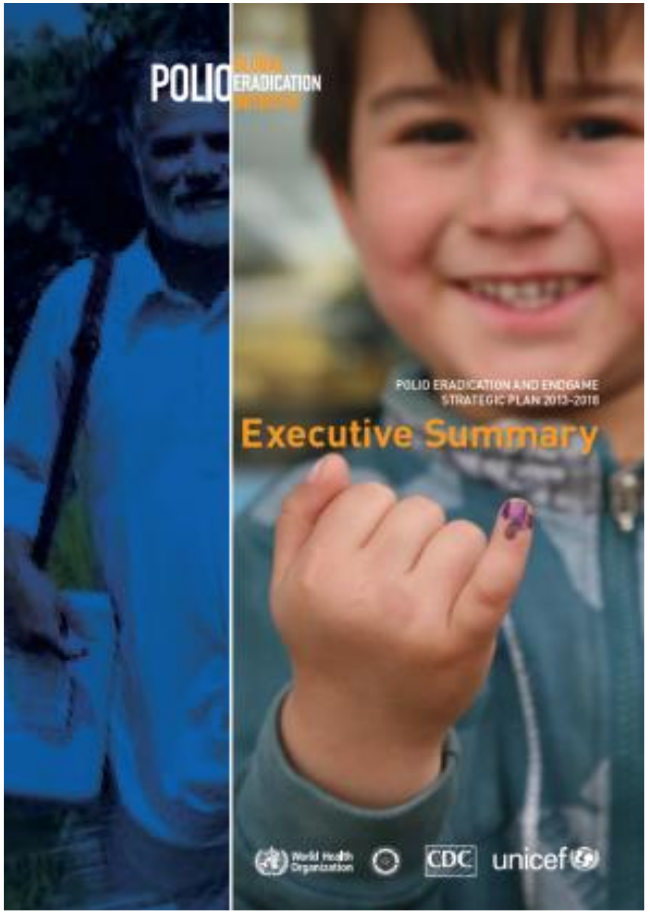
Global Update

Michel Zaffran, Director, Polio Eradication, World Health Organization
Reza Hossaini, Director, Polio Eradication, UNICEF
Polio Partners Group Meeting, Geneva, 5 December 2016

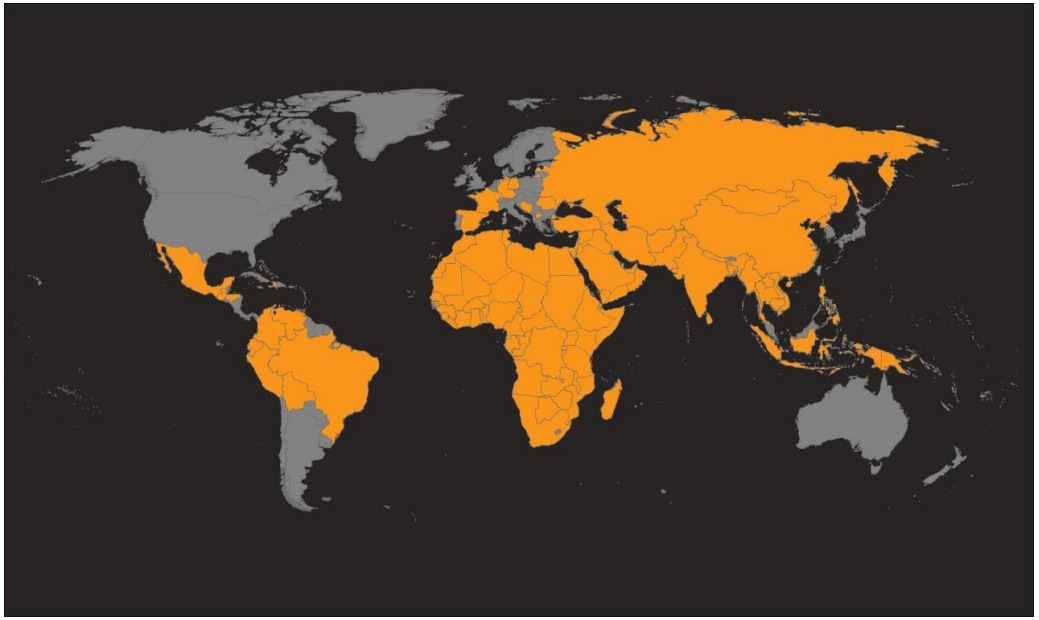
Polio Eradication and Endgame Strategy

1. Poliovirus detection & interruption
2. OPV2 withdrawal, IPV introduction, immunization system strengthening
3. Containment & Global Certification
4. Transition Planning



EVERY LAST CHILD

GPEI's Impact: Progress in WPV eradication

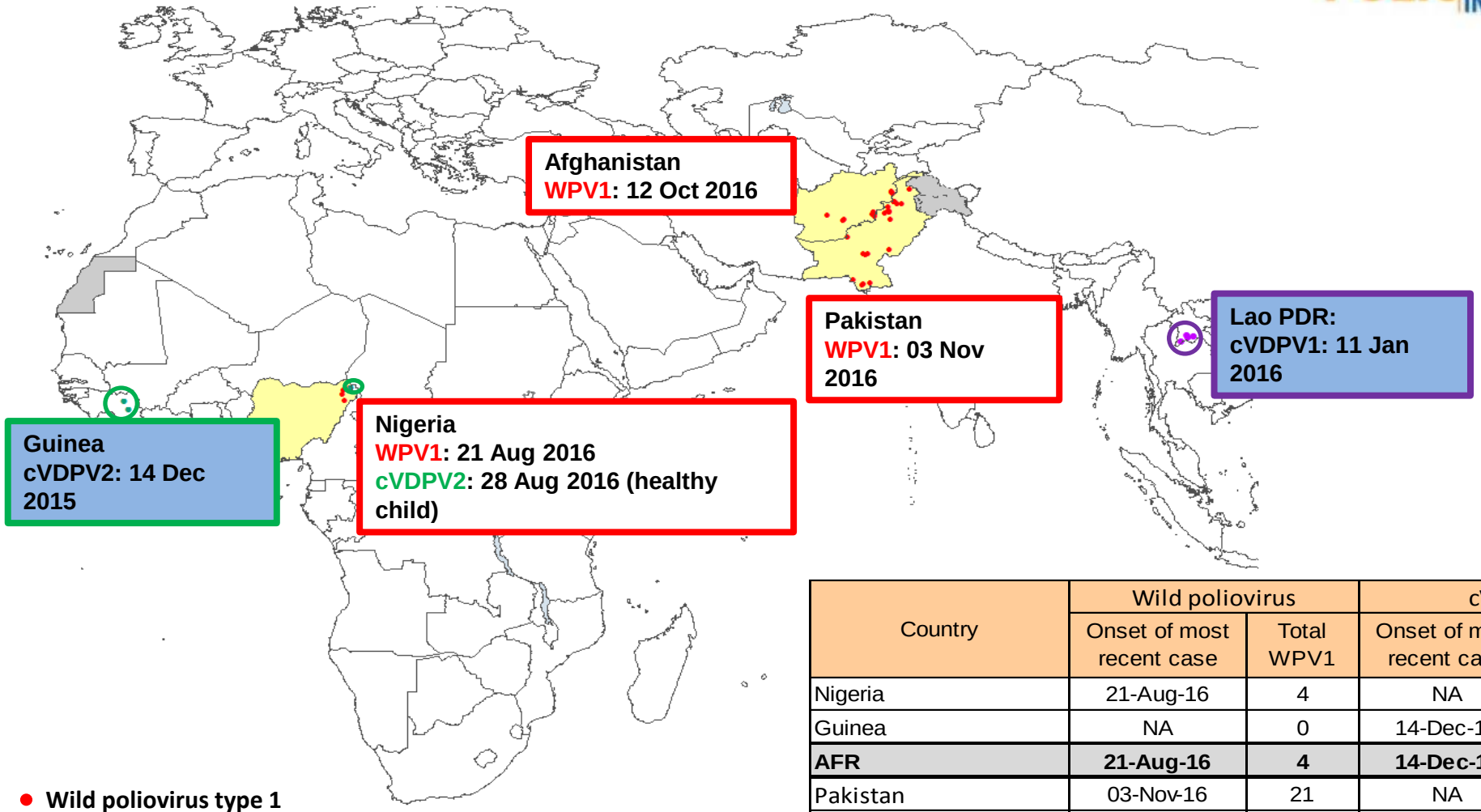


1988

34 Cases so far in 2016

Public Health Emergency of International Concern declared in May 2014

Global Wild Poliovirus & cVDPV Cases[1,2], Previous 12 Months[3]



