

The FAO-WHO-WOAH Global Early Warning System (GLEWS+)

A One Health Intelligence Approach to Strengthening Global Health Security at the Human-Animal-Ecosystem Interface

Presented by: Fernanda Dórea

Tatiana Metcalf¹, Neil Saad¹, Elisa Palamara³, Madhur Dhingra³, **Fernanda Dórea**³, Ismaïla Seck³, Andrea Capobianco Dondona³, Matteo Morini², Itlala Gizo², Paolo Tizzani², Jenny Hutchison², Esther Hamblion¹, Dubravka Selenic Minet³

¹World Health Organization, ²World Organisation for Animal Health, ³Food and Agriculture Organization of the United Nations

8th World One Health Congress
September 22, 2024

What is GLEWS+

- ▶ GLEWS+ established in 2006
- ▶ One Health Intelligence collaboration among FAO, WHO, and WOAH.
- ▶ Enhances global health security through rapid detection and response to emerging threats at the human, animal, and environmental interface.



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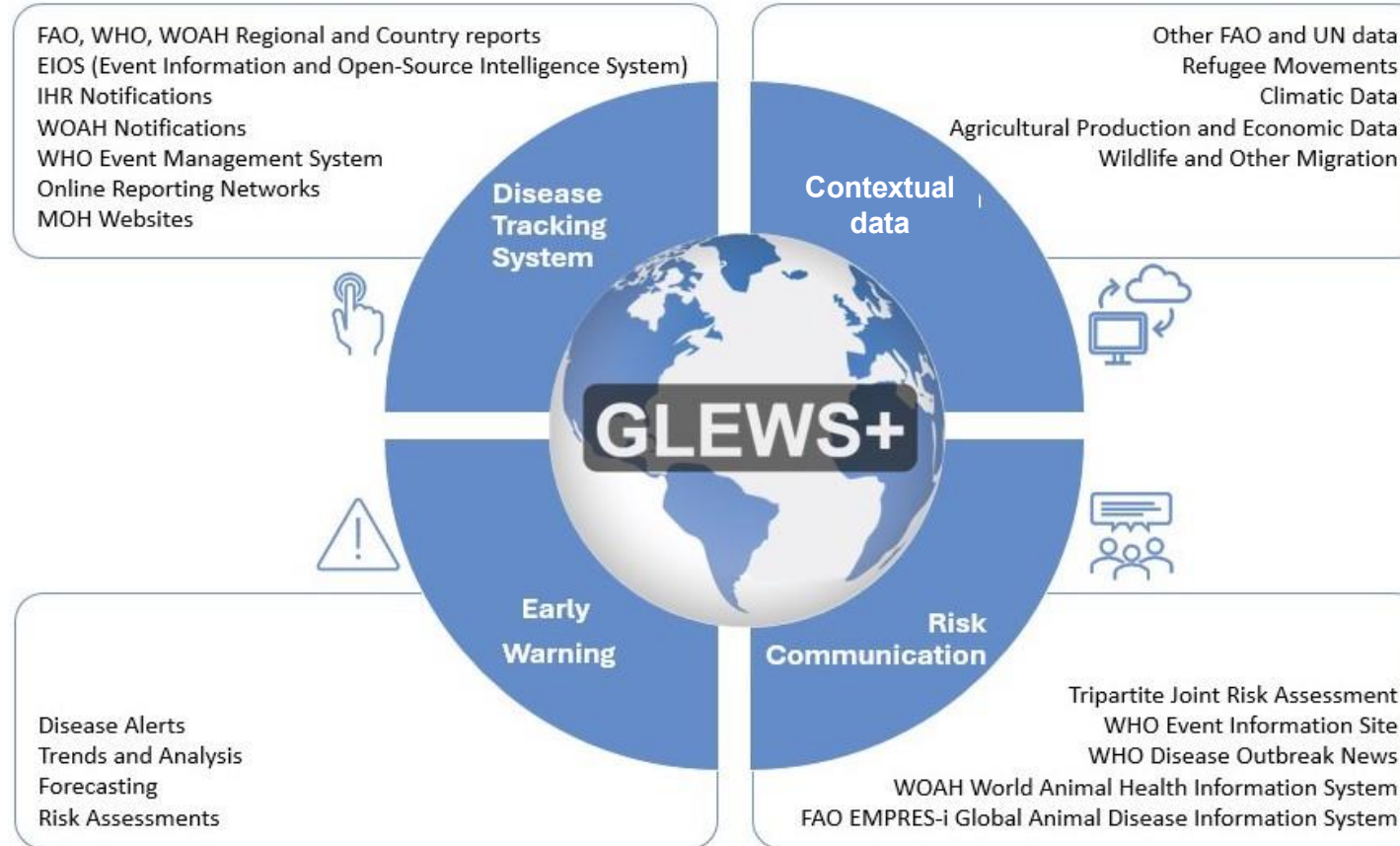


