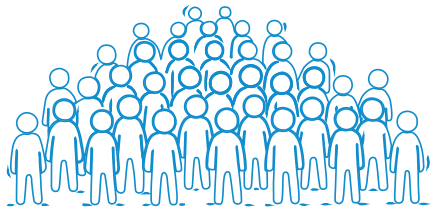
Assessing and detecting Arbovirus risk: Epidemiological surveillance

Diana Rojas Alvarez, MD PhD
Technical Lead Chikungunya and Zika
Epidemic and Pandemic Preparedness and Prevention
Health Emergencies Program
World Health Organization

World Health Organization

Washington December 12th, 2023

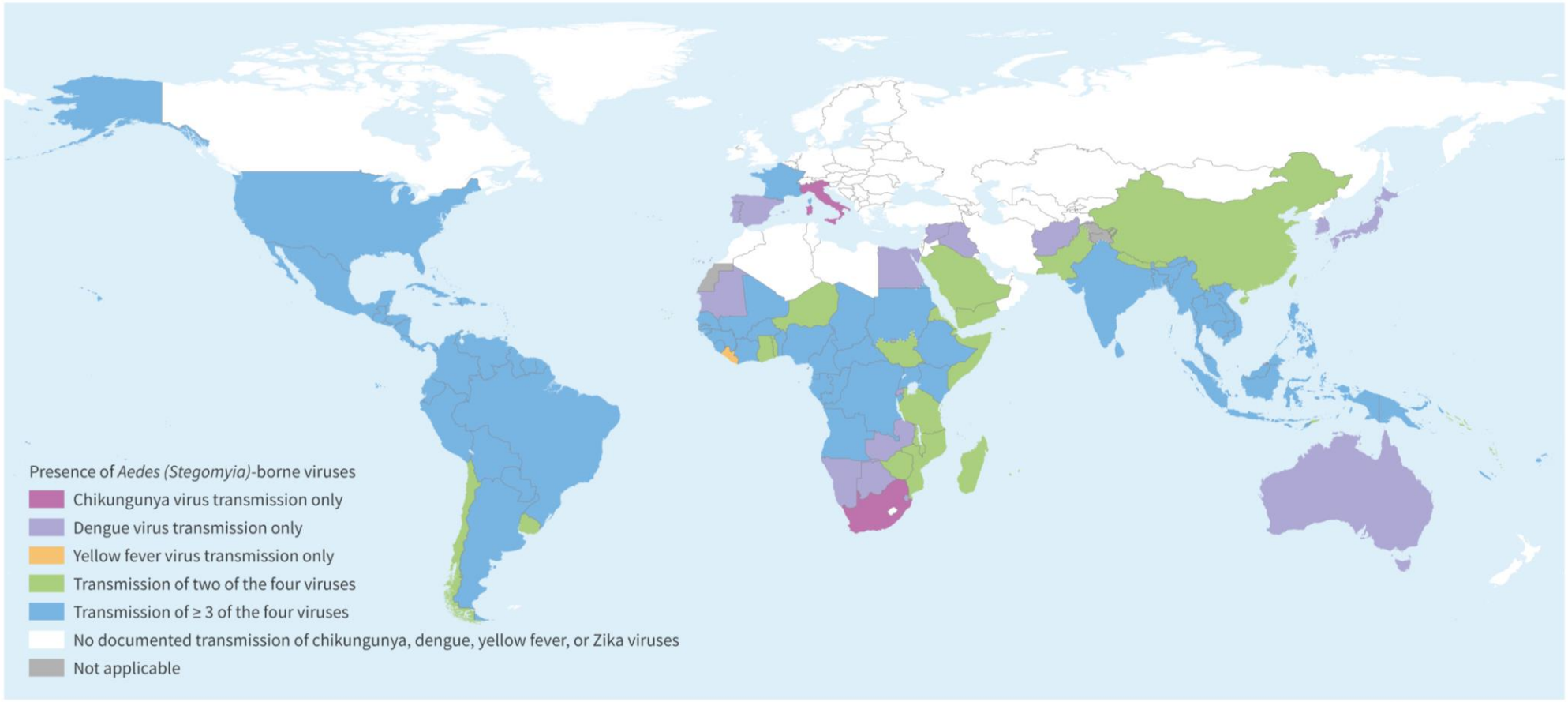


Almost 4 billion people

at risk for *Aedes*-borne infections

Countries and territories with current or previous transmission of chikungunya, dengue, yellow fever, or Zika viruses