- Wild poliovirus type 1
- cVDPV type 1
- cVDPV type 2[2]
- Endemic country

Country	Wild poliovirus		cVDPV	
	Onset of most recent case	Total WPV1	Onset of most recent case	Total cVDPV
Nigeria	21-Aug-16	4	NA	0
Guinea	NA	0	14-Dec-15	2
AFR	**21-Aug-16**	**4**	**14-Dec-15**	**2**
Pakistan	03-Nov-16	21	NA	0
Afghanistan	12-Oct-16	13	NA	0
EMR	**03-Nov-16**	**34**		**0**
Lao People's Democratic Republic	NA	0	11-Jan-16	4
WPR	**NA**	**0**	**11-Jan-16**	**4**
Global	**03-Nov-16**	**38**	**11-Jan-16**	**6**

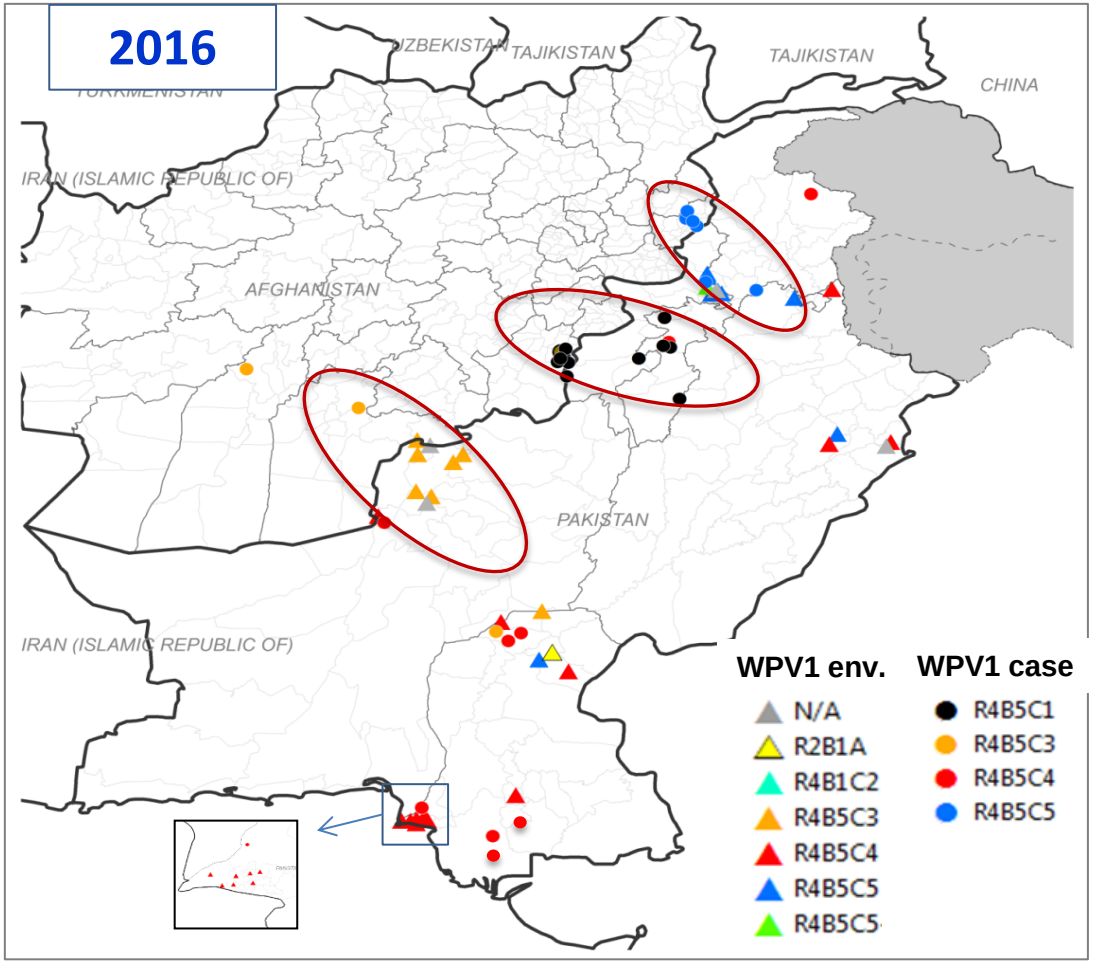
[1]Excludes viruses detected from environmental surveillance
[2]In Nigeria, 1 cVDPV2 from a healthy child contact of WPV1 case
[3]Onset of paralysis 30 November 2015 – 29 November 2016

Data in WHO HQ as of 29 November 2016

Pakistan – Afghanistan

Lowest number of cases ever in the epidemiological block

AFG-PAK epidemiological block: WPV1 by genetic cluster, 2016



Most recent cases - AFG: 12 Oct., PAK: 3 Nov.

Three 'corridors' of cross border transmission:

- Nangarhar/Kunar - Khyber/Peshawar
- Paktika - FATA / KP (Bermel outbreak)
- Kandahar/Helmand – Balochistan (Quetta block)

Poliovirus transmission - 2016

- PAK ES and AFP results still show wide-spread transmission. No positive ES from Afg in 2016.
- 5 separate VDPV type 2 events from PAK: Quetta (4, pending mOPV2 response), Hyderabad (fIPV response), Lahore (iVDPV).

Genetic sequencing - virus clusters, 2016:

- Diminishing number of chains of transmission - decreasing number of active virus clusters from 2015 (8) to 2016 (7)

