

Progress and challenges in meningitis prevention in the African meningitis belt

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MenAfriVac is a major success story...

should we still be concerned about meningitis in the
belt?

Meningitis epidemics in meningitis belt 2016-17

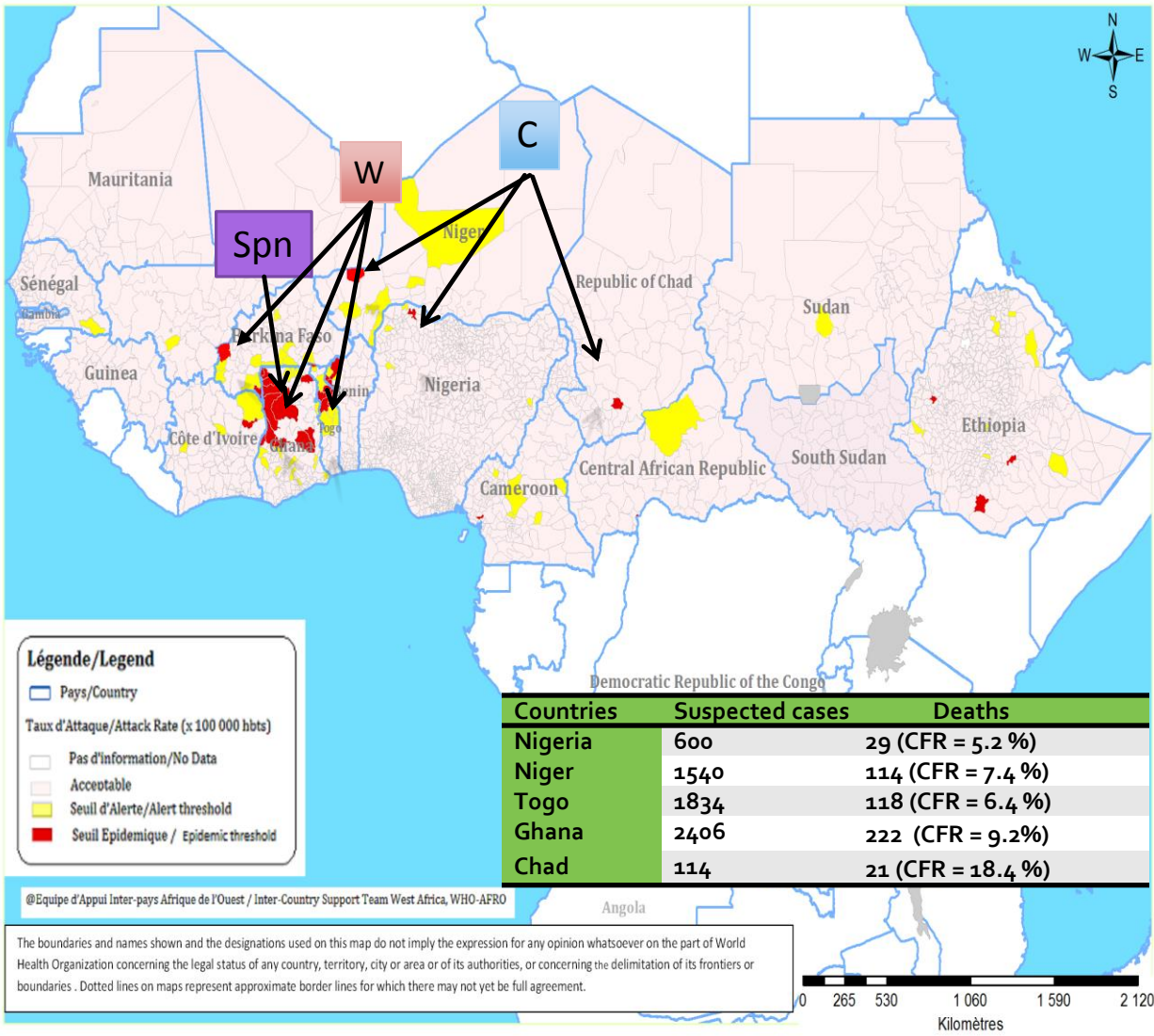


Figure A : Meningitis epidemic season 2016 w 1-26

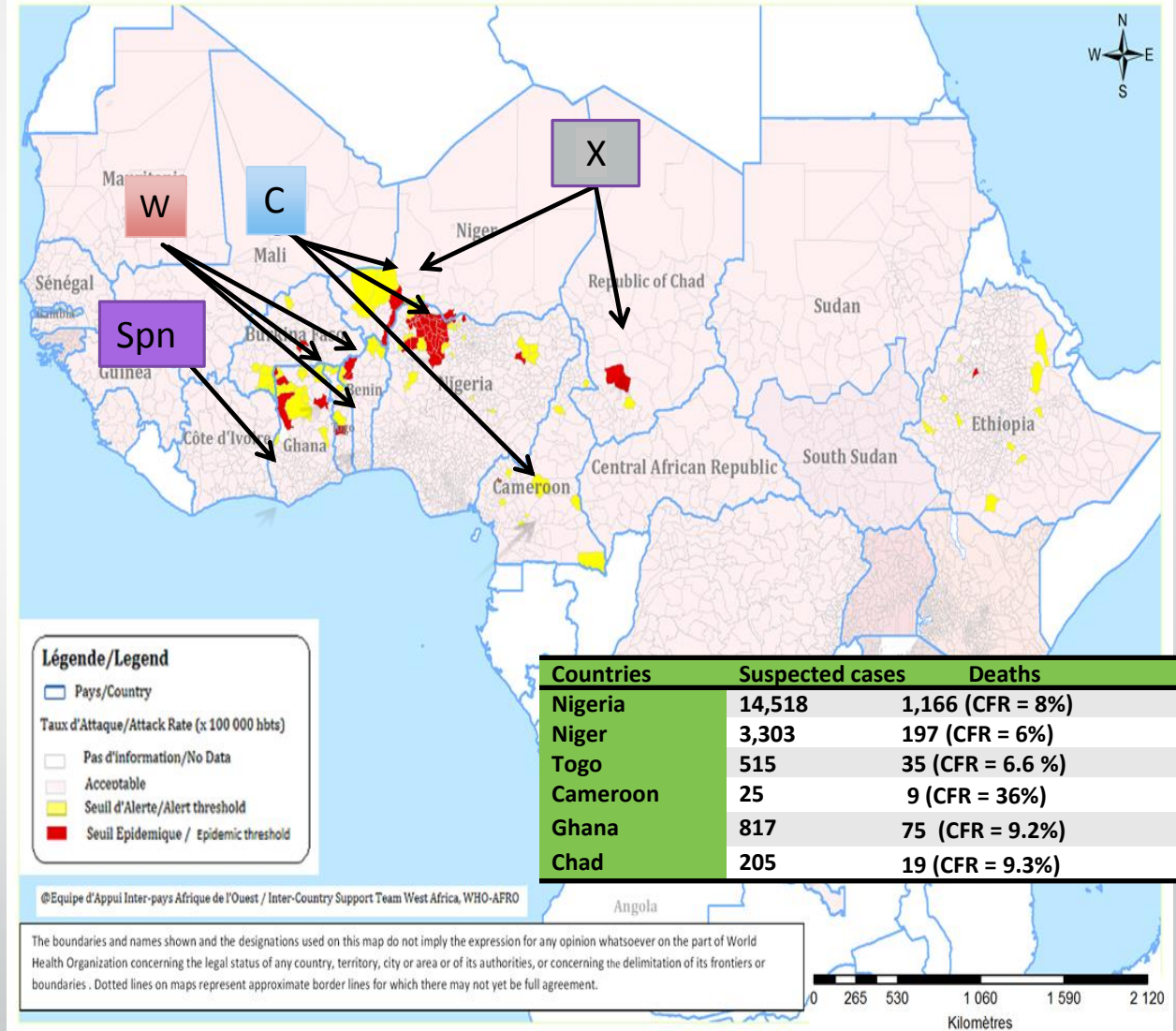
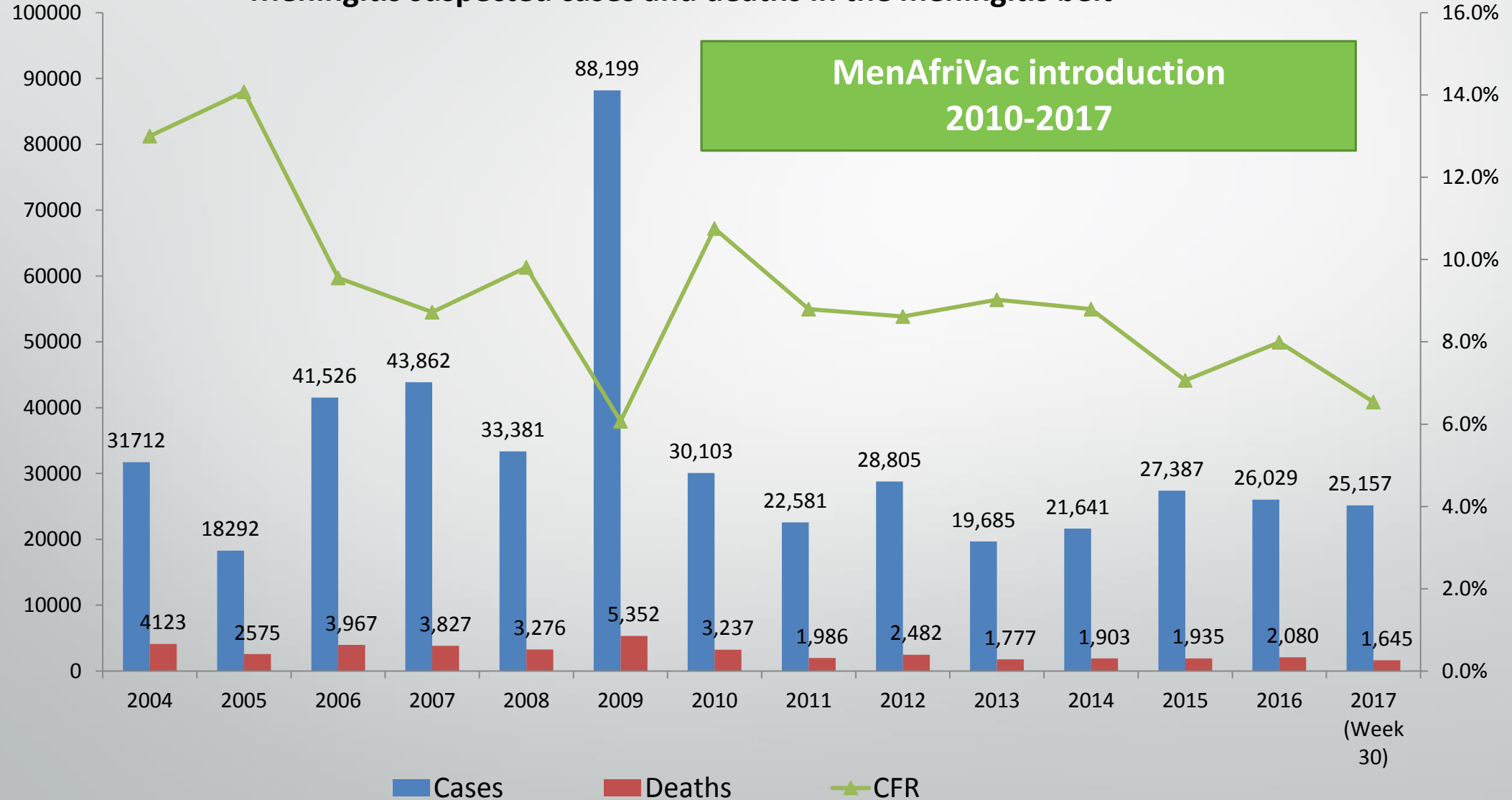


