Importance and challenges of disease reporting in wildlife

Risk analysis of spillover events in wildlife workshop

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Background and consideration points

- **Summary**

  - Disease reporting in wildlife – why it is so important
  - One health perspective and collaborative approach
  - Disease reporting and WOAH – the Wildlife Health Framework
  - How to interpret reporting in wildlife
  - Gaps, challenges and opportunities
  - Closing remarks and key messages

Disease reporting in wildlife – why it is so important

- **Impact on biodiversity conservation and ecosystem services**
  - ASF in endangered wild suids
  - HPAI in mammals and endangered species
  - PPR in Saiga antelope
- **Impact on livestock and food security**
  - HPAI (mass mortality – 200 M losses since Oct 2021)
  - ASF (1.5 M losses since January 2021)
- **Impact on human health**
  - Zoonotic influenza (HPAI - H5N1 and risk of pandemic)
  - Rabies (dog-transmitted but also wildlife transmitted)

Food and Agriculture Organization of the United Nations

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Protecting animals, preserving our future

GUIDELINES FOR THE CONTROL AND PREVENTION OF PESTE DES PETITS RUMINANTS (PPR) IN WILDLIFE POPULATIONS

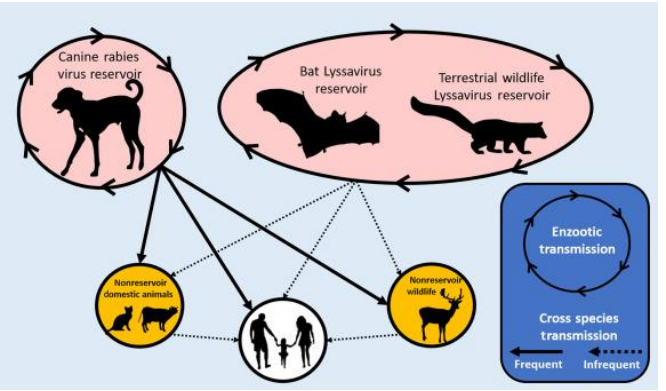
Peste des petits ruminants Global Eradication Programme

viruses MDPI

Article

The Potential Role of Wild Suids in African Swine Fever Spread in Asia and the Pacific Region

Madalene Oberin [1,2,*], Alison Hillman [2,3], Michael P. Ward [4], Caitlin Holley [5], Simon Firestone [1] and Brendan Cowled [2,4]



Disease reporting in wildlife – why it is so important

Species	ASF Detected	Distribution	Population Size (Estimate)
Wild boar/Feral pig (*Sus Scrofa*)	Yes [13]	Widely distributed across Asian countries in the oriental and Sino-Japanese zoogeographic regions [1]	Abundant throughout the region
Sulawesi babirusa (*Babyrousa celebensis*)	No	Indonesia	9999 [69]
Hairy babirusa (*B. babyrussa*)	No	Indonesia	No recent data available [2]
Togian Islands babirusa (*B. togeanensis*)	No	Indonesia	1000 [70]
Bearded pig (*Sus barbatus*)	Yes [71,72,73]	Indonesia, Brunei, Malaysia [3]	No recent data available
Javan warty/Bawean warty pig (*S. verrucosus*)	No	Indonesia	*S. v. blouchi*: 172–377 [74] [4]
Sulawesi warty pig (*S. celebensis*)	No	Indonesia	No recent data available
Philippine warty pig (*S. philippensis*)	Yes [75]	Philippines	No recent data available
Mindoro (oliver's) warty pig (*S. oliveri*)	No	Philippines	No recent data available
Palawan bearded pig (*S. ahoenobarbus*)	No	Philippines	No recent data available
Visayan warty pig (*S. cebifrons*)	No	Philippines	No recent data available
Pygmy hog (*Porcula salvania*)	No	India, Bhutan [5]	100–250 [76]

