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READY: GLOBAL READINESS FOR MAJOR DISEASE OUTBREAK RESPONSE

*Operationalizing One Health to Support
Humanitarian Sector Outbreak Response*
April 16, 2021

Hugh Kissell/C. Williams

Agenda

- Welcome and Overview of the READY Initiative
- Introduction to the One Health concept and operational strategies and tools
- One Health Dashboard
- Q&A / Discussion

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READY: Objectives and Focus

- Three year, BHA-funded consortium
- Augmenting what already exists to build NGO capacity for infectious disease response
- Three primary project objectives:
 1. Strengthen NGO coordination
 2. Strengthen operational capacity
 3. Adapt and develop technical readiness

READY PARTNERS



Save the Children®



JOHNS HOPKINS
Center for Communication
Programs



JOHNS HOPKINS
CENTER for
HUMANITARIAN HEALTH

UK-MED



**EcoHealth
Alliance**

Agenda

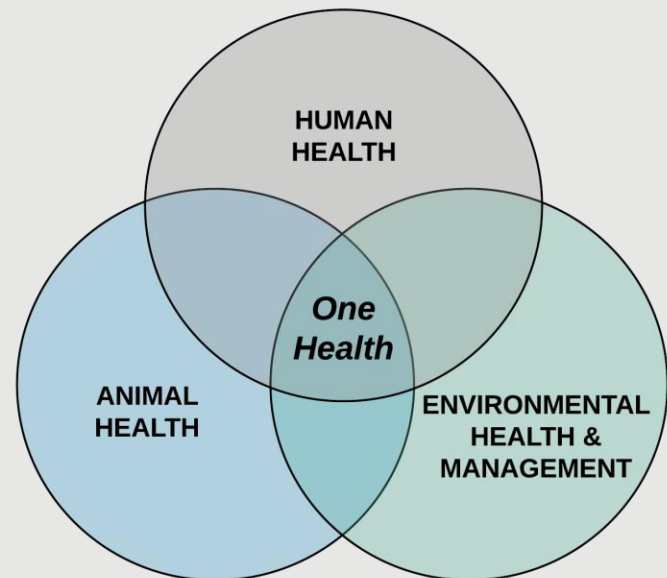
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One Health

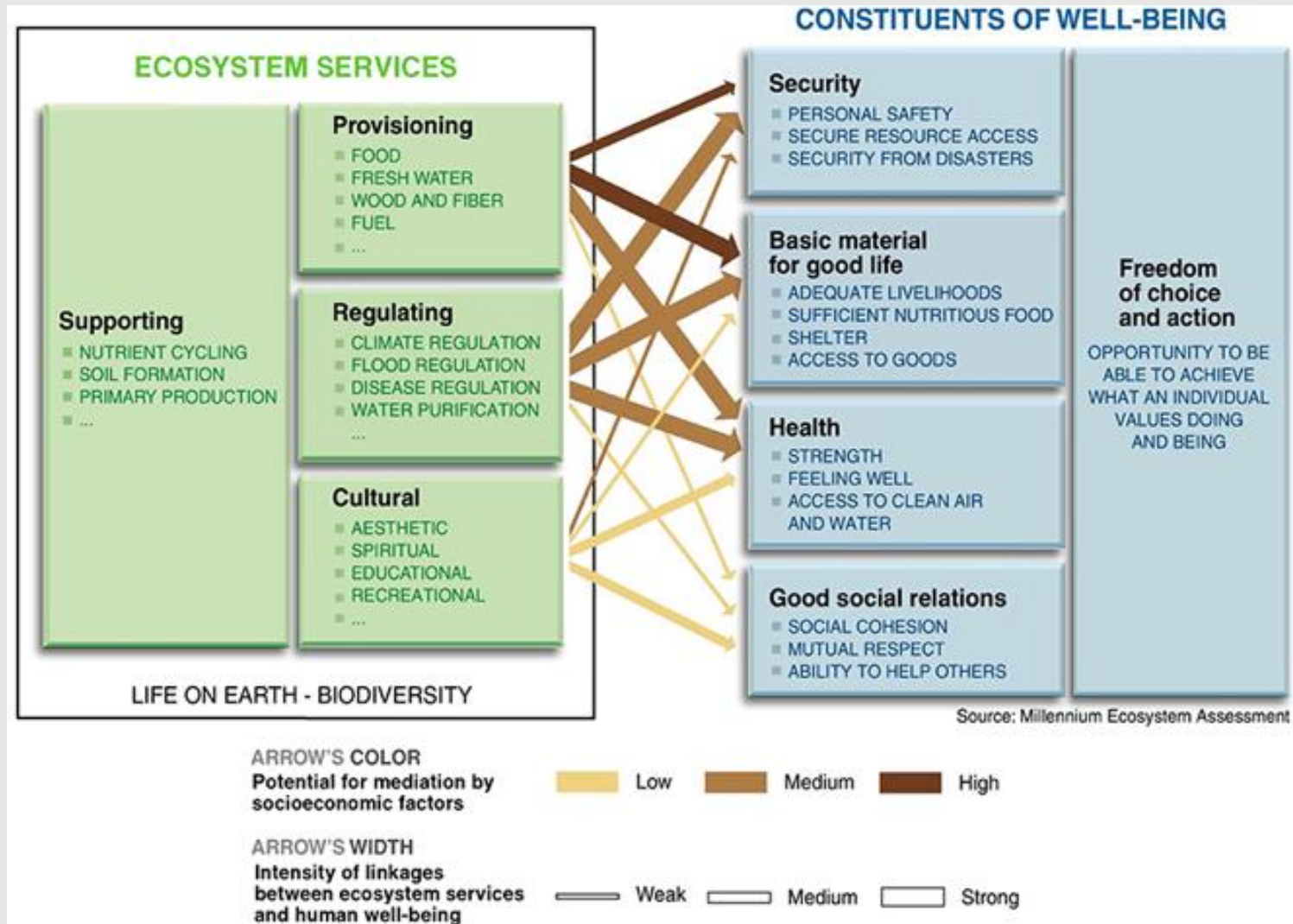
The **One Health** concept recognizes the connections between the health of humans, animals, and our shared environment.