Pakistan- Afghanistan Epidemiological Block

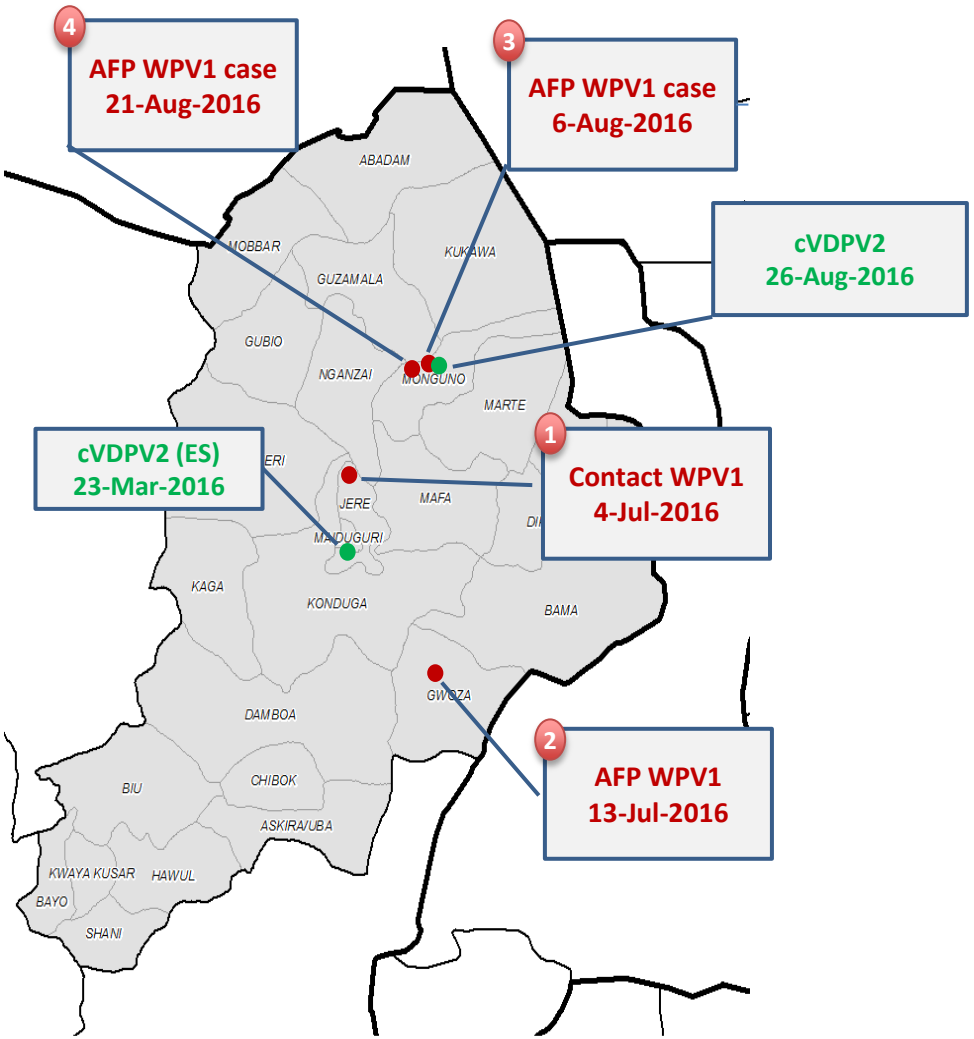
- Situation improved; decreased cases & +ve Environ. Samples
- Strong Emergency Operation Centers (EOCs)
- Strong coordination between the two national programs
- National Emergency Action Plans (2016-2017) operationalized and kicked off

Concerns:

  - Deteriorating access in north-east Afghanistan (Kunduz)
  - Outbreak in south KP / FATA – southeast Afg. Block
  - Weaknesses in surveillance at district level in Pakistan
  - Remaining quality problems in Northern Sindh and Karachi

Nigeria + Lake Chad

WPV Outbreak in Borno State, Nigeria



- 4 WPV1s reported in Borno in the last three months – all 'orphan viruses'
- 2 cVDPV2 isolated – also 'orphan viruses'
- Represents hundreds of infections, and years of missed transmission
- All cases related to areas where the polio program stopped immunizing 2+ years ago because of inaccessibility due to Boko Haram threat
- Regional public health emergency
- Coordination established in N'djamena with 5 governments
- 5 Rounds of Multi-country outbreak response targeting over 40 million children being completed (5th round this week)

Strategies for reaching every child

Major barrier : Accessibility and Security

Only 9 of 27 LGAs have been accessible consistently;

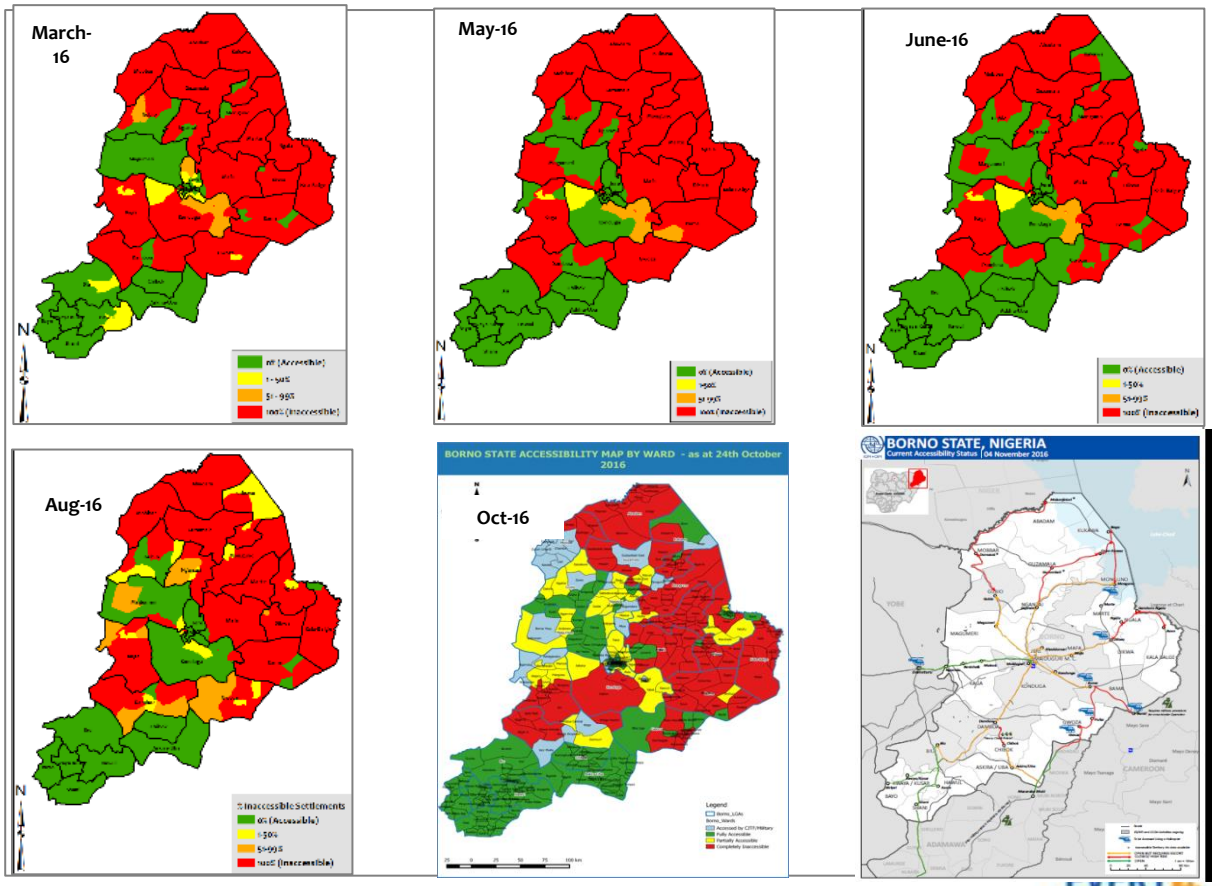
- Estimated population 2.6-2.8 Mio (~600K under 5)
- 2 LGAs remain completely off limits – Abadam and Marte

Strategies to reach children :

- Fire walling, Permanent Health Teams, Vaccination in International Border and Permanent Transit points, Hit and Run, Vaccination in IDP camps, etc.