(as of 25/10/2023)



Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme
Request ID: RITM00065

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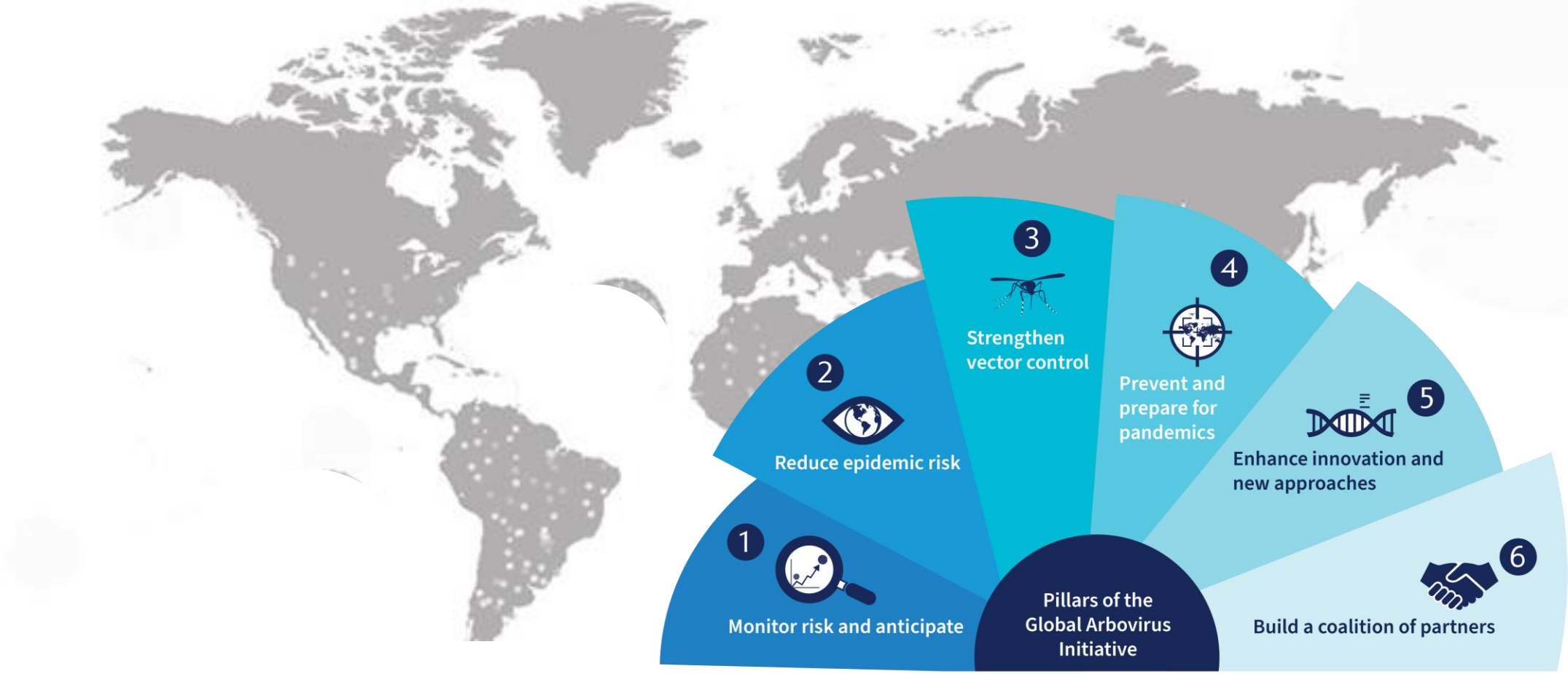

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Tackling mosquito-borne viruses with epidemic and pandemic potential

Pillar 1: Monitor risk and anticipate

Priority actions:

1. Develop a global risk monitoring framework for arboviruses using the one health approach

2. Forecast and model potential epidemic and pandemic scenarios for arboviruses

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Data dashboard

1. Inventory data sources and systems across WHO Regions
2. Develop an integrated global arbovirus reporting system to capture and transmit arbovirus-related data from national → regional → global level
3. Design and operationalize a global arbovirus dashboard to be hosted by HQ

