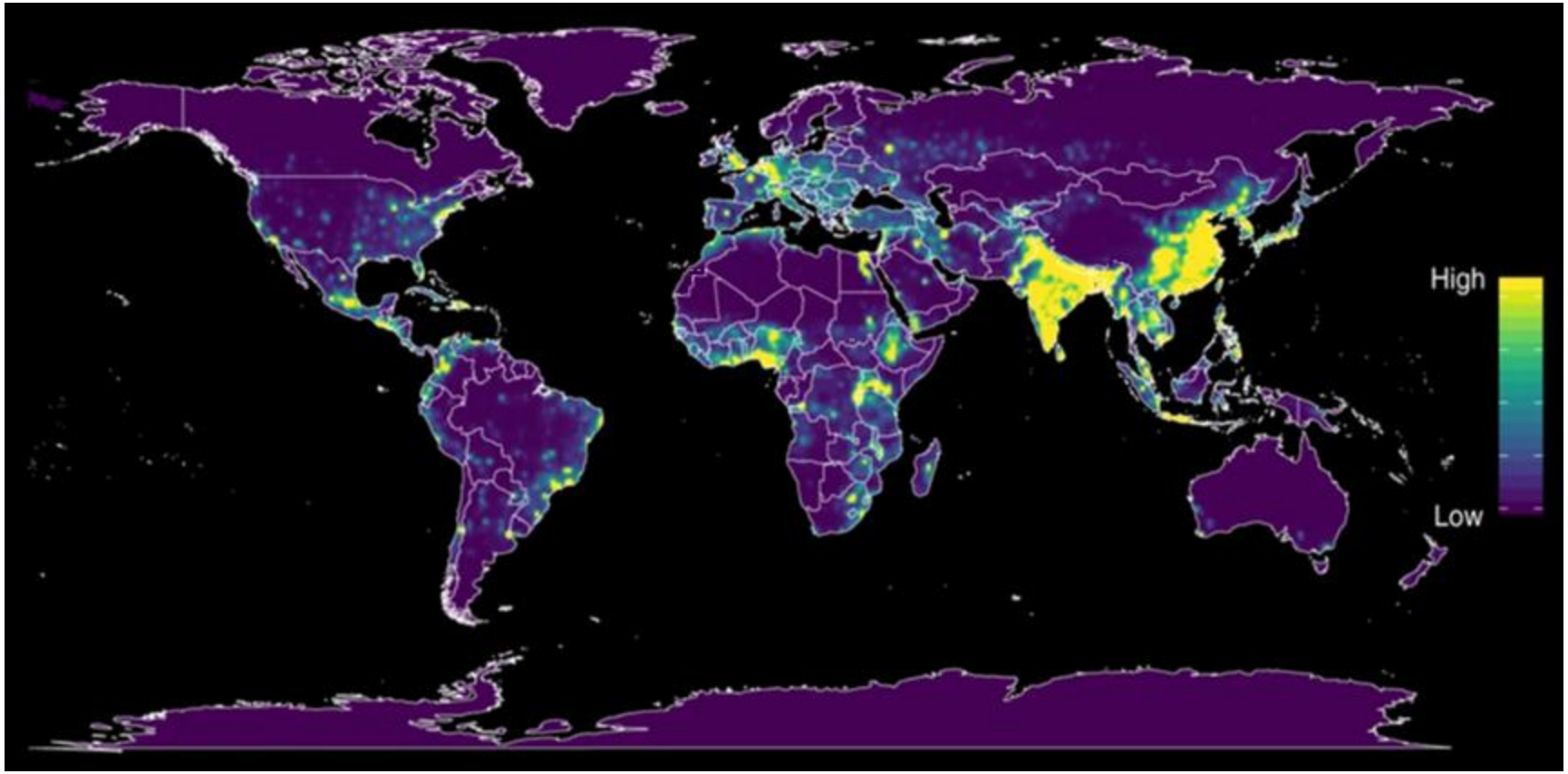
Attention is needed on hotspots for spillovers and climate-related impacts

Pandemic risks and vulnerabilities are global, though unevenly distributed

Risk anywhere is risk everywhere

There are no boundaries to infectious disease epidemics, **all countries are vulnerable to the impact of epidemics and spillovers**

Most hotspots for emerging infectious diseases are in low- and middle-income countries, *i.e.*, **in IDA and IBRD countries**



Adapted from Allen et al., 2017. Nature

Pandemic prevention and preparedness is a global public good

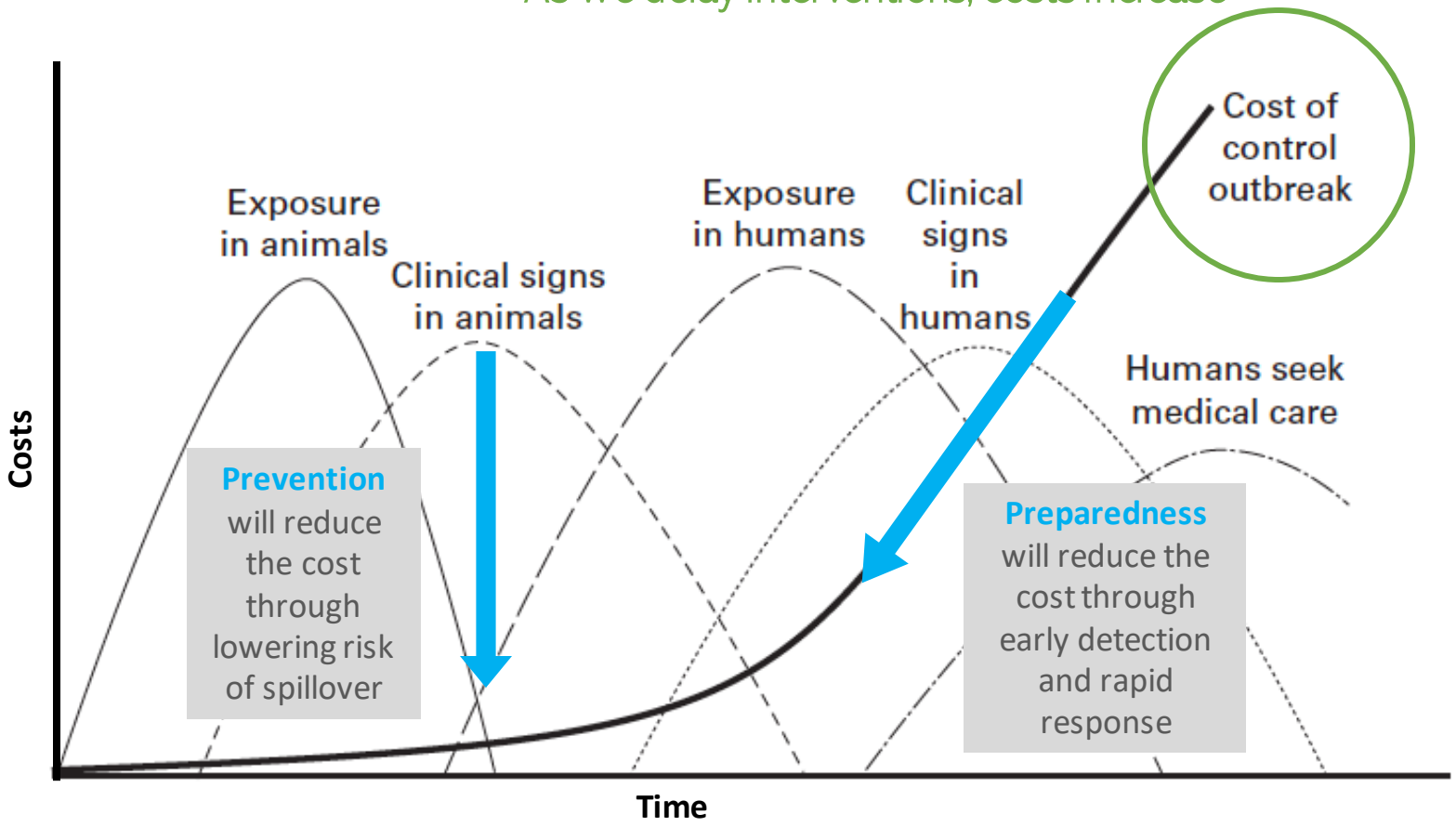
A compelling economic case

- The estimated annual cost of prevention and preparedness is less than 1% of the cost of the current pandemic