Strong linkages with Humanitarian response

39% of settlements in Borno inaccessible (Oct/16)



Findings from Nigeria polls identify risks to community acceptance

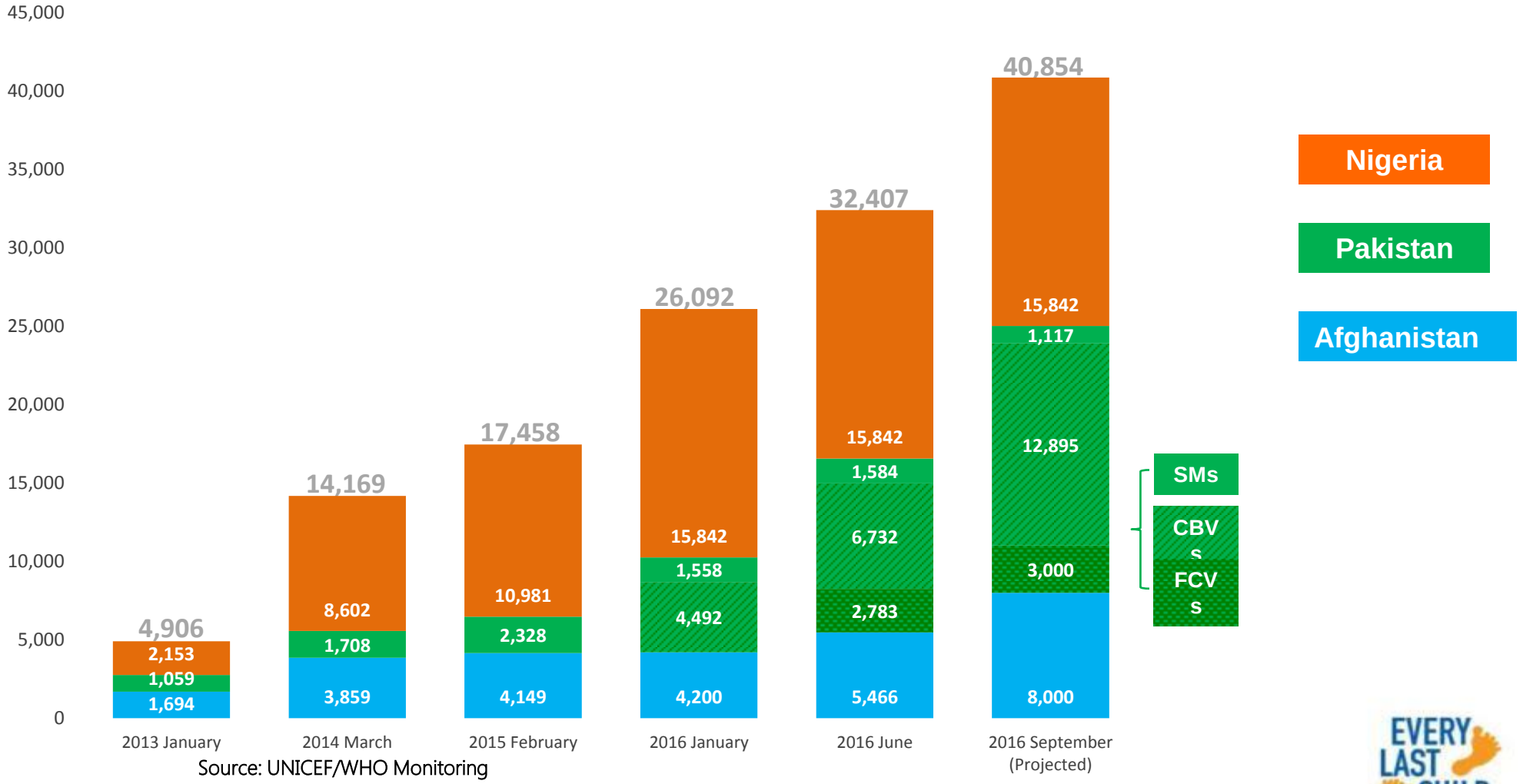
Compared to other states, caregivers in BORNO were less likely to give child polio drops every time (Poll 2015)

Caregivers in Borno in 2015 were 24% less likely to give child polio drops every time compared with a year earlier.

Borno Response: focus on communication

- Rapid scaling up of Volunteer Community Mobilization (VCM) Network from 800 to 2,100 female social mobilizers, expanding area of work from 13-23 LGAs
- Variety of community influencers engaged (teachers, Ulema Chief imams, mosque imams, wives of Tsangaya school teachers) to reduce non-compliance and accompany vaccination teams to reduce missed children during campaigns
- Follow-up between rounds to reach missed children and tackle non-compliance
- Screen malnourished children and refer them to health centers (130,500 children screened in Oct)
- Social mobilizers deployed in camps to support IDPs from the inaccessible areas