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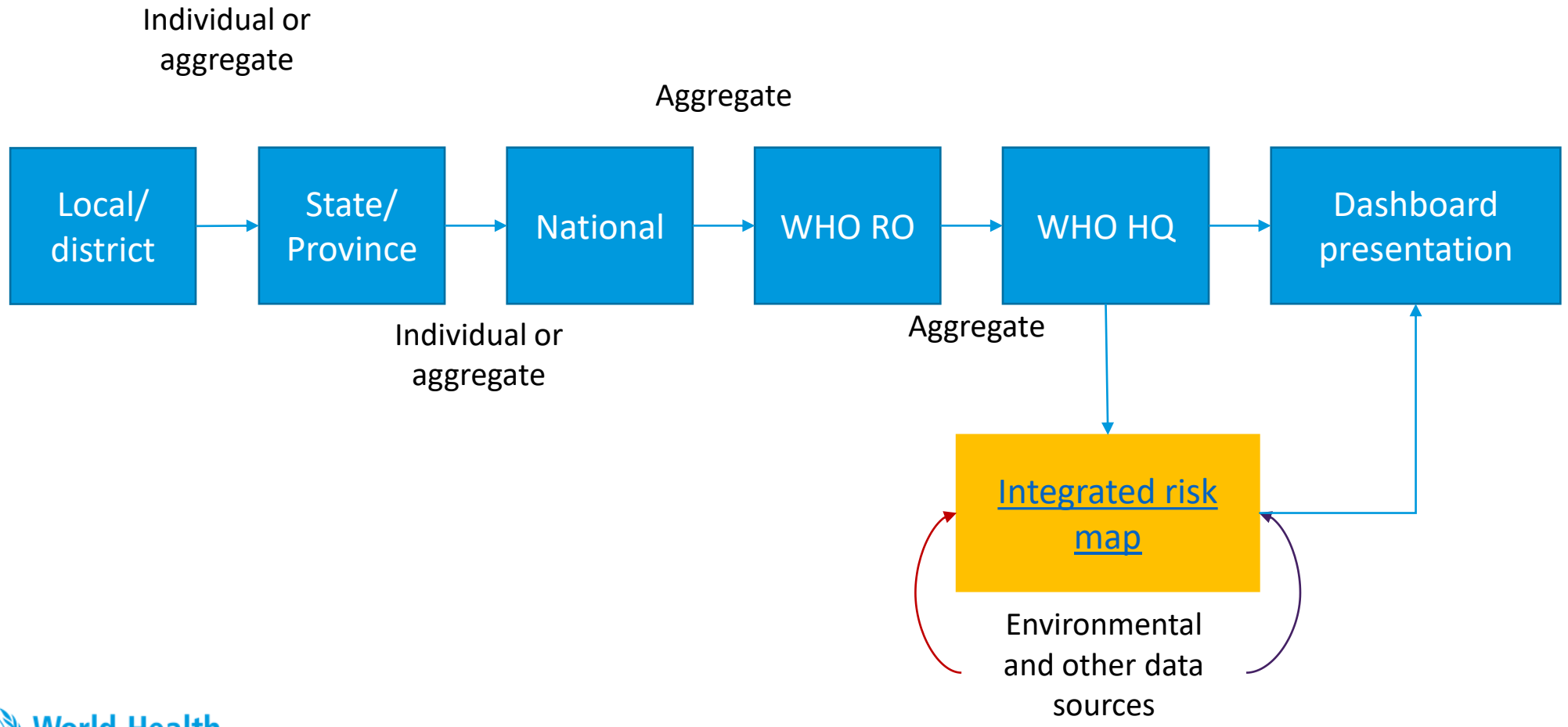
Integrated global arbovirus reporting system