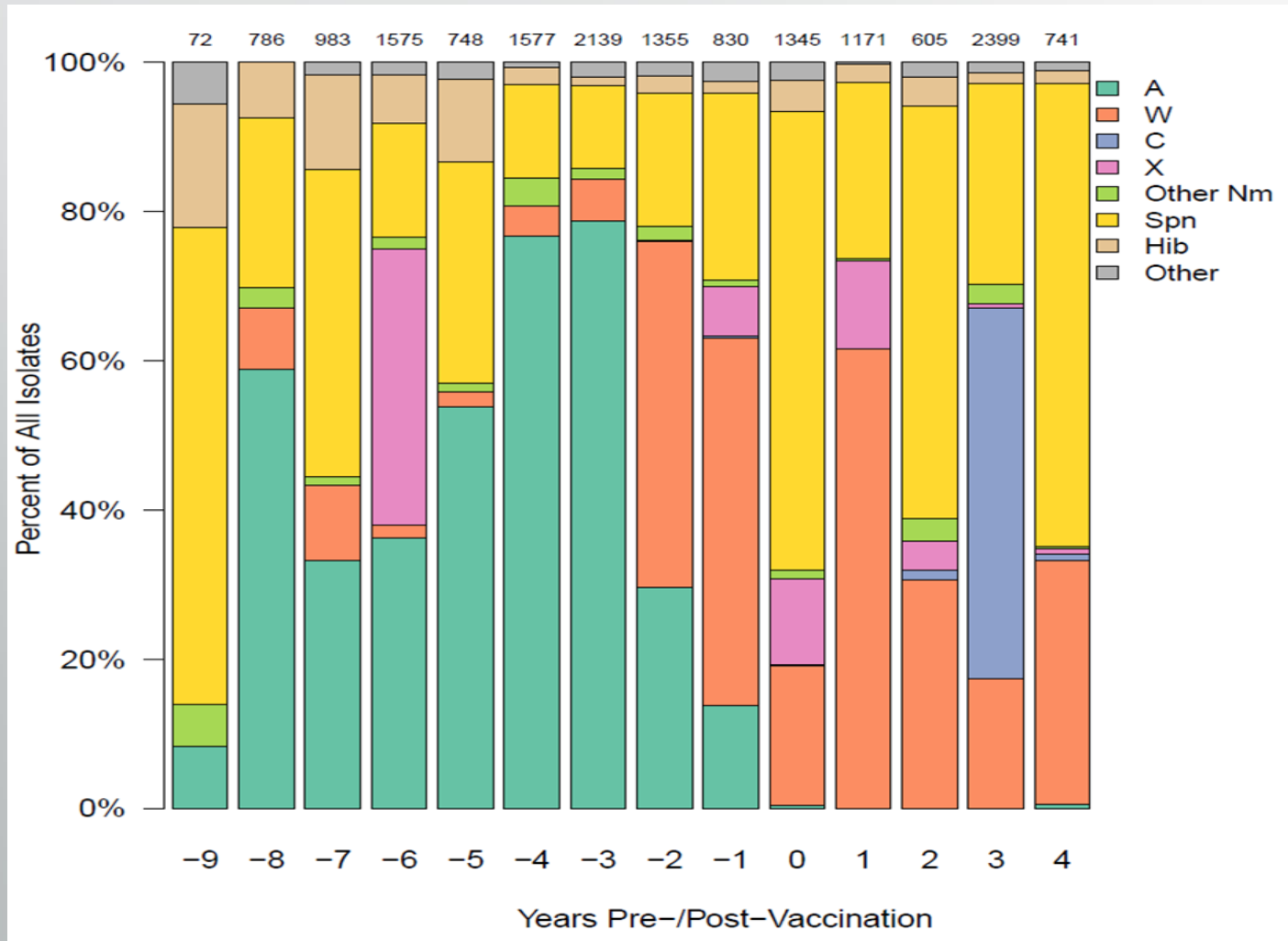
Figure B : Meningitis epidemic season 2017 w 1-26

Meningitis burden 2004-2017

Meningitis suspected cases and deaths in the meningitis belt



MenAfriVac impact across the meningitis belt



>99% decline in NmA

2x increase in other Nm
(IRR=2.0, 95%CI 0.92, 4.38)

