

OIE's activities during the COVID-19 pandemic crisis and opportunities for OIE work programmes

OIE Delegates and Partners Seminar
7 July 2020



Organisation Mondiale de la Santé Animale World Organisation for Animal Health Mundial de Sanidad Animal

Agenda

- 1. Drivers for disease emergence
- 2. Origins of SARS-CoV-2
- 3. OIE COVID-19 Response
- 4. Mitigating risks of disease spill-over between wildlife, humans and livestock
- Supporting resilience at OIE and in our Members





Population Growth

Mass Livestock Production

Climate Change

Bioterrorism

Deforestation



Global Air Travel

Urbanization

Wildlife Disruption

Antibiotic Resistance



Kamran Khan, BlueDot Integrating and using big data

Mass Gatherings

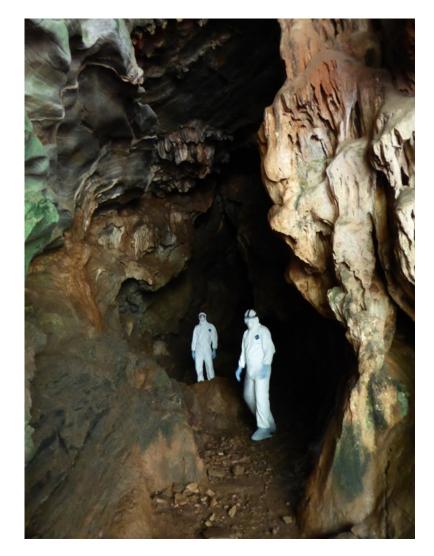




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RESEARCH ARTICLE

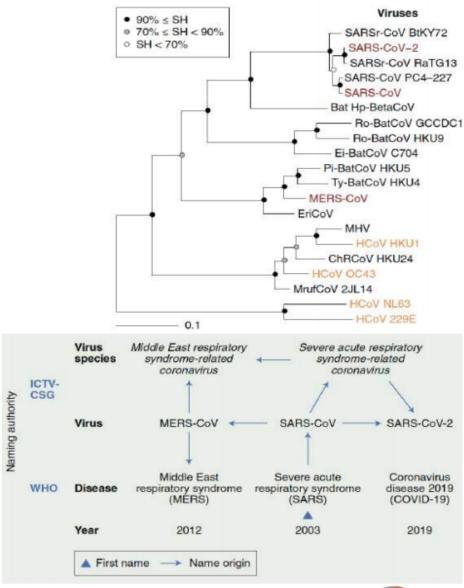
Discovery of a rich gene pool of bat SARSrelated coronaviruses provides new insights into the origin of SARS coronavirus

Ben Hu^{1©}, Lei-Ping Zeng^{1©}, Xing-Lou Yang^{1©}, Xing-Yi Ge¹, Wei Zhang¹, Bei Li¹, Jia-Zheng Xie¹, Xu-Rui Shen¹, Yun-Zhi Zhang^{2,3}, Ning Wang¹, Dong-Sheng Luo¹, Xiao-Shuang Zheng¹, Mei-Niang Wang¹, Peter Daszak⁴, Lin-Fa Wang⁵, Jie Cui^{1*}, Zheng-Li Shi^{1*}

Hu et al. (2017) PLoS Pathogens

SARS-CoV-2

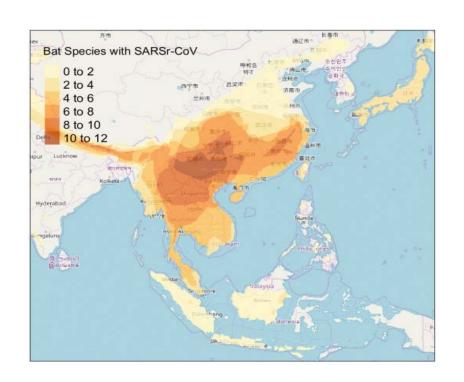
- Part a family of enveloped positive-strand RNA viruses (coronaviridae)
- · Belongs to the betacoronavirus genus
 - 98% similarity with bat coronavirus RaTG13
 - 79% genetic similarity with SARS-CoV
- 7 coronavirus known to infect humans
 - 4 coronavirus infect only the upper respiratory tract
 - HCoV HKU1 OC43 NL63 229E
 - 3 coronavirus can replicated in lower respiratory tract and cause pneumonia
 - SARS-CoV = Case Fatality Rate (CFR) of 10% (2002 2003)
 - MERS-CoV = CFR of 37% (2012)
 - SARS-CoV-2 = CFR unknown (2019)