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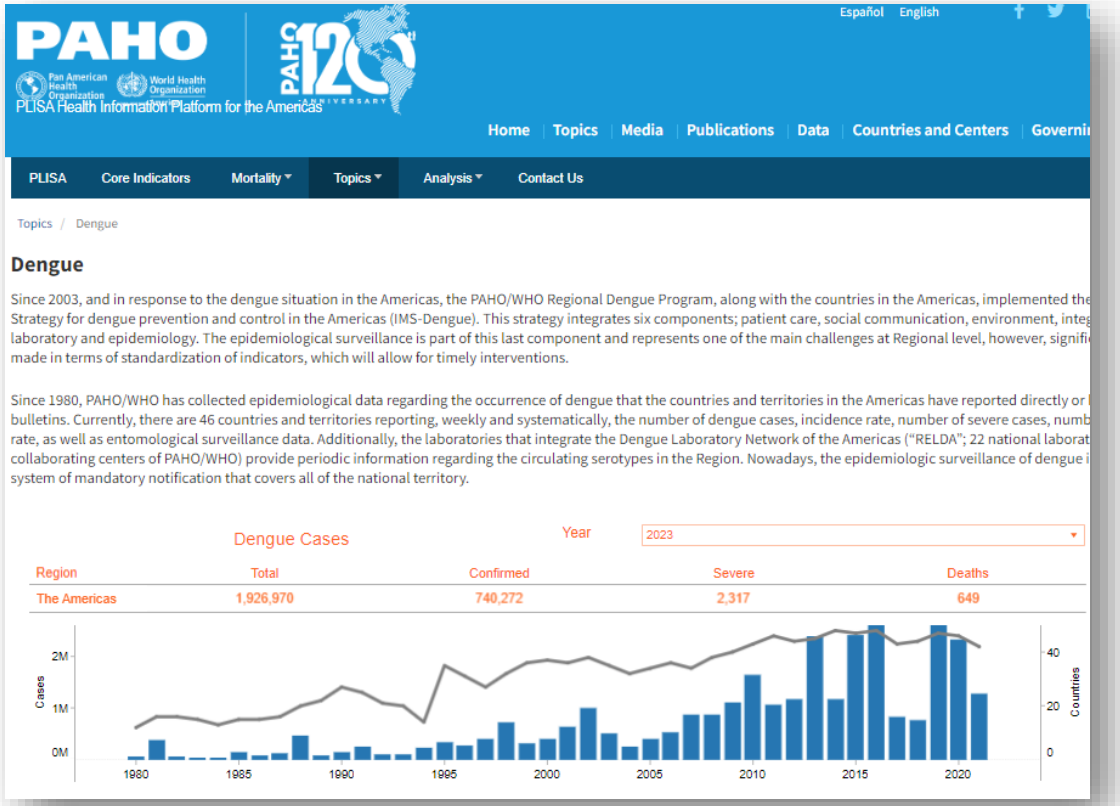
Arbovirus dashboards



https://www3.paho.org/data/index.php/en/

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World Health Organization
Western Pacific Region

Dengue Situation Update 685

23 November 2023

Update on the Dengue situation in the Western Pacific Region

This report describes the epidemiology of dengue in the World Health Organization Western Pacific Region. Data are compiled from open sources (national indicator-based surveillance systems) with the exception of Cambodia, Lao People's Democratic Republic, Viet Nam, and the Philippines, where data are provided by the WHO Country Offices. For the Pacific Island Countries, syndromic surveillance data are provided by the Division of Pacific Technical Support. Information is reported based on countries' standard dengue case definitions, summary of these definitions and countries' dengue surveillance systems - included as an annex to this report. Due to differences in surveillance methods and reporting practices, a comparison of trends between countries and areas is not possible, however, national trends can be observed over time.

Northern Hemisphere

Cambodia

As of epidemiological week 42 of 2023, the National Dengue Surveillance System reported a total of 26,912 cases with 39 deaths (Case Fatality Rate (CFR) 0.14%) since 1 January 2023 (Figure 1), an increase by 183.5% (n=9,492;) and 143.8% (n=16; Case Fatality Rate (CFR) : 0.16%) in cases and deaths respectively, as compared to cases and deaths reported in 2022 over the same period.