- Investing in prevention and preparedness comes with returns on investment up to 88%

World Bank, 2012. People, Pathogens and the Planet

As we delay interventions, costs increase



Adapted from World Bank, 2012. People, Pathogens and the Planet

Expenditure on prevention is an investment rather than a cost

Areas of focus for investment

Major global-level financial resources mobilized for Global Health Security (funding received or requested)

Program	Funding source(s)	Year(s)	Funding level	Prevent	Detect	Respond	Recover	Details
CEPI	Wellcome Trust, Gates Foundation, Japan, Germany, and Norway	2017–22	$560 million (as of 2017)			✓		Vaccine development; $1 billion target for first 5 years
Contingency Fund for Emergencies	WHO member contributions (17 countries have contributed to date)	2015–	$69 million received (as of June 2018); $100 million target for 2018-19			✓		Separately funded component of the WHO Health Emergencies Program; rapid response to health emergencies: up to $500,000 mobilized within 24 hours; $21 million utilized in 2017 in 23 countries
Gavi	Governments, Gates Foundation, private sector	2016–20	$9.2 billion in donor contributions and pledges	✓*		✓	✓	Immunization delivery (includes health system strengthening aspects)
GHSA	G7 nations	2014–22	>$1.44 billion	✓	✓	✓		GHSA itself does not allocate/ appropriate funds; support is allocated by countries under the principles of GHSA to advance prevent, detect, and respond capacities
Pandemic Emergency Financing Facility (PEF)	World Bank	2017–22	$320 million (Class A pathogens: $225 million, Class B: $95 million); separate cash window			✓	✓	Surge financing (insurance window + cash window) in response to activation criteria (outbreak size, spread, and growth); premiums and bonds financed by donor governments
Pandemic Preparedness Plans	World Bank IDA18 Replenishment	2017–20	Dependent on client country requests			✓	✓	Support to 25 IDA countries to develop frameworks for governance and institutional arrangements for multi-sectoral health emergency preparedness, response, and recovery
WHO Health Emergencies Program	WHO member states	2016–	$485 million requested for 2016-17 (73% funded)		✓	✓		Core budget for essential functions, plus an appeals budget that covers additional work in response to acute and protracted health emergencies

* To the extent that Gavi covers Prevent it is for the specific prevention of yellow fever spillover through vaccination in high-risk areas; does not address drivers

Carlin et al. 2019 Building Resilience to Biothreats

Existing spending on global health security is largely directed to immunization and emergency response operations – with limited spending towards pandemic prevention, surveillance and detection

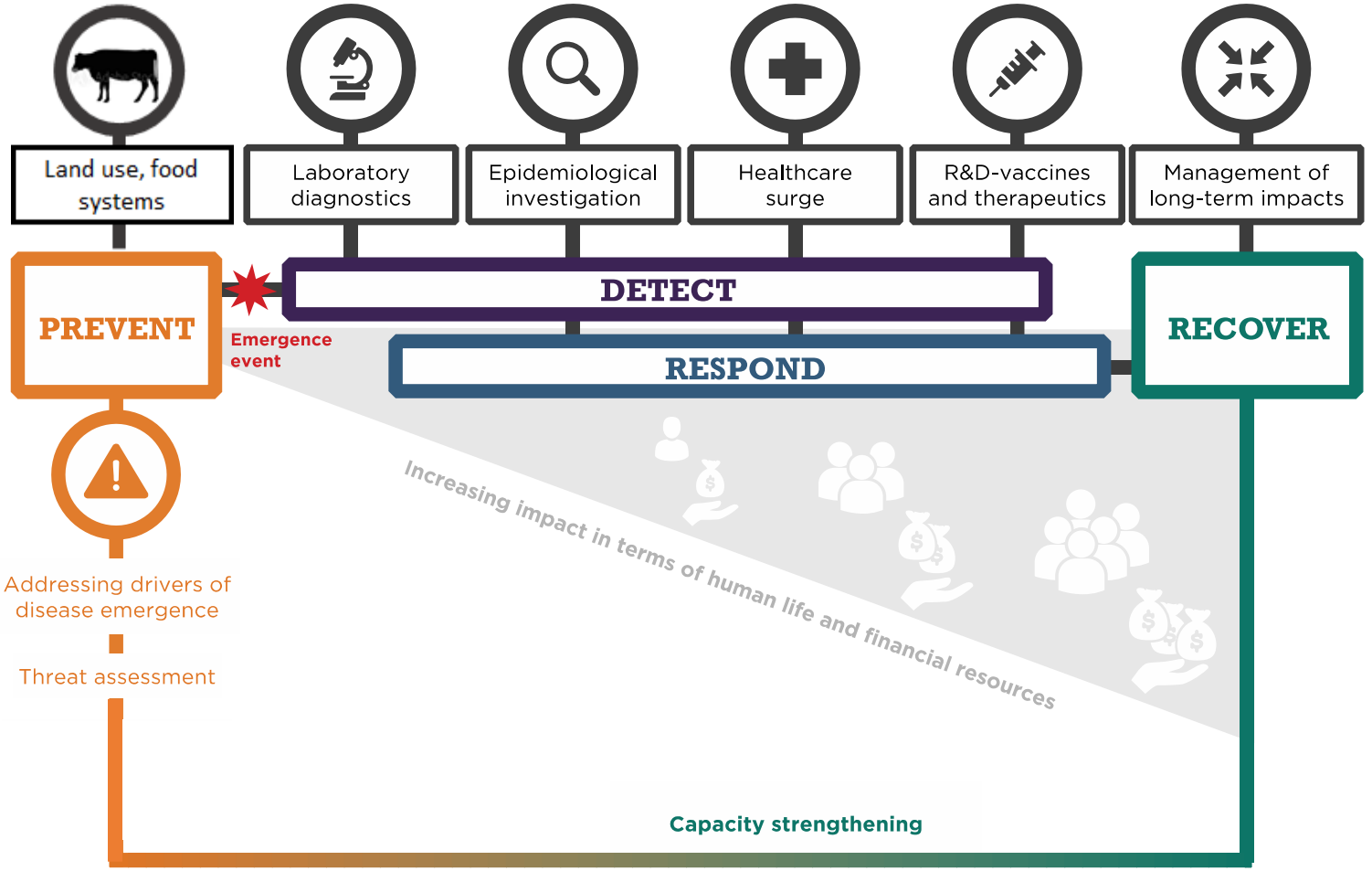
Global Health Security Tracking dashboard
Katz, R. et al. (2019). EcoHealth

Prevention and preparedness have been chronically under-invested worldwide

One Health is a necessary foundation of global health security

- *"Each time an outbreak was managed, **attention was subsequently diverted:** investments in prevention and preparedness waned, fueling the cycle of panic and neglect"*

  WB, From Panic and Neglect to Investing in Health Security (2017)

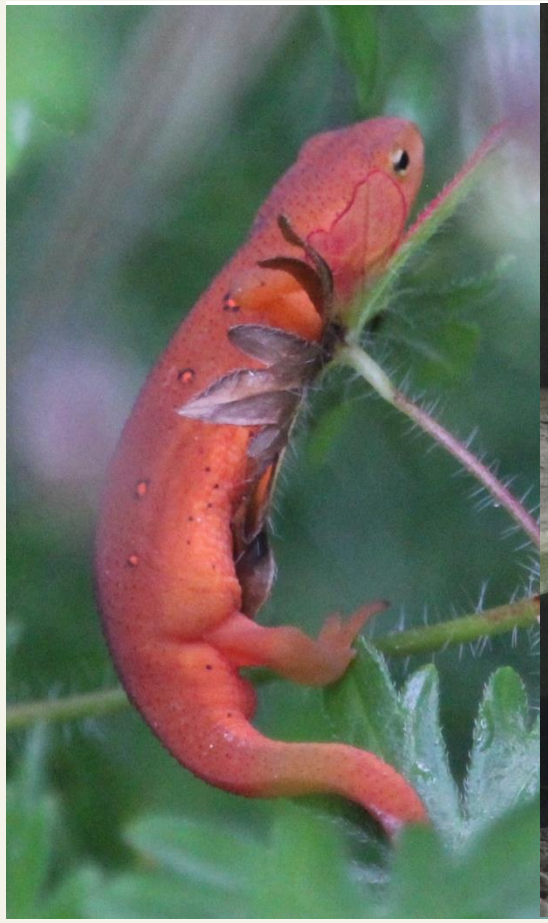


Adapted from Carlin et al., 2019. Building resilience to biothreats: an assessment of unmet core global health security