Bat-CoV risk is regional, not restricted to China





Distribution of bats harboring SARSr-CoVs Distribution of *Rhinolophus affinis*



Wildlife Trade

Bats in their natural environments









Hunting



Intermediary traders



Traditional markets (wet markets) selling live and dead wild animals direct to public













OIE COVID-19 Response



Organisation Mondiale de la Santé Animale World Organisation for Animal Health Organización Mundial de Sanidad Animal EMERGENCIES ANNUAL REPORT 2018

WHO's work in emergencies – achievements in numbers – 2018

PREPARE

ASSESSMENTS FOR ACTION

187 Member States International Health Regulations (IHR) 2005 annua reports

- 24 Joint External Evaluations
- 31 Simulation exercises
- 28 National action plans
- 18 After action reviews
- 11 IHR-public veterinary sector bridging workshops

STRENGTHENED CAPACITIES FOR ALL HAZARDS

Health security workforce development

Goal: all countries prepared for the full emergency--cycle management

400

professionals at ports and airports trained on surveillance

850

laboratory personnel trained in 62 countries

2800

health professionals in 141 countries trained on health security

6300

enrolments in online course offered through the Health Security Learning Platform

16000

downloads of the Managing Epidemics handbook

100 000

subscribers to OpenWHO learning platform

READINESS

41

risk--profiling workshops were conducted in the African region

83%

of high-risk countries in the Index for Risk Management have interagency preparedness plans in place

PREVENT

ELIMINATE YELLOW FEVER STRATEGY

61 million

people vaccinated in 24 African countries

20,8 million

doses of oral cholera vaccine were shipped to 10 countries

ENDING EBOLA

60 000

people vaccinated during response operations in the Democratic Republic of the Congo

GLOBAL INFLUENZA PREPAREDNESS AND RESPONSE

500 million

people are estimated to have been vaccinated around the world

400 million

doses of pandemic vaccine secured through the Pandemic Influenza Preparedness (PIP) Framework

EMERGENCY VACCINATION

16 million

doses of vaccines deployed through the WHO International Coordinating Group on Vaccine Provision mechanism

Number of public health sounts* In a country, for transport for the transport for th

1821 health emergencies experts from WHO and its partners deployed in 32 countries

DETECT AND RESPOND

24/7/365 EACH DAY,

EVERY DAY

the global surveillance system detects public health events

52

WEEKS A YEAR

the early warning system (EWARS) collects data each week, generates and manages alerts

7000

PUBLIC HEALTH THREAT SIGNALS PICKED UP EVERY MONTH

with about 0.5% of these resulting in a formal field investigation and a formal risk assessment

22 COUNTRIES

developed humanitarian response plans with a health response led by WHO

1600 TECHNICAL/ OPERATIONAL PARTNER INSTITUTIONS

WHO relies on its global network of technical and operational partners when responding to health emergencies, and when helping countries be better prepared to prevent, detect and respond to health emergencies

481

NEW EVENTS IN 141 COUNTRIES AND TERRITORIES

Some of the public health events included: cholera, Ebola virus disease, measles and monkeypox in the Democratic Republic of the Congo; plague in Madagascar; measles in Argentina, Brazil and Ecuador; emergency operations in Libya; West Nile fever in Serbia; Nipah virus in India; diphtheria in Bangladesh; and hand foot and mouth disease in Viet Nam