Disease reporting in wildlife – why it is so important

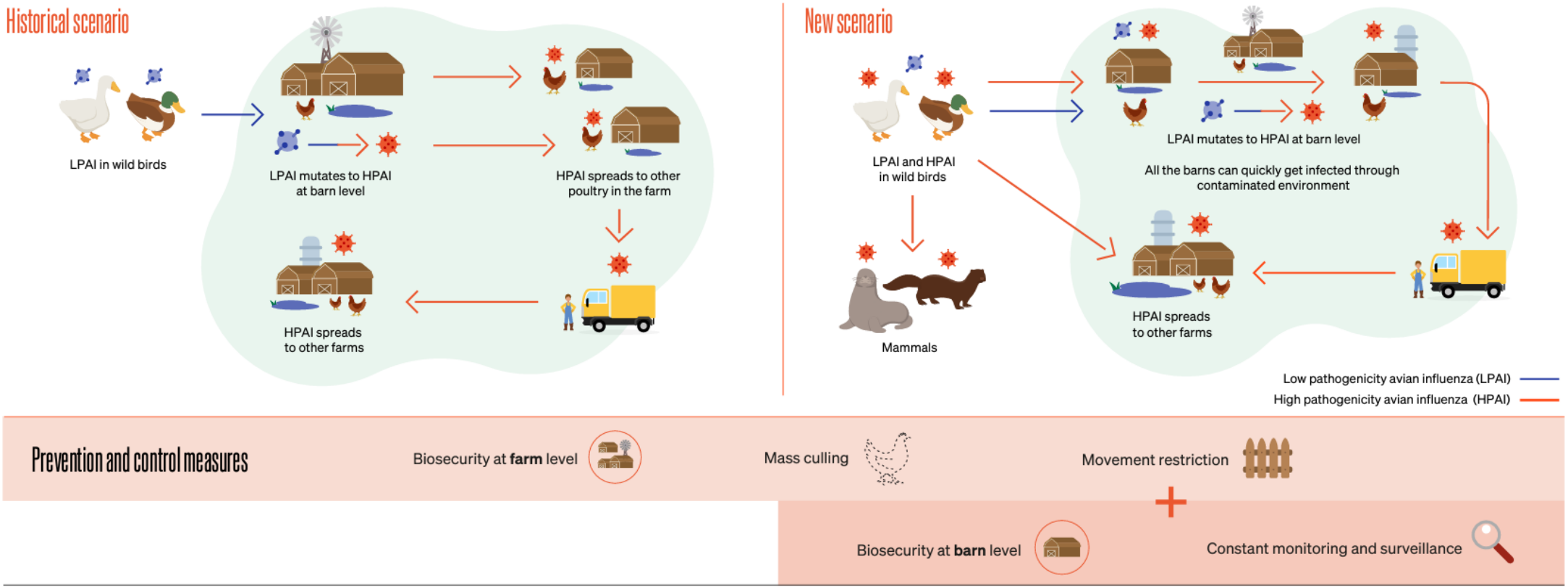
Figure 3. Before and after HPAI. A comparison of drone footage from 2020 and 2022 of the world's largest Northern Gannet breeding colony in Scotland, UK. In 2022, mass mortality of adults and young transformed the typically packed breeding sites. Image credit (from top to bottom): Darwin 200 in partnership with the Scottish Seabird Centre; Scottish Seabird Centre in partnership with The University of Edinburgh

https://www.cms.int/en/publication/h5n1-high-pathogenicity-avian-influenza-wild-birds-unprecedented-conservation-impacts

Disease reporting in wildlife – why it is so important

Avian influenza: understanding new dynamics to better combat the disease

The spread patterns of high pathogenicity avian influenza (HPAI) have recently evolved from a historically known scenario to a new one.
Both scenarios coexist in the current epidemiological situation.