Without upstream investment in prevention, the world remains at risk

Catherine Machalaba

Principal Scientist for Health and Policy,
EcoHealth Alliance



Preventing Diseases in Wildlife Management: Sharing Guidance and Insights to Support Practice

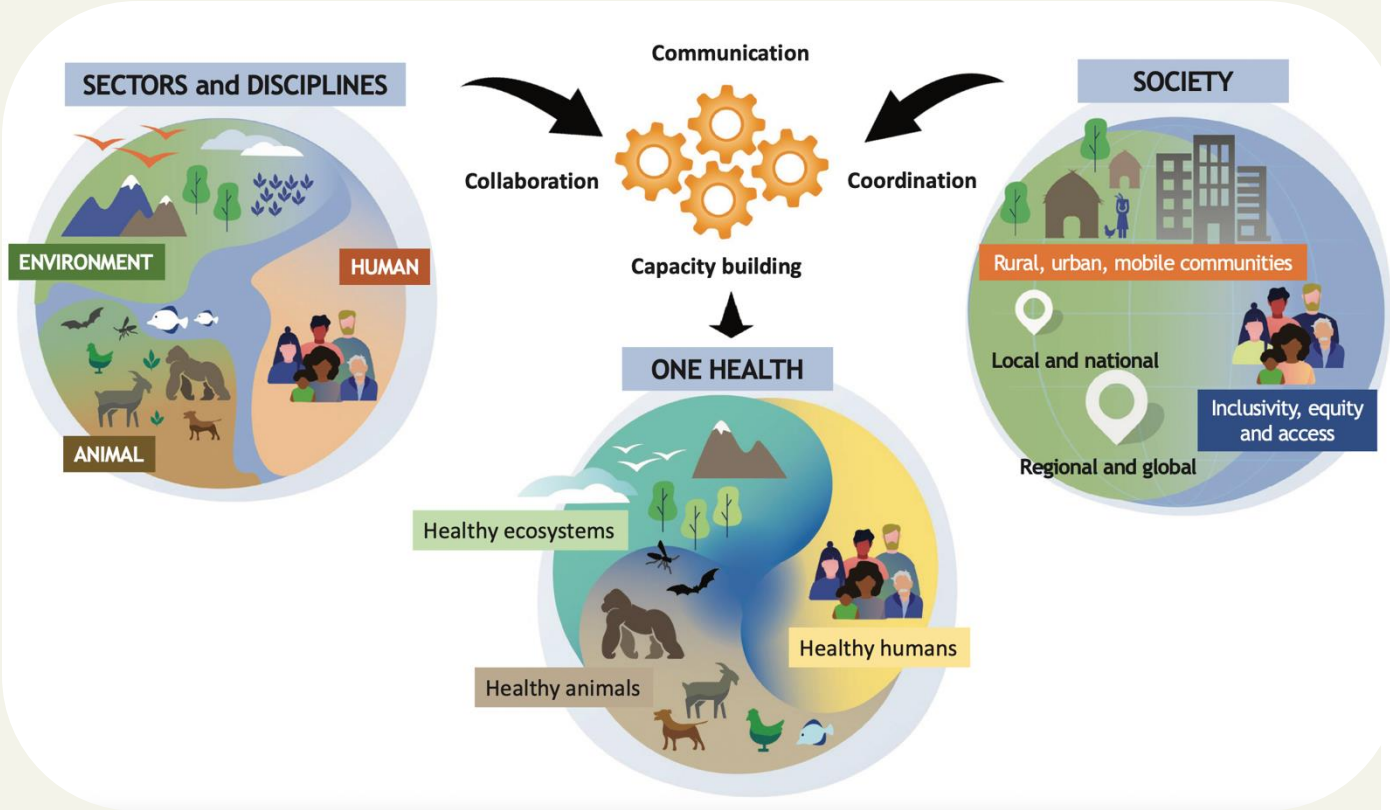
Catherine Machalaba PhD MPH
EcoHealth Alliance

Global Wildlife Program webinar
April 20, 2023

EcoHealth Alliance

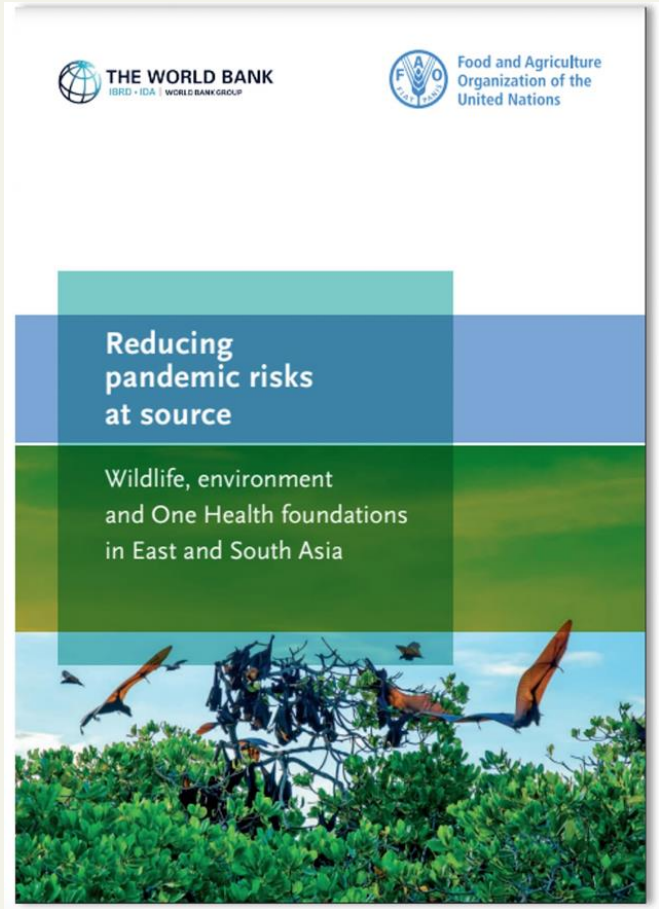
Definition

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.



One Health High-Level Expert Panel (working definition)

System Components to Reduce Disease Risk from Wildlife



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Indicator
Policies (such as for livestock or land use development) account for disease risk from wildlife
Institutional mandate for managing wildlife disease/pathogen risk
Wildlife authority included in national One Health body*
Mechanism for inter-agency coordination if authority for risk management is shared
Risk analysis process in place for assessing and managing risk at wildlife-domestic animal and wildlife-human interfaces
Plan/strategy in place for systematic surveillance and risk reduction
Dedicated budget for wildlife disease system
Wildlife monitoring network
Access to laboratory for testing wildlife specimens
Wildlife disease database
Alert system in place for early warning and response
Pipeline for wildlife veterinary/para-veterinary workforce in non-zoo settings
Applied field epidemiology training program for wildlife surveillance and investigation

World Organisation for Animal Health
Founded as OIE

IUCN SSC Species Survival Commission

WHSG Wildlife Health Specialist Group

Guidelines for Working with Free-Ranging Wild Mammals in the Era of the COVID-19 Pandemic

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Preventing transmission of SARS-CoV-2 from humans to wild mammals

Exposure Risks

Contact exposure
Mammals coming into contact with contaminated hands or equipment

Aerosol exposure
Infectious droplets from handlers holding mammals in close proximity

Environmental exposure
Sharing enclosed, poorly-ventilated spaces with mammals, where virus may persist in the air or on surfaces

MAP your plan to prevent transmission to mammals!

