Conferência sobre o Impacto das Mudanças Climáticas na Saúde

Addressing malaria interventions in the context of climate change

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REGIONAL OFFICE FOR Africa

Outline

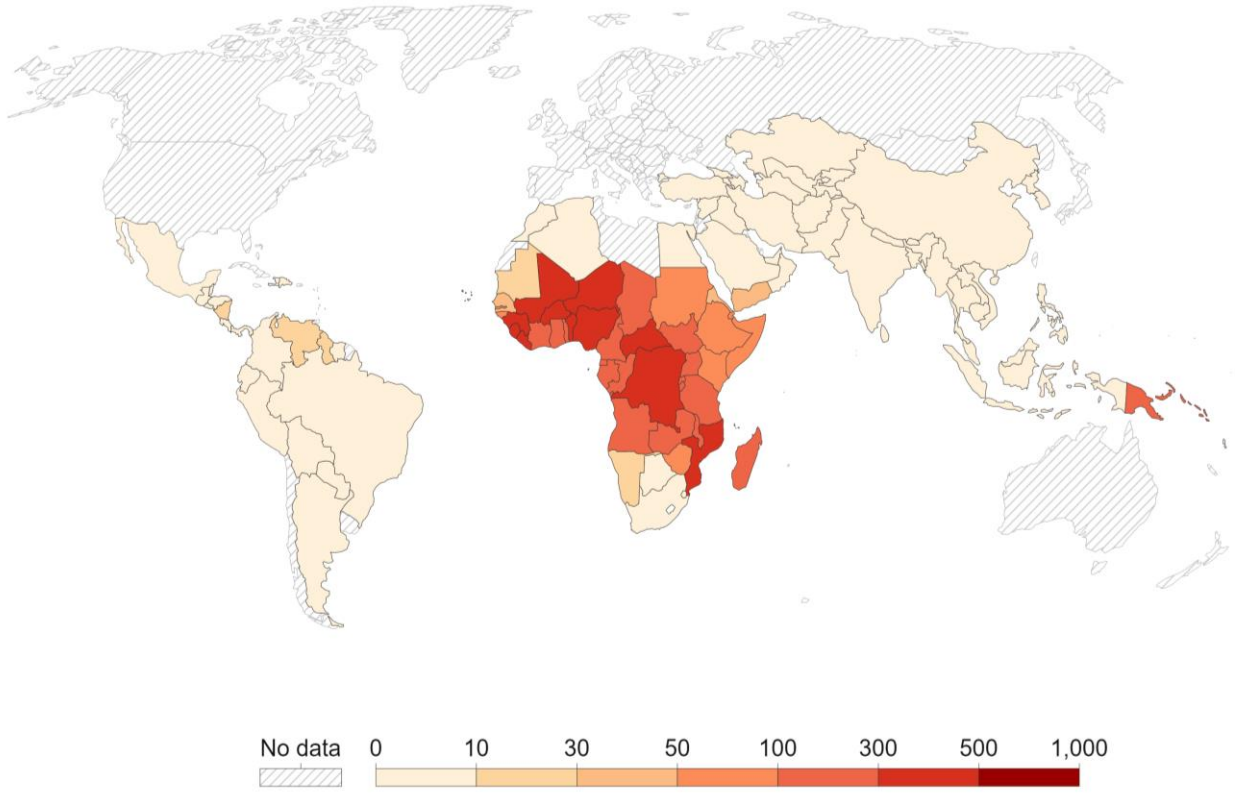
- Introduction
- The burden of vector borne diseases in Africa
- Global trends in malaria burden
- WHO's response interventions
- Future actions

Introduction

- Incidence of vector borne diseases increasing worldwide due to global warming, increasing international migration and unplanned urbanization
- In Africa additional socioeconomic factors may worsen these effects
- Vector-borne diseases (VBDs) are major contributors to overall burden of communicable diseases in the WHO African Region, cause ~ 1 million deaths annually
- Millions of people at risk of malaria, neglected tropical diseases (NTDs) and emerging and re-immerging arboviruses
- Despite significant efforts to mitigate transmission, malaria remains a major human killer in the region with 619,000 deaths in 2021

The Burden of Vector borne Diseases in Africa

Global malaria heat map 2022



In 2021, **95% of the 247 million** malaria **cases** and 96% of the **619 000 malaria deaths** occured in Africa (Several species of the Anopheles spp.