30 EVENTS IN 29 COUNTRIES

The contingency fund for emergencies was provided within 24 hours



Coronavirus disease (COVID-19)

Situation Report – 163

Data as received by WHO from national authorities by 10:00 CEST, 1 July 2020

Highlights

It has never been clearer that <u>communication is an important public health intervention</u> that contributes to controlling pandemics. The WHO Regional Office for Europe discusses this and the risks of an "infodemic" – an overabundance of information, some of which can be misleading or even harmful. <u>WHO launched the first Infodemiology conference on 29 June</u>, which includes talks with experts on how the infodemic affects the world and reflections on how it can be managed.

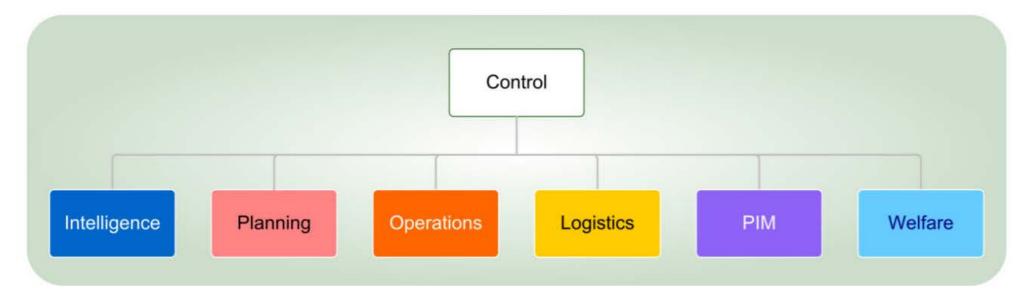
Tripartite Partner Frameworks for emergency management

- Pandemic Influenza Preparedness Programme
- WHO International Health Regulations
- Global Outbreak Alert and Response Network
- FAO Emergency Management Centre

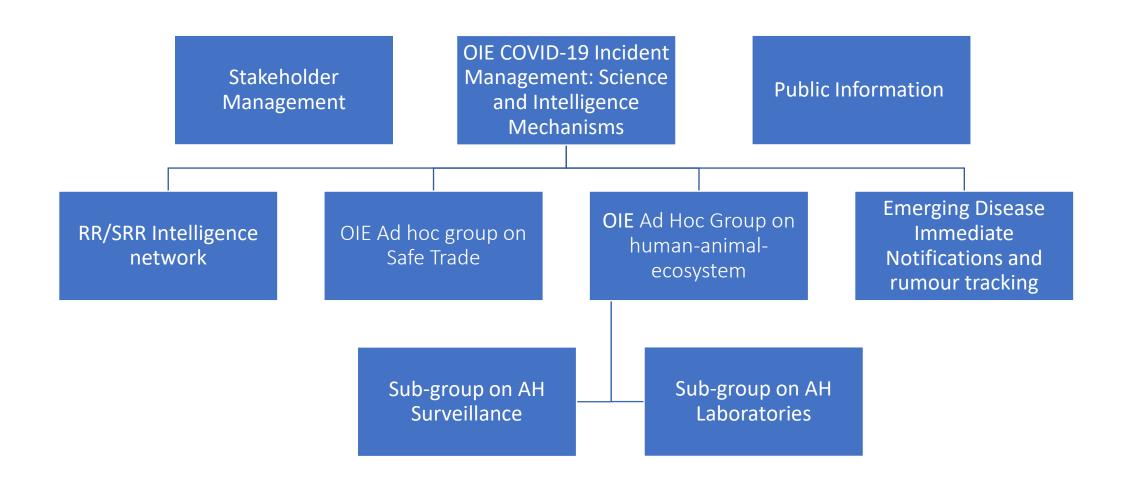


What is an Incident Management System?