Mitigation Strategies

Minimize
Delay, prioritize, or avoid handling mammals when possible, i.e. collect environmental samples

Assess
Postpone handling mammals if there is a probability that you have been exposed to SARS-CoV-2 or if you have symptoms

Protect
Adopt practices that reduce exposure, i.e. face covering, gloves, disinfection procedures

This figure was adapted in collaboration with the IUCN Bat Specialist group.

Disease Risk Interfaces

Interface	Examples
Tourism	• Encroachment into caves • Wildlife selfies
Communities	• Agriculture (e.g., livestock rearing, crops) • Housing • Food acquisition and food preparation
Natural resource extraction	• Commercial/concession-based logging, mining, and oil and gas extraction • Guano harvest
Access and resource use	• Informal (e.g., artisanal) mining • local clearing (e.g., for charcoal) • Subsistence and non-subsistence wildlife hunting and fishing (use, trade)
Research	• Biological sampling and disease investigation
Biodiversity management	• Reintroduction/translocation • Introduction and establishment of invasive alien species (and biological measures to control them)

Wildlife do not present inherent risk for pathogen spill over!

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Healthy people and wildlife through nature protection

Guidelines for prevention, detection, response, and recovery from disease risks in and around protected and conserved areas

IUCN Green List
Protected | Conserved Areas

With the support of

Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

IUCN

EcoHealth Alliance

One Health principles for sustainable tourism in protected and conserved areas

Accompanying principles to the guidelines for prevention, detection, response and recovery from disease risks in and around protected and conserved areas

IUCN Green List
Protected | Conserved Areas

Conservation Medicine

With the support of

german cooperation
DEUTSCHE ZUSAMMENARBEIT

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

IUCN Green List
Protected | Conserved Areas

Build risk reduction into site management plans and national strategies!

Guidance Topics

Sound Design and Planning

1) Disease risk assessment
2) Animal release
3) Site use planning and buffer zones

Effective Management

4) Monitoring and Surveillance
5) Disease reporting and investigation
6) Safe wildlife viewing, handling, and use
7) Biosafety and Biosecurity
8) Control measures

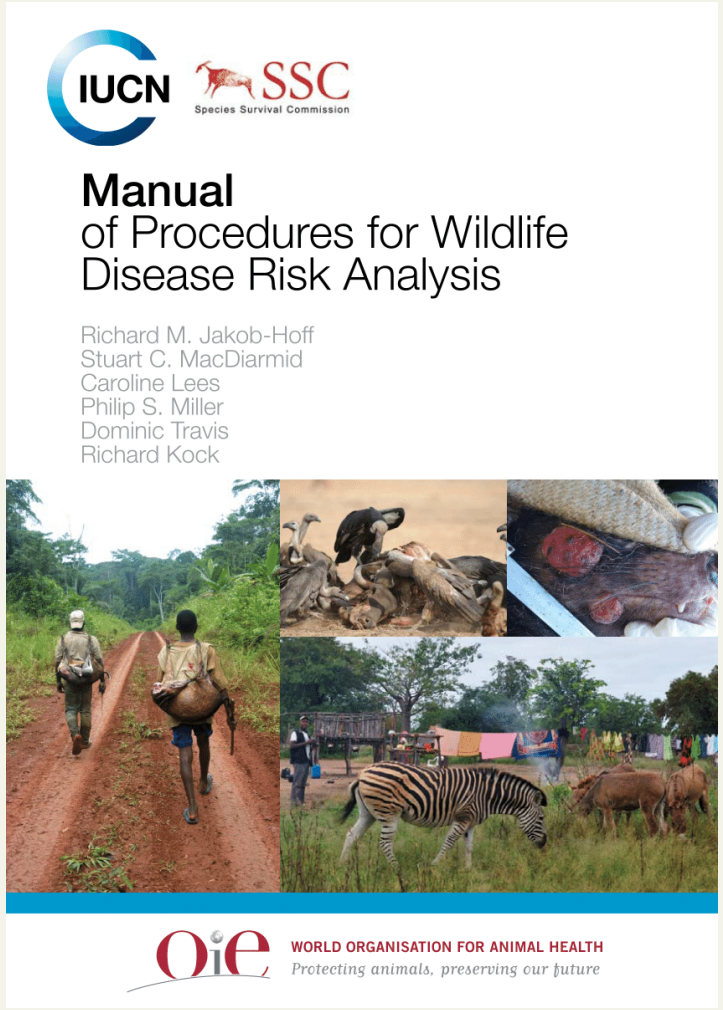
Good Governance

9) Risk communication
10) One Health coordination

Disease Risk Assessment

Most environmental impact assessments do not currently include scope on emerging disease risks

- ✓Ensure a process is in place to conduct and utilize findings from risk assessments
- ✓Conduct disease risk assessment prior to land and sea use, animal release, or reintroduction planning
- ✓Review and update risk assessment
- ✓Take action as warranted (e.g., zoning)



Risk Communication

- ✓Ensure coordination with animal and public health authorities for information exchange and consistent messages
- ✓Promote biodiversity-sensitive messaging
- ✓Post signage on safe practices and use behavioral “nudges” to encourage uptake
- ✓Include information on responsible practices to reduce disease risk in visitor codes of conduct

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One Health Coordination

- ✓Ensure participation in national or subnational One Health coordination platform
- ✓Build partnerships to notify appropriate authorities and exchange routine information
- ✓Identify and fill workforce and training needs
- ✓Develop and practice plans through multi-sectoral coordination and simulation exercises

Example of One Health Solution

What is the risk of pathogen spillover from a cave used for ecotourism?"

Relevant information for risk assessment (examples):

- Species present
- The type and frequency of interactions
- Pathogenicity of known and novel viruses, bacteria, fungi
- Protective factors to reduce exposure

Safe wildlife viewing platform

Bat cave in Uganda's Maramagambo forest
(Uganda Wildlife Authority and the US CDC)

https://www.silverbackgorillatours.com/uganda/maramagambo-forest

Q&A

SESSION 2

Case studies & success stories

Dao Nguyen

Senior Programme Manager, Conservation Action,
Species Conservation Action Team, IUCN

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SOLUTIONS FOR A HEALTHY PLANET

SOLUTIONS IN FOCUS:

Wildlife Health and Zoonotic Disease Risk Reduction

With the support of

Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

IUCN

EcoHealth Alliance

IUCN Green List

Wildlife rescues - building a safe bridge to recover wild populations in Vietnam

An animal keeper was taking care of confiscated tiger © Save Vietnam's Wildlife

SUMMARY:
In Viet Nam, there are thousands of live wild animals confiscated from illegal wildlife trade incidents, however, the majority of them could not survive after confiscation due to lack of proper treatment. Wildlife rescues are not limited to saving and taking care of animals from confiscations but also rescue and rehabilitation, release and monitoring, conservation breeding programme, capacity building, and collaboration to safely release them back to the wild, and to recover and secure wild populations. After 7 years of working, we have released more than 1200 confiscated animals back into the wild with a success rate of more than 60%, many of which were tagged and tracked post-released. Moreover, a Viet Nam Wildlife Rescue Association is going to be established to support wildlife rescue centres through the network.

SUCCESS FACTORS:

1. **Wildlife rescue and rehabilitation**
2. **Release and monitoring**
3. **Building capacity for rescue centres**

Hunter and Community-Based Early Warning System Expands Ebola Mortality Monitoring in Great Apes

Lowland Gorilla in Forest
© Courtesy of Elyssa Kellerman

SUMMARY:
In northern Republic of Congo, hunters and community members were recruited to report morbidity and mortality events in wild animals. In the region, great ape die-off events were found to precede human cases of Ebola virus disease. Through the community engagement programme, reporting channels were developed, relaying information from small villages to connector communities via radio, messages carried by commercial drivers or other contact routes with national authorities. This facilitated information flow to veterinarians so that diagnostic sampling could occur within the short timeframe needed before carcasses degrade. Reporting of events expanded the surveillance system to empower local people and allowed for early warning through sentinel surveillance for possible disease threats to humans and wild animals. Accompanying community outreach also helped to raise awareness about the dangers of hunting certain species or eating animals found sick or dead, particularly in epidemic periods, thereby promoting safer practices.

