

SAGE MEETING

18-20 OCTOBER 2016

Yellow Fever - Session 11

Part 1: Long term Yellow Fever strategy

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Epidemiology and risk of yellow fever in current context

**Oyewale Tomori,
Redeemer's University, Ede, Nigeria**

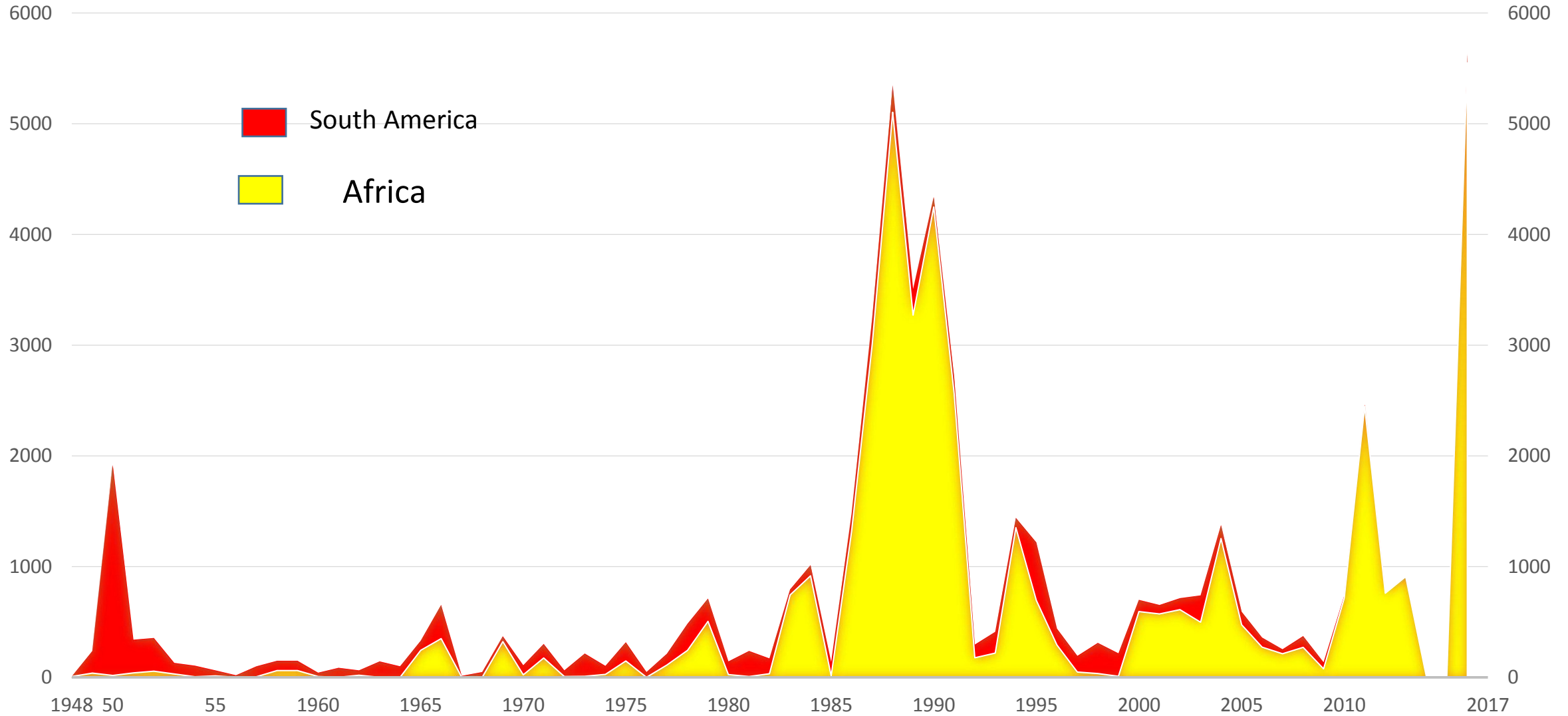
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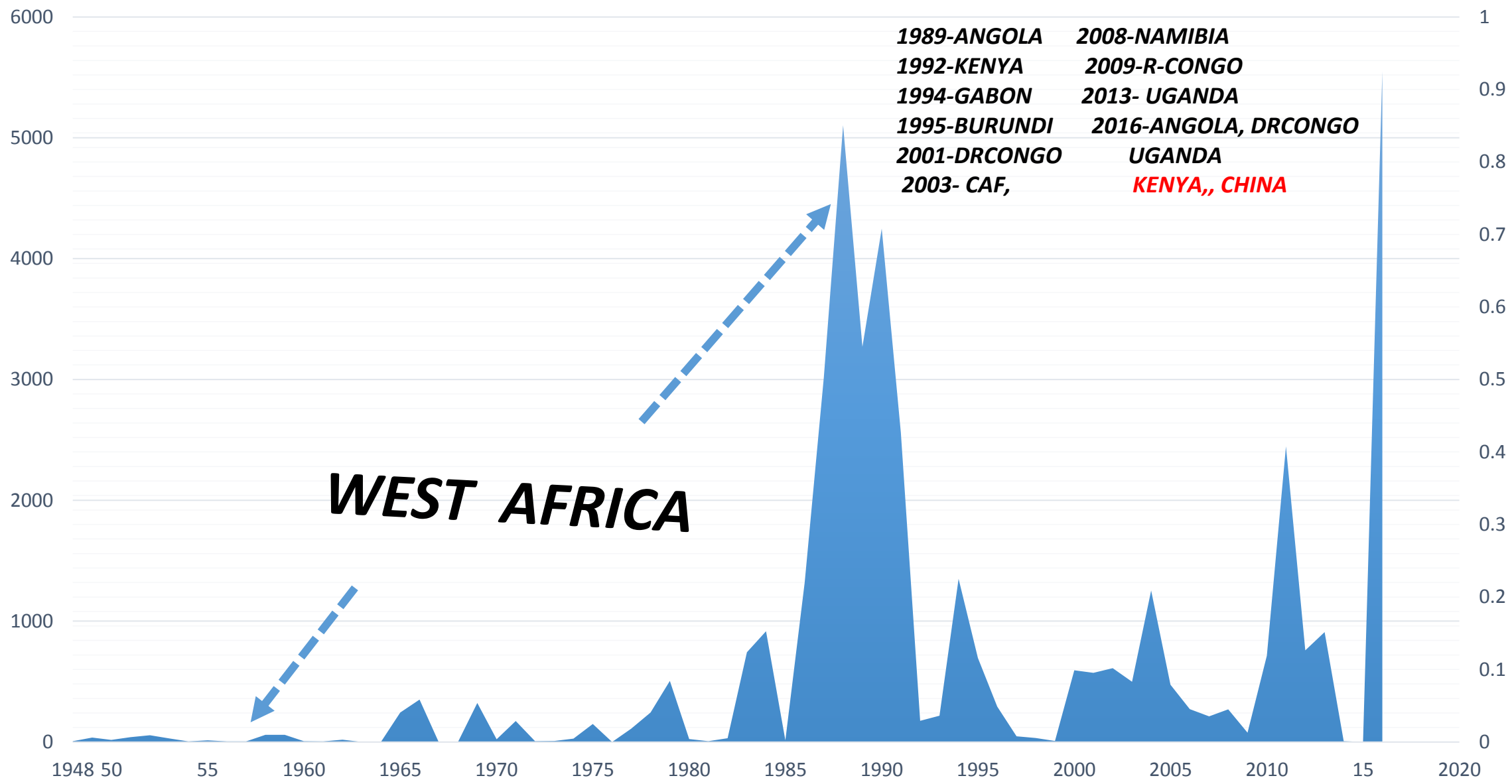
The presentation will consider:

- **Recent changes in the epidemiology of yellow fever**
- **Major lessons learned from past control programmes**
- **The need for a strengthened and scaled up YF control strategy**
- **Challenges and opportunities of the EYE strategy**

~ 70 years of reporting Yellow Fever to WHO

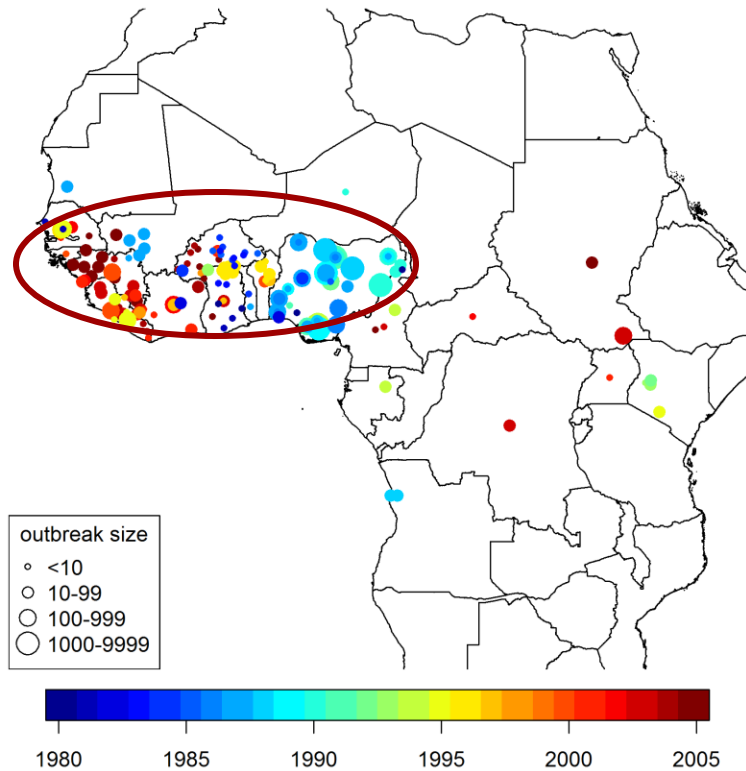


