



One Health Pandemic Prevention: Leveraging innovation in surveillance and disease control to be better prepared for zoonotic disease spillover

Innovation in Veterinary Care
World Veterinary Association and Health for Animals Seminar
4 June 2021

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Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Population Growth

Mass Livestock Production

Climate Change

Global Air Travel

Bioterrorism

Urbanization

Deforestation

Wildlife Disruption

Antibiotic Resistance

Mass Gatherings



Kamran Khan, BlueDot
Integrating and using big data

Themes

1. Science and Technology innovations

- Demographics of animal populations
- Understanding infectious disease risk and spread
- Intelligence and surveillance system coordination
- Diagnostics and molecular epidemiology

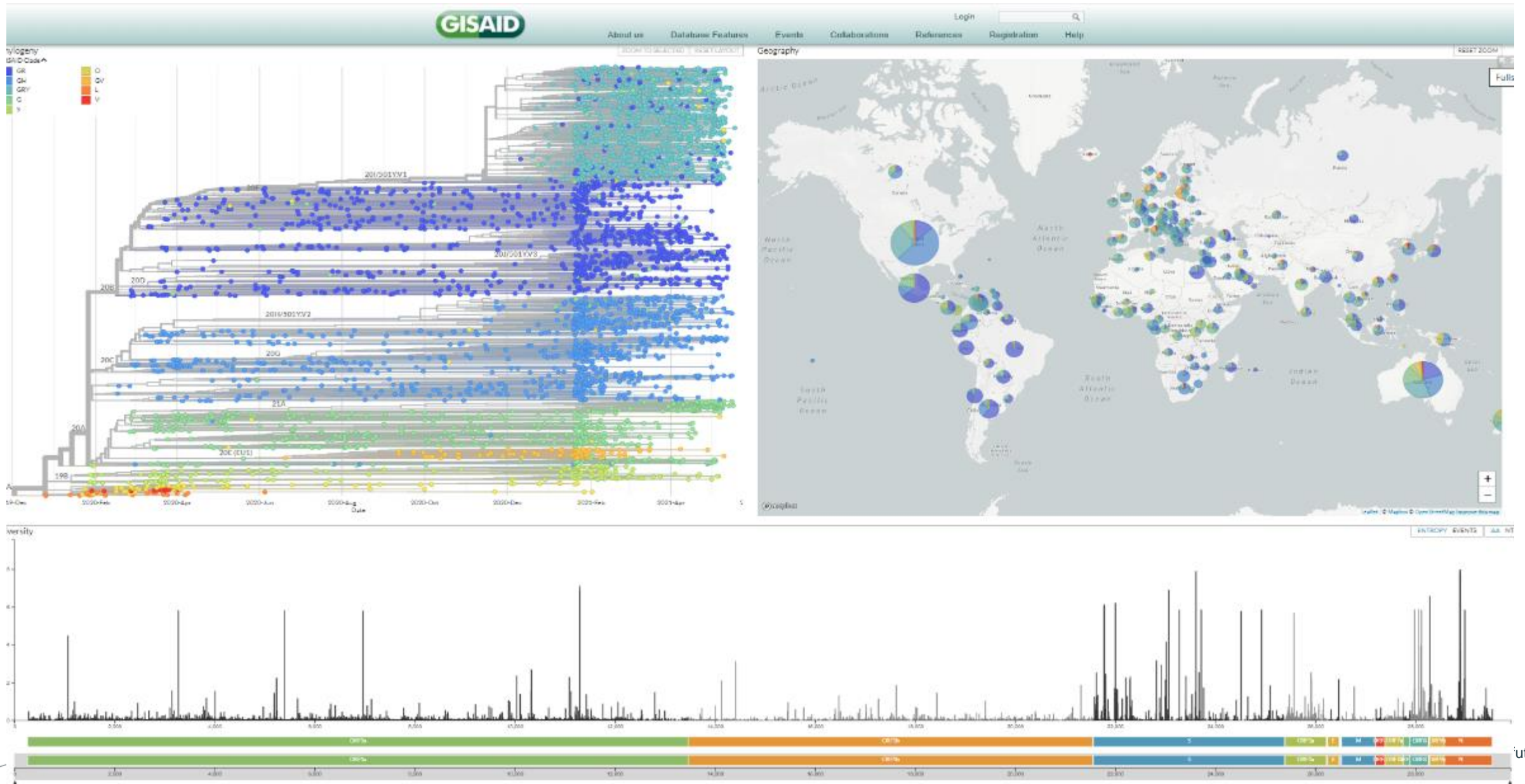
2. Regulatory innovations

- Good Regulatory Practices to co-design systems and engage stakeholders for improved compliance
- Data stewardship and interoperability
- E-learning tools

3. Strategy and Governance innovations

- Foresight, threat and vulnerability assessment
- Collaboration and partnerships
- Governance for leadership, advocacy and coordination

The genetic revolution and bioinformatics data sharing is providing incredible insights into how epidemics propagate and evolve



Laboratories in LMICs are struggling with basic elements of sustainability: equipment maintenance and calibration, training and retention of staff, essential utilities



PVS Lab Indicators

Nearly 80 indicators have been identified to date to measure the level of investment and describe lab management capacity across the 16 missions in the legacy cohort

- BIOHAZARD & BIOSECURITY / BIOLOGICAL RISK ANALYSIS** (8 INDICATORS)
- CASH-FLOW (FUNDING)** (18 INDICATORS)
- CONTINUOUS EDUCATION & TRAINING** (8 INDICATORS)
- EQUIPMENT INVENTORY** (16 INDICATORS)
- EQUIPMENT MANAGEMENT** (7 INDICATORS)
- QUALITY MANAGEMENT SYSTEMS** (4 INDICATORS)
- SPACE CAPACITY & BUSINESS SUSTAINABILITY** (16 INDICATORS)