SUCCESS FACTORS:

1. Early warning system
2. Stakeholder engagement and participation

Read more:
https://panorama.solutions/en/solution/hunter-and-community-based-early-warning-system-expands-ebola-mortality-monitoring-great

Training on Disease Prevention, Detection, Response and Recovery for Protected Area Managers in Vietnam

Glo Germ was applied on 20 participants to emphasize the importance of proper hand washing procedures © EcoHealth Alliance

Photo credit: Save Vietnam Wildlife

SUMMARY:

In September 2022, a training was held in Viet Nam's Cúc Phương National Park on the recently developed IUCN *guidance for Prevention, Detection, Response and Recovery from Disease Risks in Protected and Conserved Areas* and accompanying *One Health Principles for Sustainable and Healthy Tourism*. The training was designed for professionals, wildlife handlers and park rangers to introduce the One Health concept, IUCN guidance, sampling, human safety, risk assessment, biosafety, personal protective equipment (PPE), and biohazard waste disposal. Forty participants from various agencies in Viet Nam including Cát Tiên, Pù Mát and Cúc Phương National Parks took part in the two-day training. The field experience and expertise of the training team and adaptation to the relevant context ensured practical application of the guidance. Sessions such as the 'Glo Germ' test, which demonstrated the importance of proper PPE donning and doffing and handwashing procedures, helped make the training interactive and reinforce key concepts.

Read more:
https://panorama.solutions/en/solution/training-disease-prevention-detection-response-and-recovery-protected-area-managers-0

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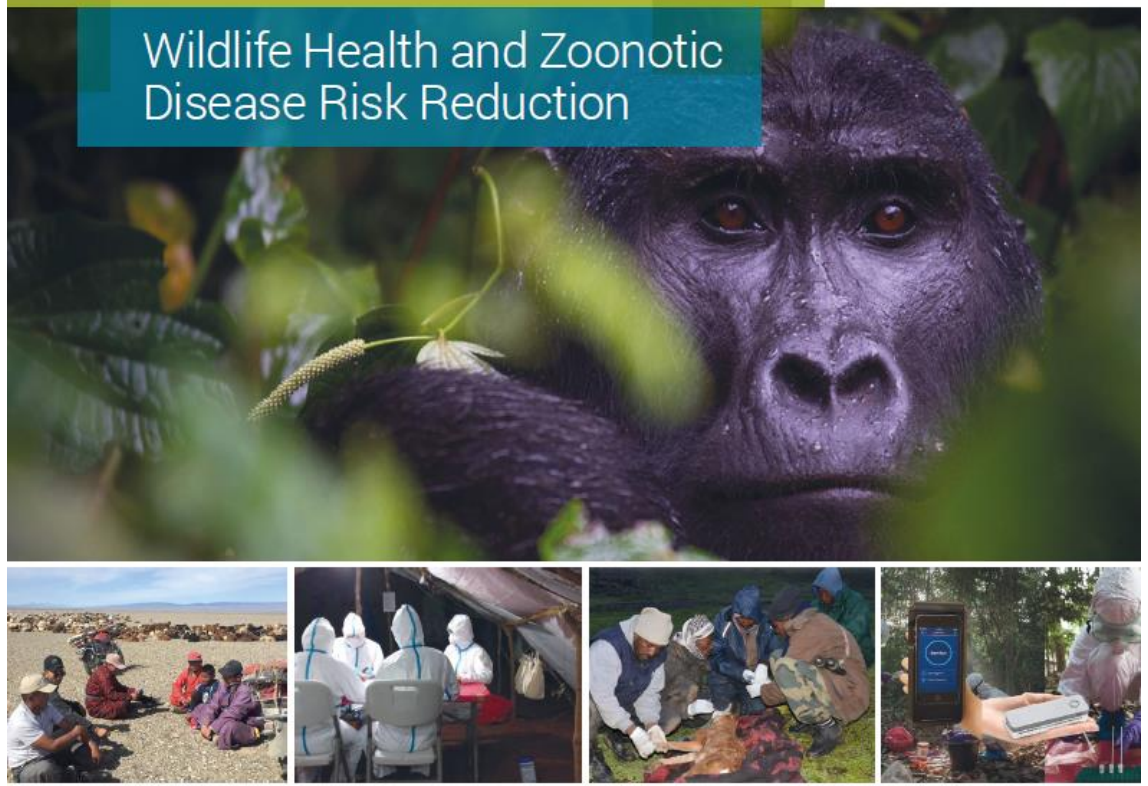
SOLUTIONS FOR A HEALTHY PLANET

SOLUTIONS IN FOCUS:

Wildlife Health and Zoonotic Disease Risk Reduction



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Green List

Dr. Kalpy Julien Coulibaly

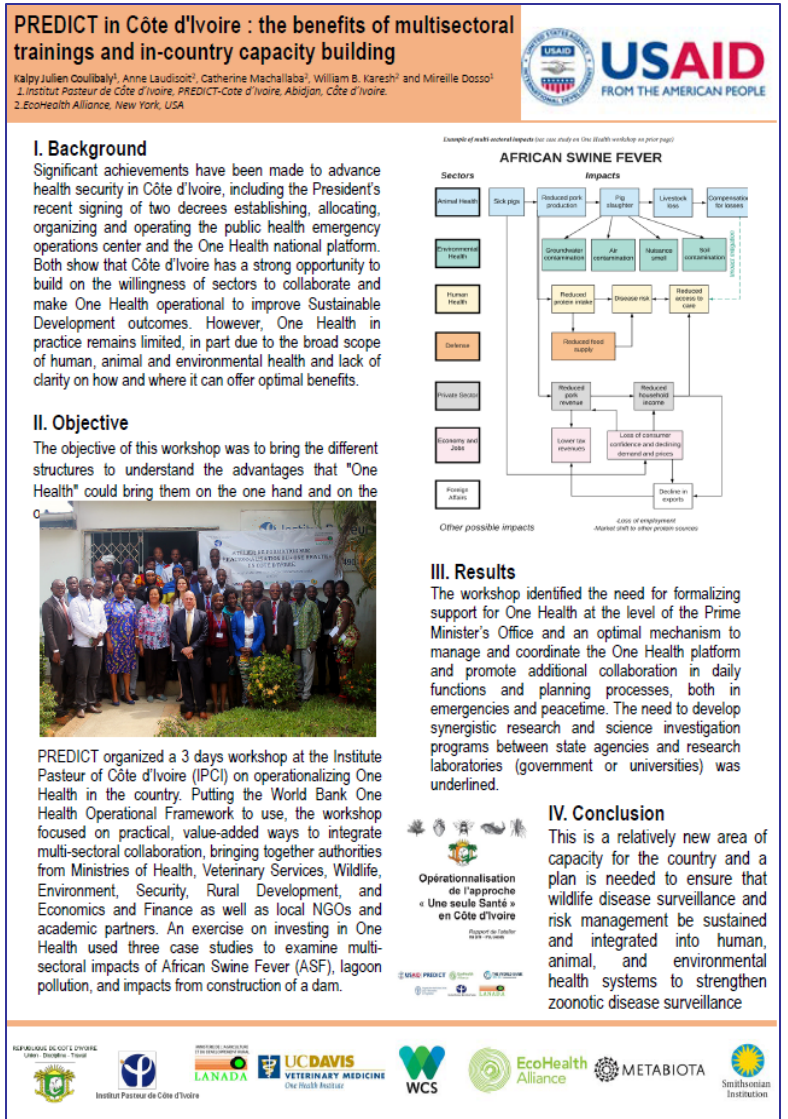
Head of Department of Environment and Health,
Pasteur Institute of Côte d'Ivoire

1) Main factors of emergence of wildlife-related diseases

- Land conversion and deforestation
  - ➔ Increases contact between wildlife and humans
- Hunting and poaching
- Misconceptions and ignorance: Animal diseases cannot be transmitted to humans
  - 1/3 of 401 people surveyed said they *had eaten a sick or apparently sick animal*

2) Practical examples/case studies at the national level about prevention and management of disease spread

- Côte d'Ivoire has set up the One Health platform
  - ➔ before we worked on its operationalization
- Simulation of the response to certain pandemics.