Scale up of social mobilization networks
January 2013 – September 2016

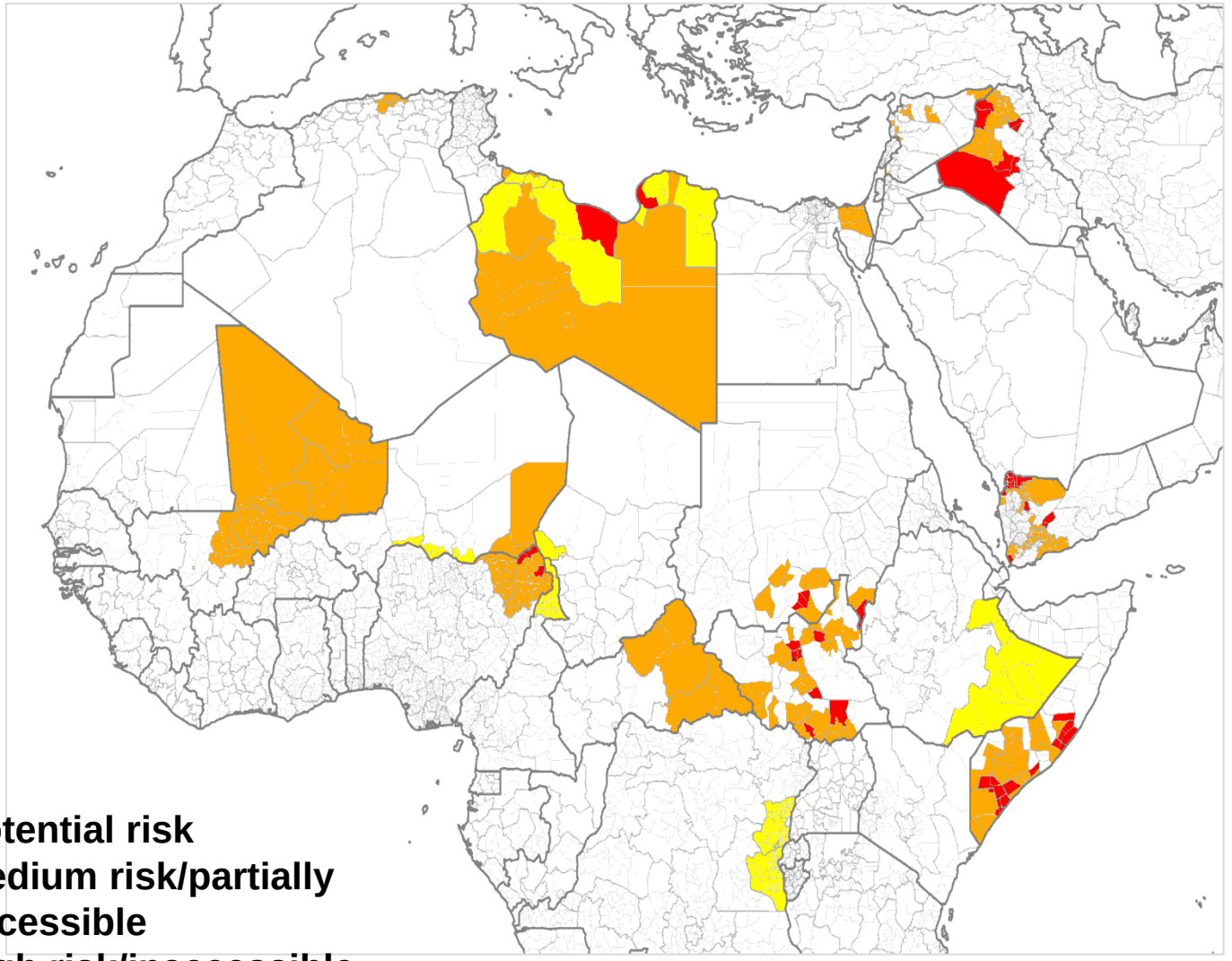


Source: UNICEF/WHO Monitoring

Learning the lessons from Nigeria

Ensuring there are no more undetected reservoirs

Conflict-related access limitations

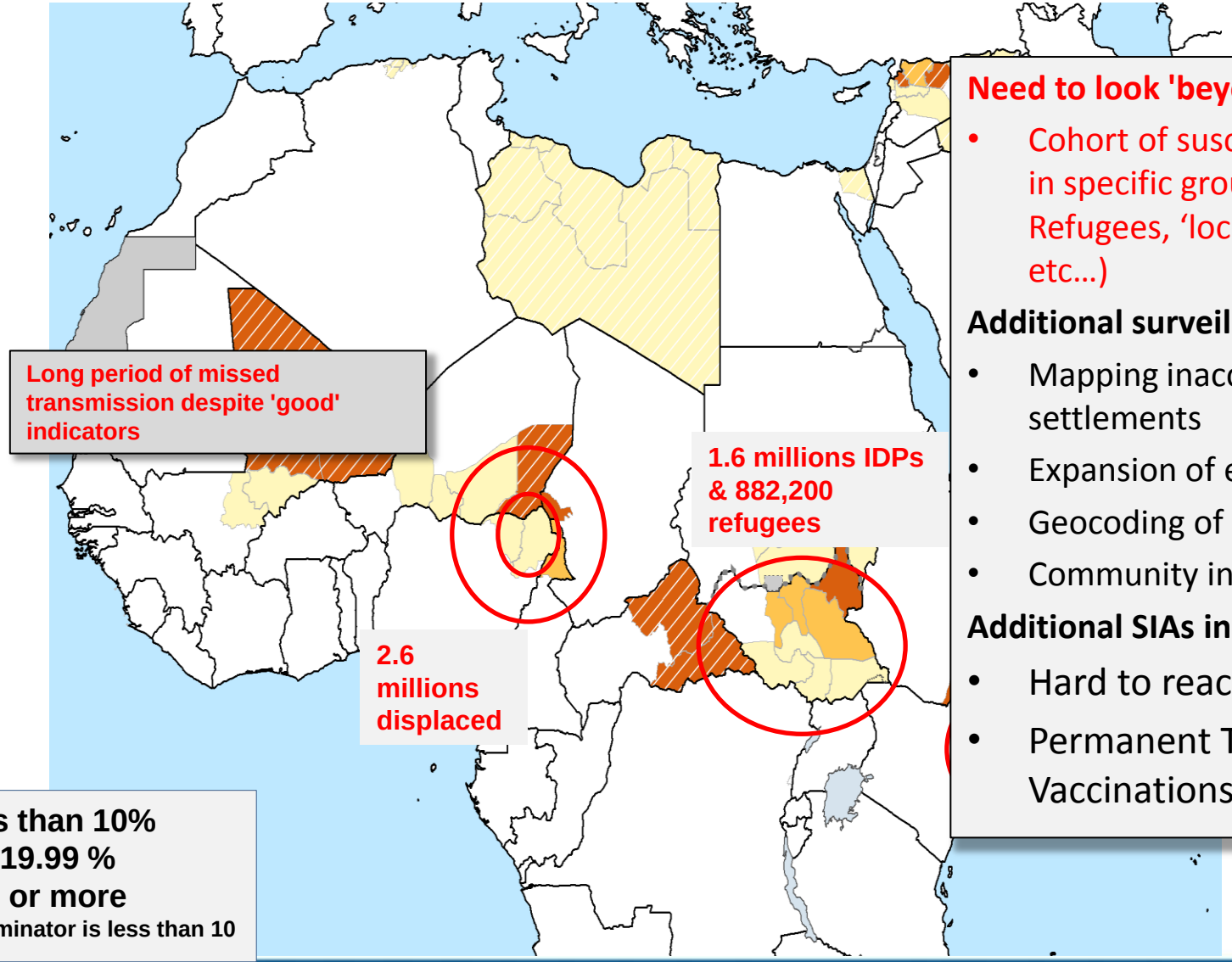


- Potential risk
- Medium risk/partially accessible
- High risk/inaccessible

Source : United Nations Department of Safety and Security , August 2016

Risk of outbreaks following PV importation

% of AFP cases aged 6 to 59 mo with 0-2 OPV doses, last 12 months (5 Oct '15 to 4 Oct '16



Need to look 'beyond indicators'

- Cohort of susceptible children in specific groups (IDPs, Refugees, 'locked in' groups, etc…)

Additional surveillance initiatives

- Mapping inaccessible settlements
- Expansion of env. surveillance
- Geocoding of AFP cases
- Community involvement

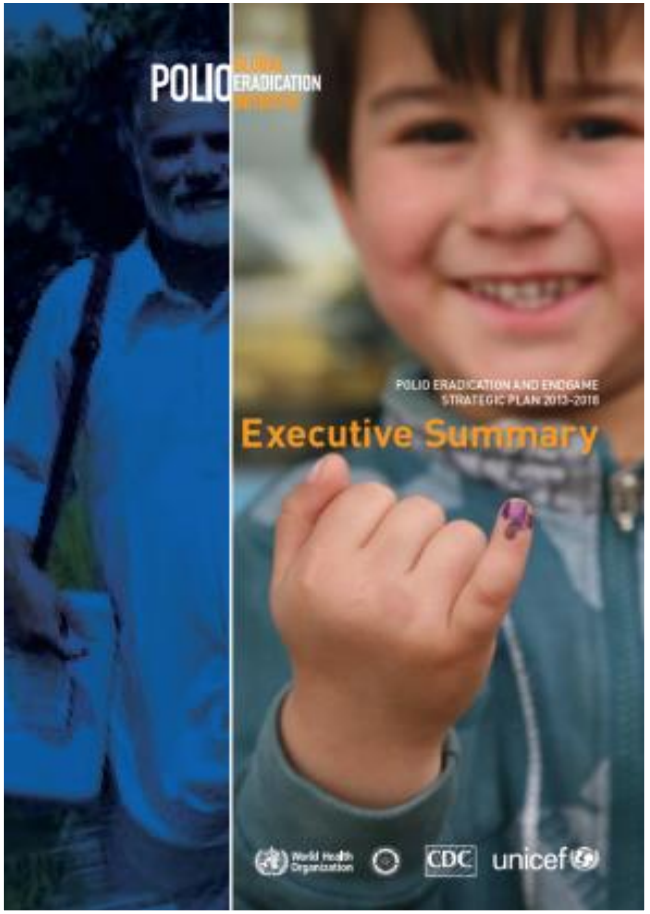
Additional SIAs initiatives

- Hard to reach strategies
- Permanent Transit Point Vaccinations,

Data source: WHO Database; Last updated 05 Oct 2016

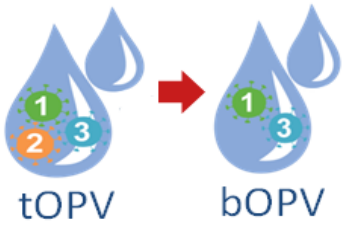
Polio Eradication and Endgame Strategy

1. Poliovirus detection & interruption
2. OPV2 withdrawal, IPV introduction, immunization system strengthening
3. Containment & Global Certification
4. Legacy Planning



EVERY LAST CHILD

The OPV switch



Globally coordinated switch was a success!!

- Global switch occurred **17 April to 1 May 2016**
- All 155 countries/territories using tOPV switched to bOPV in a synchronised manner

Vaccine parade during Vaccination Week in the Americas - Guatemala

e.g. Haiti, Sierra Leone, South Sudan, Philippines, Myanmar, Madagascar

tOPV tombstone in Myanmar

Type 2 Poliovirus: need to stay vigilant!