UNIVERSITY OF LIVERPOOL | OIE | INSTITUTE FOR INFECTIOUS ANIMAL DISEASES

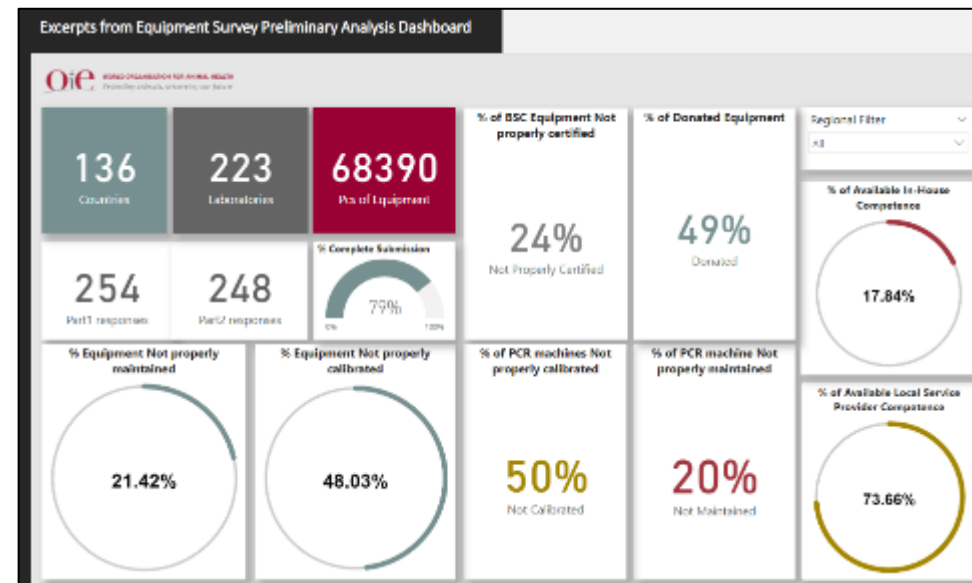
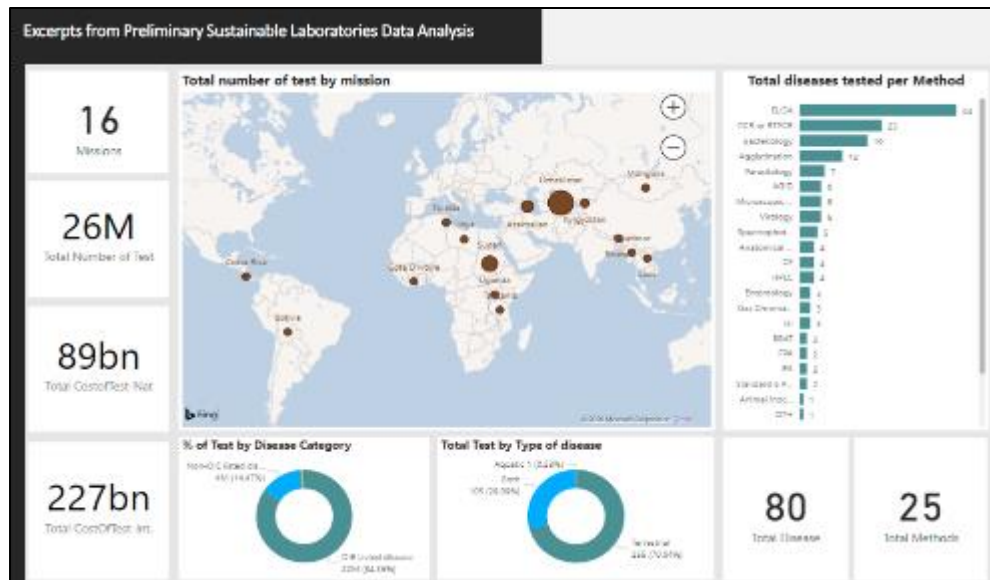
Programme managed by Jennifer Lasky OIE, Paris, France

Mitigation Of Animal Disease Threats Through Sustainable Laboratory Biosafety And Biosecurity


Interim Report: Economic Expertise On Investing In Sustainable Laboratory Biosafety And Biosecurity

Prepared by Nick Lyons, Jessica Corgi, Melissa Requert, Terry McEwan, Miguel Gonzalez and Jonathan Rushton

July 2020



Supporting data sharing and interoperability for efficiency, speed and insights: OIE initiatives include OIE-WAHIS, OIE-AMU, OIE-PVS, OIE-Official Status, OIE-Observatory





WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

OIE-WAHIS


Reports ▾ Analytics **EN** ES FR

How would you like to consult the information ?

 Analytics >

 by Report >

Outbreaks from the most recent events



Most recent notifications VIEW ALL

Country/Territory	Disease-Serotype/genotype/subtype	Date
Germany	Highly pathogenic influenza A viruses (Inf. with)(non-poultry including wild birds)(2017-) H5N1	27/05/21
Germany	Highly pathogenic influenza A viruses (Inf. with)(non-poultry including wild birds)(2017-) H5N4	27/05/21
Bhutan	African swine fever virus (Inf. with)	27/05/21
Germany	Highly pathogenic influenza A viruses (Inf. with)(non-poultry including wild birds)(2017-) H5N1	26/05/21
Russia	African swine fever virus (Inf. with)	26/05/21
Nepal	Burkholderia mallei (Inf. with) (Glanders)	24/05/21
Russia	Newcastle disease virus (Inf. with)	21/05/21
Romania	Caprine arthritis/encephalitis	21/05/21

OIE Training Platform and Serious Games are improving E-Learning offerings for VS Capacity Building and Public Engagement



ALERTE
LE JEU DE LA SURVEILLANCE POUR UNE SEULE SANTÉ

BUT DU JEU
Alerte est un jeu coopératif. Tous les joueurs gagnent ou perdent ensemble. Le but du jeu est de placer correctement les cartes de tous les joueurs dans la chaîne de surveillance, au centre de la table.