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GLEWS+ and the Tripartite alliance



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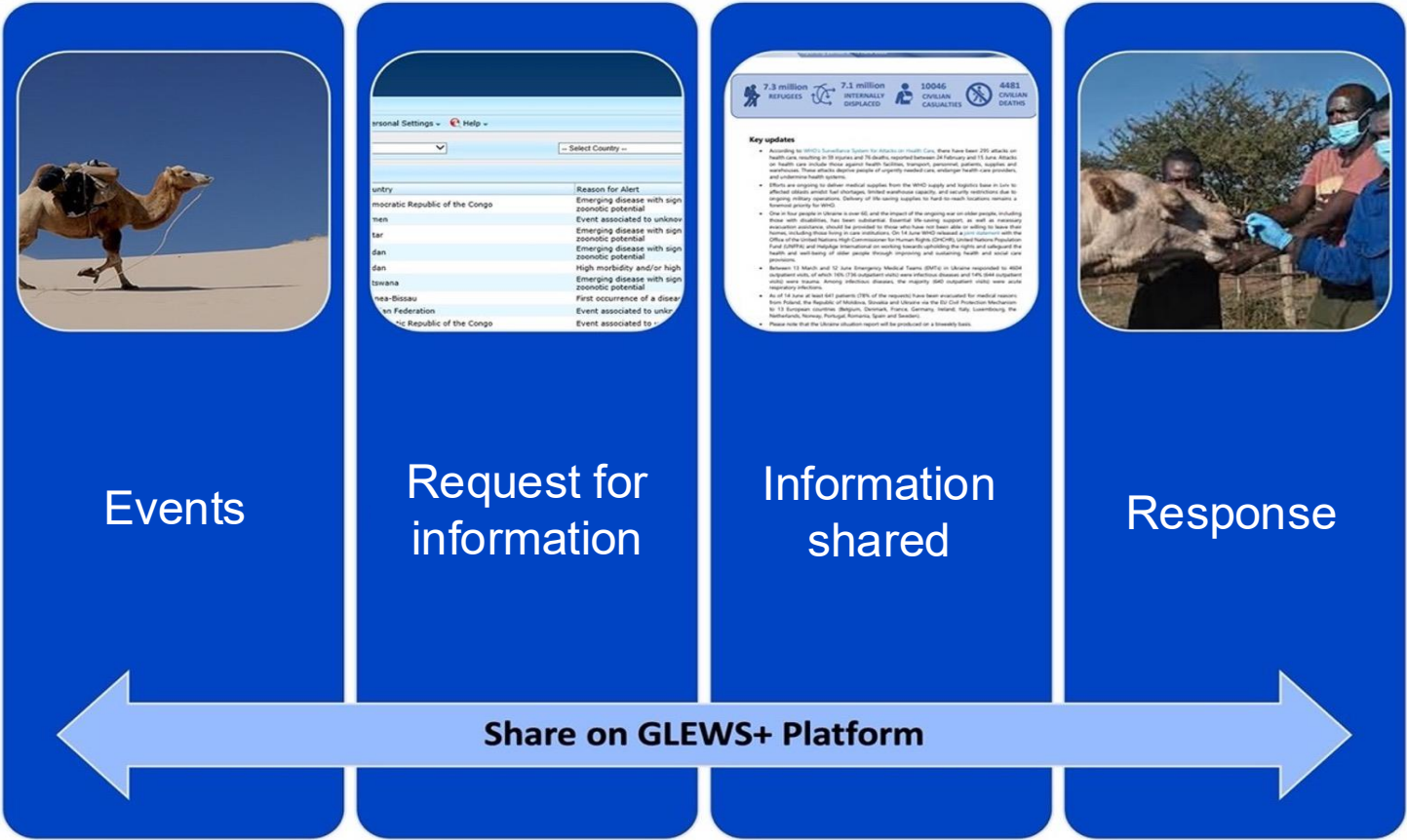


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Operational flow



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Methods

- ▶ Data analysis of events recorded in the GLEWS+ platform (2018-2023).
- ▶ Trend analysis was conducted using descriptive statistics and Sen's slope estimator.
- ▶ Sen's method was used to estimate the rate and direction of change over time, at a 95% confidence level.