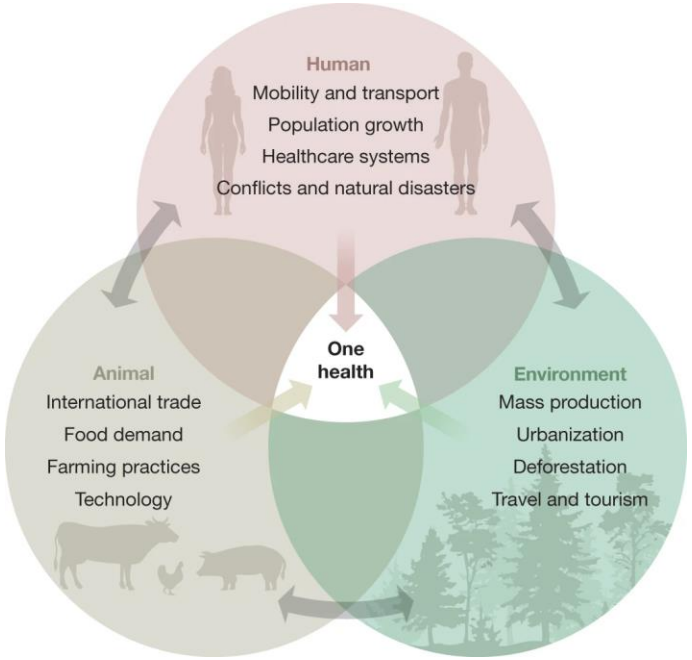


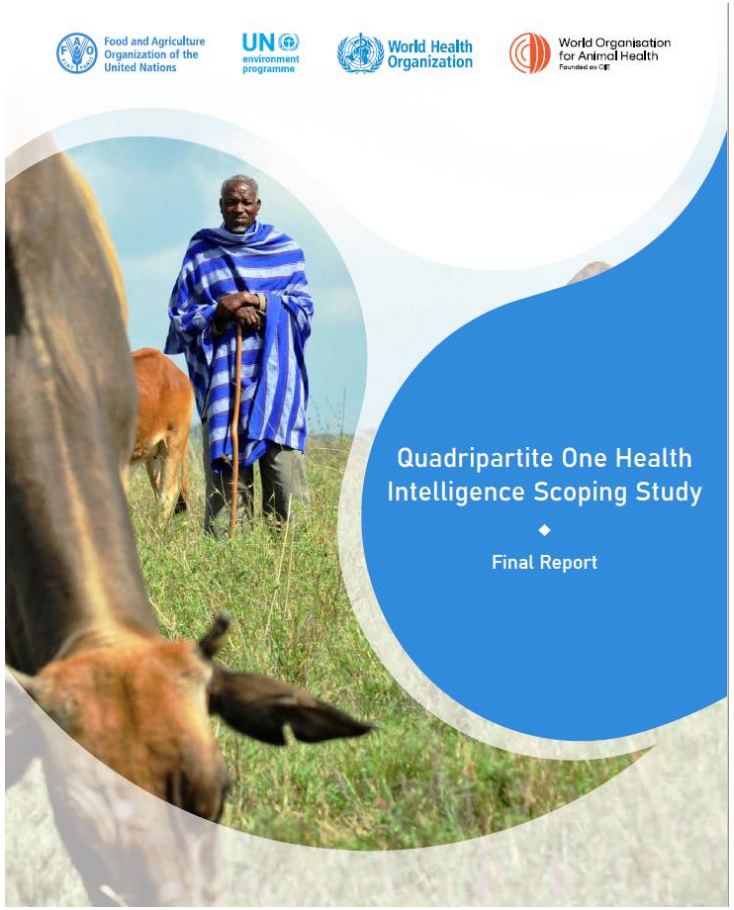
https://www.woah.org/en/document/avian-influenza-understanding-new-dynamics-to-better-combat-the-disease/