MATÉRIEL

- 1 plateau *Emergence de la maladie*
- 1 disque en bois *Curseur de maladie*
- 20 cubes en bois *Point de victoire*
- 27 cartes *Aléa* - 18 *Aléas négatif* (rouge) et 9 *Aléas positif* (bleu)
- 117 cartes *Action* :
 - 44 cartes orange (1^{er} niveau local : village),
 - 20 cartes rouges (2nd niveau local : chef-lieu),
 - 28 cartes turquoise (niveau régional),
 - 16 cartes violettes (niveau national)
 - et 9 cartes grises (journalistes et médias)

CHAÎNE DE SURVEILLANCE

ebosursu Oie cirad innov IRD Institut Pasteur

ALERTE

Organisation mondiale de la Santé Organisation des Nations Unies pour l'alimentation et l'agriculture OIE UN



OIE Rinderpest Serious Game

OIE - World Organisation for Animal Health Educational ★★★★★ 41

Everyone

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RINDERPEST

Rinderpest the game PLAY

Rinderpest VIGILANCE

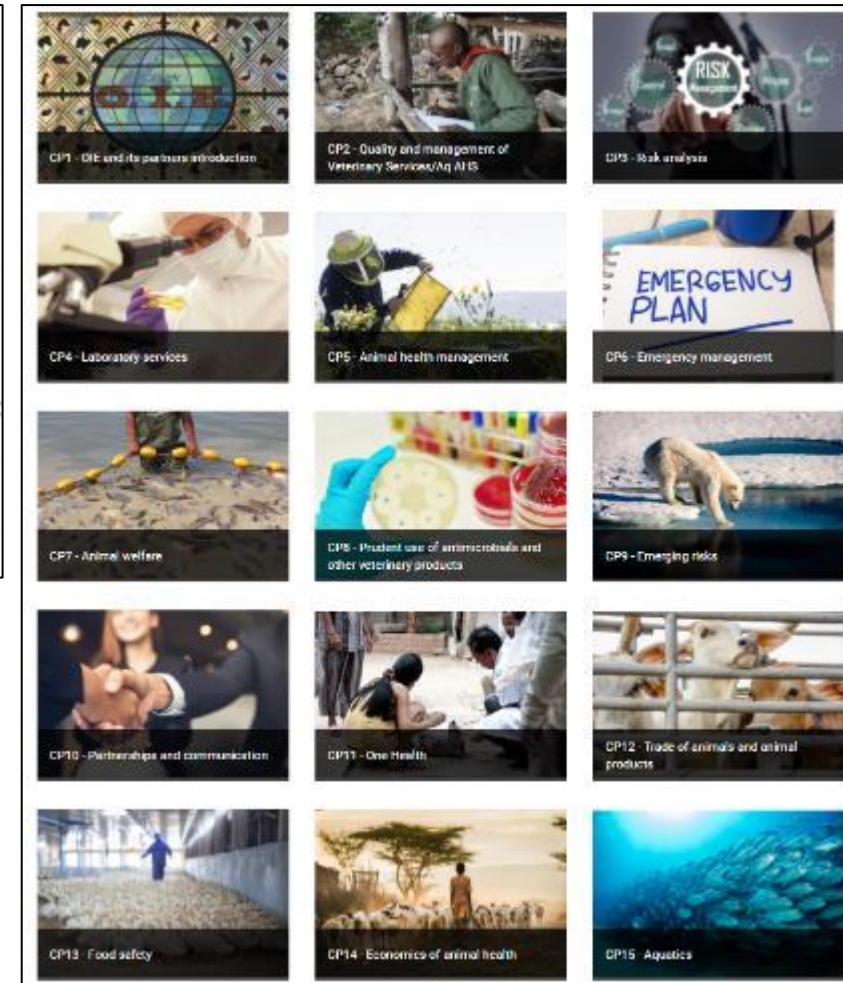
Required competencies of Veterinary Services in the context of the international trade Opportunities and challenges

5. OIE global de antimicrobia

OIE capacity-building activities to reinforce Veterinary Services' capacity on trade

Overview of current capacity building activities to reinforce Veterinary Services' capacity on trade

Programme OIE capacity-building and trade on trade



CP1 - OIE and its partners introduction

CP2 - Quality and management of Veterinary Services/An AI IS

CP3 - Risk analysis

CP4 - Laboratory services

CP5 - Animal health management

CP6 - Emergency management

CP7 - Animal welfare

CP8 - Prudent use of antimicrobials and other veterinary products

CP9 - Emerging risks

CP10 - Partnerships and communication

CP11 - One Health

CP12 - Trade of animals and animal products

CP13 - Food safety

CP14 - Economics of animal health

CP15 - Aquatics

AMR: Global Governance systems for leadership, advocacy, coordinated action and resource mobilisation