PREDICT in Côte d'Ivoire : the benefits of multisectoral trainings and in-country capacity building

Kalpy Julien Coulibaly[1], Anne Laudisoit[2], Catherine Machallaba[2], William B. Karesh[2] and Mireille Dosso[1]
1.Institut Pasteur de Côte d'Ivoire, PREDICT-Cote d'Ivoire, Abidjan, Côte d'Ivoire.
2.EcoHealth Alliance, New York, USA

USAID FROM THE AMERICAN PEOPLE

I. Background

Significant achievements have been made to advance health security in Côte d'Ivoire, including the President's recent signing of two decrees establishing, allocating, organizing and operating the public health emergency operations center and the One Health national platform. Both show that Côte d'Ivoire has a strong opportunity to build on the willingness of sectors to collaborate and make One Health operational to improve Sustainable Development outcomes. However, One Health in practice remains limited, in part due to the broad scope of human, animal and environmental health and lack of clarity on how and where it can offer optimal benefits.

II. Objective

The objective of this workshop was to bring the different structures to understand the advantages that "One Health" could bring them on the one hand and on the o

PREDICT organized a 3 days workshop at the Institute Pasteur of Côte d'Ivoire (IPCI) on operationalizing One Health in the country. Putting the World Bank One Health Operational Framework to use, the workshop focused on practical, value-added ways to integrate multi-sectoral collaboration, bringing together authorities from Ministries of Health, Veterinary Services, Wildlife, Environment, Security, Rural Development, and Economics and Finance as well as local NGOs and academic partners. An exercise on investing in One Health used three case studies to examine multi-sectoral impacts of African Swine Fever (ASF), lagoon pollution, and impacts from construction of a dam.

III. Results

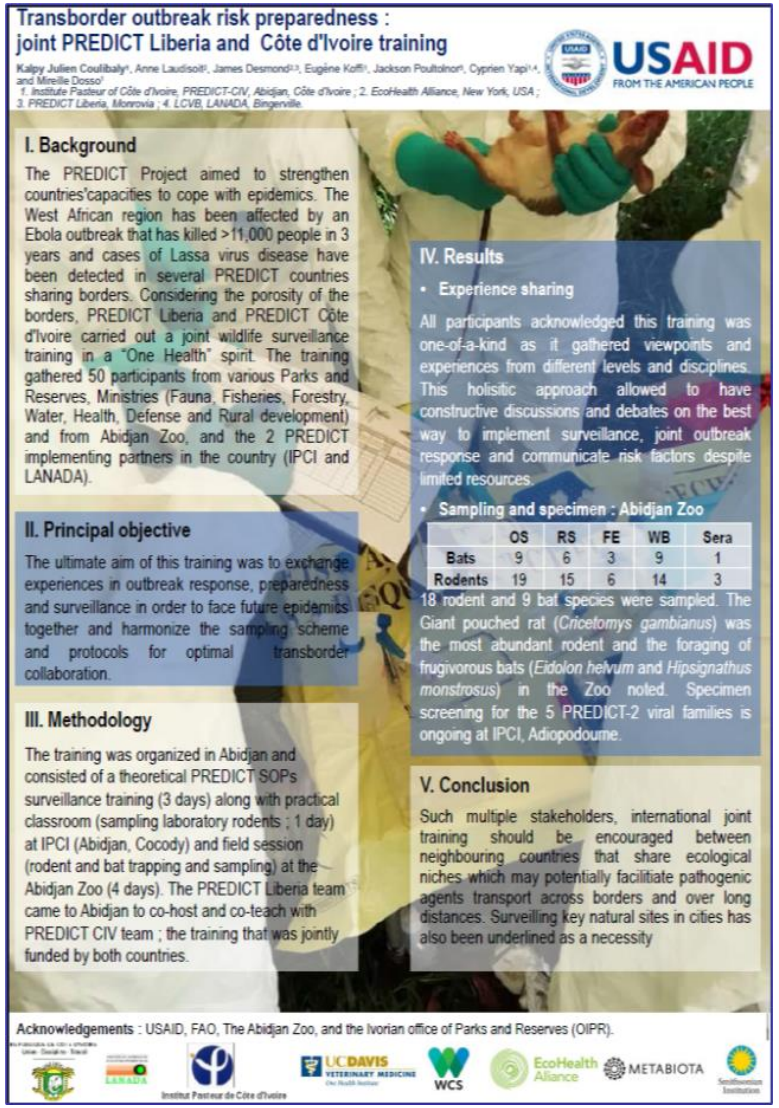
The workshop identified the need for formalizing support for One Health at the level of the Prime Minister's Office and an optimal mechanism to manage and coordinate the One Health platform and promote additional collaboration in daily functions and planning processes, both in emergencies and peacetime. The need to develop synergistic research and science investigation programs between state agencies and research laboratories (government or universities) was underlined.

IV. Conclusion

This is a relatively new area of capacity for the country and a plan is needed to ensure that wildlife disease surveillance and risk management be sustained and integrated into human, animal, and environmental health systems to strengthen zoonotic disease surveillance

2) Practical examples/case studies at the national level about prevention and management of disease spread

- Côte d'Ivoire has set up the One Health platform
  - ➔ before we worked on its operationalization
- Simulation of the response to certain pandemics.
- Training in cross-border management of certain epidemics (CIV - Liberia)



Transborder outbreak risk preparedness : joint PREDICT Liberia and Côte d'Ivoire training

Kalpy Julien Coulibaly[1], Anne Laudisoit[2], James Desmond[2,3], Eugène Koffi[1], Jackson Poultolnor[4], Cyprien Yapi[1,4], and Mireille Dosso[1]
1. Institute Pasteur of Côte d'Ivoire, PREDICT-CIV, Abidjan, Côte d'Ivoire ; 2. EcoHealth Alliance, New York, USA ; 3. PREDICT Liberia, Monrovia ; 4. LCVB, LANADA, Bingerville.

USAID FROM THE AMERICAN PEOPLE

I. Background

The PREDICT Project aimed to strengthen countries'capacities to cope with epidemics. The West African region has been affected by an Ebola outbreak that has killed >11,000 people in 3 years and cases of Lassa virus disease have been detected in several PREDICT countries sharing borders. Considering the porosity of the borders, PREDICT Liberia and PREDICT Côte d'Ivoire carried out a joint wildlife surveillance training in a "One Health" spirit. The training gathered 50 participants from various Parks and Reserves, Ministries (Fauna, Fisheries, Forestry, Water, Health, Defense and Rural development) and from Abidjan Zoo, and the 2 PREDICT implementing partners in the country (IPCI and LANADA).

II. Principal objective

The ultimate aim of this training was to exchange experiences in outbreak response, preparedness and surveillance in order to face future epidemics together and harmonize the sampling scheme and protocols for optimal transborder collaboration.

III. Methodology

The training was organized in Abidjan and consisted of a theoretical PREDICT SOPs surveillance training (3 days) along with practical classroom (sampling laboratory rodents ; 1 day) at IPCI (Abidjan, Cocody) and field session (rodent and bat trapping and sampling) at the Abidjan Zoo (4 days). The PREDICT Liberia team came to Abidjan to co-host and co-teach with PREDICT CIV team ; the training that was jointly funded by both countries.

IV. Results

- **Experience sharing**

All participants acknowledged this training was one-of-a-kind as it gathered viewpoints and experiences from different levels and disciplines. This holistic approach allowed to have constructive discussions and debates on the best way to implement surveillance, joint outbreak response and communicate risk factors despite limited resources.

- **Sampling and specimen : Abidjan Zoo**

	OS	RS	FE	WB	Sera
Bats	9	6	3	9	1
Rodents	19	15	6	14	3

18 rodent and 9 bat species were sampled. The Giant pouched rat (*Cricetomys gambianus*) was the most abundant rodent and the foraging of frugivorous bats (*Eidolon helvum* and *Hipsignathus monstrosus*) in the Zoo noted. Specimen screening for the 5 PREDICT-2 viral families is ongoing at IPCI, Adiopodoume.

V. Conclusion

Such multiple stakeholders, international joint training should be encouraged between neighbouring countries that share ecological niches which may potentially facilitiate pathogenic agents transport across borders and over long distances. Surveilling key natural sites in cities has also been underlined as a necessity

Acknowledgements : USAID, FAO, The Abidjan Zoo, and the Ivorian office of Parks and Reserves (OIPR).