- Systems describing coordination, command and control for management of emergency events
- National standardization to provide for inter-departmental / inter-organizational interoperability
- Bespoke structure with generic functions and reporting lines
- Set daily and weekly rhythm of data cut-off times, reporting, briefings, media
- Key concepts: interoperability and scaleability



OIE COVID-19 Incident Management Approach



OIE and World Veterinary Association Statement on Veterinary Activities as Essential





Covid-19 and Veterinary Activities designated as Essential

In the framework of the Covid-19 pandemic, the World Organisation for Animal Health (OIE) and the World Veterinary Association (WVA) jointly draw attention to the roles and responsibilities of the veterinary profession for public health. They highlight the specific veterinary activities which are key to ensure a continuum in food safety, disease prevention and emergency management.

To effectively tackle the challenges posed by the Covid-19 pandemic, many governments around the world have taken restrictive measures to close non-essential businesses. These decisions raise questions regarding potential adaptations that need to be implemented by the veterinary profession.

In this context, the World Organisation for Animal Health (OIE) and the World Veterinary Association (WVA) advocate for the specific activities of Veterinary Services to be considered as essential businesses.

https://www.oie.int/en/for-the-media/pressreleases/detail/article/covid-19-and-veterinaryactivities-designated-as-essential/



COVID-19: Maintaining the activities of Veterinary Professionals is essential.







@OIE/S.Owusu/G.Espin/C.Nadal

COVID-19 and veterinary activities designated as essential: OIE - World Organisation for Animal Health

oie.int

World Organisation for Animal Health (OIE)
28,095 followers

It's **#WorldVeterinaryDay** and we highlight the contributions of the veterinary sector to support the **#publichealth** response to the **#COVID19** pandemic.

...see more



Responding to the COVID-19 crisis: the contribution of the veterinary profession:
OIF - World Organisation for Animal Health



WORLD ORGANISATION FOR ANIMAL HEALTH

Protecting animals, preserving our future

Statement of the OIE Wildlife Working Group, April 2020

Wildlife Trade and Emerging Zoonotic Diseases

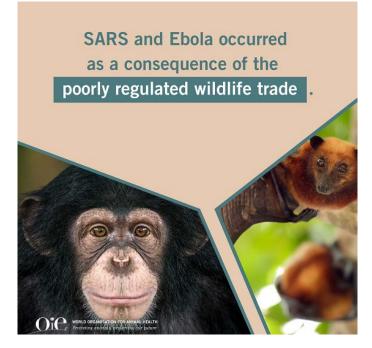
The majority of recently-emerging infectious diseases have wildlife origins, among them Lassa, Monkeypox, Marburg, Nipah and numerous other viral diseases. Within the coronavirus family, zoonotic viruses have been linked to the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 and the Middle East Respiratory Syndrome (MERS) first detected in 2012. The COVID-19 pandemic stemmed from introduction of a novel coronavirus ("SARS-CoV-2") into human populations. While the specific mechanism of

aforementioned risks. Thus, there is a need to support legal, sustainable and responsible wildlife use by providing sound guidance, standards, and risk assessment and risk management tools.

The OIE is developing guidelines or standards for trade in wildlife based on sound governance and regulatory principles that reduce health risks, and support animal welfare and biodiversity conservation. These standards will result in sustainable and responsible practices in legal trade, transportation, capture, farming,

Guidelines for safe wildlife trade will
result in sustainable and responsible...

...transport
...capture
...farming
...consumption



https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/A OIEWildlifeTradeStatement April2020.pdf

OIE ad hoc group on COVID-19 and the human-animalecosystem interface

Terms of Reference

- 1. Advise on investigations into the possible role of animals as a reservoir of the SARS-CoV2 and in zoonotic transmission;
- Contribute to OIE's technical coordination with WHO and FAO;
- 3. Share relevant scientific information and opinion on COVID-19 at the human-animal-ecosystems interface;
- 4. Provide advice to support national veterinary services on human animal interface aspects of COVID-19;
- Advise on knowledge gaps and associated animal related research priorities;
- 6. Monitor and interpret scientific publications and communications;
- 7. Contribute to the implementation of WHO R&D Blueprint.