'One Health' is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes (WHO)

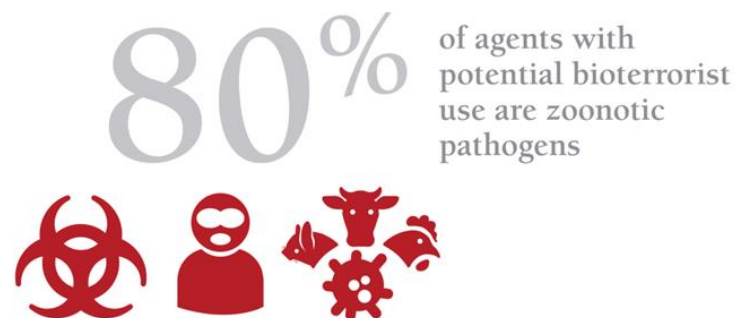
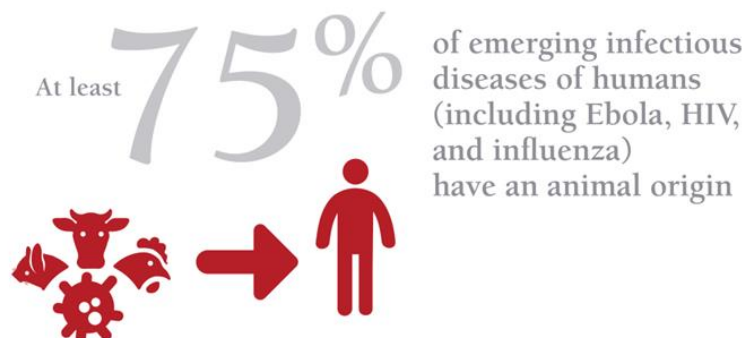
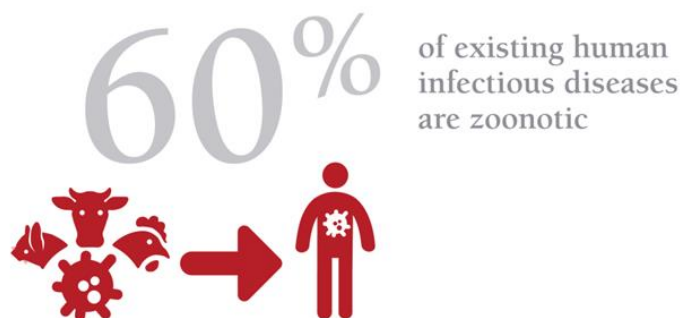
- Assess and mitigate risks and impacts
- Promote coordinated understanding, messaging, and optimal interventions



Health-Benefitting Ecosystem Services



The One Health Imperative



World Organisation for Animal Health

The frequency, magnitude, and impact of epidemics are increasing

Key Areas of Focus for One Health Strategies

✓ **Manage risk and burden**

- assess vulnerabilities to animal and environmental exposures that may present disease risk (communicable and non-communicable)