LANADA · Institut Pasteur de Côte d'Ivoire · UC DAVIS VETERINARY MEDICINE · WCS · EcoHealth Alliance · METABIOTA · Smithsonian Institution

2) Practical examples/case studies at the national level about prevention and management of disease spread

- Sharing information and raising awareness

- Lessons Learned in Dealing with the COVID Pandemic
  - Over 2,000,000 tests performed between March 2021 and December 2022

Fraternité Matin

Lundi 9 septembre 2019

Marahoué

Des virus détectés chez des chauves-souris

Une étude menée durant trois ans dans la région de la Marahoué a permis de détecter deux souches de coronavirus connues chez trois espèces de chauve-souris, a rapporté le chercheur à l'Institut Pasteur et coordinateur Pays, le Dr Kalpy Julien Coulibaly, à l'occasion de l'atelier de clôture du projet Usaid-Predict 2, vendredi à Bouaflé.

« *Ces virus ne peuvent pas rendre l'homme malade pour l'instant, et selon les caractéristiques décrites et les interprétations des chercheurs américains et ceux de l'Institut Pasteur, ils ont toutes les caractéristiques pour pouvoir rendre l'homme malade s'ils continuent d'être proches des humains* », a-t-il révélé.

« *Les virus que nous avons détectés pour l'heure c'est par exemple les virus respiratoires qui peuvent ressembler à la grippe mais ce n'est pas la grippe. C'est plutôt plus proche de la maladie comme ce qu'on a appelé en son temps le syndrome respiratoire aigu qui a fait plusieurs morts en Asie ou bien la maladie respiratoire aiguë du Moyen-Orient qui a fait plusieurs morts en Arabie Saoudite* », a ajouté le Dr Coulibaly.

Il a invité les populations à la prudence, à ne pas manipuler et consommer de chauves-souris malades, exhortant les chercheurs et le pouvoir public à accentuer la surveillance de maux.

Le Dr Coulibaly a lors de cette étude crit dans le cadre en œuvre du pro Predict 2, un vir grippe A a été dét un homme. Le proje également, entre création du groupe technique sur la s male et le renforce capacités des c pour la lutte contre dies.

Le secrétaire géné préfecture de Bou kayoko Mamadou,

cette initiative, invitant les populations à apprendre à vivre en parfaite sécurité avec les animaux et à les préserver.

Ledit projet a pour objectif général de renforcer les capacités du système de surveillance des maladies humaines et animales dans les régions à haut risque, établir des plateformes de collaboration « S'anté-unique » pour réduire le risque de transmission, d'amplification et de propaga-

COMMUN

3) Wildlife management as part of national "One Health" approaches

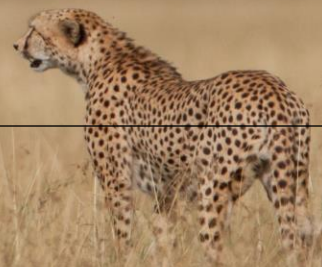
- Train wildlife specialists
  - Few wildlife veterinarians
- Train the different sectors to cooperate according to the "One Health" approach
- Operationalize "One Health" at the national level in the framework of Wildlife Management
  - Case of Human Conflict Elephants in Côte d'Ivoire
    - DFRC IPCI Cooperation

Thank you for your attention

Francois Diaz

Scientific Coordinator for Wildlife and Bees, Preparedness and Resilience Department, Organisation on Animal Health (WOAH, founded as OIE)

Guidelines for addressing disease risks in wildlife trade



François Diaz
Scientific Coordinator for Wildlife and Bees

Global Wildlife Program - Webinar on Preventing diseases in wildlife management: Sharing guidance and insights to support practice - 20 April 2023

Thanks to Tiggy Grillo who contribute this presentation

General Background

- Wildlife provide essential ecosystem services and are a key component of overall biological diversity.
- Wildlife is also an important source of protein, income, and livelihoods for many local or rural communities, whilst also important for national and regional economies through tourism and nature-based recreation.

-

- Unregulated, unsustainable harvest, use, and trade of wildlife can pose threats to animal health and welfare, have detrimental impacts on species conservation and biodiversity, and can have serious public health implications (in particular zoonosis)
- Risk of pathogen spillover and disease emergence amplified by steady increase in level of interaction between humans, wildlife, and domestic animals.

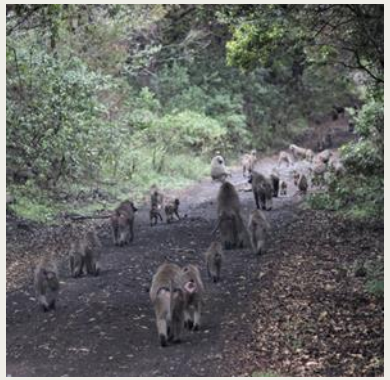
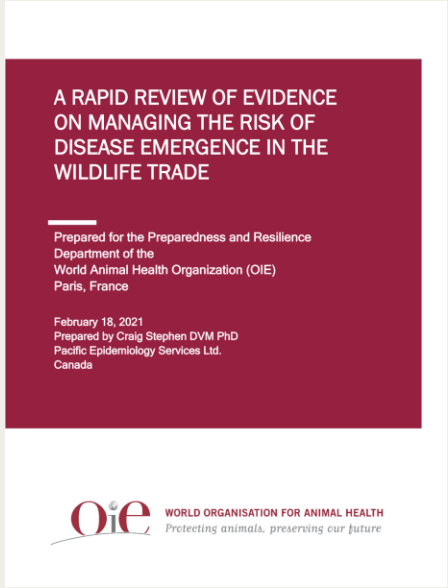


Image: pixabay .com

Background of the Guidelines

- In April 2020, the OIE Wildlife Working Group released a statement highlighting the complexities, benefits, and challenges of wildlife trade.
- End of 2020-Early in 2021, development of the WOAH Wildlife Health Framework
- Early in 2021, a consultant-led 'rapid review of evidence on managing the risk of disease emergence in the wildlife trade' was completed.

- ✓ WOAH set up an Ad Hoc Group (Group of experts) on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain
- ✓ Experts from different sectors (wildlife crime, wildlife trade, animal welfare, risk assessment, veterinary services, animal health standards, ecology, public health, social and behavior change and systems-thinking)
- ✓ 7 virtual meetings in addition inter-sessional work since June 2021



Stephen C, Berezowski J et al. 2021 Rapid Review of Evidence on Managing the Risk of Emerging Diseases in the Wildlife Trade. Prepared for the Preparedness and Resilience Department.