A COORDINATED GLOBAL RESEARCH ROADMAP:

2019 NOVEL CORONAVIRUS

MARCH 2020

There is broad consensus on the need for research to: focus on actions that can save lives now; facilitate actions so that those affected are promptly diagnosed and receive optimal care; and catalyse the full integration of all innovations within each research area.

Moreover, there is an imperative to support research priorities in a way that leads to the development of sustainable global research platforms pre-prepared for the next disease X epidemic. This will allow for accelerated research, innovative solutions and R&D of diagnostics, therapeutics and vaccines, as well as the timely and equitable access to these life-saving tools for those at highest risk.



Eight immediate research actions were agreed as part of the Global Research Forum

- Mobilize research on rapid point of care diagnostics for use at the community level this is critical to be able to quickly identify sick people, treat them and better estimate how widely the virus has spread.
- 2. Immediately assess available data to learn what standard of care approaches from China and elsewhere are the most effective – there is an imperative to optimize standard of care given to patients at different stages of the disease and take advantage of all available technological innovations to improve survival and recovery.
- 3. Evaluate as fast as possible the effect of adjunctive and supportive therapies. The global research community needs to understand what other adjunctive treatments being used we have at our disposal that may help with the standard of care provided to patients, including the quick evaluation of interventions such as steroids and high flow oxygen.
- 4. Optimize use of personal protective equipment and other infection prevention and control measures in health care and community settings - It is critical to protect health care workers and the community from transmission and create a safe working environment.

- 5. Review all evidence available to identify animal host(s), to prevent continued spill over and to better understand the virus transmissibility in different contexts over time, the severity of disease and who is more susceptible to infection- Understanding transmission dynamics would help us appreciate the full spectrum of the disease, in terms of at risk groups, and conditions that make the disease more severe as well as the effectiveness of certain public health interventions.
- therapeutics and vaccines by using "Master Protocols". Rapidly developing master protocols for clinical trials will accelerate the potential to assess what works and what does not, improve collaboration and comparison across different studies, streamline ethics review and optimize the evaluation of new investigational drugs, vaccines and diagnostics.
- 7. Maintain a high degree of communication and interaction among funders so that critical research is implemented. Funders reiterated their current financial commitments to tackling this outbreak and agreed that the priorities agreed at the Forum would help to coordinate existing investments and inform mobilization of additional resources in the coming days, weeks and months.
- 8. Broadly and rapidly share virus materials, clinical samples and data for immediate public health purposes - It was agreed that virus materials, clinical samples and associated data should be rapidly shared for immediate public health purposes and that fair and equitable access to any medical products or innovations that are developed using the materials must be part of such sharing.

TESTING OF HUMAN DIAGNOSTIC SPECIMENS IN VETERINARY LABORATORIES

Considerations:

- Regulatory affairs
- Business continuity and prioritisation
- Types of test and testing requirements
- Scalability
- Quality assurance
- Biosafety
- Biosecurity
- Data management and reporting
- Personnel and logistics
- Training needs



DID YOU KNOW?

Accra Veterinary Laboratory in Ghana has tested more than 3000 human samples o COVID-19 so far.





https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/A_Guidance_for_animal_health_laboratories_1April2020.pdf

OIE WAHIS

Early warning activity



Organisation

Objective:

Publish through WAHIS as soon as possible - if relevant - the immediate notifications and follow-up reports received from our Member Countries using "emerging disease" as reason of notification.

Terms of Reference:

Chapter 1.1. of OIE Terrestrial Animal Health Code, Article 1.1.4. and Article 1.1.6.

Findings in animals

OIE Member Countries have been keeping the OIE updated on any investigations or outcomes of

Animal surveillance in China: China update (5/02/2020).