Antimicrobial Resistance Multi-Partner Trust Fund

Combattling the rising global threat of AMR through a One Health Approach

Members of the Global Leaders Group



Co-chairs

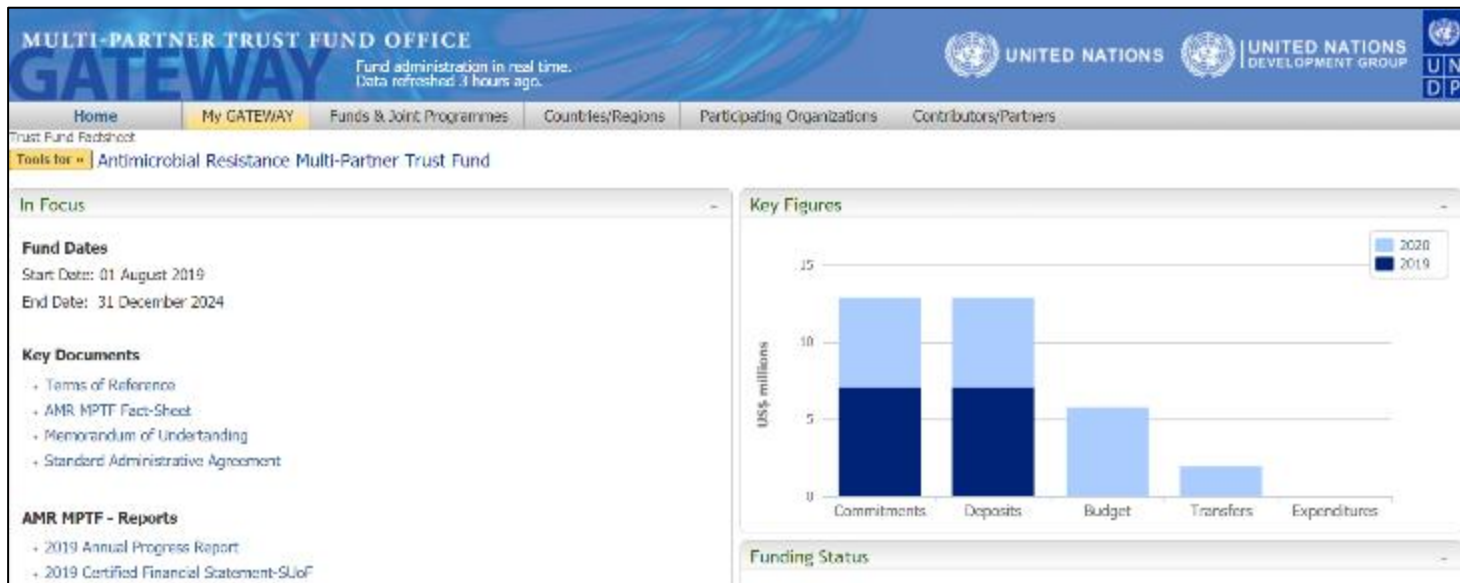
H.E. Sheikh Hasina
Prime Minister, PEOPLE'S REPUBLIC OF BANGLADESH

H.E. Mia Amor Mottley
Prime Minister, Minister of Finance, Economic Affairs and Investment, Minister of National Security and the Civil Service, BARBADOS

Terms of Reference

[Global Leaders Group Terms of Reference - English \(pdf\)](#)
123 KB



MULTI-PARTNER TRUST FUND OFFICE GATEWAY

Fund administration in real time. Data refreshed 3 hours ago.

UNITED NATIONS | UNITED NATIONS DEVELOPMENT GROUP | UNDP

Home | My GATEWAY | Funds & Joint Programmes | Countries/Regions | Participating Organizations | Contributors/Partners

Trust Fund Redsheet

Tools for: Antimicrobial Resistance Multi-Partner Trust Fund

In Focus

Fund Dates
Start Date: 01 August 2019
End Date: 31 December 2024

Key Documents

- Terms of Reference
- AMR MPTF Fact-Sheet
- Memorandum of Understanding
- Standard Administrative Agreement

AMR MPTF - Reports

- 2019 Annual Progress Report
- 2019 Certified Financial Statement-SUoF


Key Figures




Category	2019 (US\$ millions)	2020 (US\$ millions)
Commitments	~7.5	~12.5
Deposits	~7.5	~12.5
Budget	0	~6.0
Transfers	0	~2.5
Expenditures	0	~2.5

Funding Status

Agro-Threats, Agro-Crimes and Emergency Preparedness: Veterinary Services must partner and integrate into National Emergency Management Systems

BUILDING RESILIENCE AGAINST AGRO-TERRORISM AND AGRO-CRIME



PROJECT	SCOPE	PROJECT PARTNERS
3 YEARS 2019-2021	GLOBAL	  

FOCUS

EMERGENCIES RESULTING FROM AGRO-TERRORISM OR AGRO-CRIME, AND RESILIENCE AGAINST ALL TYPES OF ANIMAL HEALTH EMERGENCY

OBJECTIVE

STRENGTHENING MULTI-SECTORAL CAPACITY TO RESPOND TO ANIMAL HEALTH EMERGENCIES BY:

- FOSTERING coordination at national, regional and international level
- BUILDING capacity through training and exercising
- IMPROVING coordination between Veterinary Services and law enforcement authorities

ASSESSING NEW CHALLENGES AND OPPORTUNITIES





- Exploring, designing and piloting innovative approaches
- Assessing cost-effectiveness of preparedness
- Understanding national and regional risks and vulnerabilities
- Identifying priorities for capacity building


EMPOWERING KEY STAKEHOLDERS THROUGH TRAINING AND EXERCISING

- Refining and sharing synergistic guidance tools
- Loading regional trainings and simulations exercises
- Tooling coordination through an international simulation exercise
- Sharing good practices for building solidarity