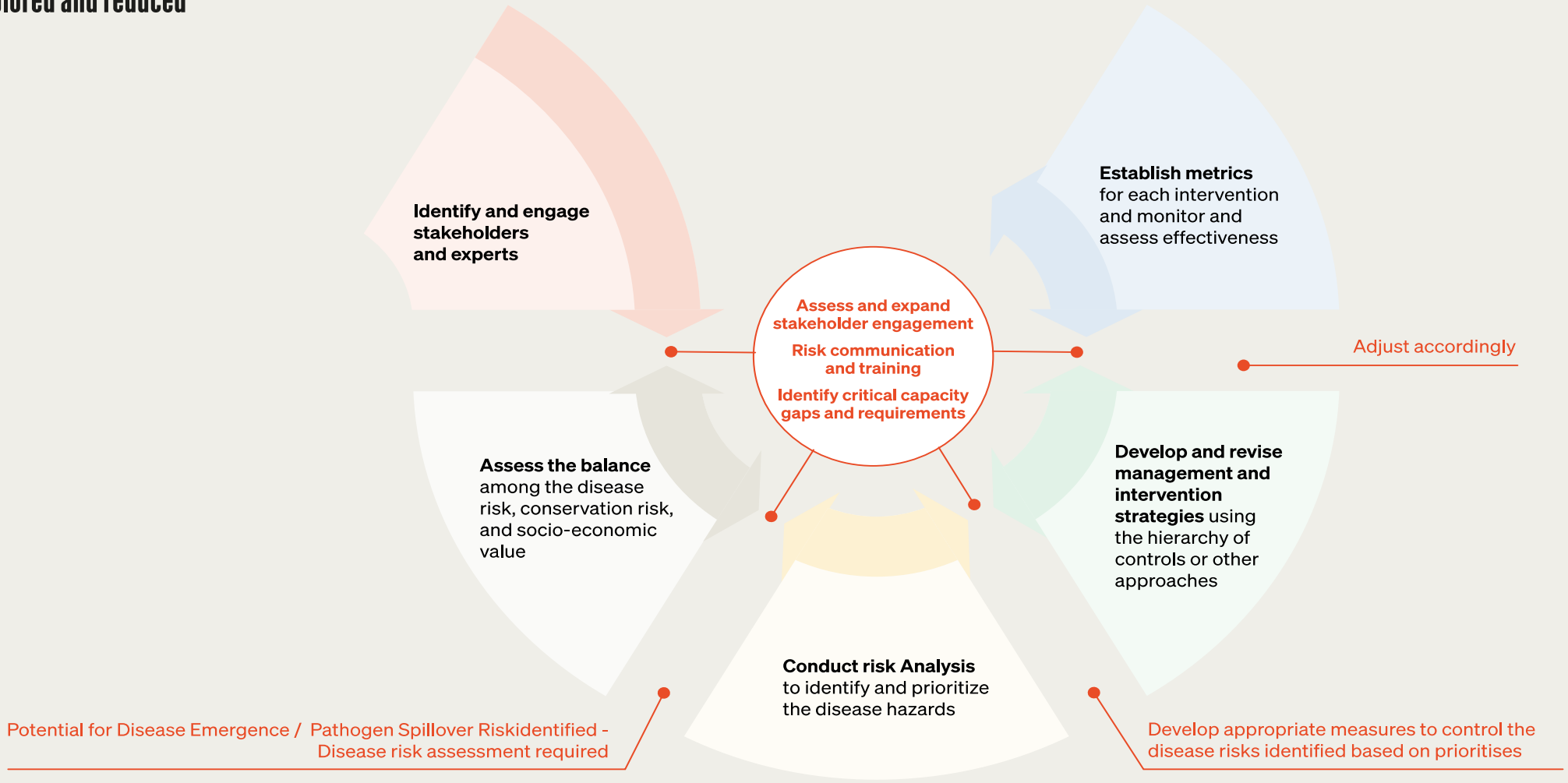
Overview

- **<u>Primary audience</u>**: Veterinary Services, Wildlife Authorities, Public Health authorities, other Competent authorities with a mandate on animal health and welfare, public health, wildlife management and trade, law enforcement.
- Guidelines provide **an approach** to facilitate users to identify and select pragmatic, flexible, practical, adaptable and relevant disease risk reduction and intervention strategies
- **Taking into account** identified disease risks, capacity, and needs of the users
- **With the final objective** to ensure feasible, effective and sustainable implementation on the ground at markets selling wildlife and along wildlife trade supply chains

Image: pixabay.com

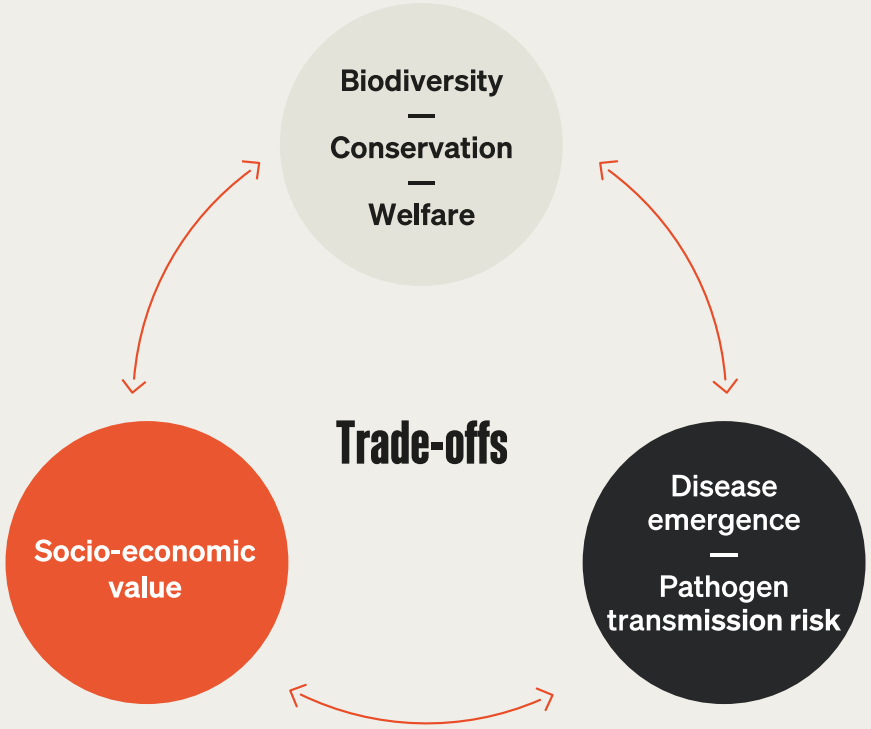
Approach

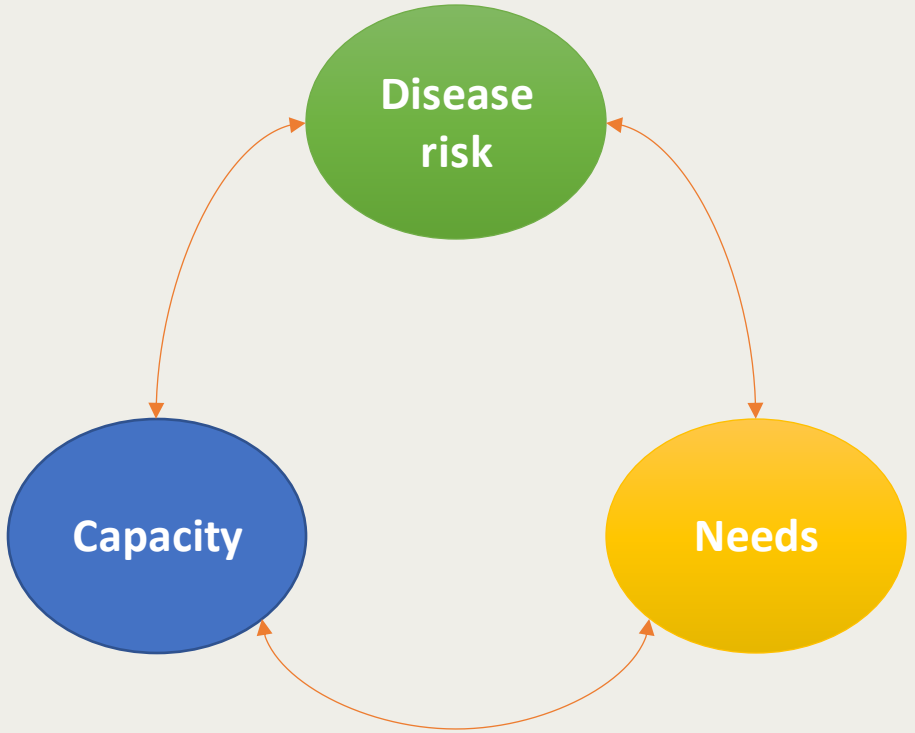
Identify a wildlife trade supply chain or interface for which disease risks are to be explored and reduced



Implementation (Disease risk intervention strategies)

Decision Making Frameworks in the Face of Complexity





Availability of the Guidelines

- ✓ Guidelines already finalized
- ➢ On the process of copy editing
- ➢ Should be available by June 2023

- ➢ Guidelines will be available on the WOAH website – Wildlife page:

https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/

- ➢ Guidelines will be diffused to International Partners and the WOAH National Focal Points for Wildlife + Pilot project in the implementation of the Guidelines in some countries

Thank you

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Founded as OIE

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Fondée en tant qu'OIE

Organización Mundial de Sanidad Animal
Fundada como OIE

Discussion

Jackson Katampi

Zambia National Coordinator, IUCN Green List For Protected and Conserved Areas, Ministry of Tourism and Arts, Department of National Parks and Wildlife, Zambia

Q&A

Thank you!

Visit our website at: https://www.worldbank.org/en/programs/global-wildlife-program

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