THE RELENTLESS MARCH OF Yellow fever THROUGH AFRICA

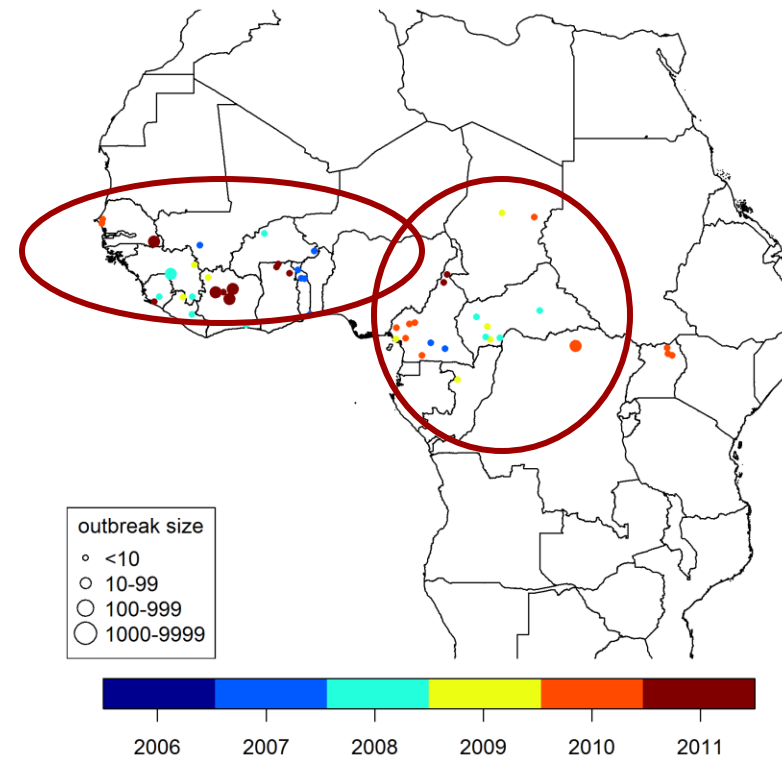


Outbreaks and suspected cases of YF in Africa

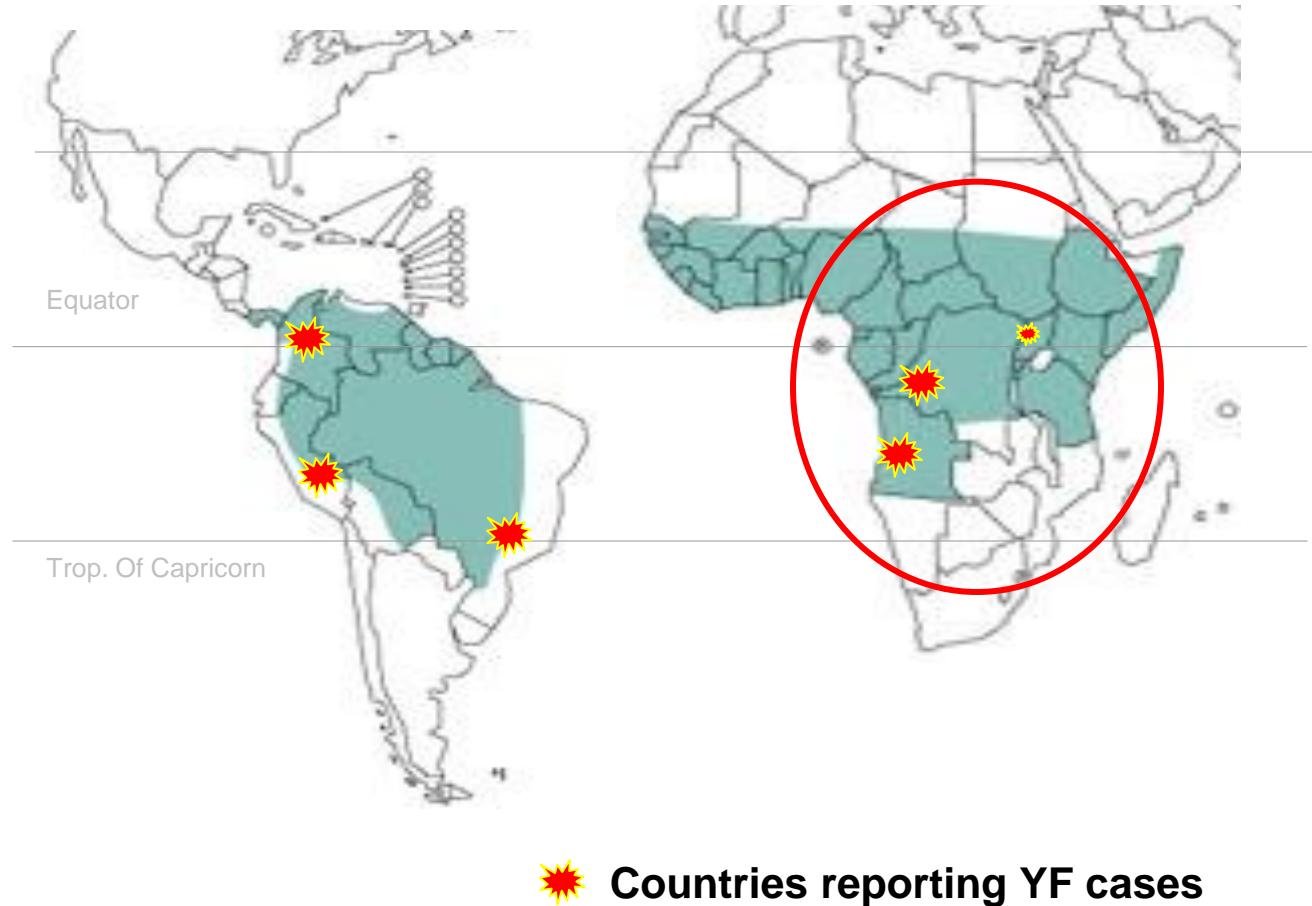
Before 2006



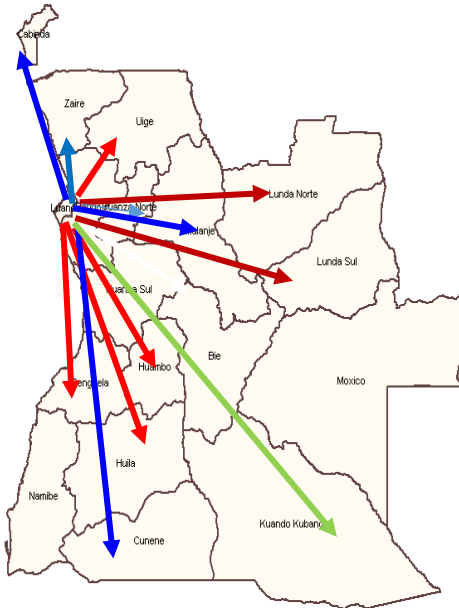
After 2006



YF outbreaks in 2016



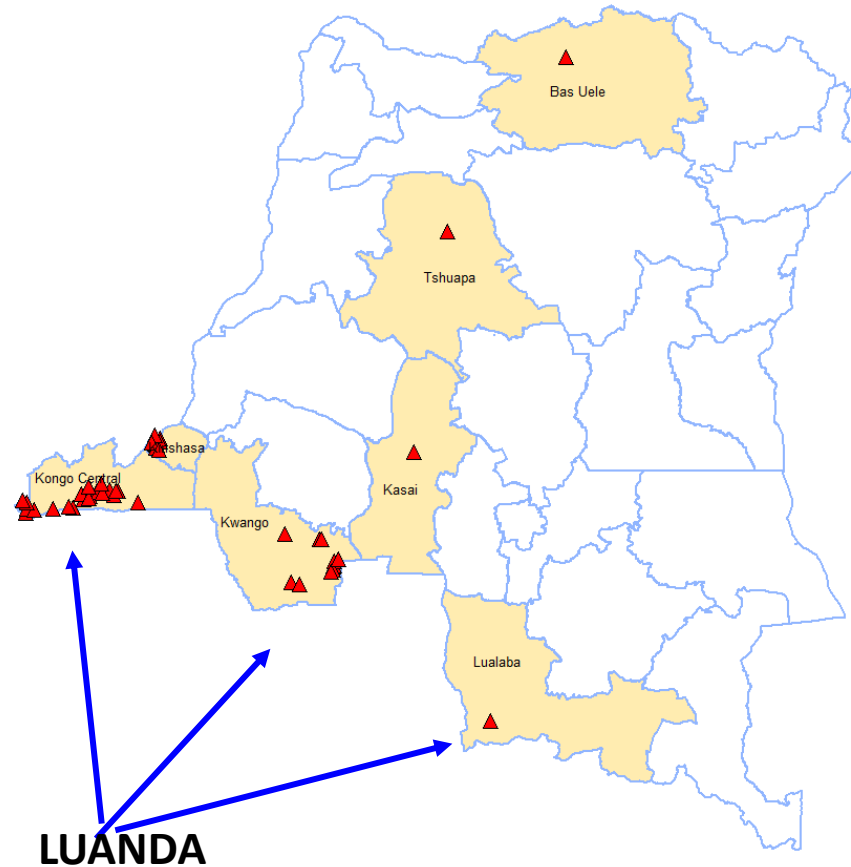
SPREAD OF YELLOW FEVER CASES FROM ANGOLA