COORDINATION AND COMMUNICATION

- Developing scientific and policy guidance
- Catalysing dialogue and transparency
- Promoting gender equality
- Informing a global strategy for animal health emergencies

FUNDED BY:    



GUIDELINES FOR SIMULATION EXERCISES

A consistent set of good practices for preparing, delivering, and learning from animal health and welfare and veterinary public health simulation exercises for Veterinary Services

Actions	Outcomes	Goals	Impacts
<p>VS and LL communities exploit effective collaborative frameworks and mechanisms to tackle animal agro-crime, based on a common understanding of the threats and risks as well as shared aims and priorities to tackle animal agro-crime</p> <p>Specific Actions:</p> <ol style="list-style-type: none"> 1. Advocacy - Make the case to tackle agro-crimes 2. Communication and awareness - facilitate wider understanding and engagement 3. VSAE joint capacity development - Build skills and shared tools and approaches 4. VSAE collaboration mechanisms - Handbook and fact file in translation, expertise sharing and joint operations 5. VSAE information and intelligence sharing - enhance data, evidence, information and intelligence collection, analysis, and use 6. VSAE joint teams and operations - Facilitate inter-agency working groups and arrangements 7. VSAE mutual understanding - Formalise agreed policy aims and standard operating procedures 8. VSAE relationship building - Create opportunities to interact and develop trust 9. VSAE joint risk management - Conduct and act on shared assessments 	<ol style="list-style-type: none"> 1. Better collect and exploit evidence to tackle animal agro-crimes 2. Enhance intelligence assessment, and sharing to counter animal agro-crimes 	<p>Minimise the risks and impacts of animal agro-crimes / eradicate animal agro-crimes</p> <p>Specifically:</p> <p>Reduce the risks and incidence of:</p> <ul style="list-style-type: none"> Falsified products Animal cruelty and abuse Agro-terrorism Food fraud Non-compliance with laws and regulations Illicit wildlife use Smuggling Theft, poaching and other illegal activities 	<ul style="list-style-type: none"> Reduce risks to human health Minimise economic costs and losses Safeguard people's livelihoods Protect animal health Enhance the welfare of animals Conserve biodiversity

Assessment Phase Studies

Global Vulnerability Assessment for Agro-Crime and Agro-Terrorism



INSTITUTE FOR INFECTIOUS ANIMAL DISEASES

A World Organisation for Animal Health Collaborating Centre

Cost Benefit Analysis of Investing in Emergency Management



UNIVERSITY OF LIVERPOOL



Revue scientifique et technique

United Against Rabies Global Forum is engaging partners to support national programmes and the global control strategy

UNITED AGAINST RABIES FORUM **ZERO BY 30** *One Health in action* DECEMBER 2020



CALL TO ACTION

UNITED AGAINST RABIES COLLABORATION

First annual progress report

ZERO BY 30

THE GLOBAL STRATEGIC PLAN TO END HUMAN DEATHS FROM DOG-MEDIATED RABIES BY 2030

UNITED AGAINST RABIES

Agenda FAQs Resources Contact

Food and Agriculture Organization of the United Nations | OIE WORLD ORGANISATION FOR ANIMAL HEALTH | World Health Organization

United Against Rabies: One Health in Action, Partnering for Success

A global virtual event announcing the new United Against Rabies Forum, with high level speakers including ministers, experts and activists from around the world. First shown 22 September 2020, moderated by Patricia Amira.

English | Français | Español

HIGHLIGHTS

Dr Tedros Adhanom Ghebreyesus (Director-General, WHO) | Dr Qu Dongyu (Director-General, FAO) | Dr Monique Eloit (Director-General, OIE)

"COVID-19 has reminded us of the intimate links between our own health and that of animals and the environment. We can only end rabies with a One Health approach." Dr Tedros Adhanom Ghebreyesus, Director-General, WHO.



"We now have a chance to strengthen One Health coordination and regional cooperation...Uniting against rabies is an excellent way to put those ideas into action." Dr Qu Dongyu, Director General of FAO.



"Despite the role of dogs as the main vector, their vaccination is not often prioritised in countries where human rabies is still present, for economic and structural reasons." Dr Monique Eloit, Director General of OIE.



African Swine Fever Global Initiative: supporting innovations in disease control to protect wild and managed populations