Important overall benefit

58% decline in meningitis

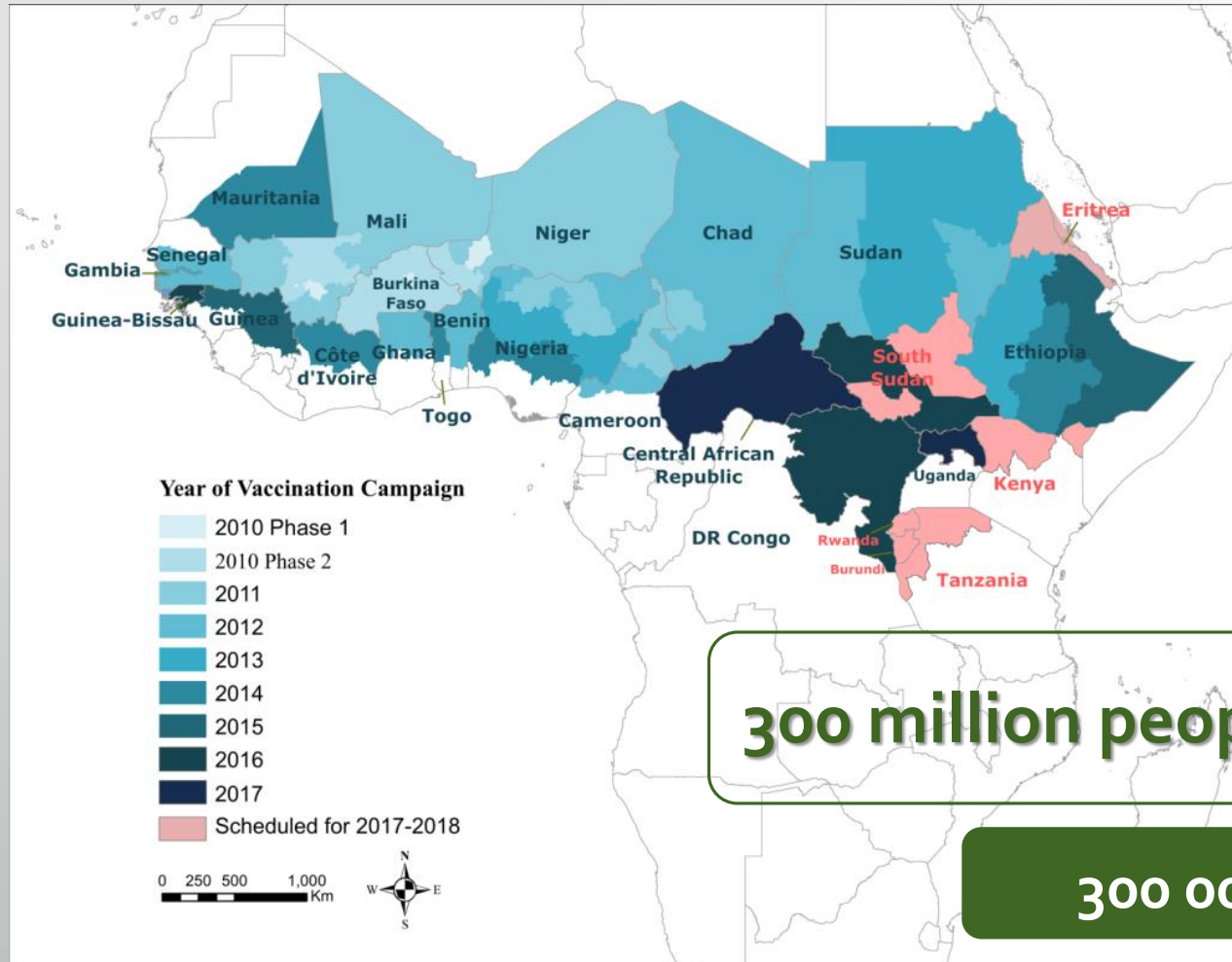
60% decline in risk of epidemics

Trotter et al Lancet Inf Dis 2017;17;867-72

Analysis of surveillance data from 9 countries 2005-15:
Benin, Burkina Faso, Chad, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Togo