NATIONAL

As of Sep.29 2016

- 4188 suspected cases /373 deaths in 16 of 18 provinces
- 17M people vaccinated in ANG & DRC
- 7M vaccinated with fraction dose of YF vaccine



LUANDA

INTERNATIONAL

DR Congo- as of 5 Oct 2016

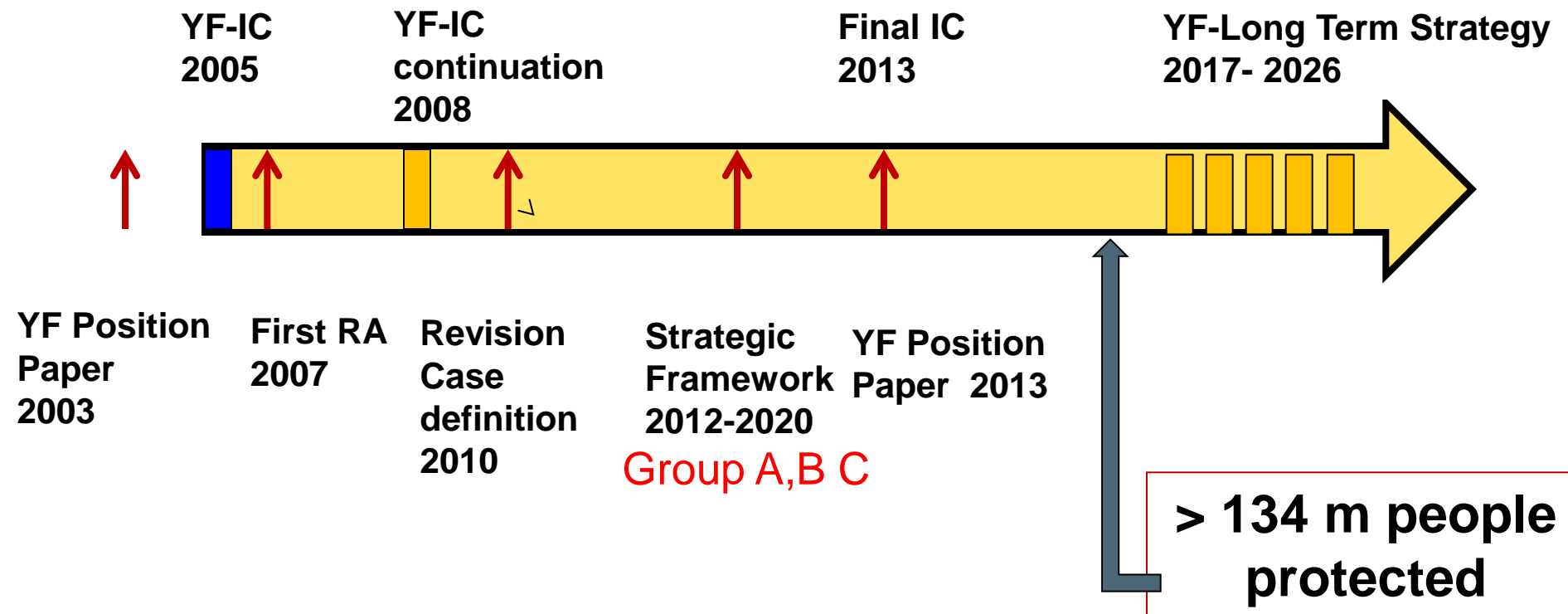
- 2870 suspected cases in 26 provinces
- 2473 samples lab tested, 76 confirmed/16 deaths
- Of 57 confirmed cases, 13 autochthonous
- Also cases exported to Mauritania (1) & Kenya (2)