Food and Agriculture Organization of the United Nations

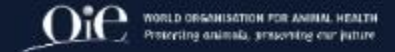
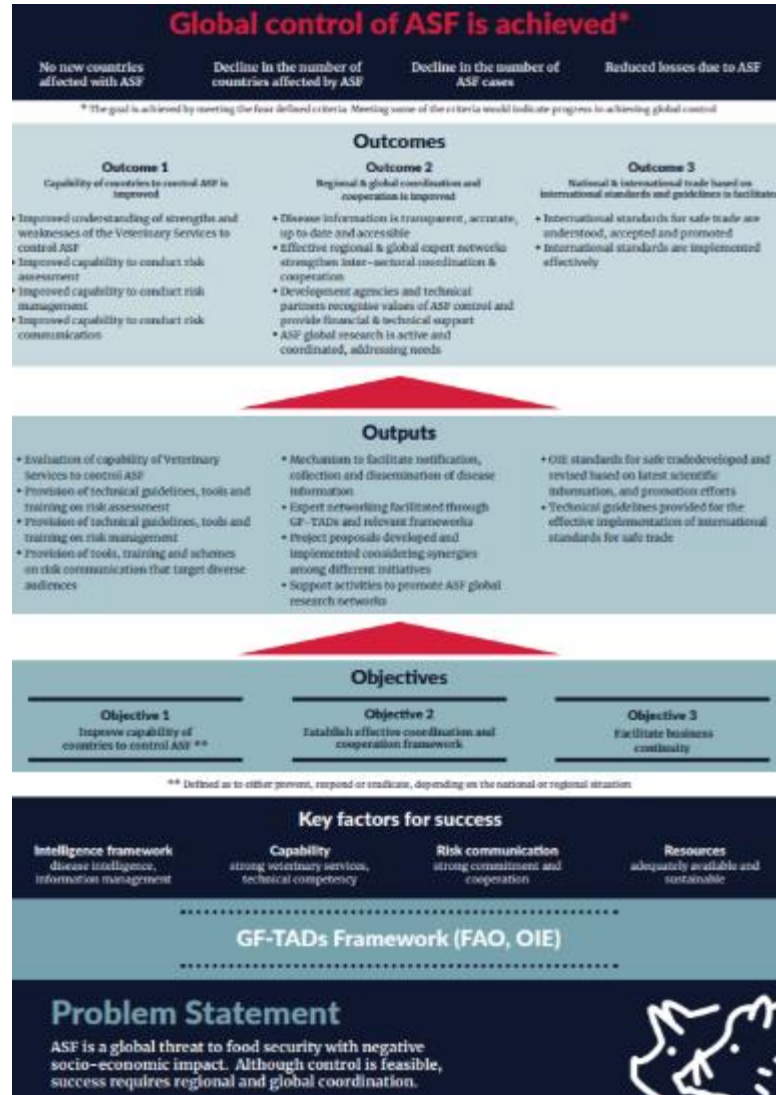


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Global control of African swine fever A GF-TADs initiative



2020-2025

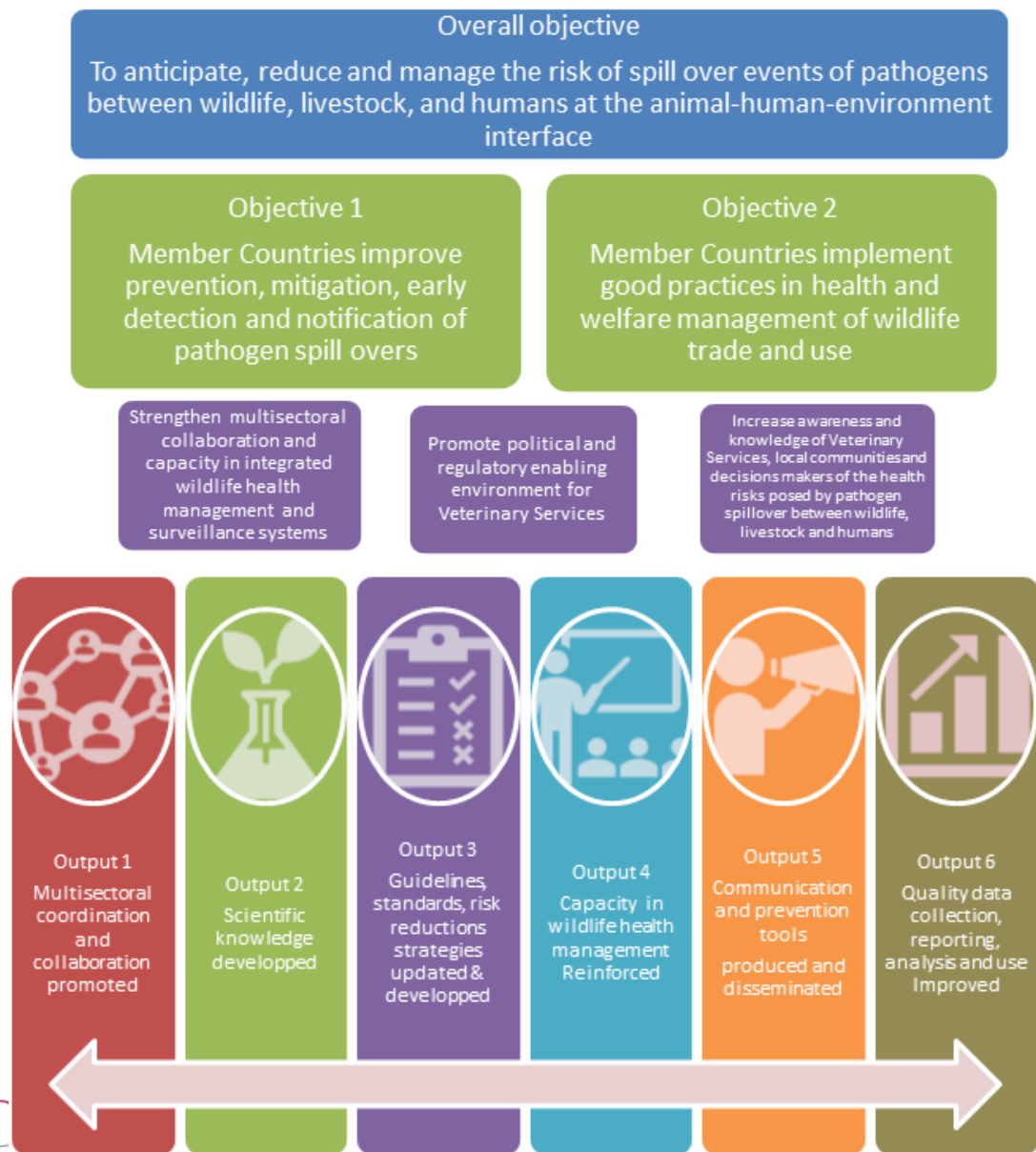


Compartmentalisation Guidelines



AFRICAN SWINE FEVER

OIE Wildlife Health Framework is expanding our commitment to wildlife within the One Health programme, but demands new partnerships and new commitments