In 2012 a **new invasive vector *Anopheles stephensi*** occured in the **Horn of Africa**, **currently spreading** to several countries in **Central and West Africa**.

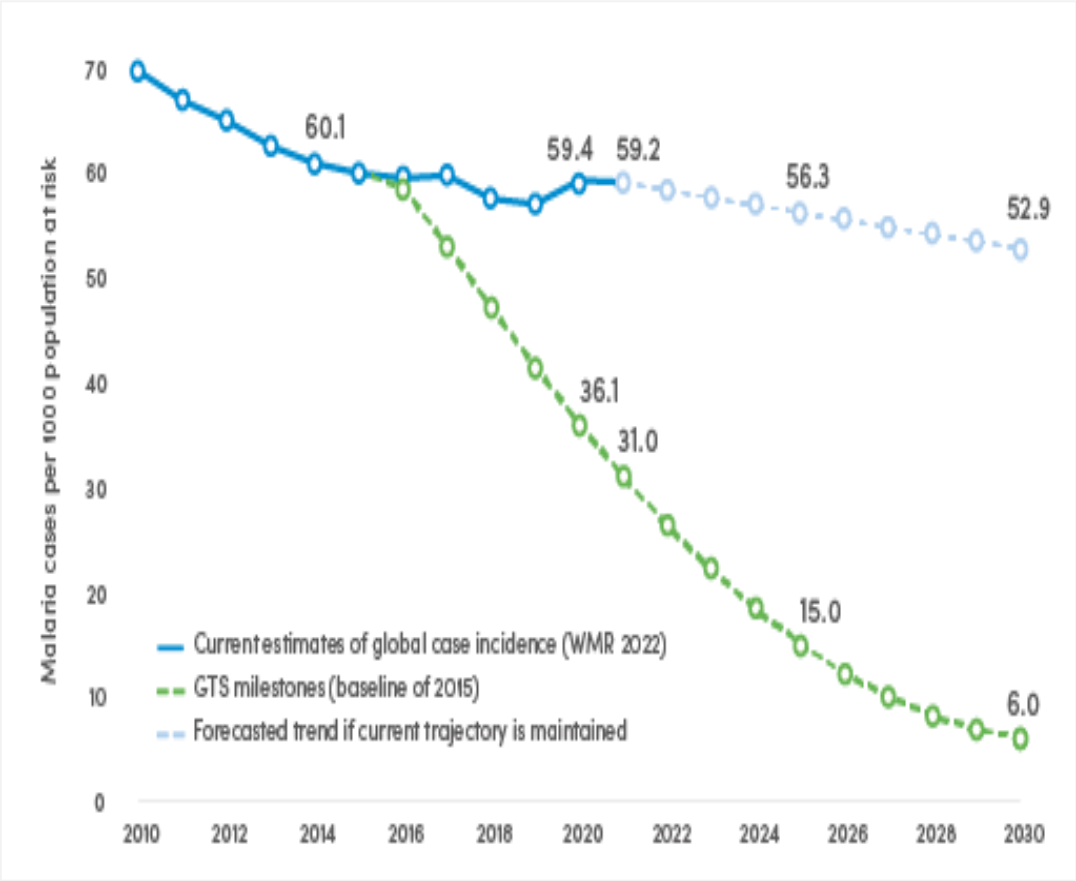
The region also affected by several **outbreaks of vector borne diseases** incl. malaria and arboviruses