INTER-CONTINENTAL

China 11

Yellow Fever Initiative (YFI) and GAVI support



Achievement of the 2005 Initiative - 1

- 90 million people vaccinated
- No YF epidemics in WA since 2006

YF Preventive Campaign

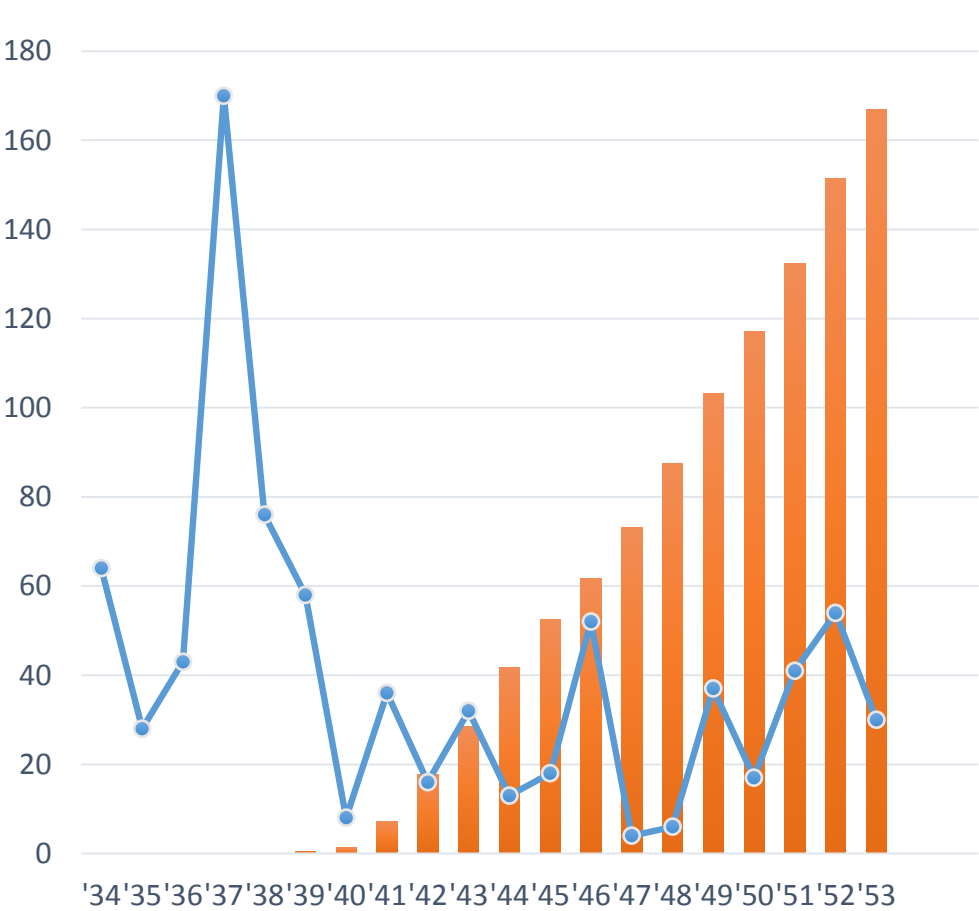


		Vaccinated (in million)	Coverage (%)
Burkina Faso	2006	7.6	100*
Mali	2006	5.9	83
Togo	2007	3.6	98
Senegal	2007	3.1	99
Cameroon	2009/2014	7.5	99
Benin	2009	6.3	99
Liberia	2009	2.9	99
Sierra Leone	2009	4.1	96
Guinea	2010	6.0	89
Côte d'Ivoire	2011-12	15.4	84
Ghana	2011-12	7.6	88
CAR	2010-11	2.7	90
Nigeria	2013	9.0**	76
Sudan	2014, 2015	4.0**	NA, 92.8

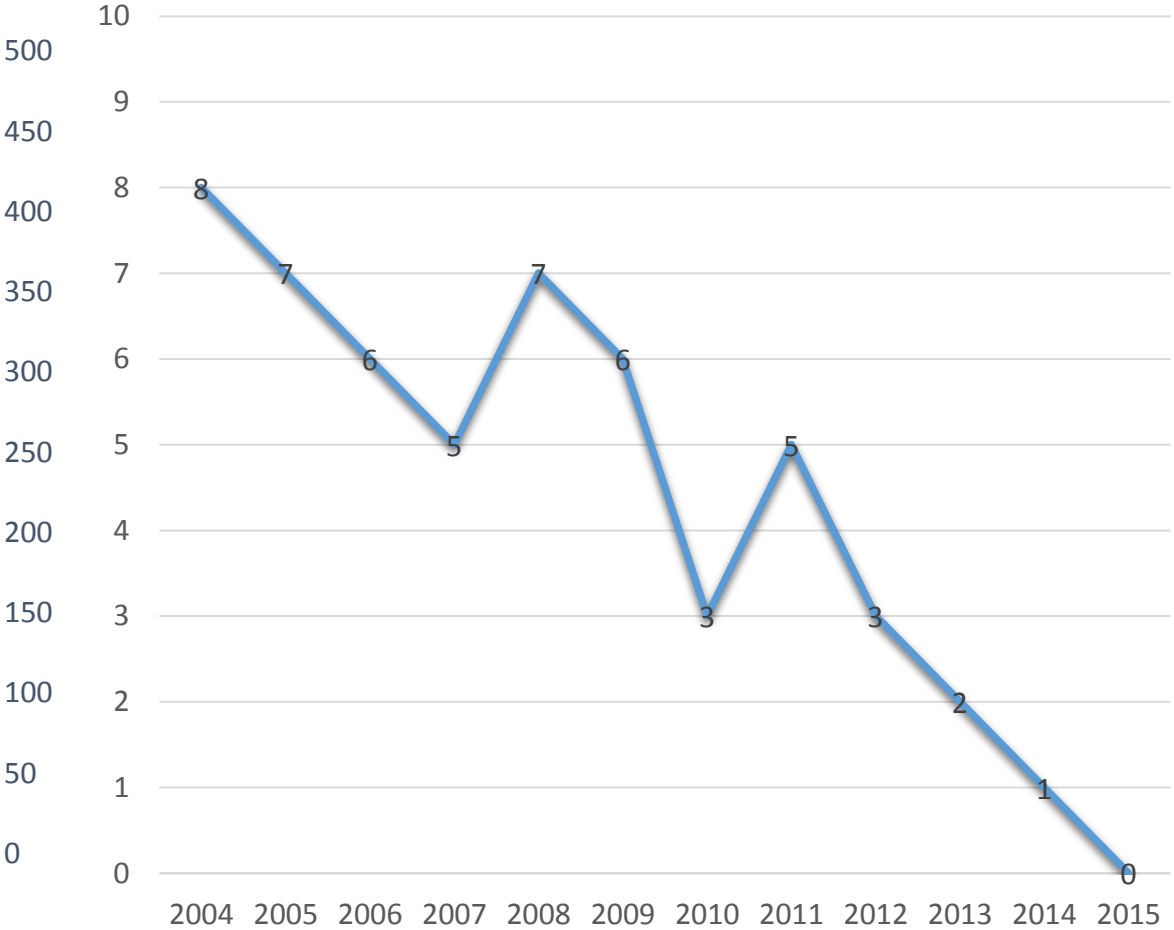
- * *Administrative coverage*
- ** *Partial, not entire country*