A new international partnership is needed to promote wildlife health in the context of One Health

IMPROVING EARLY WARNING SYSTEMS and preventing viral haemorrhagic fevers

PROJECT

5 YEARS 2017 2021

Financed by **THE EUROPEAN UNION**

10 COUNTRIES from West and Central Africa

PROJECT IMPLEMENTERS
OIE
In partnership with Institut Pasteur, CIRAD, IIRD

ZOOZOSES

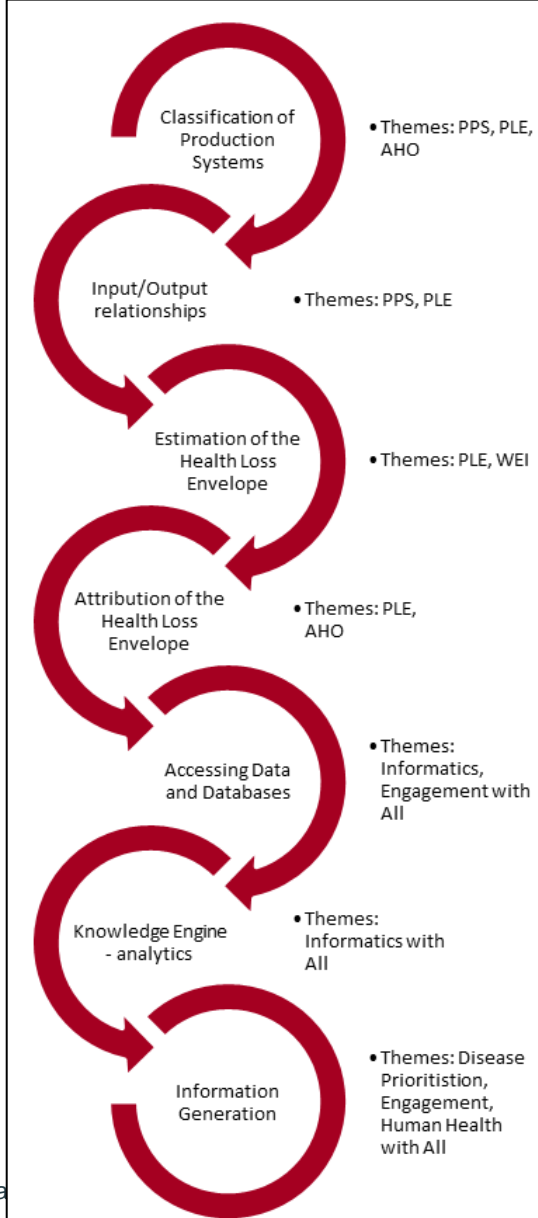
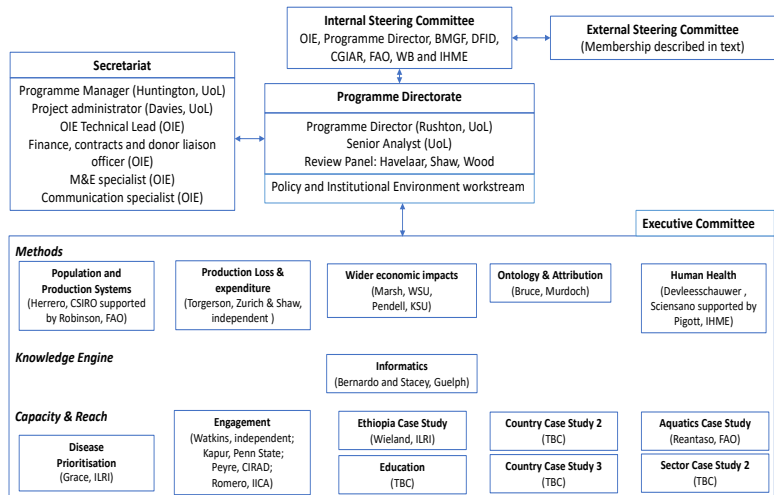
60% OF INFECTIOUS DISEASES AFFECTING PEOPLE are of animal origin, meaning they are zoonoses