Humanitarian crises due to conflicts, famine and flooding related to climate change and other health emergencies in 37 malaria-endemic countries

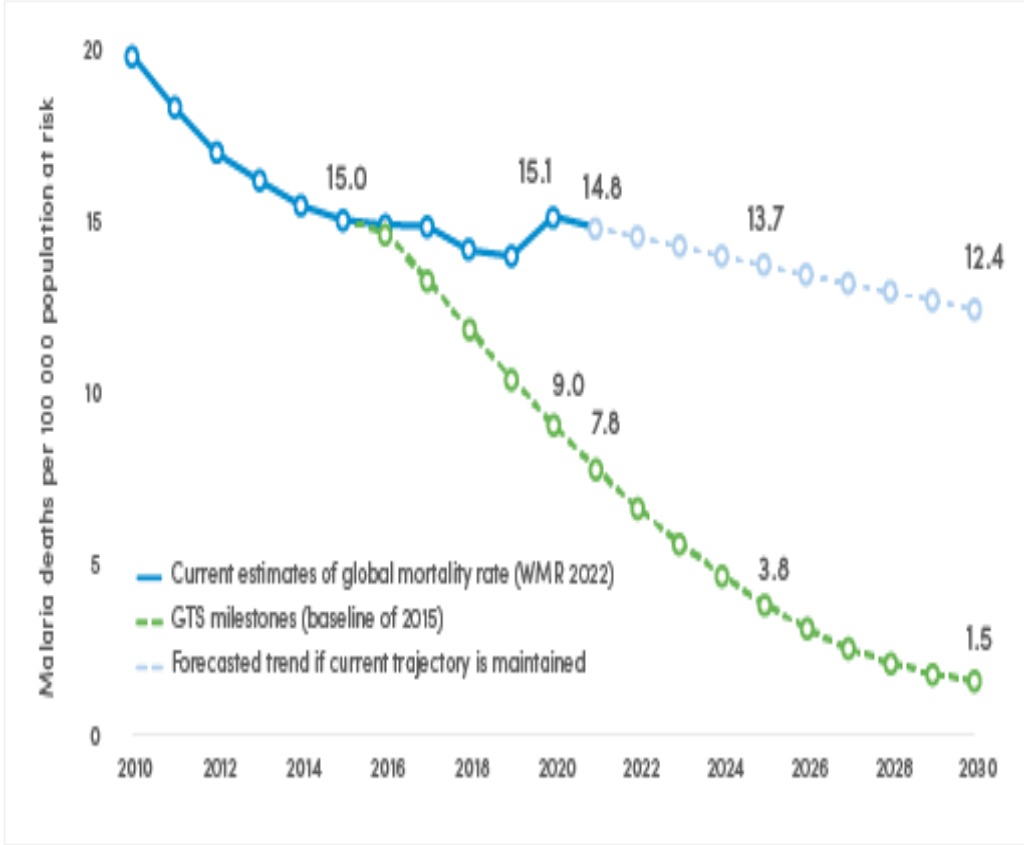
Global trends in malaria burden

The World in general and Africa in particular is off-track towards meeting the targets of the Global technical Strategy for malaria of 2025 and 2030