Control of Yellow Fever in West Africa

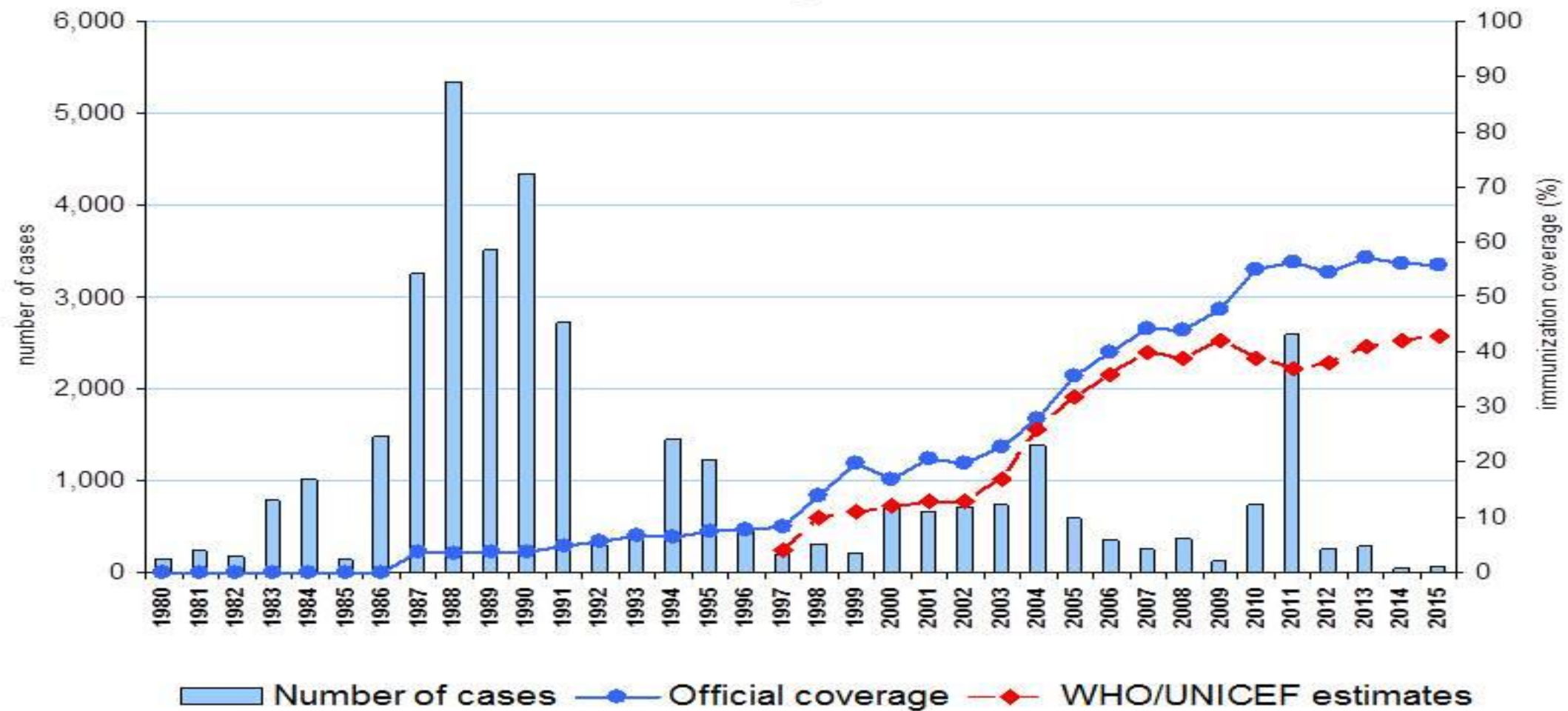
VACCINATIONS WITH FNV
& REPORTED YF CASES: 1934- 1953



GAVI THREE PRONG STRATEGY
& REPORTED YF OUTBREAKS: 2004-2015



Yellow fever global annual reported cases and YFV coverage, 1980-2015



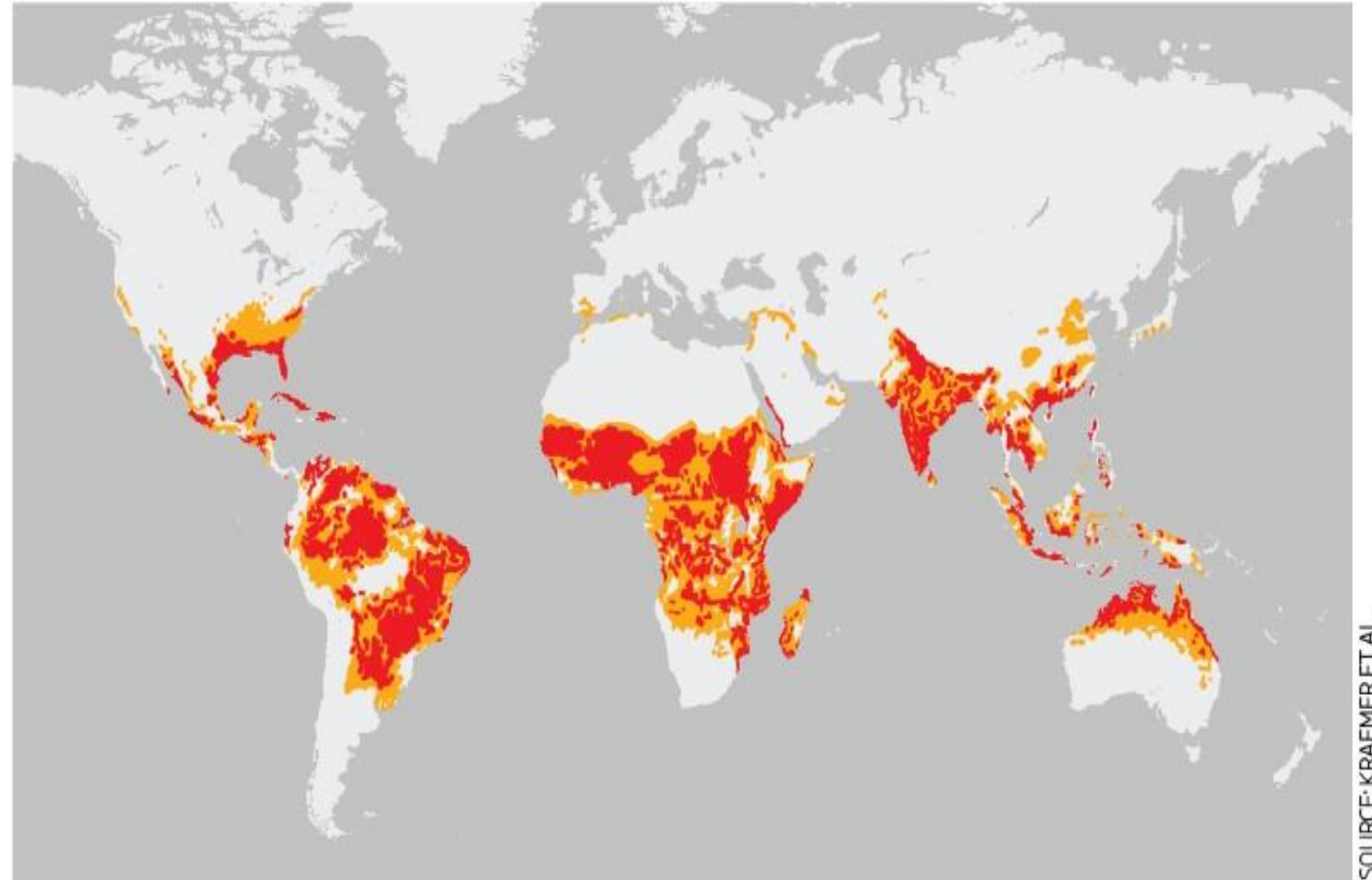
What is the risk of urban epidemics of yellow fever today?