MenAfriVac achievements

Mass campaigns 2010–2017

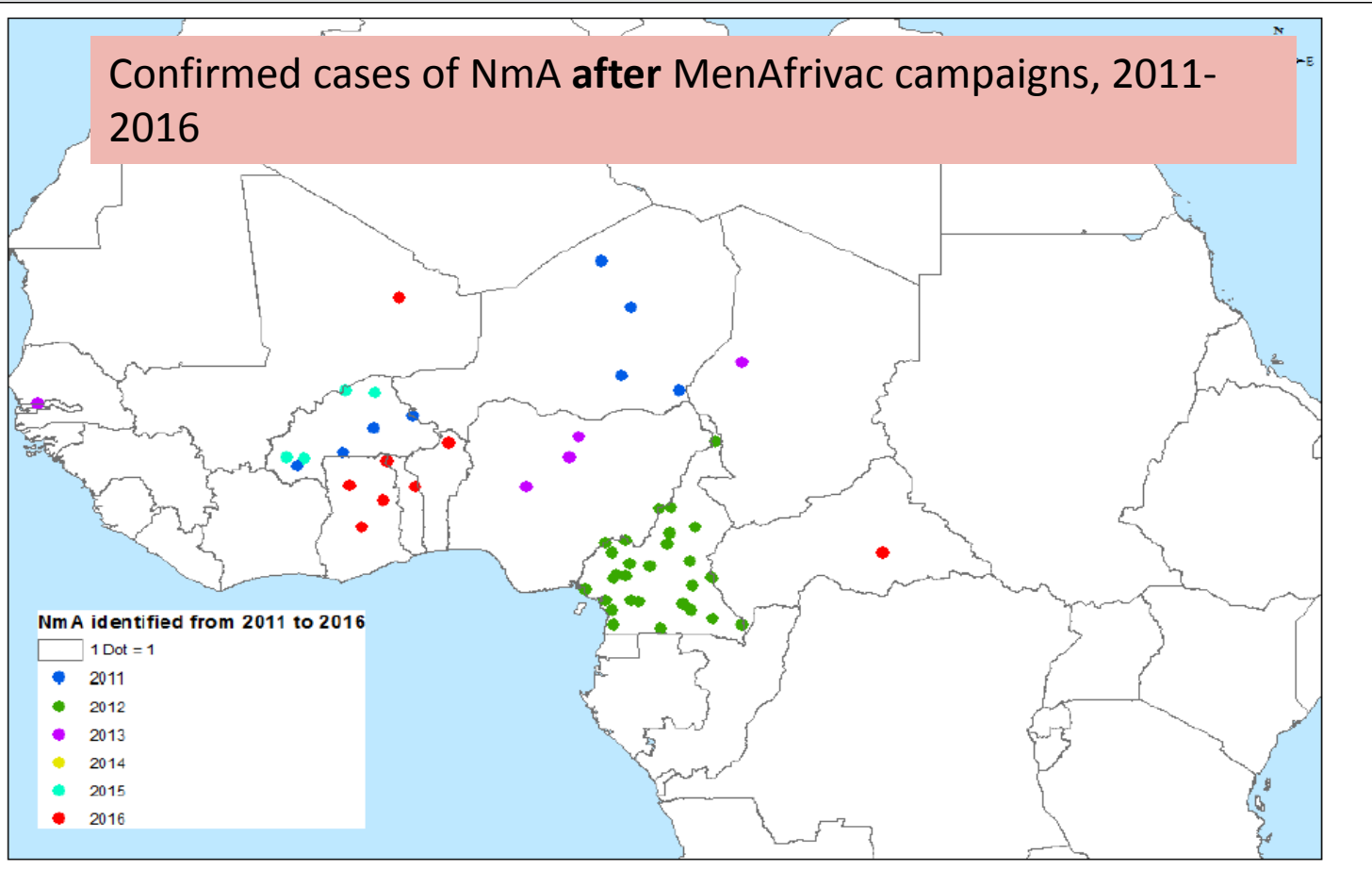


300 million people vaccinated

300 000 cases averted

30 000 deaths averted

NmA is still in circulation



NmA detected:

-2015: in 3 countries

-2016: in 5 countries

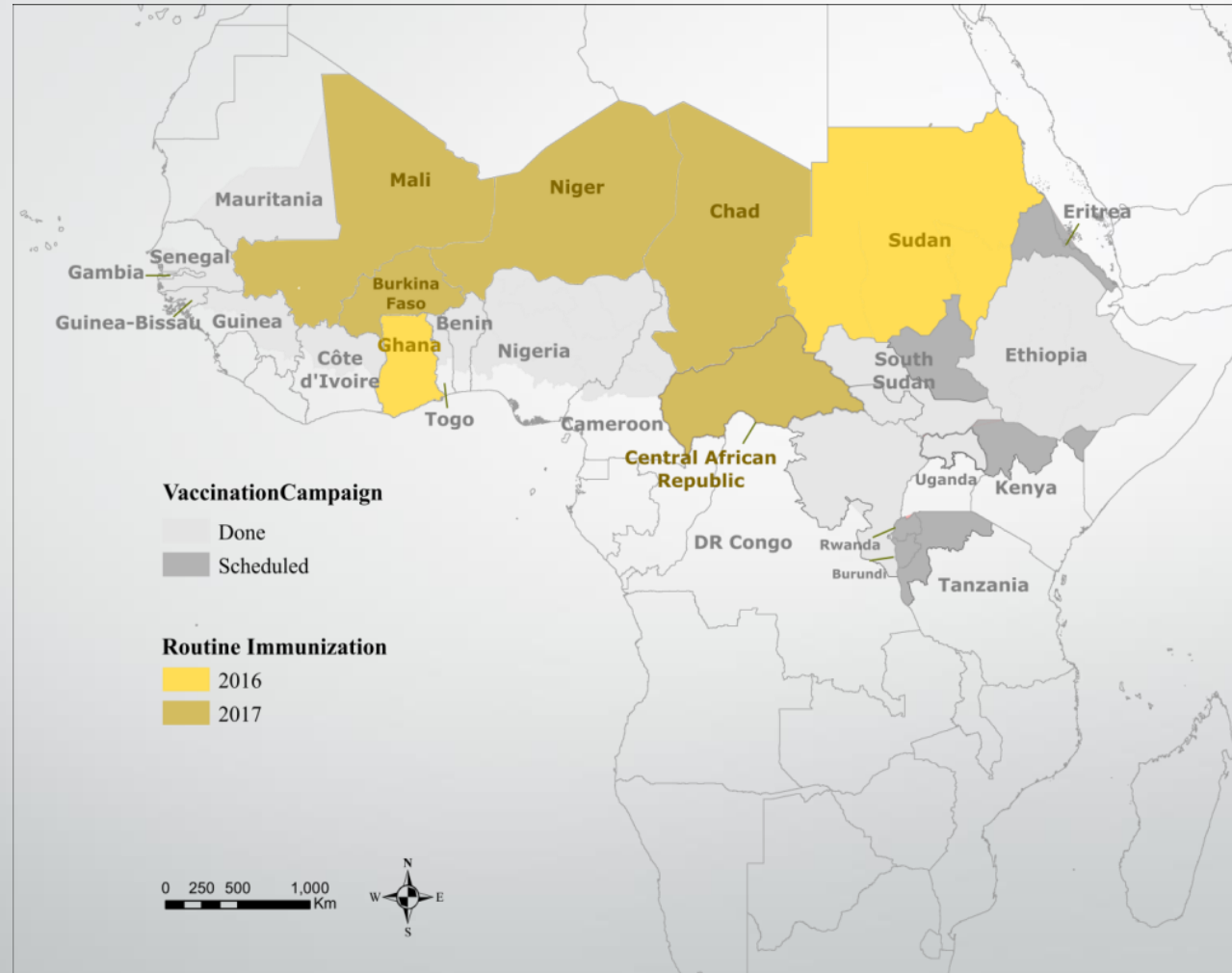
-2017: in 2 countries (Guinea, Nigeria)