✓ **Response and risk communication**

- provide consistent messaging on disease risks in humans related to animal populations

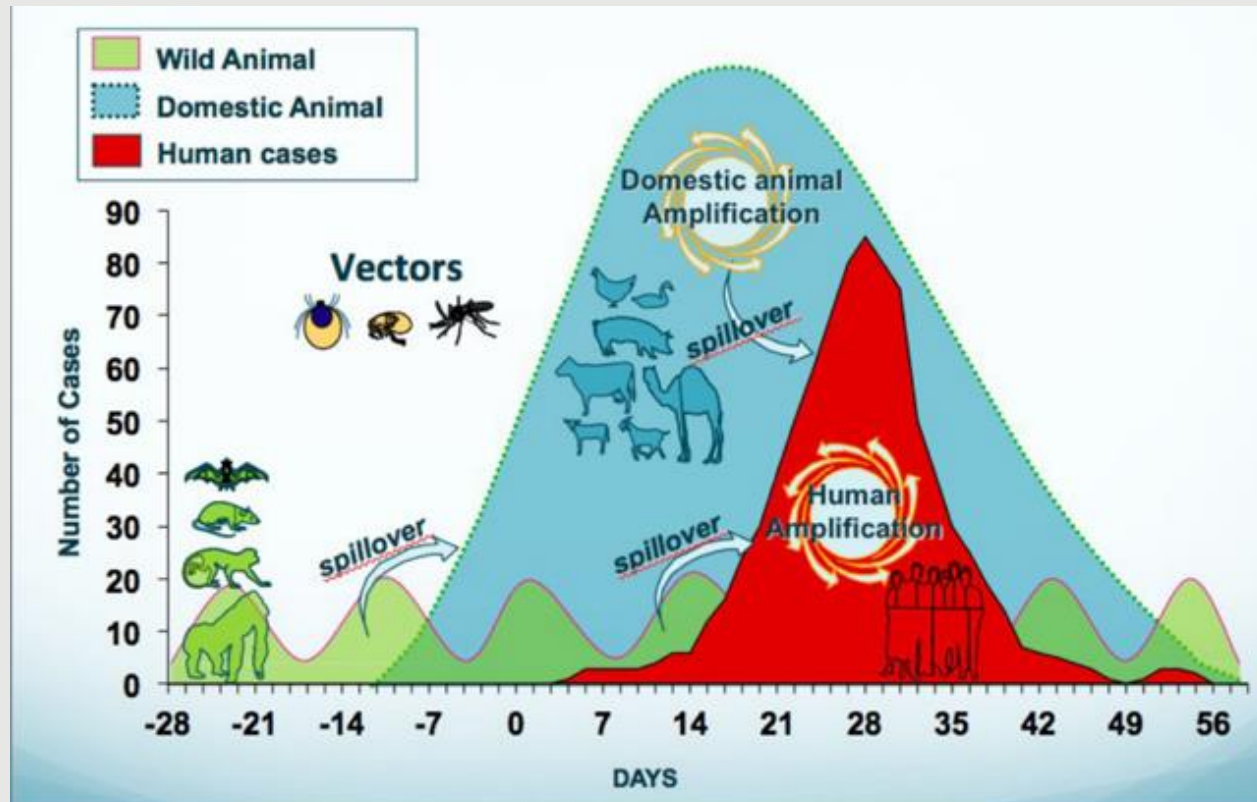
✓ **Community involvement**

- advocate for zoonotic disease risk reduction (at national level, subnational, community level) via safer practices