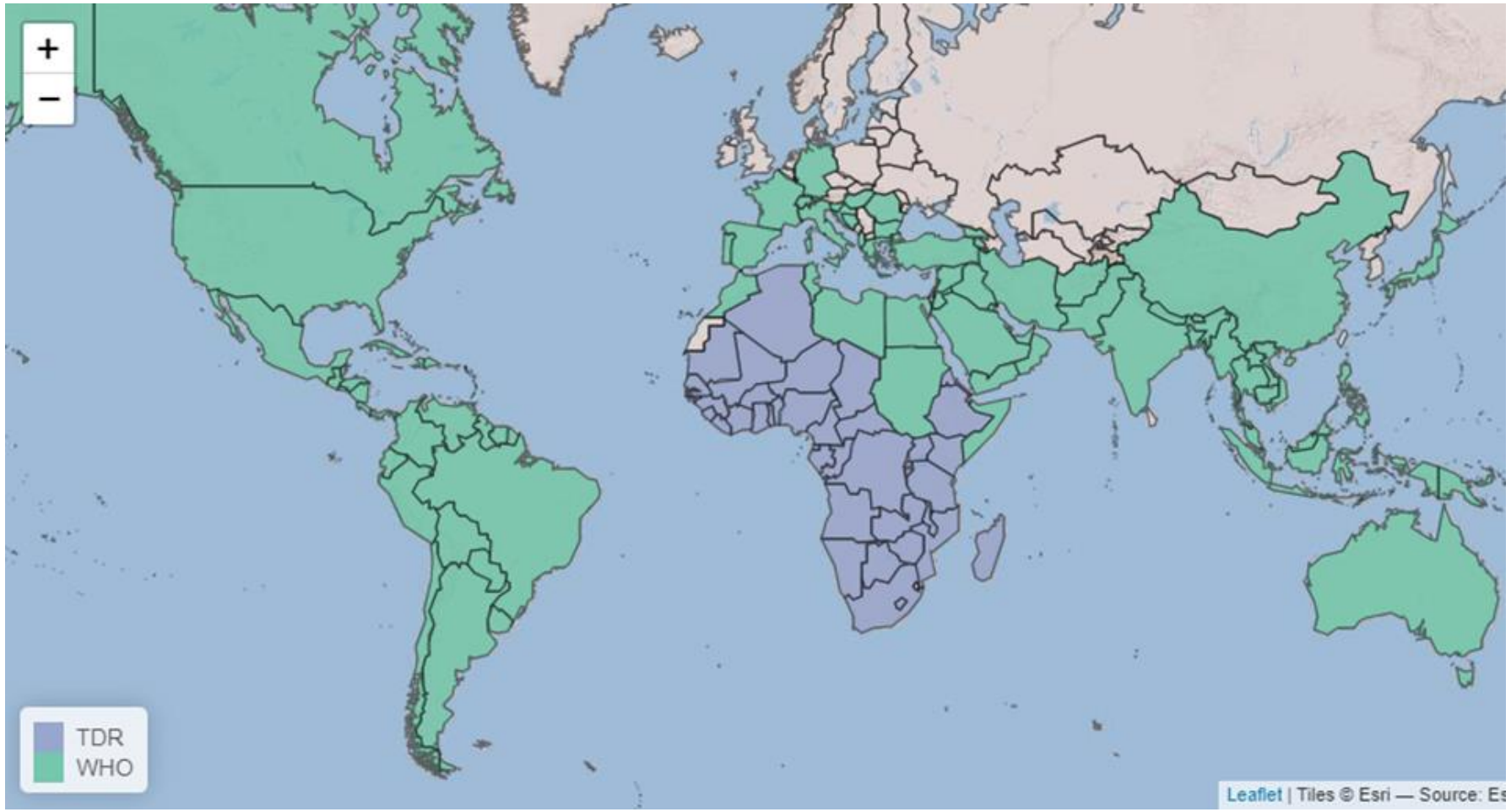
Dengue (who.int)

This epidemiological bulletin aims to provide the situation of key infectious diseases in the WHO South-East Asia region to inform risk assessments and responses. The bulletin uses information from publicly available sources and will be published every two weeks. For feedback or suggestions, please write to seoutbreak@who.int.

Table of Contents

https://www.who.int/southeastasia/outbreaks-and-emergencies/health-emergency-information-risk-assessment/sear-epi-bulletins

Global capacities survey for surveillance, prevention and control of arboviral diseases



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Main gaps national/local level

- *Large inequities within and between countries*
- Paper-based surveillance in some countries
- Data entry is not done in real time (yearly/semester/quarterly/monthly)
- The data analysis: basic to EWARS
- Epidemiological surveillance isolated from other relevant surveillance systems: Laboratory surveillance, entomological surveillance, environmental surveillance
- No/little action is taken when an alert is detected

Africa	**25/47 (53%)**
Americas	52 (100%)
Eastern Mediterranean	11 (55%)
Europe	17 (85%)
Southeast Asia	4 (50%)
Western Pacific	13 (87%)

Table 1. Percent countries conducting arbovirus surveillance

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Gaps/Opportunities regional level

- No regional agreements on arbovirus surveillance (case definitions, basic variables to be shared, confirmatory tests)
- Information sharing
- Countries are worried about reporting affecting tourism
- Regions are critical to liaise with the countries
- Having people dedicated to drive arbovirus surveillance processes in the regions

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How can we do better surveillance globally?

- Fill the gaps and inequities in technology across the globe to guarantee real time surveillance
- Transfer the analytical tools to the local levels to improve response: EWARS, modelling, genomic surveillance
- Leverage on the lessons learned and gains from COVID-19 pandemic
- Integrated approach: One health
- Multisectoral approach all levels
- Keep bringing awareness to arboviral diseases: Climate sensitive diseases
- Trust, trust, trust……
- Continuous financial support: partnerships
- Preparedness is now!