Only one documented case of vaccine failure (NmA in a vaccinated case) in Burkina Faso

Introduction into routine is a priority

MenAfriVac

Routine immunization 2016–2017



Meningitis epidemics in the African meningitis Belt in 2015 - 2017

2015: first large-scale Nm C outbreak

Niger and Nigeria: 11 000 cases

2016: Nm C, W and Spn outbreaks

Niger and Nigeria Nm C: 2400 cases

Ghana Nm W, Spn: 2406 cases

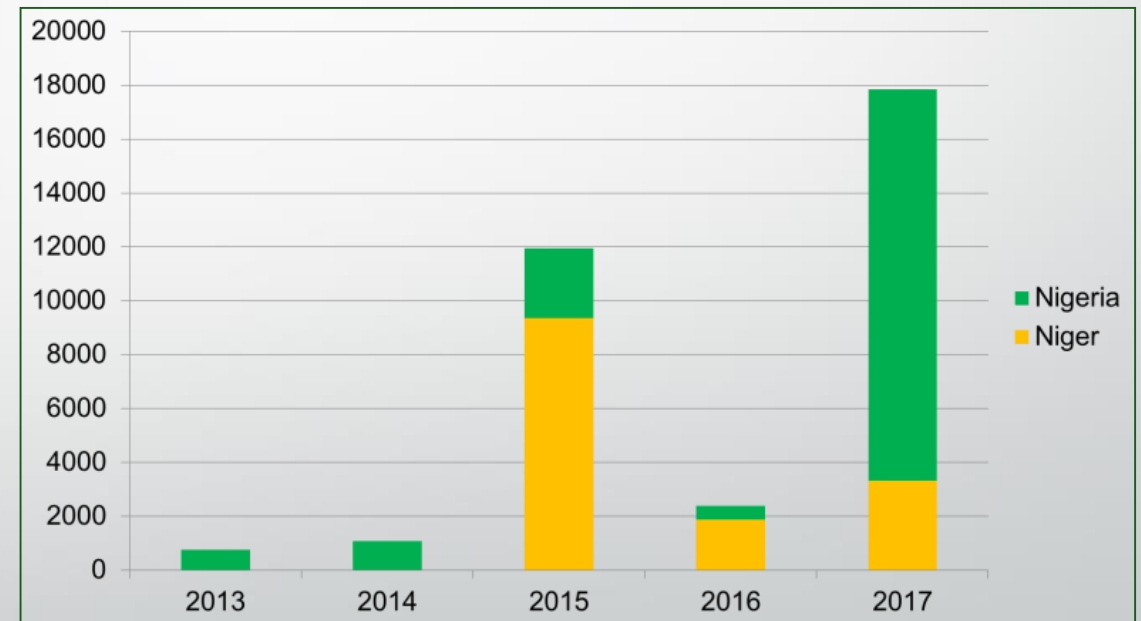
Togo Nm W: 1834 cases

2017: large-scale Nm C outbreak

Nigeria: 14 518 cases

Niger: 3317 cases

Cases in Niger and Nigeria, 2013-2017



Challenges in surveillance and laboratory confirmation

Low quality data



Insufficient laboratory capacity



Need for rapid tests



Picture courtesy of



Challenges in emergency vaccination

- Lack of vaccine in international vaccine stockpile (ICG)
 - Polysaccharide vaccines little used outside the belt
 - Conjugate vaccines expensive
- Delays in accessing the stockpile
 - Late requests
 - Insufficient surveillance data
 - Long shipment times
- Falsified vaccines (Niger, Cameroon)