✓ **Coordination structures**

- coordinate with other sectors to identify and manage disease risks

Manage Risk and Burden: *Moving toward Prevention*



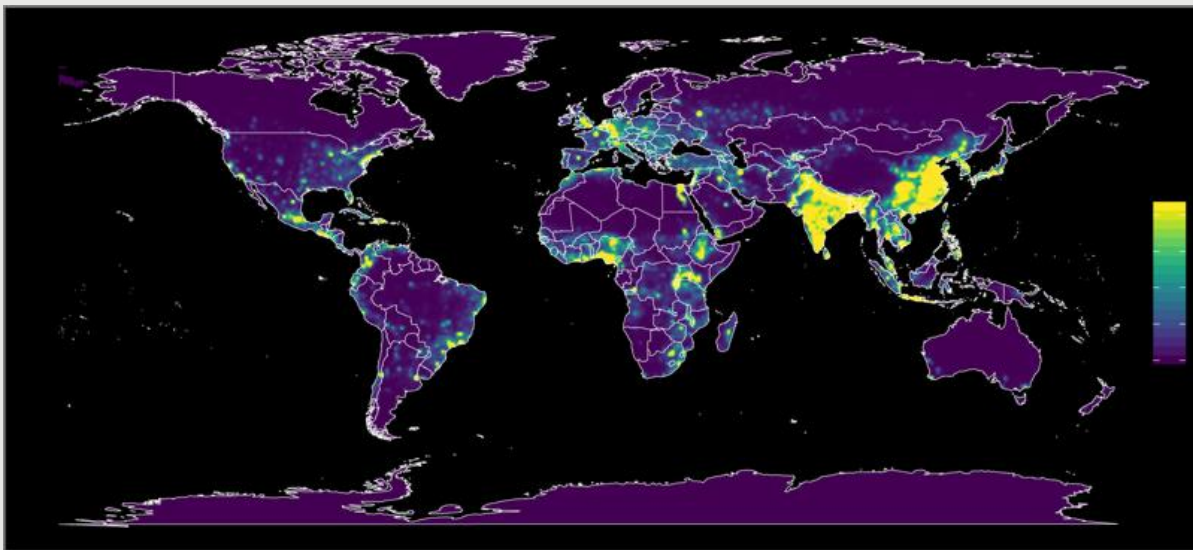
Source: Karesh et al. 2012. The Lancet & WHO

Understanding the connections between wildlife, domestic animals, vectors, human populations, and environmental conditions helps to proactively prevent, detect and respond to disease risks.

Manage Risk and Burden: *Identifying Areas of Vulnerability*

Background risk can help us target where to be on alert:

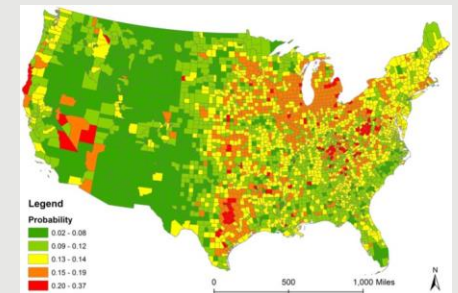
for novel diseases....



Allen et al. *Nature* 2017

...and known diseases

Predicted canine
Leptospirosis, by county
(United States)

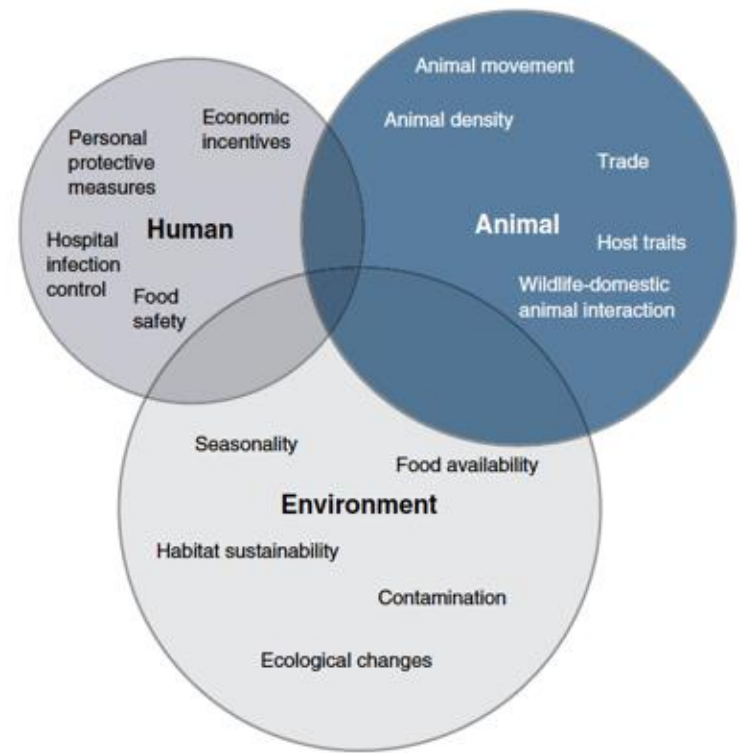


White et al. *The Veterinary Journal*
2017

To better prevent, detect, and respond to events

Manage Risk and Burden: *Context Matters!*

- Not everyone working together all the time....
- But strong human, animal and environmental health systems are needed to determine relevant sectors for a given objective, disease, or situation
- Identify entry points – resilience and recovery from direct and indirect impacts