SARS-CoV-2 positive test results in dogs in Hong Kong: Follow-up report no.1 (09/03/2020), Follow-up report no. 2 (16/03/2020), Follow-up report no. 3 (23/03/2020)

SARS-CoV-2 positive test result in a cat in Belgium (28/03/2020)

SARS-CoV-2 positive test result in a tiger (06/ 04/2020), a lion (17/04/2020) and a dog (03/06/2020) in the USA

SARS-CoV-2 positive test result in two domestic cats in the USA (22/04/2020), Follow-up reports latest (10/06/2020)

SARS-CoV-2 positive test result in two mink farms in The Netherlands (26/04/2020), situation update 1 (15/05/2020), situation update 2 (9/06/2020)

SARS-CoV-2 positive test result in two domestic cats in France 1st (02/05/2020) and 2nd (12/05/2020)

SARS-CoV-2 positive test result in domestic cats in Spain 1st (11/05/2020) and 2nd (08/06/2020)

SARS-CoV-2 positive test result in a domestic cat in Germany (13/05/2020)

SARS-CoV-2 positive test result in a domestic cat in Russia (26 /05/2020)

SARS-CoV-2 positive test result in a mink farm in Denmark (17/06/2020)



WORLD ORGANISATION FOR ANIMAL HEALTH

Protecting animals, preserving our future

Considerations for sampling, testing, and reporting of SARS-CoV-2 in animals

Prepared by the OIE Preparedness and Resilience Department and the OIE ad hoc Group on COVID-19 and the humananimal interface

Purpose

The purpose of this document is to provide high level considerations on sampling, testing, and reporting of SARS-CoV-2 in animals.

Scope

The following considerations are intended to be non-prescriptive and broad enough to cover a range of human and animal interactions. The document aims to differentiate individual case management from research.

This document will be reviewed and updated as new scientific evidence of SARS-CoV-2 infection in animals comes to light.

- SARS-CoV-2 as an emerging disease in animals
- High level guiding principles for sampling and testing

https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-

19/Sampling Testing and Reporting of SARS-CoV-2 in animals final 7May 2020.pdf

- 3. Rationale for testing of animals to manage risk
- Suggested case definition
- 5. Reporting to the OIE

Animal Health Surveillance during the COVID-19 events



OIE considerations on the application of sanitary measures for international trade related to COVID-19

Recommendations for OIE Members

That Members work collaboratively and cooperatively during the COVID-19 pandemic to:

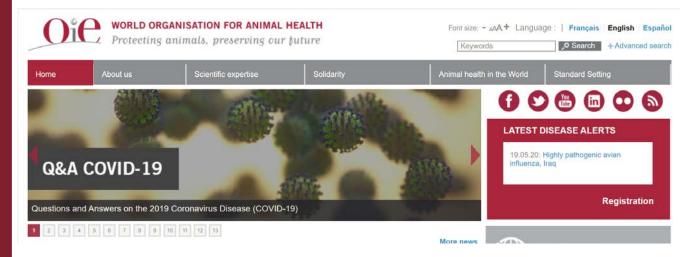
- facilitate safe international movement of live animals and animal products (accordance OIE Terrestrial Animal Health Code)
- 2. introduce no COVID-19-related sanitary measures unless and until these have been shown necessary to protect human or animal health, are scientifically justified by a risk analysis, and are fully in line with relevant International Standards
- 3. continue implementing OIE standards under WTO SPS principles, and (where possible) apply administrative flexibility to minimize the impact that this pandemic may have on procedural aspects of trade e.g. allowing electronic certification, making allowances



Public Information:

OIE

Communications



Questions and Answers on the COVID-19

(last updated: 18/05/2020)

What causes COVID-19?

Are animals responsible for COVID-19 in people?

Can animals be infected with SARS-CoV-2?

What precautionary measures should be taken when companion or other animals have close contact with humans suspected or confirmed to be infected with SARS-CoV-2?

What can National Veterinary Services do with regards to companion animals?