One health perspective and collaborative approach

- **One health approach to disease surveillance and report in wildlife**

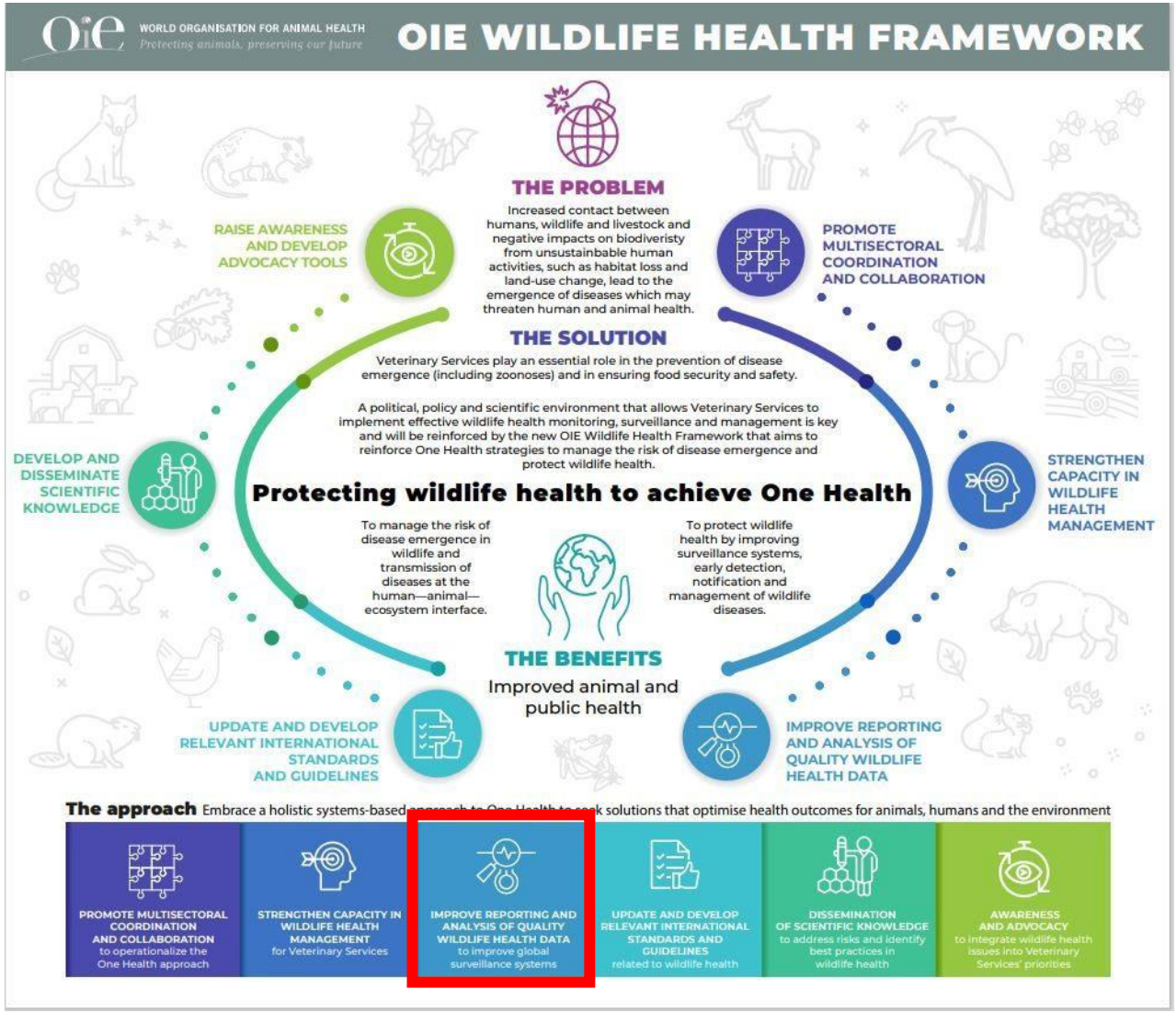
- ***Data sharing and collaborative approach***





"Human health and animal health are interdependent and bound to the health of the ecosystems in which they exist."