World Bank One Health Operational Framework

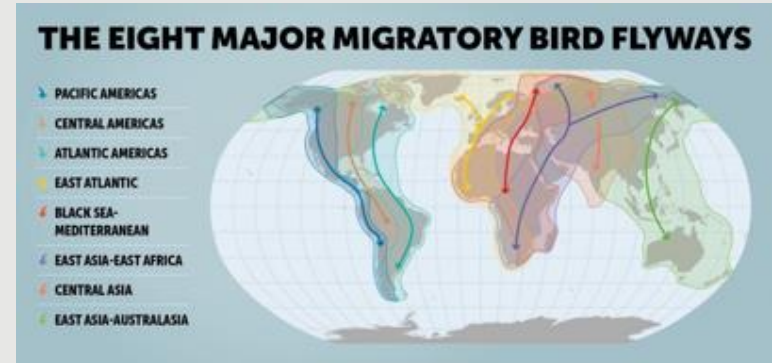
Flying fox bats serve as the natural reservoir for Nipah virus and have a direct role in recurring spillover events In Bangladesh. Hospital-acquired spread has been documented, but appears limited. Thus, animal and environmental contamination factors warrant emphasis.



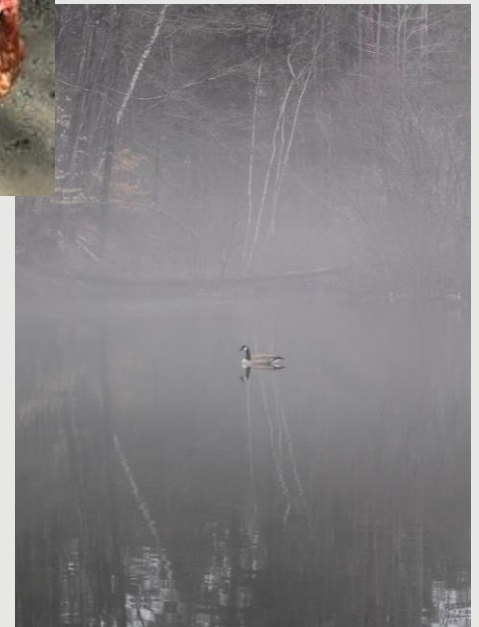
Manage Risk and Burden: *Avoid Unintended Consequences*

Avian Influenza

- Wild birds are the natural reservoir, but typically carry lowly-pathogenic strains
- ‘Mixing’ with domestic birds is a common route of introduction in agriculture. Biosecurity matters!
- Without effective coordination, response measures can be incorrectly targeted and an inefficient use of resources
- Inappropriate response measures put economies, ecosystems, and communities at risk
- **Partners on conservation, human and animal health, food and livelihood security, risk communication, and local leaders play an important role in appropriate control strategies**