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IMPROVING EARLY WARNING SYSTEMS and preventing

viral haemorrhagic fevers



PROJECT

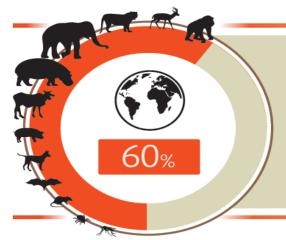
5 YEARS 2017 · · · · → 2021







ZOONOSES



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

ebosuasy





INCREASE SURVEILLANCE CAPACITY FOR VIRAL HAEMORRHAGIC FEVERS



Professional TRAINING and **EDUCATION**



Laboratory **TWINNING**



AWARENESS raising workshops for human and animal health services



Sustainable STRENGTHENING of national health systems and veterinary services



RAISE COMMUNITY AWARENESS OF VIRAL HAEMORRHAGIC FEVERS



COMMUNICATE with Ministers, schools, and local communities



SCIENTIFIC COMMUNICATION

conferencies and publications



Produce **AWARENESS-RAISING** communications tools



Undertake socio-economic. epidemiological and ecological STUDIES





Develop a **DATABASE**



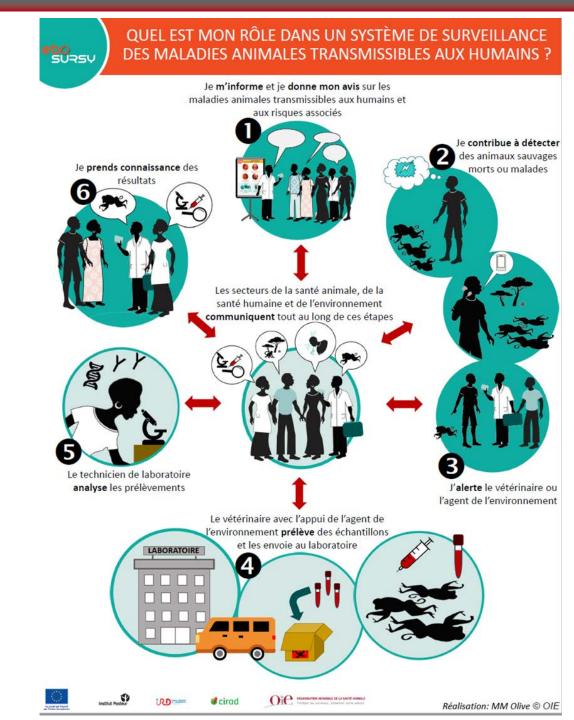
STRENGTHEN SURVEILLANCE PROTOCOLS FOR VIRAL HAEMORRHAGIC FEVERS



COLLECT AND ANALYSE samples

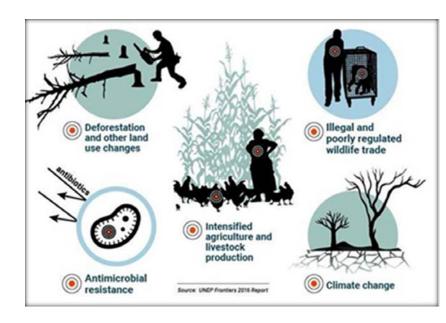
Lessons learned from EBO-SURSY Project

- 1. Wildlife health management is rarely included in the VS mandate
- 2. Develop and sustain intersectoral collaboration and partnerships
- 3. Engage key stakeholders early on in the surveillance systems
- 4. Translate scientific findings into practical recommendations, guidelines and policies
- 5. Develop and improve integrated protocols of surveillance