Malaria incidence



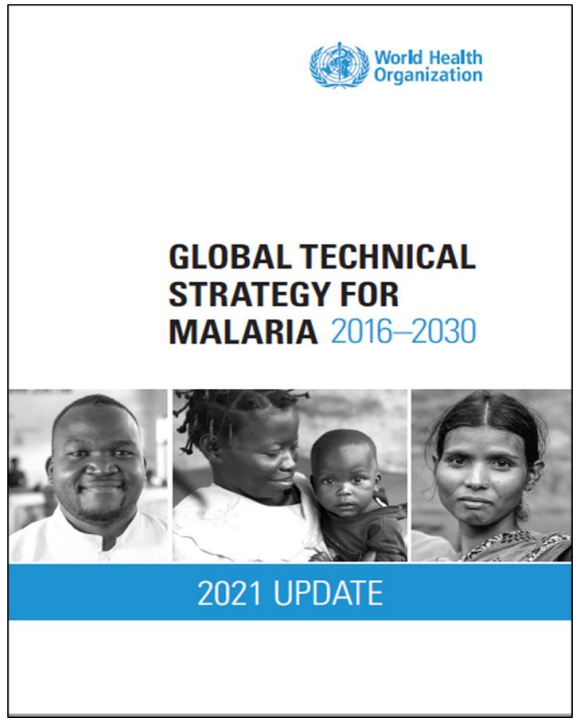
Malaria mortality rate



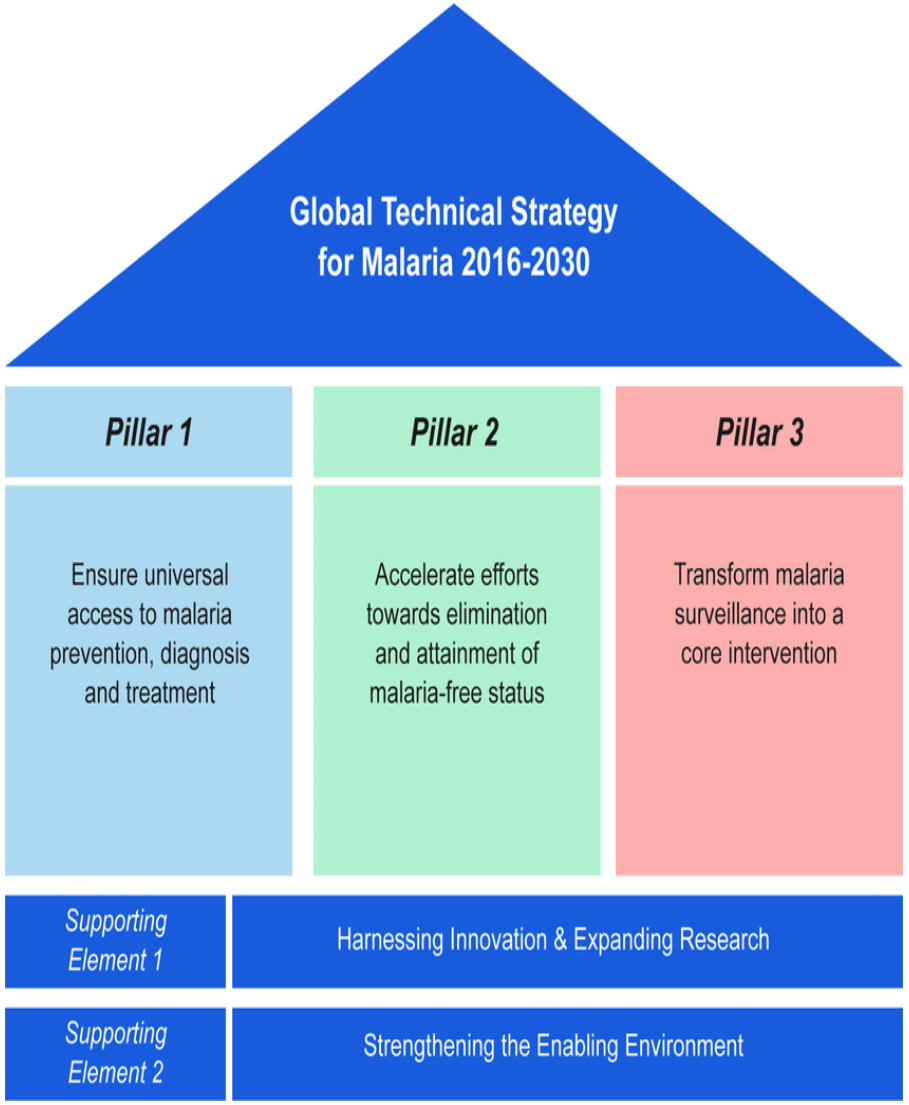
WHO’s Response

- WHO has adopted strategic normative and technical guidance for addressing persistent and emerging diseases incl. malaria and other vector borne diseases
- These are outlined in the:
  - **Global Technical Strategy for malaria 2016 – 2030**
  - **WHO consolidated malaria guidelines**
  - **Global Vector Control Response**
  - **Global arborvirus initiative**