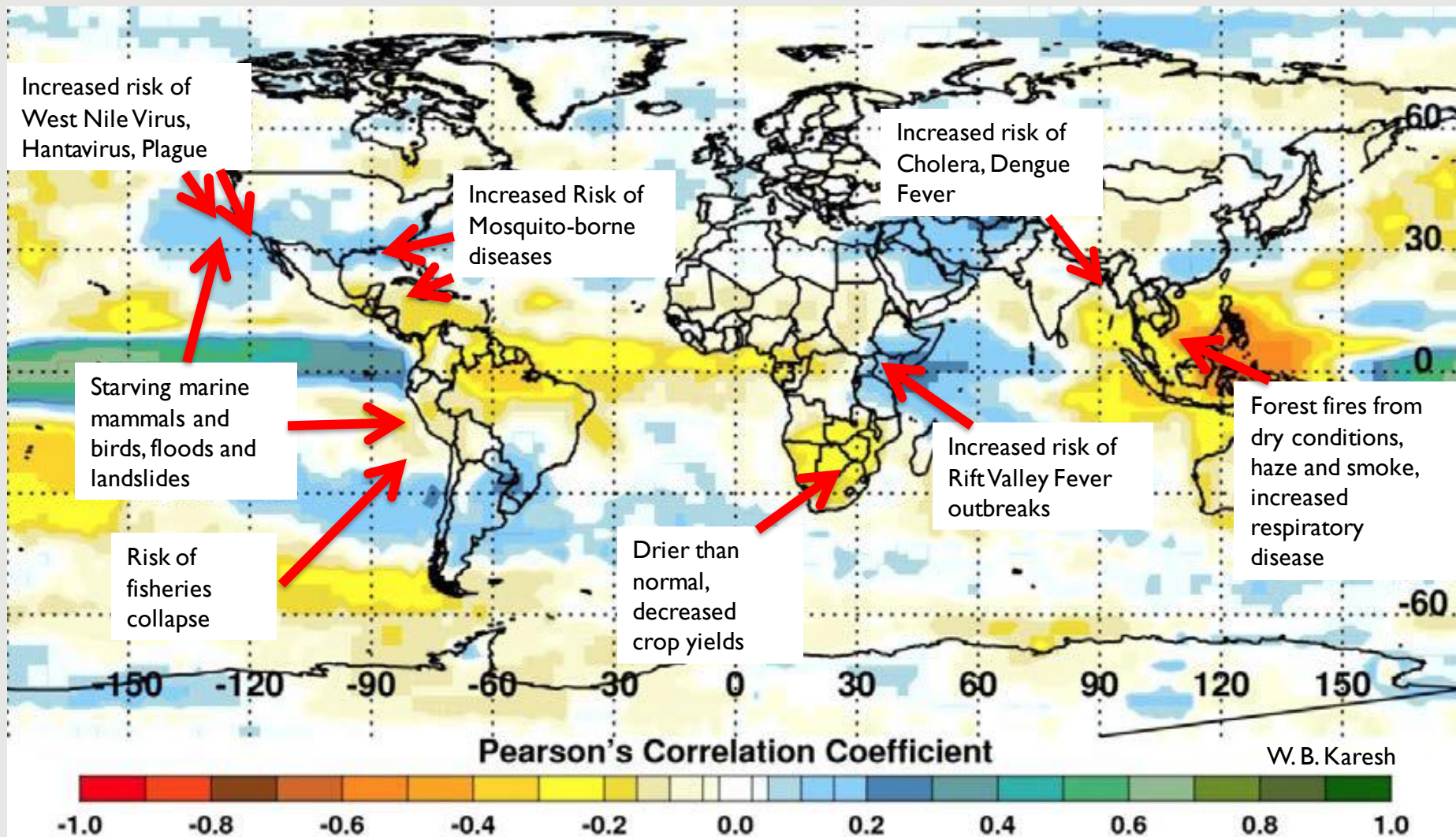


Credit: BirdLife



Managing Impacts of Disaster Events

Examples of likely health effects from El Niño, 2015-2016



Background map of average rainfall anomalies from NASA/Anyamba, et al., *PLOS Neglected Pathogens*, 2012.
Shades of yellow to red indicate below normal rainfall and blue to green indicate above normal.

Community Engagement: One Health Surveillance



Community Entry Points:

- County Superintendent
- Livestock Officer
- Regional Forester or Park Warden
- Health Promotion Focal Person
- Town chiefs
- Youth leaders
- Community animal health worker
- Livestock farmers
- Community dwellers



Courtesy of Sandra G. Samuels
Society for the Conservation of Nature of Liberia

Community Engagement: Raising Awareness

Section 1. Bats are an Essential Part of our Ecosystem

Bats also play an important role in keeping us and our ecosystem healthy by pollinating flowering plants. Over 300 species of fruit depend on bats for pollination. These fruits include mangoes, guavas, and guavas.

Living Safely with Bats



Coordination Structures: *National One Health Platforms*

- Practical challenge: many sectors, with different regulations and mandates, capacities, plans, programs, and systems (national and global)
- For NGOs in a response phase: need landscape of actors and resources to identify where to best align
- Intentional coordination needed to create effective bridges and synergies across epidemic prevention, detection, and response
- Goal of bringing together partners to make coordination more routine

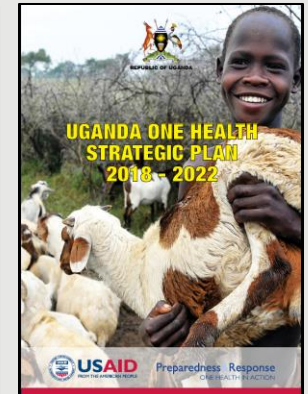
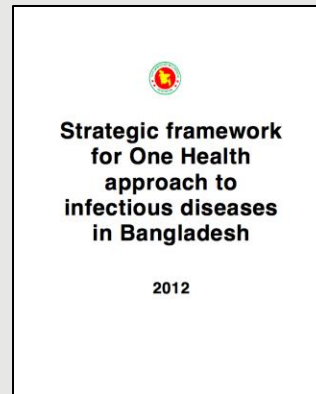
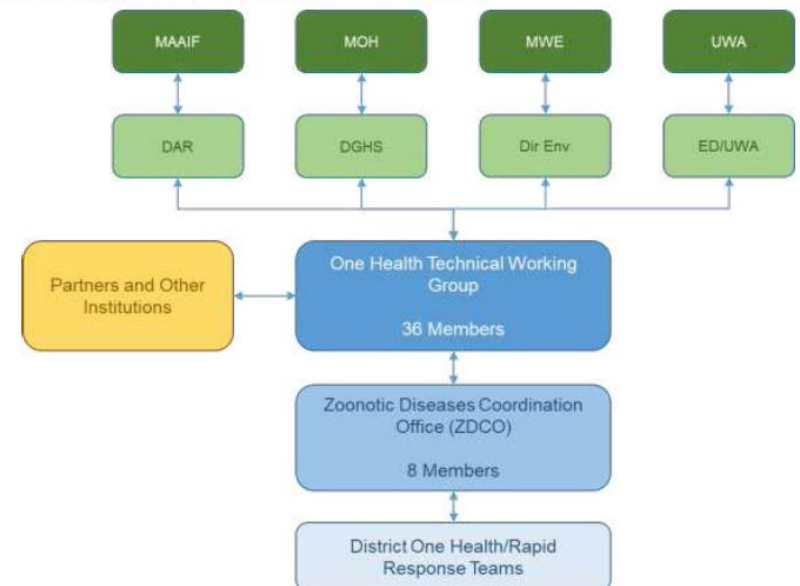