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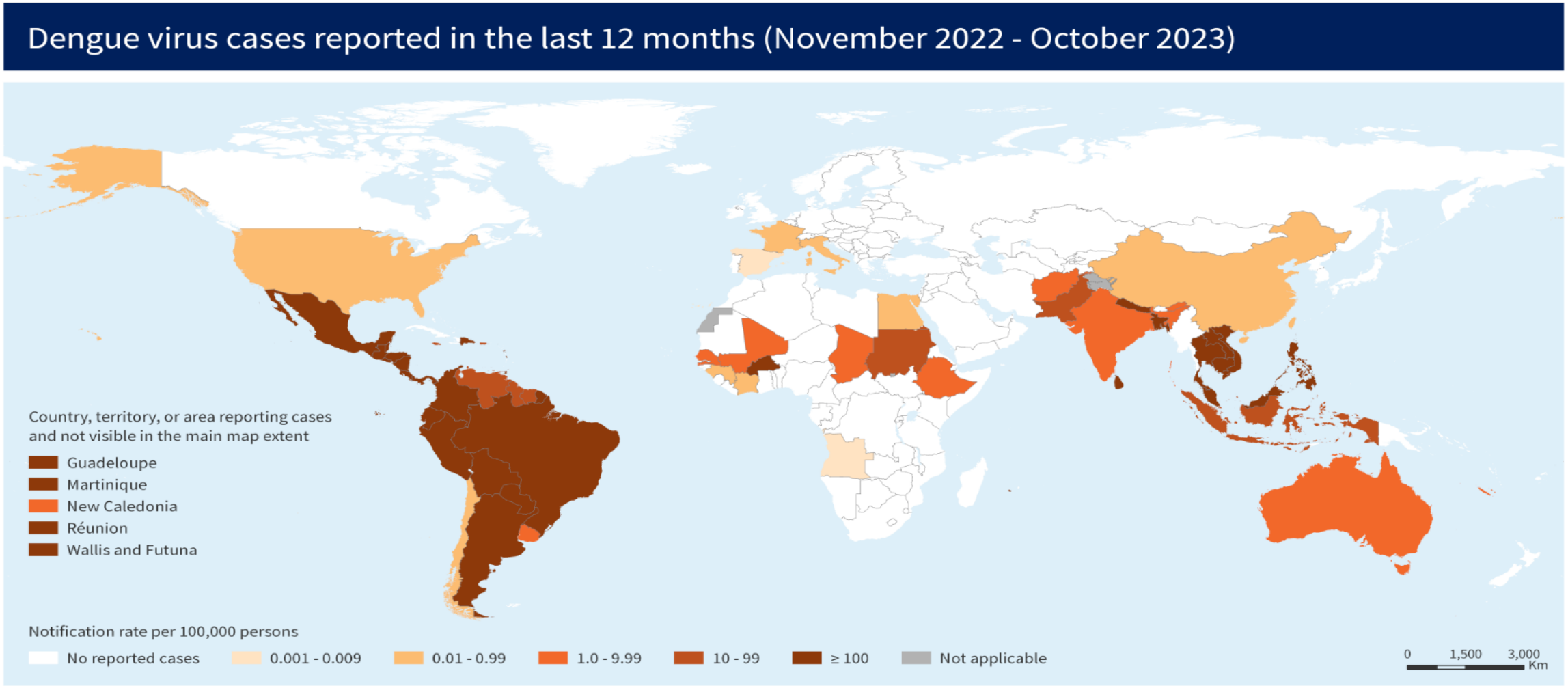
Upsurge of cases and deaths in 2023



Data Source: World Health Organization, European Centre for Disease Prevention and Control
Map Production: WHO Health Emergencies Programme
Map Date: 1 December 2023

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Summary

1. Inequities on transmission, surveillance, laboratory and response capacities
2. Opportunities leverage on the capacities built to respond to the COVID-19 pandemic
3. Information to act: early detection, response, plan intervention….
4. Multisectoral approach: multisectoral surveillance
5. Strengthen global surveillance mechanisms for rapid response
6. Political commitment in all levels to guarantee continuous financial support
7. Building partnerships

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Partners

All of you, TAG arbovirus members, regional offices and member states

Thanks for your attention

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