Disease reporting and WOAH – the Wildlife Health Framework



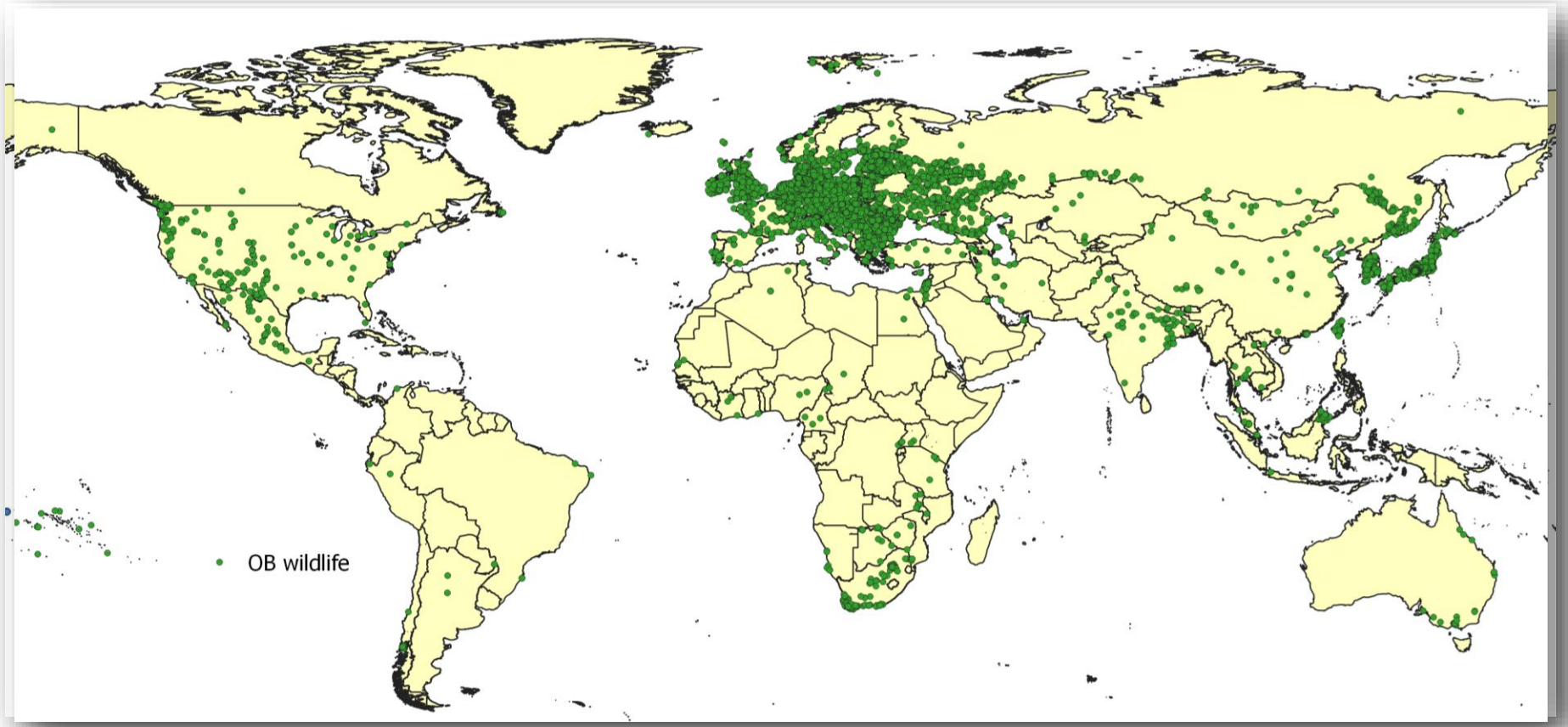
https://www.woah.org/fileadmin/Home/eng/Internationa_Standard_Setting/docs/pdf/WGWildlife/A_Wildlifehealth_conceptnote.pdf