23 VDPV2 events since the Switch (chronological order of lab notification)

(Guinea-ongoing since 2014)

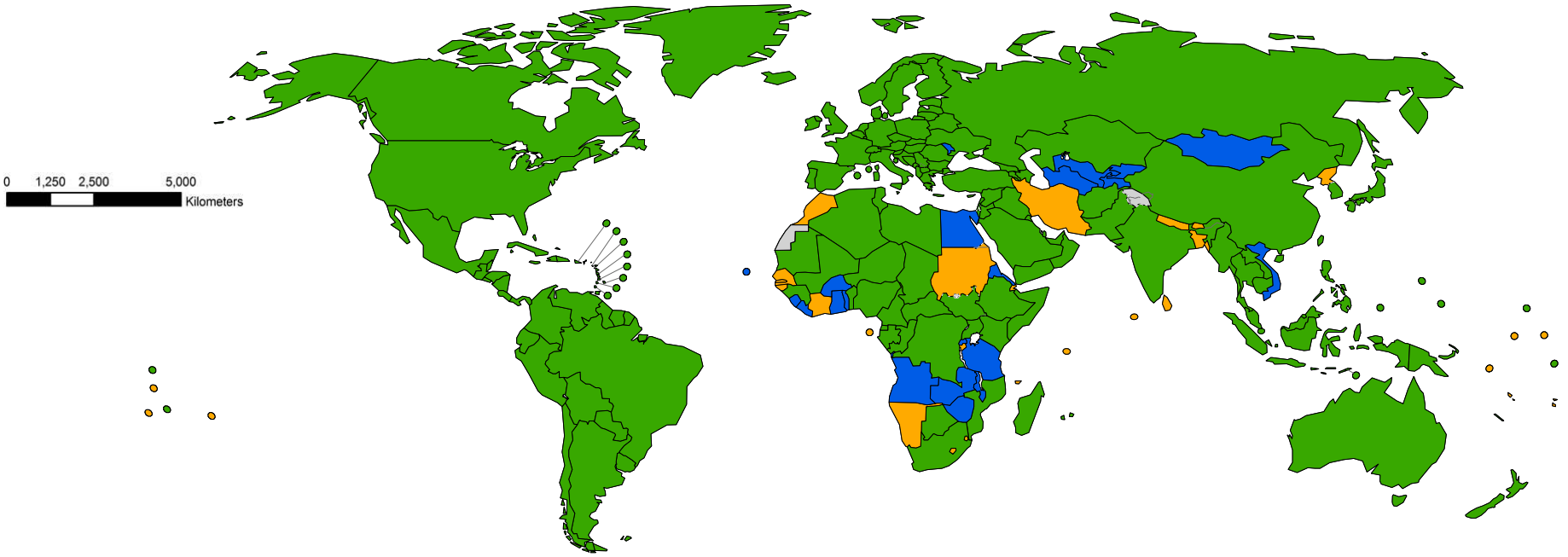
1. **Egypt**
2. **Nigeria** – Borno 1 (envir. sample)
   + Lake Chad region : **Niger, Chad, Cameroun**
3. **Kenya**
4. **Syria**
5. **DRC**
6. **India** - Telangana 1
7. **Nigeria** - Jigawa
8. **India** - Kolkata
9. **India** – Delhi
10. **India - Telangana 2**
11. **Pakistan – Balochistan, Quetta 1**
12. **Pakistan - Sindh**
13. **Ukraine** - Odessa
14. **Yemen** - Aden
15. **Palestine** - Bethlehem
16. **Nigeria** – Borno 2 (healthy child)
    + Lake Chad region : Niger, Chad, Cameroun
17. **Afghanistan** - Paktika
18. **Pakistan –** Balochistan, Quetta 2
19. **Russia** – **Moscow**
20. **Pakistan** – Punjab
21. **Pakistan –** Balochistan, Quetta 3
22. **Nigeria –** Sokoto (AFP case)
    + neighbouring Niger districts
23. **Somaliland** - Togdher

mOPV2 released by WHO DG

fIPV campaign

Countries using IPV vaccine

105 Countries have introduced since January 2013

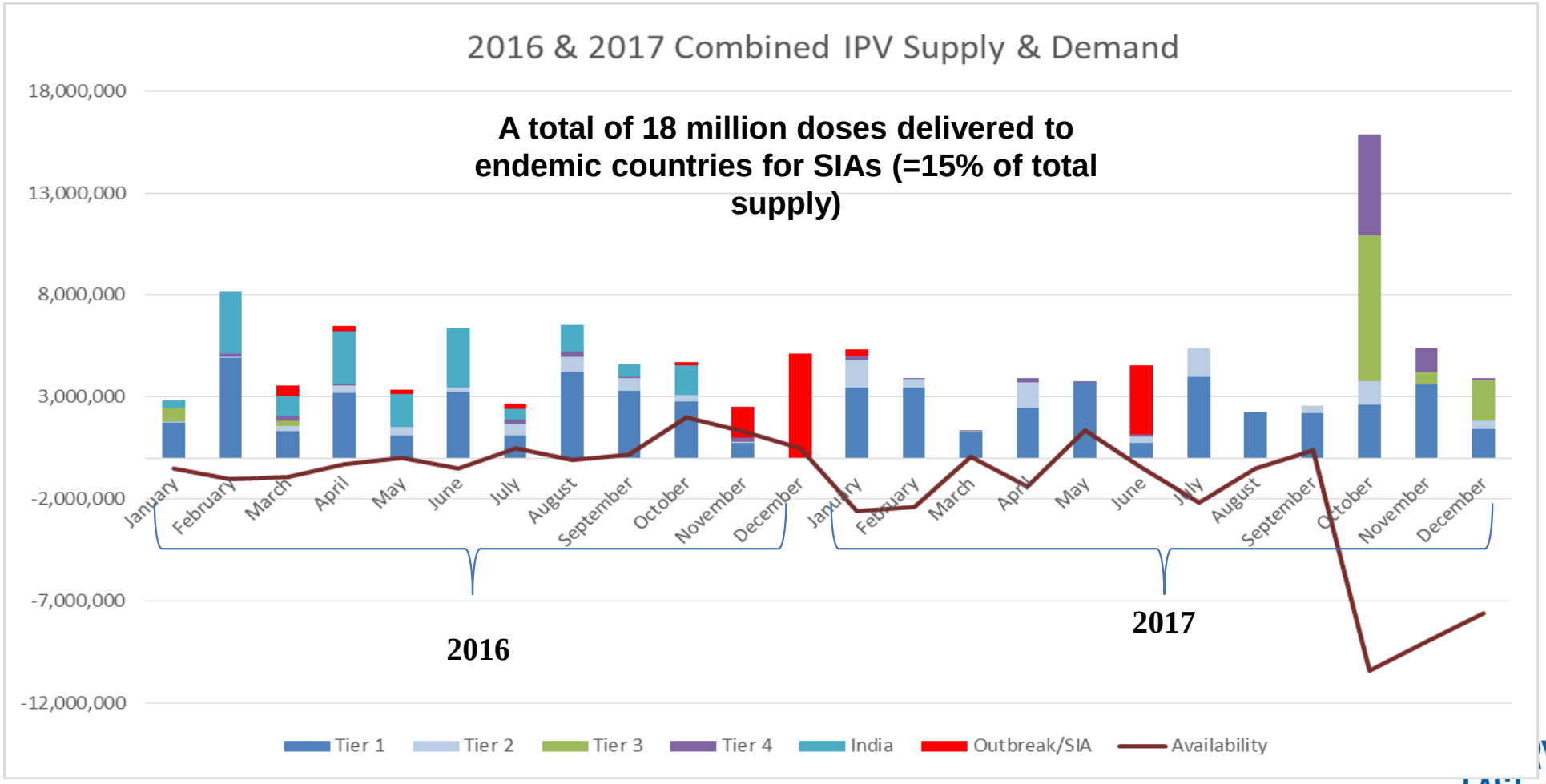


- Introduced to date *(173 countries or 89%)*
- Countries with delayed introductions *(21 countries or 11%)*
- Countries affected by stock outs *(29 countries)*
- Not available
- Not applicable