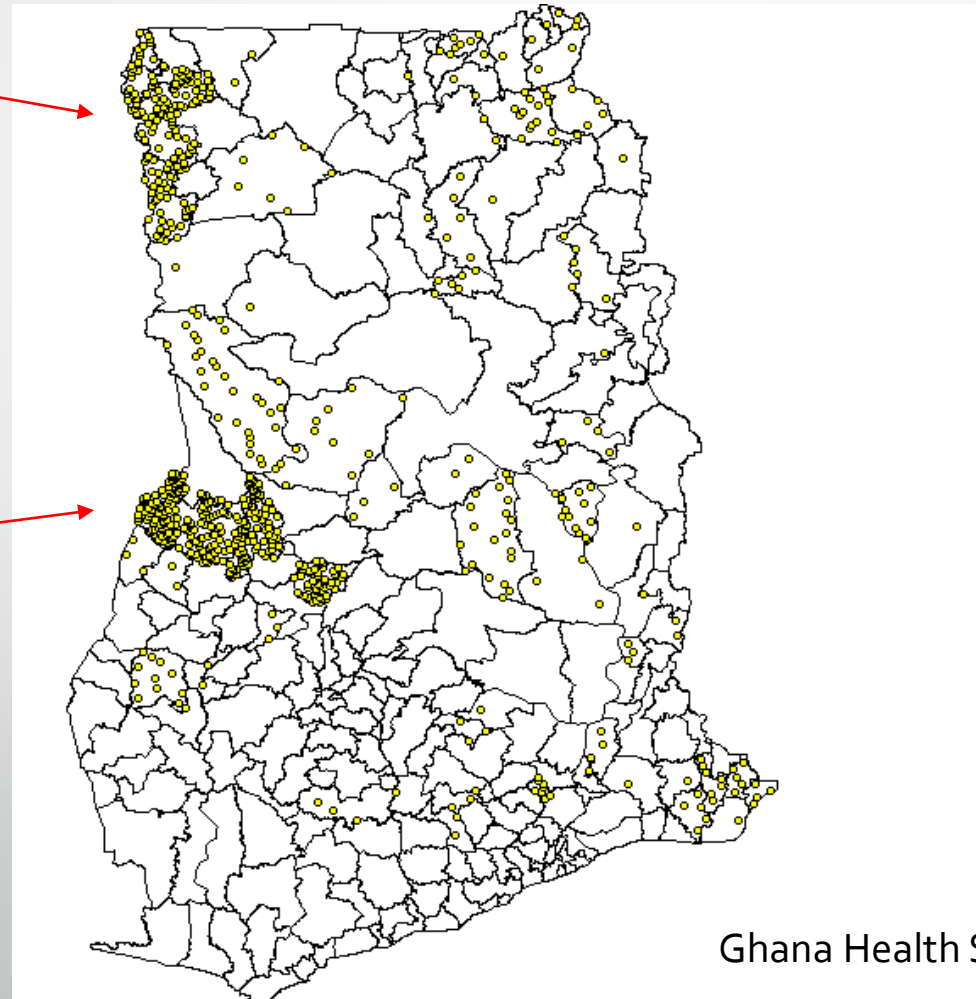
Getting more and better vaccines

- ICG procurement strategy agreed
5 year tender 2017-2021 for 5 million doses per year)
- Exploring national contingency stockpiles
- Promoting development and use of affordable multivalent conjugates

And there is still the risk of pneumococcal meningitis : Ghana 2016

Upper West
NmW

Brong Ahafo
Spn



Ghana Health Services

Pneumococcal meningitis in the belt

- Similar pattern to meningococcal meningitis
 - incidence in dry season 10x wet season
 - majority of cases in older children and adults
- Previous outbreaks: Burkina Faso 2009 & 2011, Chad 2009, Ghana 2010
- High burden outside epidemics
 - Spn >25% of confirmed meningitis cases in the belt
 - high case fatality ratio (20% - 60%) and severe after effects
- Uncertain if PCV13 infant vaccination programmes with 3+0 schedule will protect older age groups

Wilton Park 2017

Global vision for meningitis by 2030 and an action plan to get there



WHO now leading task force to develop action plan
First meeting WHO, MRF, CDC, MSF, LSHTM, UNICEF, PATH to take place July 2018