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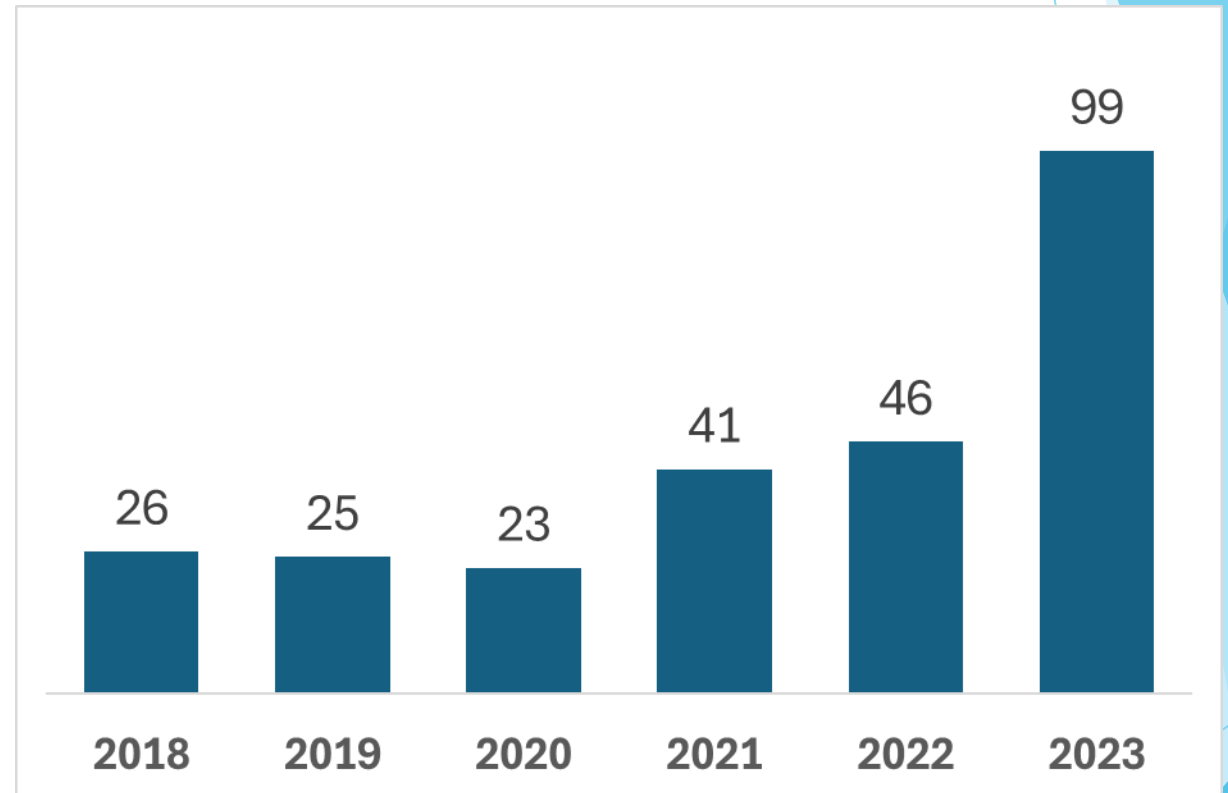
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Annual trend of events 2018-2023

- ▶ 243 events recorded
- ▶ Significant increase in events recorded over time (Sen's Slope test $z=2.2544$, $p\text{-value}<0.05$)
- ▶ 172 events confirmed and followed; 71 disregarded after verification