GLOBAL TECHNICAL STRATEGY FOR MALARIA 2016 – 2030



https://www.who.int/docs/default-source/documents/global-technical-strategy-for-malaria-2016-2030.pdf



Prevention

- Insecticide-treated mosquito nets
- Indoor Residual Spraying

Preventive Chemotherapy

- Intermittent Preventive Treatment in pregnancy (IPTp)
- Perennial Malaria Chemoprevention (PMC /IPTi+)
- Seasonal Malaria Chemoprevention
- IPT in School Children
- Post Discharge malaria chemoprevention
- Mass Drug Administration
- Malaria vaccine

Diagnosis & Treatment

- Parasite based diagnosis (Microscopy, RDT)
- Artemisinin-based combination therapies
- Severe Malaria: Artesunate

Service delivery: Health facilities (Pub/private), Community

Surveillance, M & E

- Routine HMIS
- Malaria surveillance and response systems
- Household surveys
- Health Facility Surveys

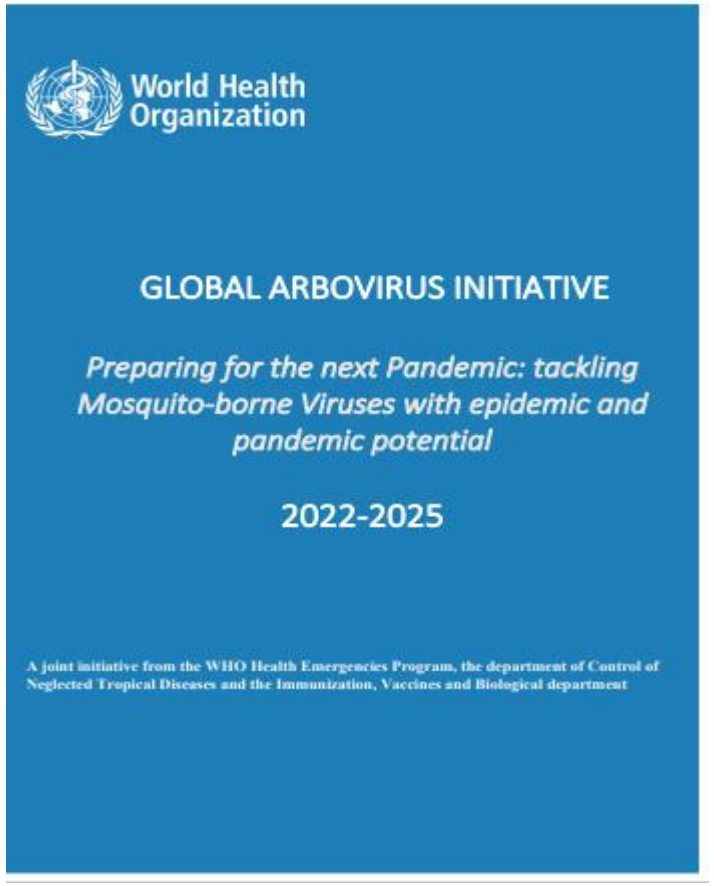
WHO's Response

WHO responds to vector-borne diseases by:

- providing evidence-based guidance for controlling vectors and protecting people against infection;
- providing technical support to countries so that they can effectively manage cases and outbreaks;
- supporting countries to improve their reporting systems and capture the true burden of the disease;
- providing training (capacity building) on clinical management, diagnosis and vector control with support from some of its collaborating centres; and
- supporting the development and evaluation of new tools, technologies and approaches for vector-borne diseases, including vector control and disease management technologies