Data source: WHO/IVB Database, as of 13 October 2016
Map production Immunization Vaccines and Biologicals (IVB),
World Health Organization

EVERY LAST CHILD

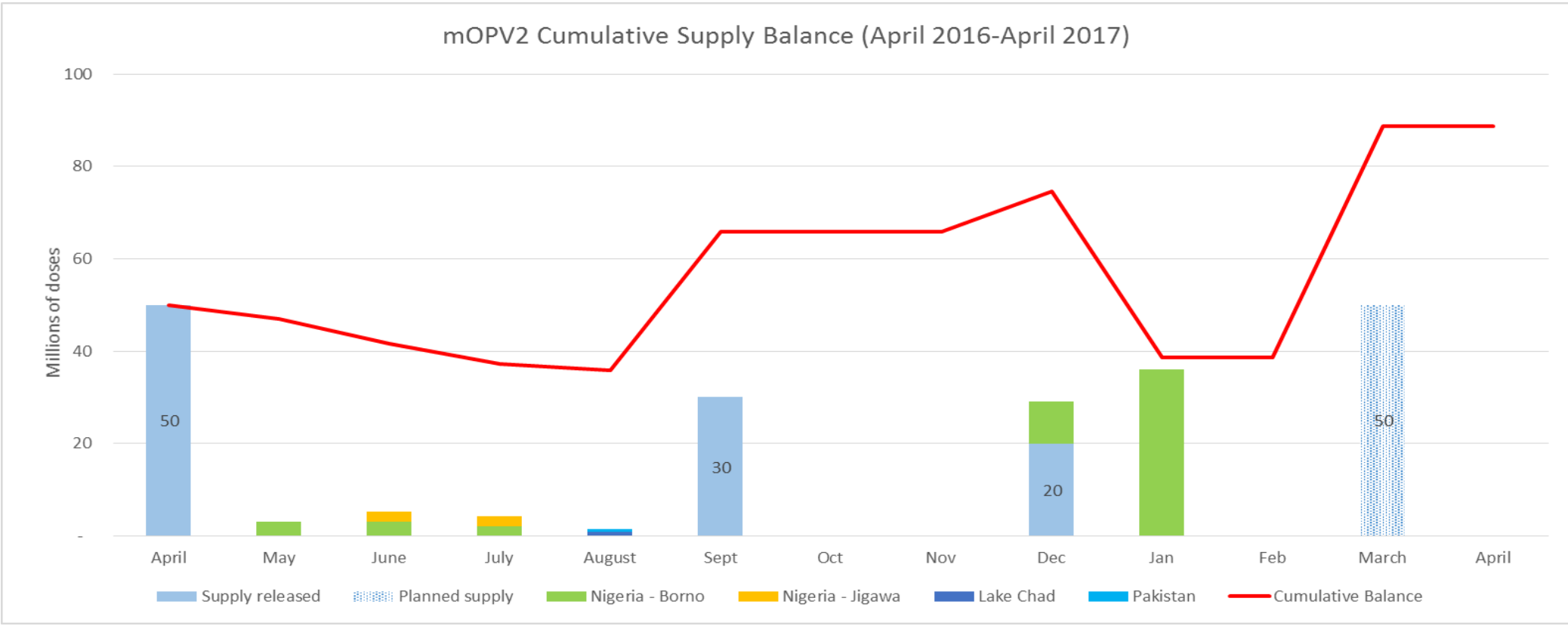
IPV supply continues to decline due to production issues with both suppliers, now impacting Tier 1 and 2 countries



Impact of the IPV supply Gap

- Tier 3 and 4
  - **Introductions delayed** in 21 countries (Tier 3 & 4)
  - **Forced stockouts** in 29 countries
- Tier 1 and 2
  - Latest supply reductions have led to impacts on higher risk countries
    - **As of Q1 2017 re-supply to routine programmes will be delayed**
      - **13 Tier 2 countries (3 months)**
      - **4 Tier 1 countries (2 months)**
- Supply is expected to improve in 2018

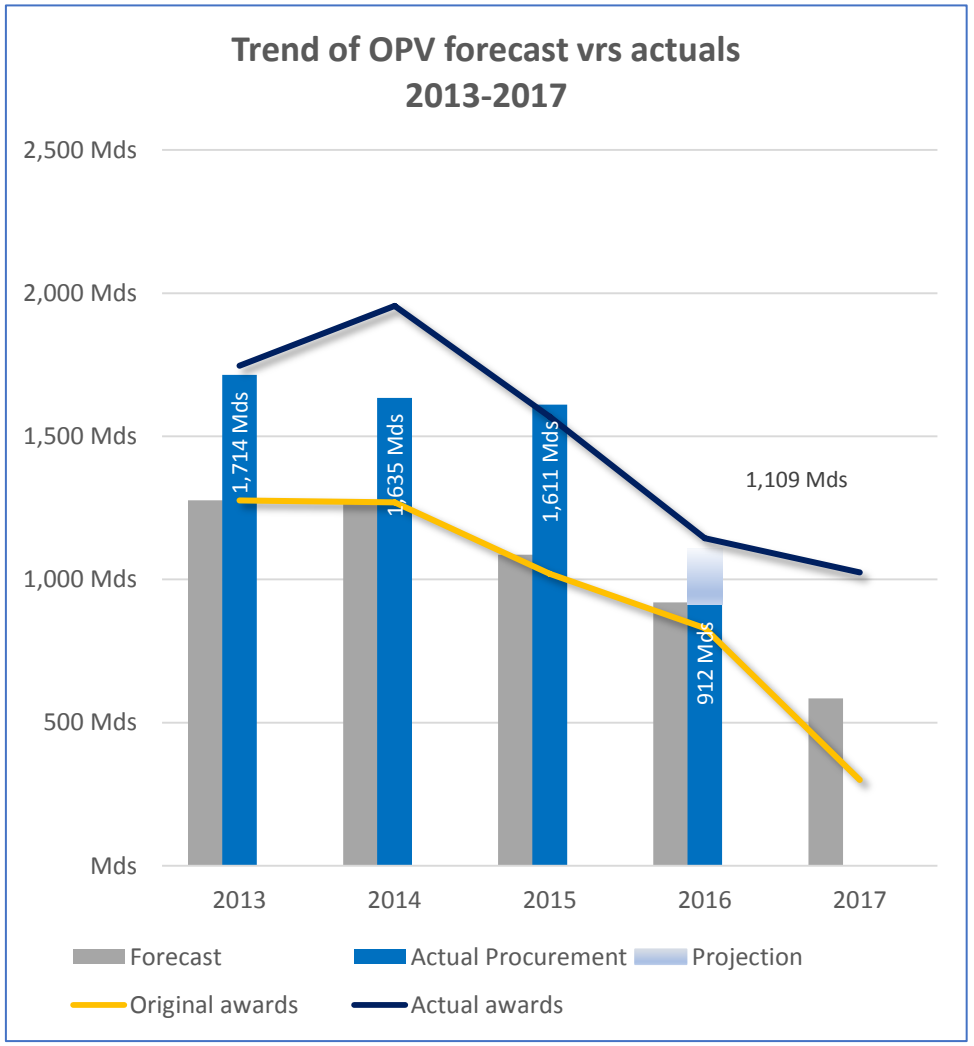
mOPV2 : Supply status as of November 2016



- **Total doses delivered since April 2016: 14 million doses (Nigeria/Lake Chad, Pakistan)**
- **Upcoming deliveries: 46.2 million doses (DG endorsed 25 November and 3 December) (Nigeria)**
- **Lead time for conversion: 12 months (369 million type 2 bulk doses remaining)**