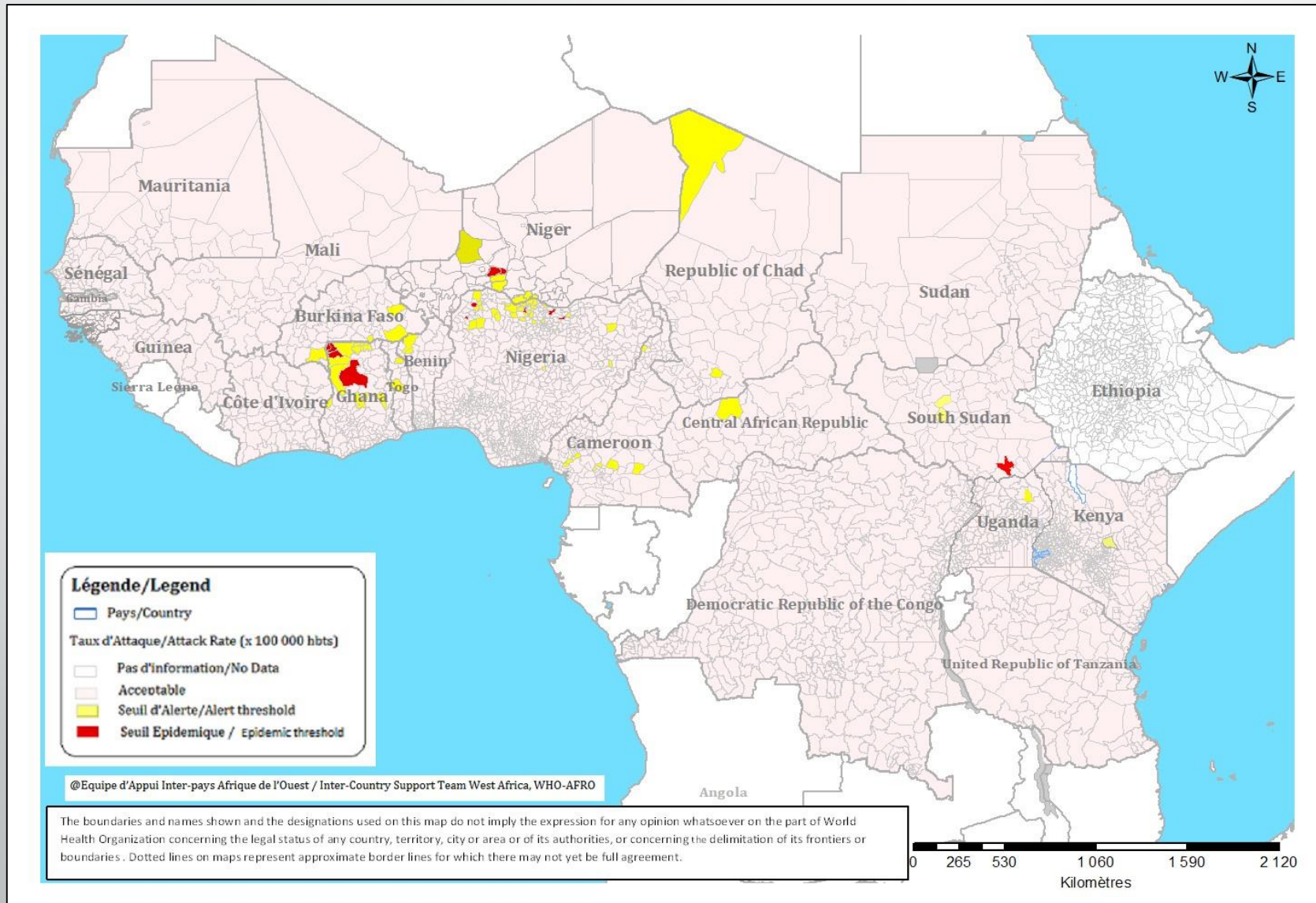
Meningitis in the belt: Key points

- Meningitis is still a major threat in the African meningitis belt

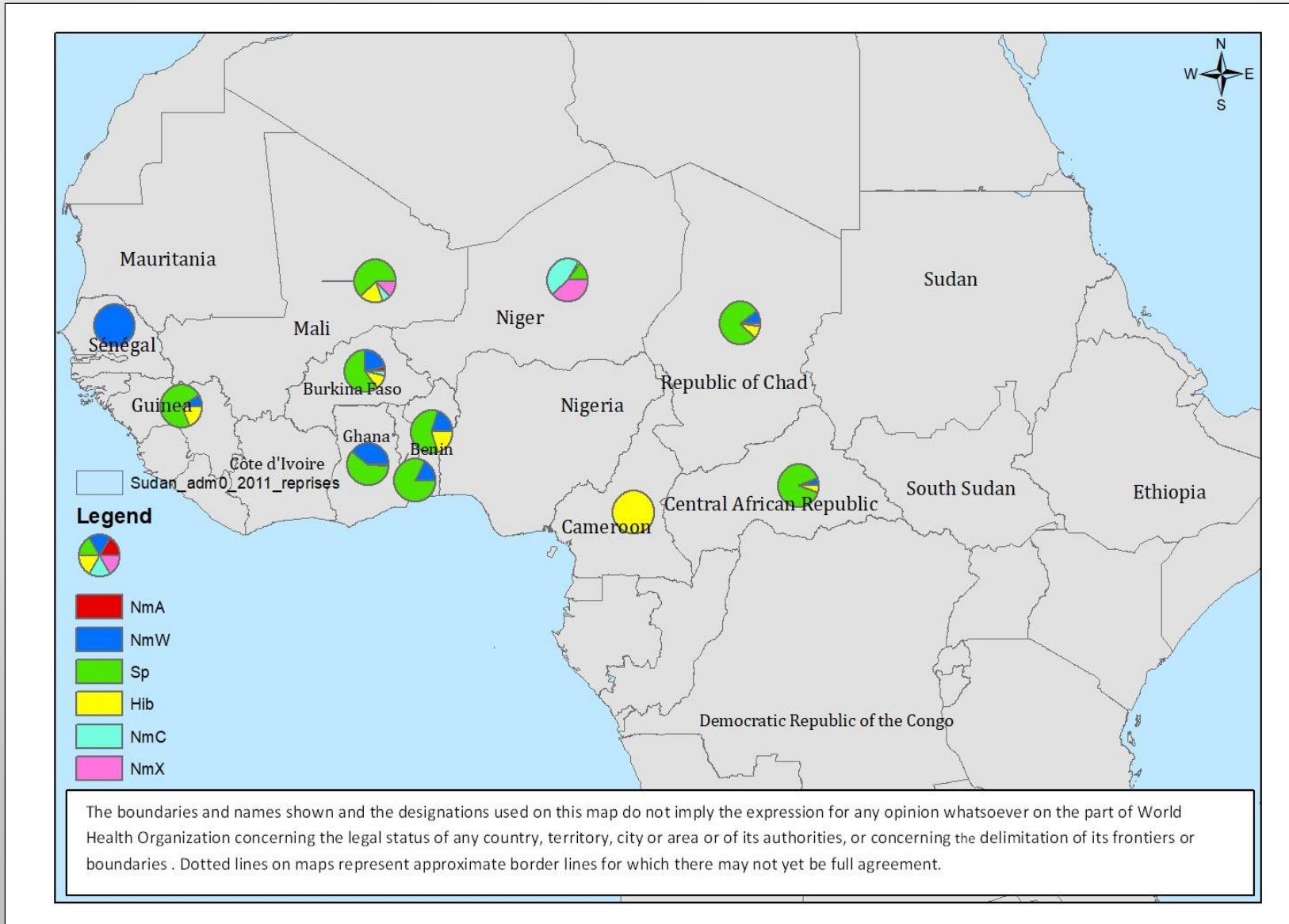
Priorities

- Ensuring vaccine supply for outbreaks
- Developing affordable multivalent conjugate vaccines for meningococcal meningitis
- Implementing new vaccine strategies to prevent pneumococcal meningitis
- Advancing new technologies for rapid diagnosis

Districts in epidemic 2018 wks 1-22



Pathogen distribution 2018 wks 1-22



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