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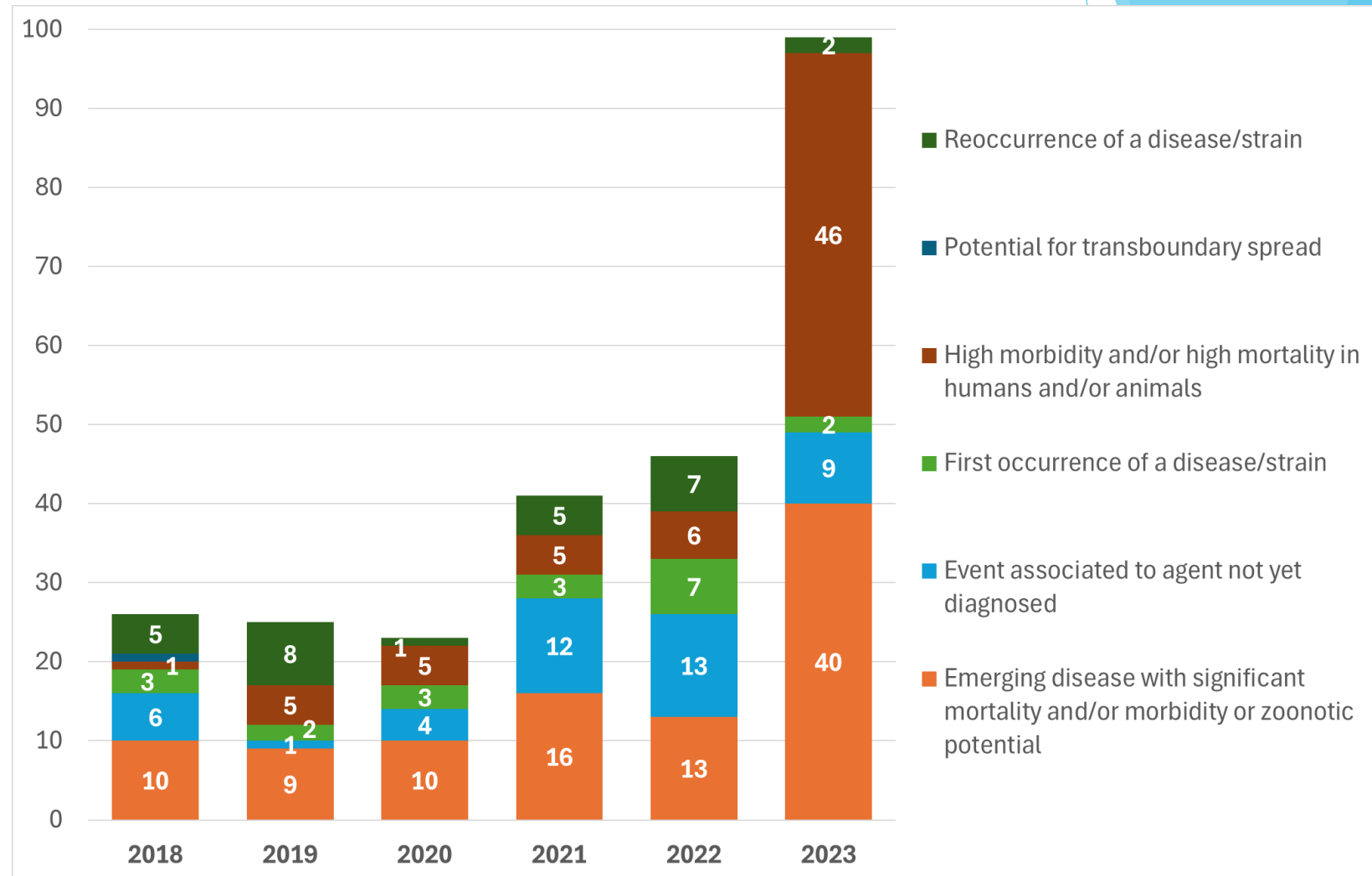
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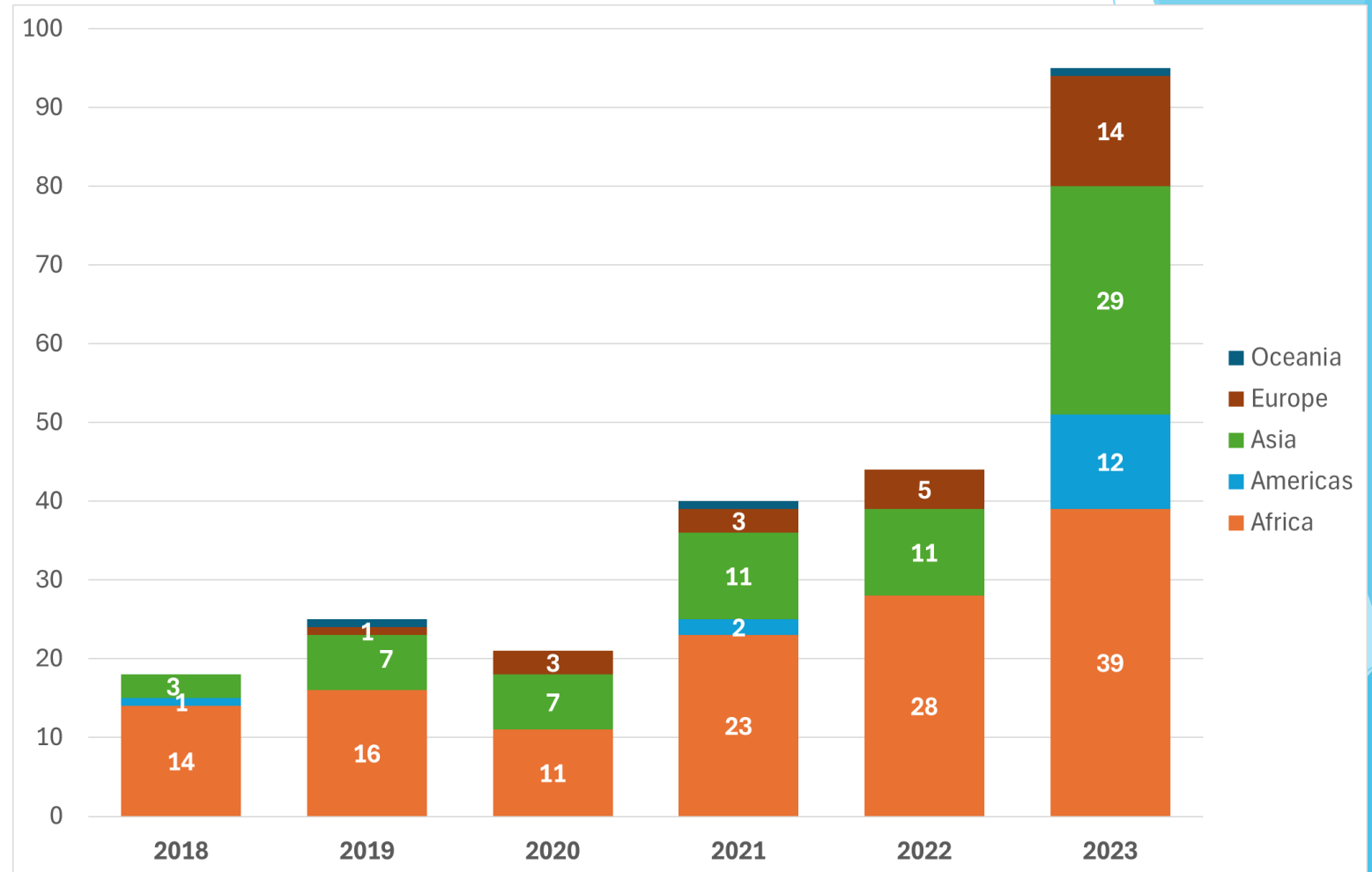
Event triggers