Disease reporting and WOAH – the Wildlife Health Framework

58,000 OBs (40%) in wildlife

ASF (N=42,000), and HPAI (N=10,000) the most reported

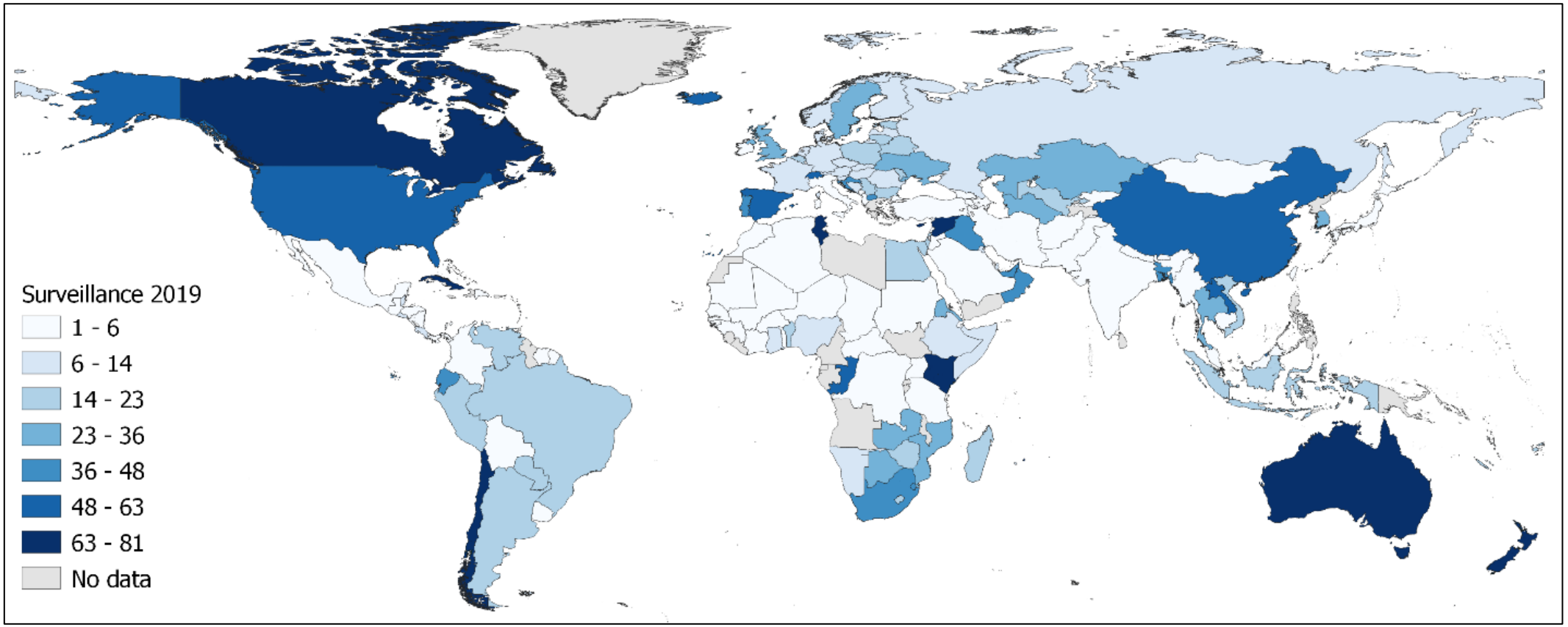
447 species



OB = Outbreaks

How to interpret reporting in wildlife

- **Always consider surveillance activities in place**



Number of diseases listed by WOAH for which surveillance is reported in terrestrial wildlife (data referring to situation reported by countries to WOAH in 2019 – being the most recent year with almost all countries having sent reports).