5 MAJOR PATHOGENS STUDIED

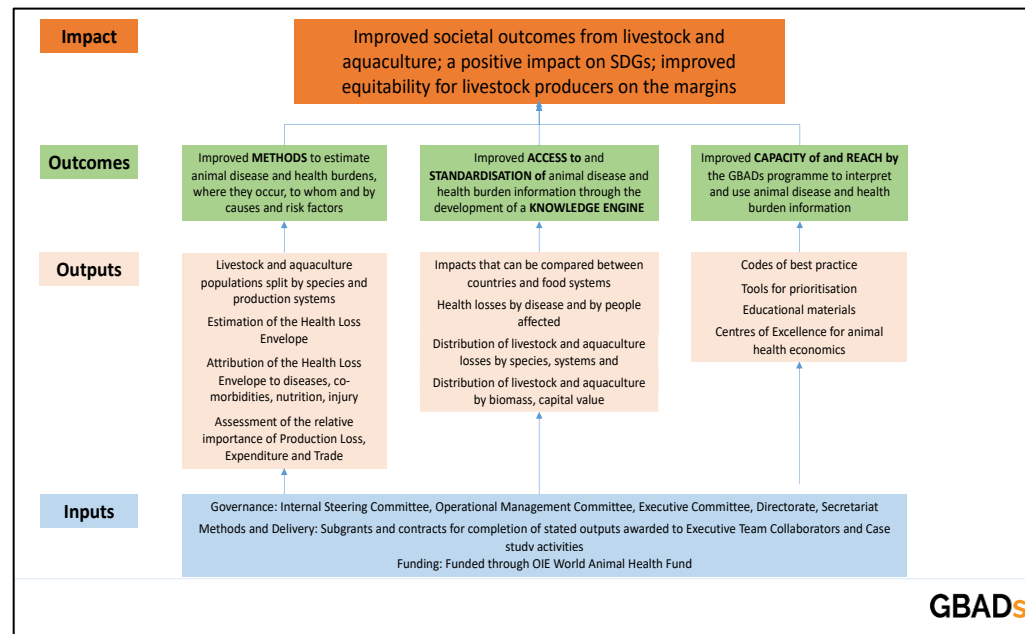
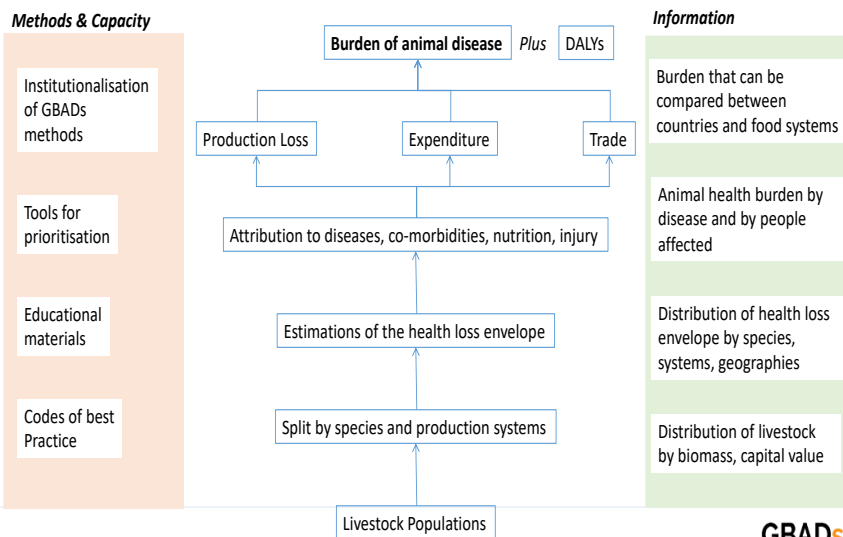
VIRUSES

- Ebola virus
- Marburg virus
- Rift Valley Fever
- Crimean-Congo Fever
- Lassa Fever

Global Burden of Animal Disease will support investment in livestock programmes by demonstrating impact of disease and performance of programmes in economic terms



GBADs – the legacy of estimating burdens



In conclusion ...

- Veterinary Services are an essential partner in One Health
- To be a good partner we need to lift our own game by supporting capacity development for VS in LMICs
- Resource constraints across IOs and VS should be a permanent driver for innovation in design and implementation of programmes
- Overcoming disruptions such as from COVID-19 has been an important stimulus for innovation
- Innovation is happening right in front of us, sometimes it is just a matter of identifying it, promoting it and amplifying the uptake and impact
- Incentivise and promote Science, Regulatory and Strategic Innovations – understand and take risks, monitor well, accept fast fails, recognize and reward success.
- Use Design Thinking approaches to introduce innovation into your systems: co-design with users, unconstrained ideation for creativity, prototyping to materialise

The Case for Investment in Animal Health Systems (AHS)



EVALUATION

2

- A PVS Evaluation
- B PVS Evaluation Follow Up
- C PVS Self-Evaluation
- D PVS Evaluation (post-2017)
- E Specific Content (July 2017 released)

ORIENTATION

- A Sub-Regional Orientation Training Workshop
- B Sub-Regional Lessons Learnt Workshop



3 PLANNING

- A PVS Cap Analysis
- B PVS Strategic Planning Support

TARGETED SUPPORT

- A One Health Integration (PVS/IHR)
- B Veterinary Legislation Support
- C Sustainable Laboratories
- D Veterinary and Veterinary Para-professional Education
- E OIE National Focal Points Training
- F Public-Private Partnerships



SDG 1: End poverty in all its forms everywhere



SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture



SDG 3: Ensure healthy lives and promote well-being for all at all ages



SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



SDG 5: Achieve gender equality and empower all women and girls



SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable



SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

KEY TAKEAWAYS



Veterinary Services are a **global public good** worthy of sustainable investment by the whole international community.



Veterinary Services are chronically **under-resourced** against all comparative measures.



Veterinary Services make a vital contribution to **global health security** in areas such as emerging zoonoses, antimicrobial resistance and food safety, as they address "risk at source" for most major infectious threats, including pandemics.



The OIE is a **unique intergovernmental organisation** with key attributes as a partner in strengthening Veterinary Services, at global, regional or national levels.



Veterinary Services make a critical global contribution to **food security, nutrition, poverty alleviation and resilience**, given the number of poor rural communities that rely on animals for their economic livelihoods and as a food source.



The OIE has a proven track record in strengthening Veterinary Services, particularly over the last decade through its flagship **OIE PVS Pathway programme**, which is being expanded for the future.



The PVS Pathway shifts away from externally driven, short-term, emergency response type 'vertical' approaches addressing only specific diseases, and contributes to a **more sustainable, long term strengthening of 'horizontal' systems**. The process targets capacity building and good governance of Veterinary Services to improve aquatic and terrestrial animal health and welfare via improved compliance with OIE standards.

Your further support as a valued OIE partner will assist the OIE and its Member Countries to continually expand the good progress made in strengthening Veterinary Services, as a global public good.



Text...