Risk Factors

- *Aedes aegypti* and *Ae. albopictus* have global distribution
- At risk YF susceptible population exceeds 2.5 billion people
- Vector control has been unable to prevent epidemic dengue, chikungunya and Zika
- Mass preventive campaigns with high RI coverage?

Prime locations

Many areas (**orange**) worldwide already have the right conditions for the yellow fever mosquito, which is currently found in the **red** regions



EYE Goal:

To eliminate the risk of YF epidemics globally by 2026

Protect at-risk populations

Prevent international spread

Rapidly contain outbreaks

Strategic Objective 1: Protect at-risk populations

Where risk is high, vaccinate everyone	<ul style="list-style-type: none">475 mio vaccine doses for national preventive mass vaccination campaigns in 13 countries
Vaccinate every child; find and vaccinate everyone who has been missed	<ul style="list-style-type: none">55 mio vaccine doses annually for routine immunisation in 26 countriesCatch-up campaigns where indicated
Strengthen surveillance and build laboratory capacity	<ul style="list-style-type: none">Cost and work plan to be defined
Monitor immunity	<ul style="list-style-type: none">Cost and work plan to be defined

Strategic Objective 2: Prevent international spread

Protect high-risk workers	<ul style="list-style-type: none">Cost and work plan to be defined
Apply the International Health Regulations	<ul style="list-style-type: none">Cost and work plan to be defined
Build resilient urban centres	<ul style="list-style-type: none">Cost and work plan to be defined

Strategic Objective 3: Contain outbreaks rapidly

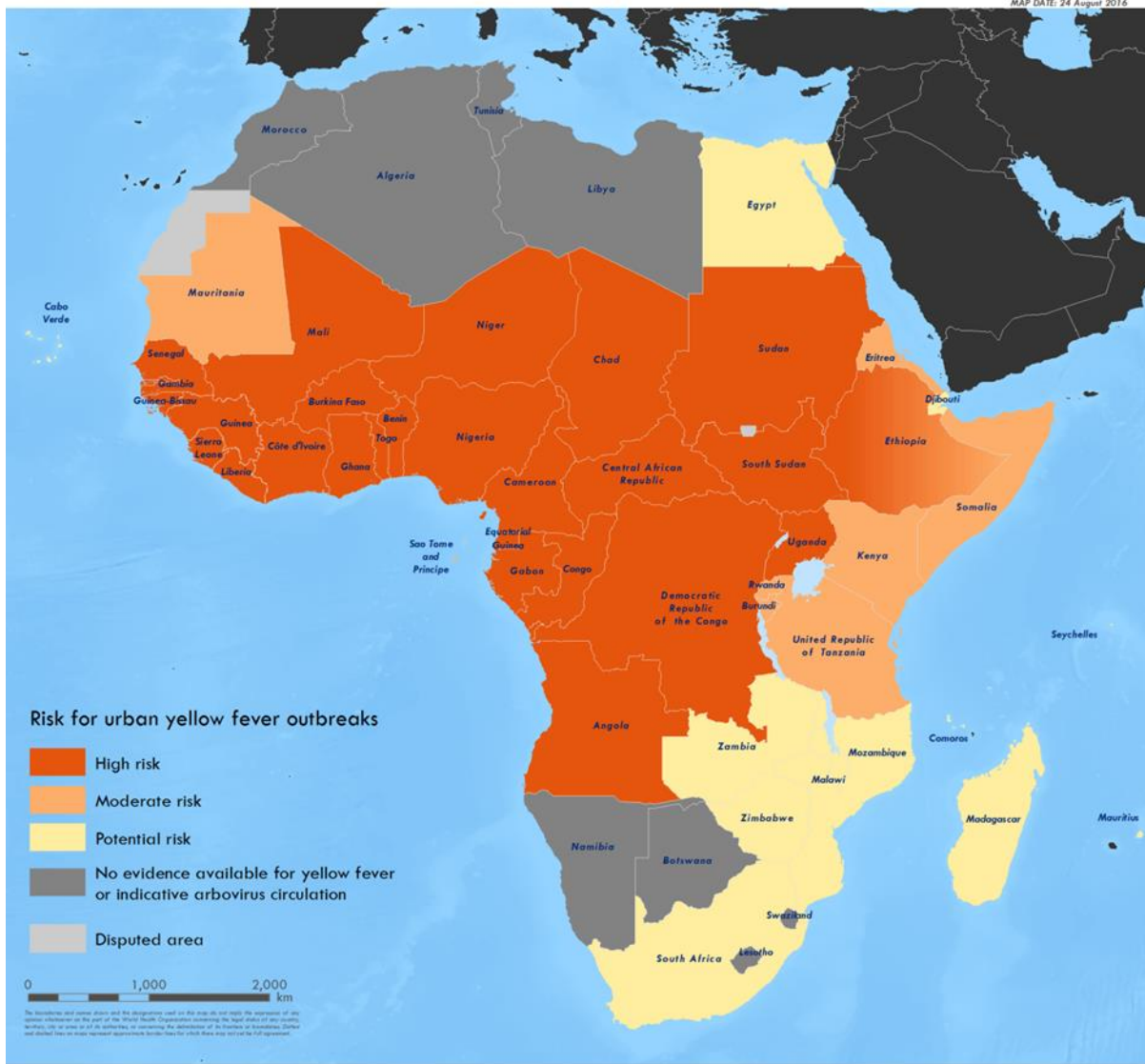
Ensure emergency stockpile vaccines always readily available	<ul style="list-style-type: none">maintain 6 mio vaccine doses for emergency stockpile
Prepare for rapid response	<ul style="list-style-type: none">Cost and work plan to be defined