Figure 1: Approved One Health Governance Structure



One Health Operational Guidance



World Bank One Health Operational Framework. 2018.

Domain	Prevent	Detect	Respond	Recover
Mapping of stakeholders, roles, and responsibility	Technical entities conducting health disaster risk reduction implementation	Technical and non-technical entities contributing to passive surveillance	Resources for outbreak investigation/control and treatment	Private sector role in resilience
Financial and personnel resources	Entomologists, wildlife disease experts, veterinarians, safeguard assessors	Routine funds for case-based surveillance and laboratory investigation	Medical and public health experts (e.g. Community Health Workers), virologists	Enhanced resource allocation based on deficits identified in after-action review
Communication and information	Population-specific and sensitive messaging (e.g., gender or cultural)	Coordination among authorities, affected sectors, logistical players (e.g., medical supply chain, treatment centers, security)	Population-specific and sensitive messaging (e.g., gender or cultural)	Multisectoral resilience planning and prioritization
Technical infrastructure	Identification of vulnerable populations (heightened risk or disproportionate impact from risk management options)	Detection at point of entry	Risk management for disease control, including via contact tracing, awareness campaigns, etc.	Risk mitigation measures, e.g., universal vaccination campaigns
Governance	Disease risk in environment/social impact assessment	Initial reporting to national and international authorities	Risk adaptation (e.g., change in regulations, forced quarantine)	Economic evaluation of risk management options

Response and Risk Communication







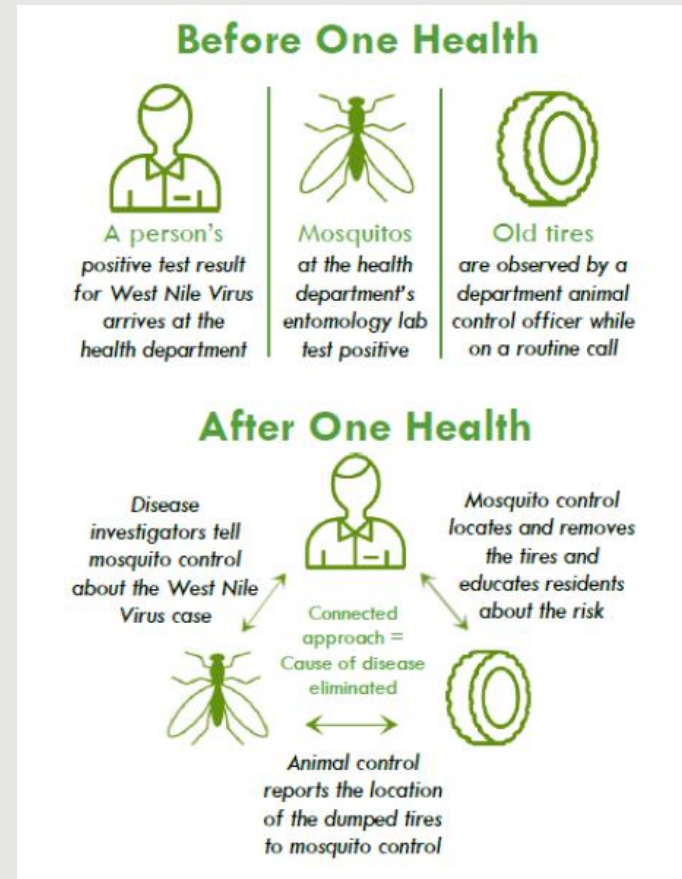


Solema (22) and her son Sayed (3) receive treatment at Save the Children's health facility in the Rohingya refugee camps. August 13, 2020, Bangladesh.*

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Integrated Framework for COVID-19 Response

Integrated Framework for COVID-19 Response.
READY 2020.