- ▶ GLEWS+ alerts are based on specific criteria to safeguard public and animal health.
- ▶ Emerging diseases with high mortality/morbidity or zoonotic potential, **38%.**
- ▶ High morbidity and/or high mortality in humans and/or animals, **27%.**
- ▶ Event associated to agent not yet diagnosed, **18%.**
- ▶ Reoccurrence of a disease strain, **11%.**
- ▶ First occurrence diseases/strain, **7%.**



Regional distribution

- ▶ Over 50% of health threats in Africa
- ▶ Top 5 diseases: zoonotic influenza, diseases of unknown etiology, Rift Valley fever, anthrax, Ebola.



Response:

GLEWS+ Tripartite Joint Risk Assessments (TJRA)

- ▶ Tripartite Joint Risk Assessments (TJRAs) offer a unique cross-sectoral approach for conducting comprehensive risk assessments on zoonotic events with endemic or pandemic potential
- ▶ These assessments focus on developing risk management strategies across human, animal, and environmental health sectors under the One Health framework.
- ▶ TJRAs enhance collective early warning and response capacities by integrating the alert and response mechanisms of FAO, WHO, and WOA.

The majority are confidential, but some are public:



Summary

- ▶ From 2018 to 2023, GLEWS+ recorded a substantial increase in events, particularly those with high mortality or zoonotic potential
- ▶ Africa was the most affected region. The region has only 3% of the world's health workforce and less than 1% of global financial resources
- ▶ The increase in recorded health events can be attributed to both a real increase in global events and improvements in surveillance systems, increased awareness, and enhanced reporting capabilities.

WHO. The Global Health Observatory. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-not-further-defined-\(number\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-not-further-defined-(number))



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Some limitations

- ▶ The effectiveness of GLEWS+ is influenced by the quality and timeliness of data from member countries, many of which have limited capacity for surveillance, data collection, and reporting.
- ▶ Event-based surveillance (EBS) provides a significant amount of data, helping to reduce the time-to-detection for disease outbreaks. However, EBS, particularly when reliant on media reports, requires extensive time and manpower to search and verify alerts, which can lead to delays in response.
- ▶ While GLEWS+ plays a pivotal role in receiving and sharing alerts, timely and direct information sharing from member countries remains limited.
- ▶ The GLEWS + website www.glews.net is currently inactive due to a lack of funds.