Gaps, challenges and opportunities

- **Several gaps in surveillance and reporting diseases in wildlife – WOAH survey**

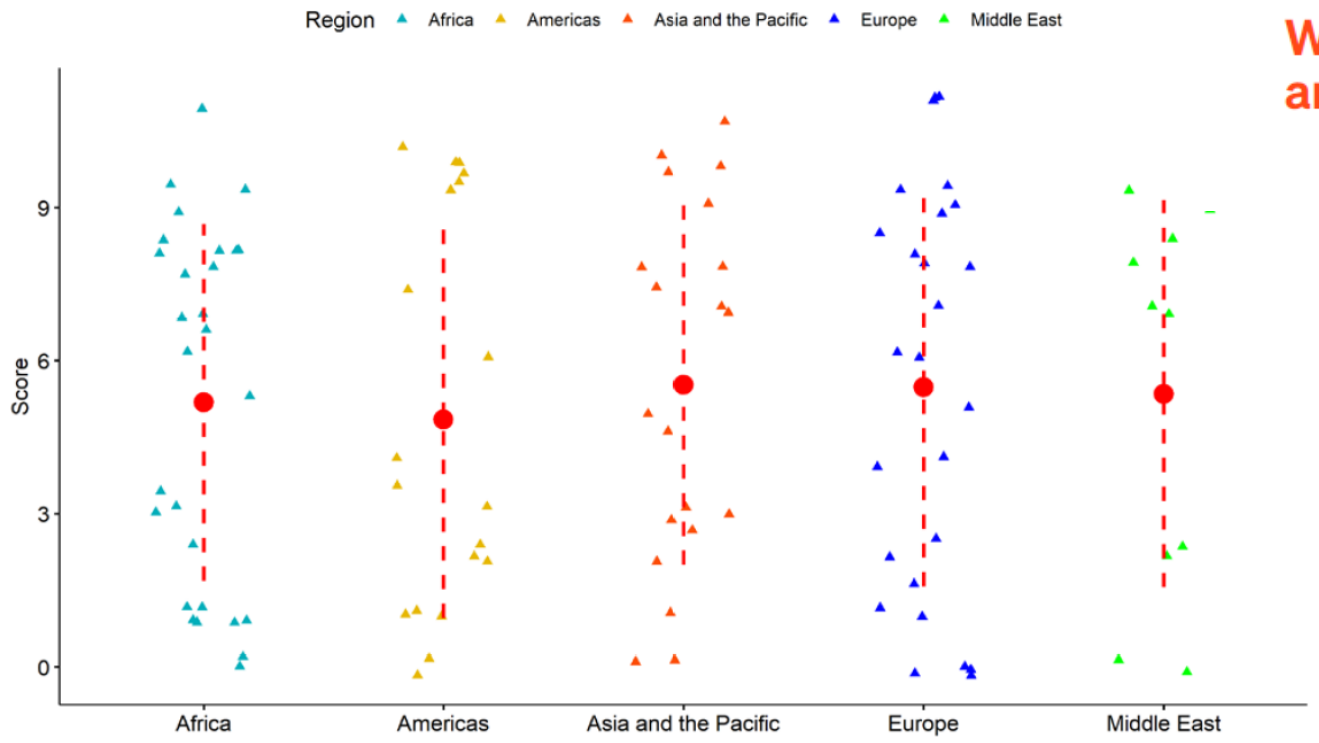


Figure 6

Distribution of country surveillance capacity scores, by region

Each triangle represents the score of wildlife surveillance capacity obtained by a Member. The red circle illustrates the average score for each region. Vertical dashes represent the standard deviation

https://doi.org/10.20506/rst.42.3359

Wildlife health surveillance: gaps, needs and opportunities

M. Delgado[1], N. Ferrari[2], A. Fanelli[3], S. Muset[1], L. Thompson[1], J.M. Sleeman[4], C.L. White[4], D. Walsh[4, 5], C. Wannous[1] & P. Tizzani*[1]

Closing remarks and key messages

- **Wildlife health surveillance** to understand and **manage risks** to animal and public health.
- Challenges addressed through **One Health approach**.
- Need for national **capacity assessments to prioritise** investments.
- Wildlife and environmental considerations absent from the most recent **health security capacity assessments**
- Adoption of digital surveillance systems to optimise data flow and data collection, analysis, reporting and sharing might facilitate **intersectoral, national and international collaborations**.
- **Increased consideration of wildlife and environmental changes** as the major source of emerging zoonoses could help in understanding and managing risks to animal and public health.

Thank you

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