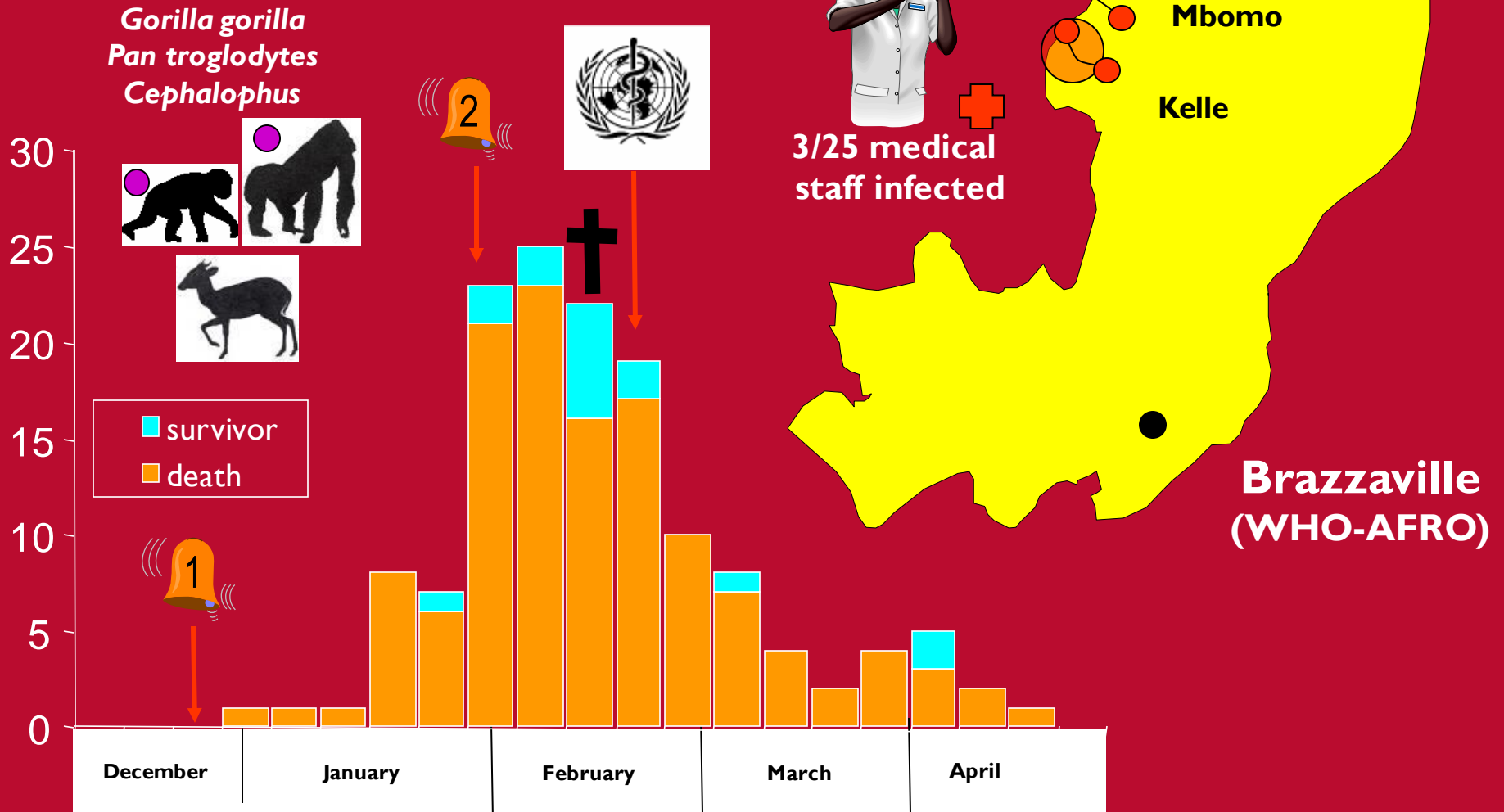
Courtesy of the Harris County Public Health Department / U.S. National Academies

Response and Risk Communication



AFP/Getty

Ebola outbreak in Mbomo and Kélé districts, December 2002 to April 2003, Congo (143 cases, 128 deaths).



Response and Risk Communication



Coordinated messaging to reduce disease risk and promote biodiversity



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