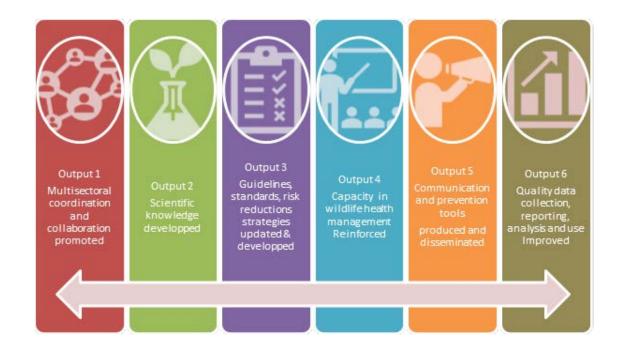
Wildlife Health Problem Statement

- Emerging diseases from animal sources can have severe economic and health impacts.
- Disease spread between wildlife, livestock and humans occurs through complex transmission pathways at the One Health interface, with collateral impacts for biodiversity and food system sustainability.
- The risk of disease emergence has increased as a result of increasing opportunities for human-livestock-wildlife contact.
- This is exacerbated by human activity: intensified agriculture and livestock production; deforestation and land use change; illegal and under-regulated wildlife trade; climate change; antimicrobial resistance.



OIE Wildlife Health Management Framework

Overall objective To anticipate, reduce and manage the risk of spill over events of pathogens between wildlife, livestock, and humans at the animal-human-environment interface Objective 1 Objective 2 Member Countries improve Member Countries implement good practices in health and prevention, mitigation, early detection and notification of welfare management of wildlife pathogen spill overs trade and use Strengthen multisectoral collaboration and Promote political and knowledge of Veterinary capacity in integrated regulatory enabling lecisions makers of the health wildlife health environment for management and Veterinary Services surveillance systems ivestock and humans



- A new OIE work programme building on WWG priorities and EBO-SURSY experience
- Programme design advancing through stakeholder engagement and surveys
- Resource and implementation partners welcome





OIE COVID-19 After Action Review (AAR)

Purpose

- To learn and improve, to build institutional resilience
- What happened, why it happened, how it could be done better in future
- Organisational learning, not the performance of individuals

Scope

- Administration (finance, procurement, work from home, recruitment, staff wellbeing)
- Logistics (occupational safety, tools, (IT, office equipment))
- Events (meetings, General Session)
- Science and Technical (technical response, expert groups, guidance, coordination with partners, communications)
- Institutional communications and coordination (internal and with regions)



Broader negative impacts of the COVID-19 global response

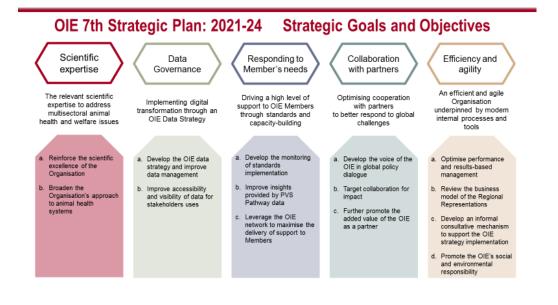
- Animal health programme interruptions
 - Surveillance activities
 - Vaccination programmes
- National economy fragility
 - Increased national indebtedness, unemployment and business failures
- Food insecurity and trade
 - Food sector as essential service (plus sectors supporting)
 - Impacts on national and international food supply chains
- Globalisation and market access
 - Further weakening of multi-lateral global instituitions



Prepare for, Prevent & Build Resilience against Health Crises in OIE Members

Enhancing our current service offering to Members:

- Integrated surveillance and early warning systems for disease emergence
- Emergency preparedness and contingency planning
- Resilient "One Health" Veterinary Services
- Sustainable Laboratories
- Notification & data analysis
- Standards, guidelines and considerations
- Wildlife value chain management
- Risk communication
- Public Private Partnerships
- Biological Threat Reduction
- Research and Development coordination





Organisation Mondiale de la Santé Animale

World Organisation for Animal Health Organización Mundial de Sanidad Animal



Acknowledgements



OIE ad hoc group on COVID-19 and the human-animalecosystem interface

Core members

- Billy Karesh (Chair)
- Dirk Pfeiffer (Epi, HKU)
- Hiroshi Kida (Hokkaido University, Japan)
- Jean-Claude Manuguerra (Institut Pasteur, France)
- Linfa Wang (coronavirus, Duke, Singapore)
- Malik Peiris (SARS, Coronavirus, HKU)
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to COVID-19

on COVID-19 and safe trade in animals and animal products

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