Risk for urban yellow fever outbreaks, by country, Africa 2016



World Health Organization

MAP DATE: 24 August 2016

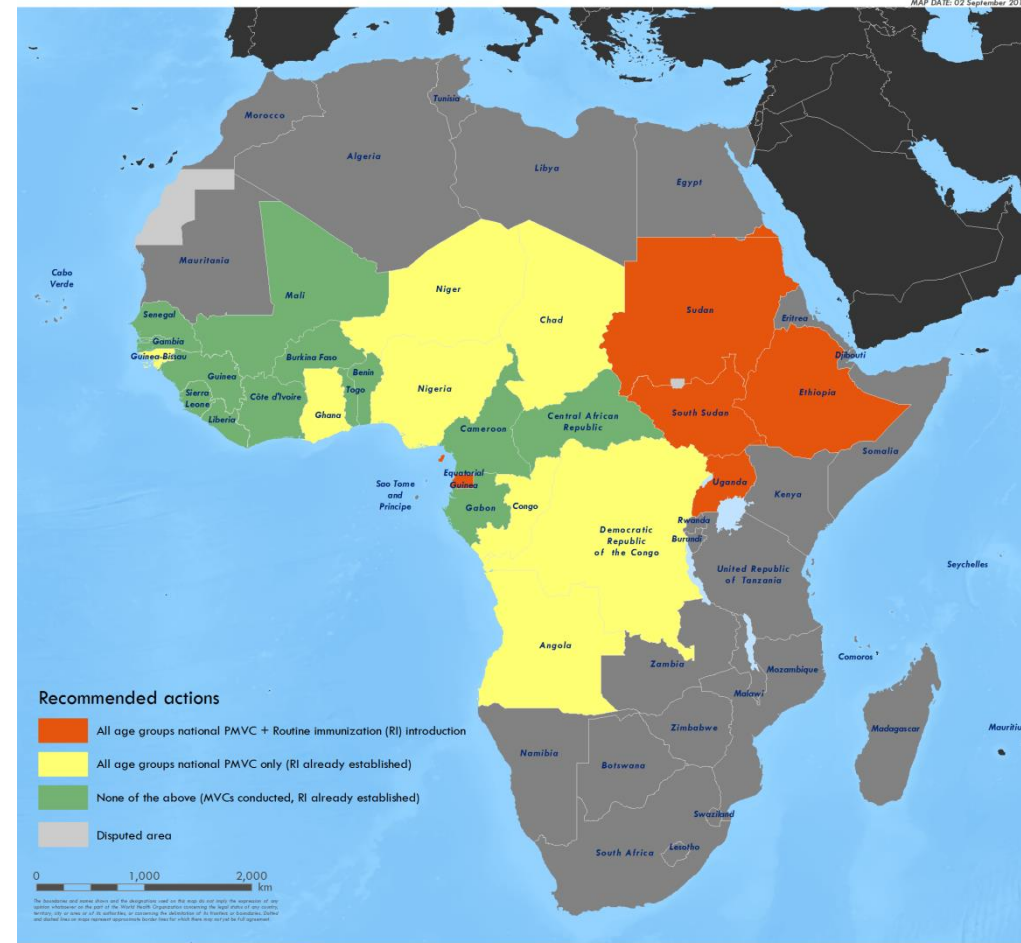


Recommended actions for yellow fever risk countries, Africa 2017 - 2026



World Health Organization

MAP DATE: 02 September 2016



Five Keys to the success of EYE

1. Political commitment for sustainable national /regional YF control strategies

Essential for leadership in YF at-risk countries to committing to preventing epidemics and embracing the need to providing expertise and resources to work with EYE.

2. Governance and partnerships

Coordination of the implementation of EYE activities with continuous monitoring and evaluation of implementation is essential for success.

Five Keys to the success of EYE

3. Accessible, affordable vaccines in sustained vaccine market

YF risk changes rare potentials for increasing YF vaccine- demand and supply must be aligned for timely and effective risk reduction strategy.

4. Sustainable, efficient disease surveillance/lab. diagnosis

The rapid detection of and efficient response to outbreaks are essential for sustainable YF control

5. Accelerated research and development for new tools and better practices

Research partnerships with all stakeholders essential for identifying needs for and development of effective tools for YF control

Yellow Fever Partnership

Collaboration

- **Ministries of Health**

- **WHO:**
coordination and technical support



- **UNICEF:**
technical support and vaccine and supply procurement



- **GOARN (AMP, CDC, PATH, Institut Pasteur etc.)**
implementation, training



- **ICG (WHO, UNICEF, MSF, IFRC)**

- **GAVI, ECHO, CERF**
financial support