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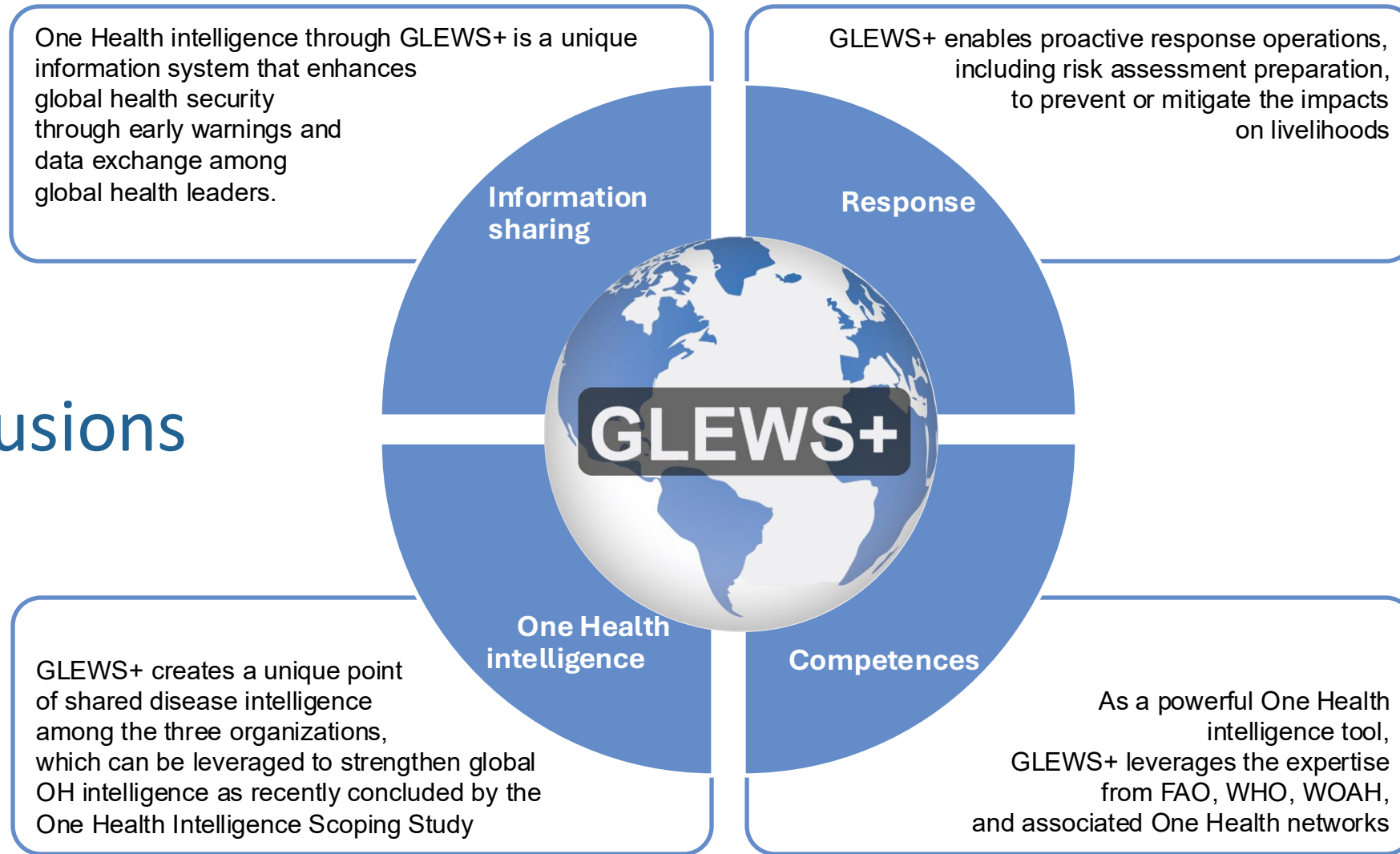


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Conclusions



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THANK YOU!



Ismaïla Seck
<Ismaila.Seck@fao.org>

Dunja SELENIC MINET
<selenicminetd@who.int>

Itlala Gizo
<i.gizo@woah.org>



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