WHO's Response

1. Development and dissemination of guidance

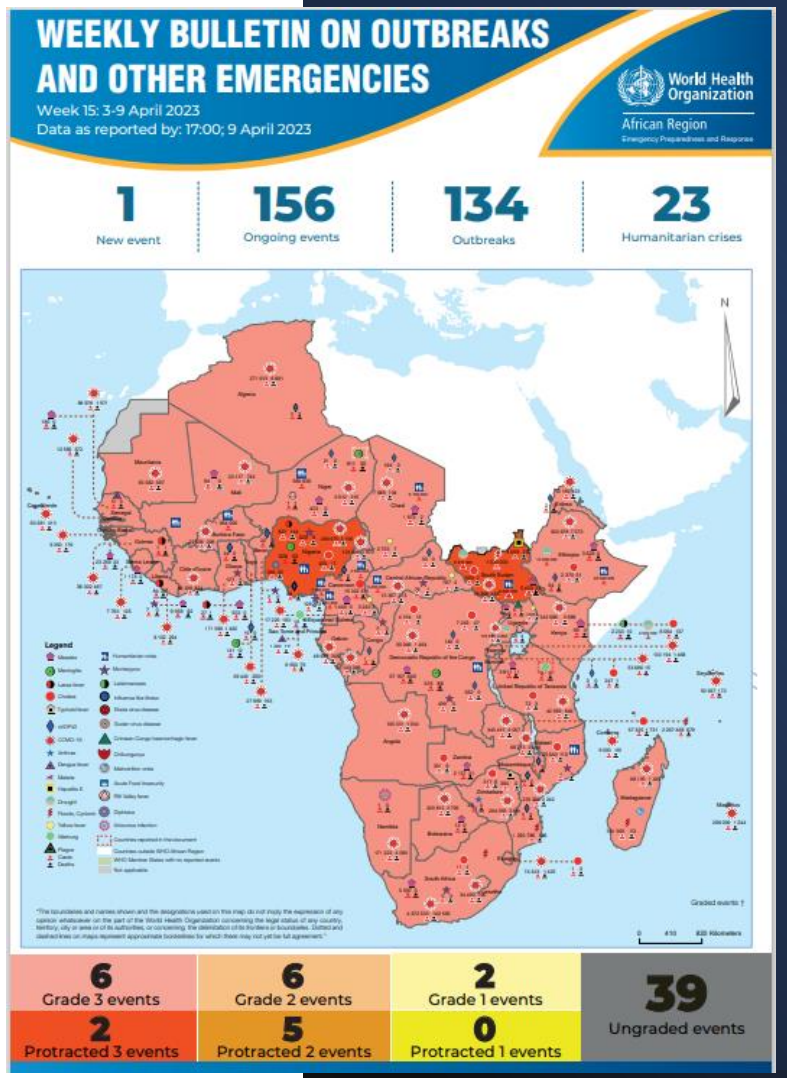


i. Monitor risk and anticipate
ii. Reduce epidemic risk
iii. Strengthen vector control
iv. Prevent and prepare for pandemics
v. Enhance innovation and new approaches
vi. Build a coalition of partners

WHO's Response

Early detection and monitoring

- Daily meetings to monitor to detect new outbreak, risks and monitor on-going ones
- Response to arboviruses and other epidemic-prone diseases has been reactive
- Need for functional VBD control programmes within the one-health approach



PREPAREDNESS AND RESPONSE INTERVENTIONS/ACTIONS

2. Vector control: new generation
Integrated vector control (IVM) strategies targeting multiple diseases, in alignment with the GVCR

IVM is implemented by combining different vector control approaches and alternating insecticides in bed nets and IRS
Additional measures:

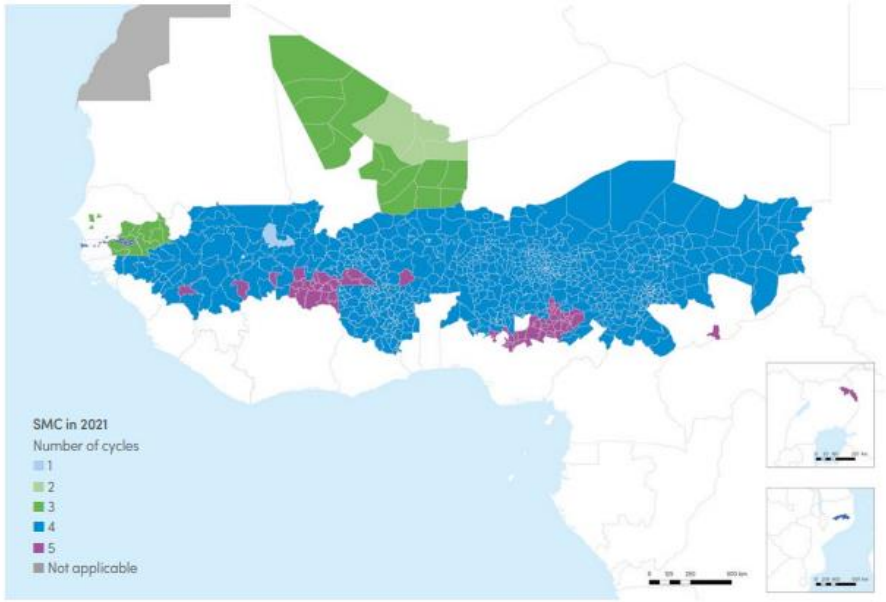
Insecticide treated bednets use in Cameroon (128 million distributed in 2021)

Spraying of long-lasting insecticides in Rwanda

Larval source management in Tanzania

WHO's Response

- **Seasonal Malaria Chemoprevention (SMC)** has been implemented in 15 countries in sub- Saharan Africa
- **Diagnosis and treatment with Artemisinin-based Combination Therapies (ACTs)** – most effective treatment for *P. falciparum* malaria
- **The RTS,S/AS01 malaria vaccine** recommended by WHO in 2021 for children living in regions with moderate-to-high *P. falciparum* malaria transmission
- To date ~2 million children reached with at least 1 vaccine dose in pilot introductions (Ghana, Kenya and Malawi)
- **Millions of malaria cases & deaths averted thro' interventions**
  - **~**185 million cases and 997 000 deaths averted
  - 82.1% of cases averted (2000-2021) in the African region
  - 94.9% of deaths averted (2000-2021) in the African region
- A 2nd vaccine (R21/MM) approved in September 2023 will increase supply to ensure protection of all children at risk



LSHTM: London School of Hygiene & Tropical Medicine; SMC: seasonal malaria chemoprevention.
Note: In one district in Mali where 4 cycles were planned, only 1 cycle was implemented, and in four districts where 3 cycles were planned, 2 cycles were implemented due to delays in receiving financial support.

Going forward…

Proposed future actions:

- ✓ **Strengthen country capacities** for improving disease surveillance, vector control and epidemic response in the African Region
- ✓ Put in place **intra- and intersectoral platforms for coordination** of vector borne disease control programmes and routine surveillance data to inform interventions at national level
- ✓ **Promote innovation and operational research**: as exemplified by Cameroun, Mozambique, and Nigeria. In West Africa resistance detected in *Ae. aegypti* and *Ae. albopictus* to insecticides of Public health use, particularly DDT, pyrethroids and carbamates, and emerging resistance to organophosphates in *Ae. aegypti.*
- ✓ **Monitor policy adjustments** based on the status of the invasive vector *Anopheles stephensi* in the Horn of Africa and the policy implications of further spread in the region.
- ✓ Work with institutions to conduct **serological mapping** of prevalence of arboviruses in Africa.
- ✓ **Enforce** International Health Regulation policies

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OBRIGADA

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