Securing sufficient OPV until certification

Demand projections historically too low; Additional awards required



Awards

- **Initial awards of 5.2Bds based on programme forecasts, leaving un-awarded quantities for 2017**
- **Following supply constraints in 2013, moving from awards based on forecasts to maximizing supply capacity (2013-2015)**
- **10 sequential awards since 2012 allowing to meet all demand due to:**
  - **Sufficient bulk was available**
  - **Allowing for production lead times (3-12 months**
- **Increasing total awards by 42% to 7.4Bds**

EVERY LAST CHILD

Current trajectory towards OPV cessation

- Continued OPV immunization for three years after last case
- OPV cessation 12 months after certification of polio eradication with some pre-cessation immunity boosting campaigns
- Given 24 months OPV production lead times, to ensure sufficient supply decisions are required 2 years in advance of cessation

Procurement objectives

- Sufficient supply to meet demand through to eradication and cessation
- To facilitate cessation of the OPV vaccine market in a responsible manner while maintaining affordability

Key risks

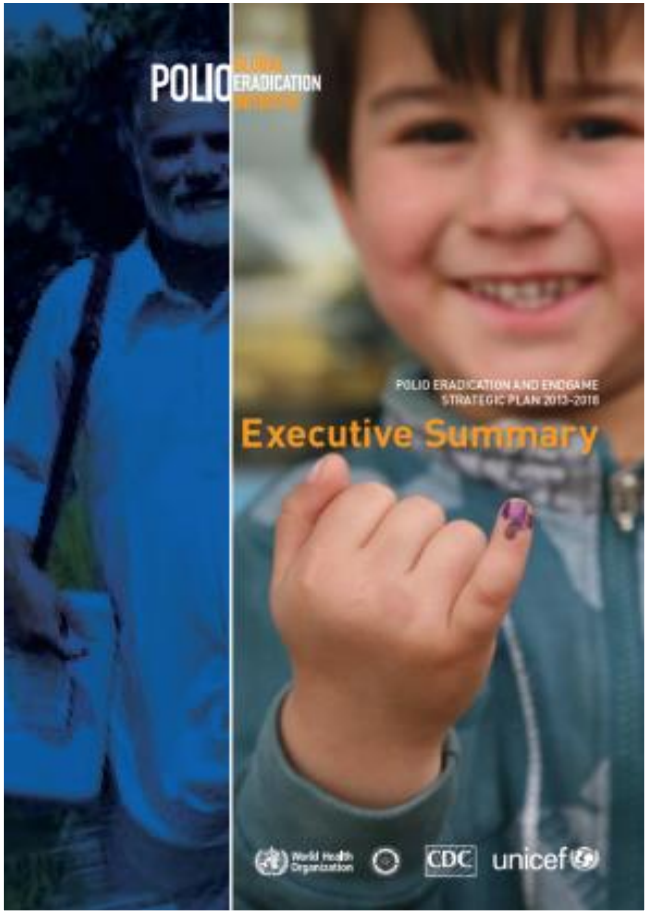
- Lack of clarity on annual demand and duration of demand (3.2 to 5.2 billion doses)
- Delays in eradication and cessation due to ongoing transmission
- Market exits from vaccine manufacturers to protect their investments - supply will not be available beyond 2022!

Expected tender ask

- Financial guarantees and risk sharing likely to be required by manufacturers to secure sufficient supplies through to eradication

Polio Eradication and Endgame Strategy

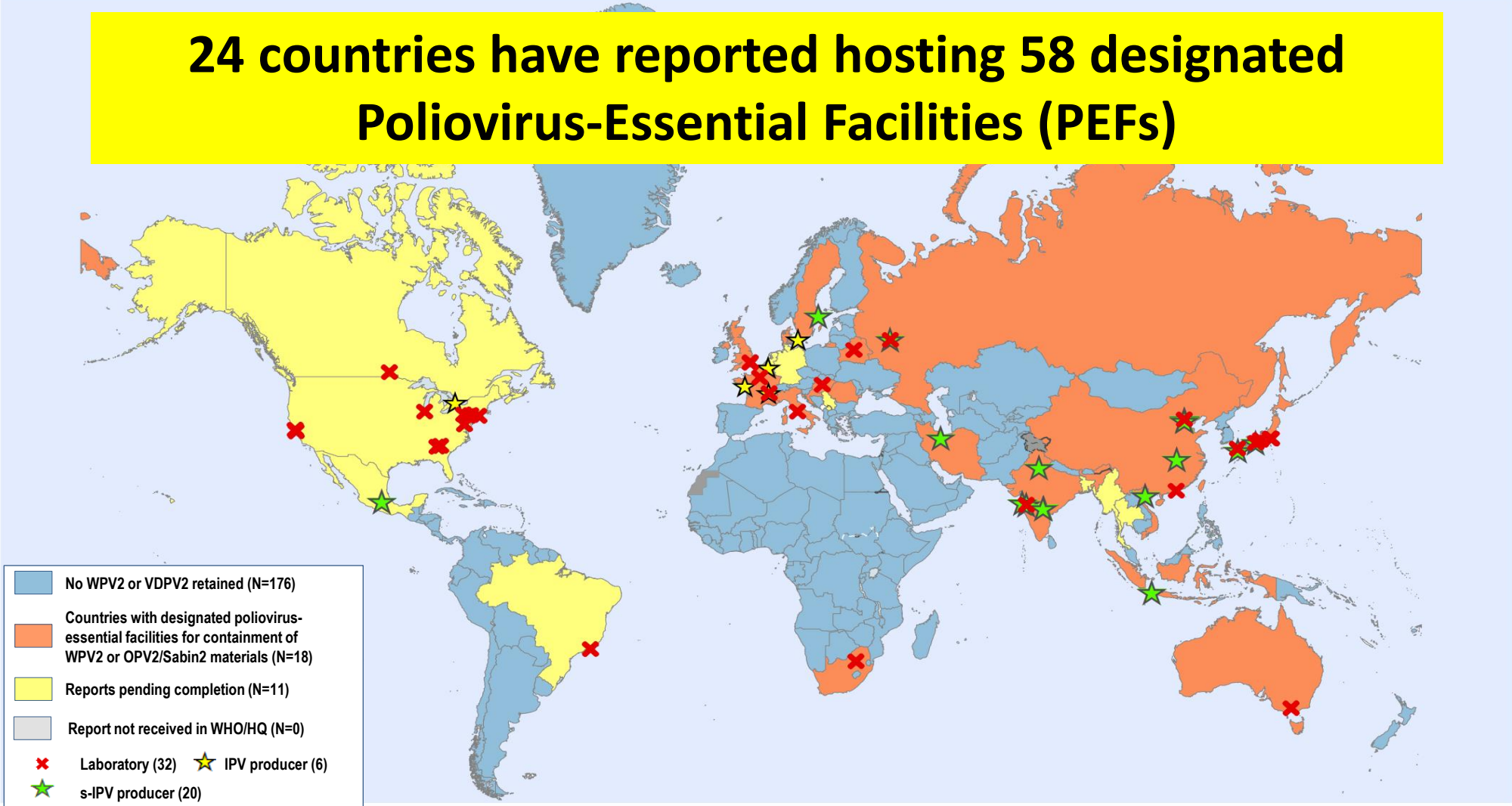
1. Poliovirus detection & interruption
2. OPV2 withdrawal, IPV introduction, immunization system strengthening
3. Containment & Global Certification
4. Legacy Planning



EVERY LAST CHILD

GAPIII - Phase I (WPV2/VDPV2)

24 countries have reported hosting 58 designated Poliovirus-Essential Facilities (PEFs)



used on this map do not imply the expression of any opinion whatsoever he legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

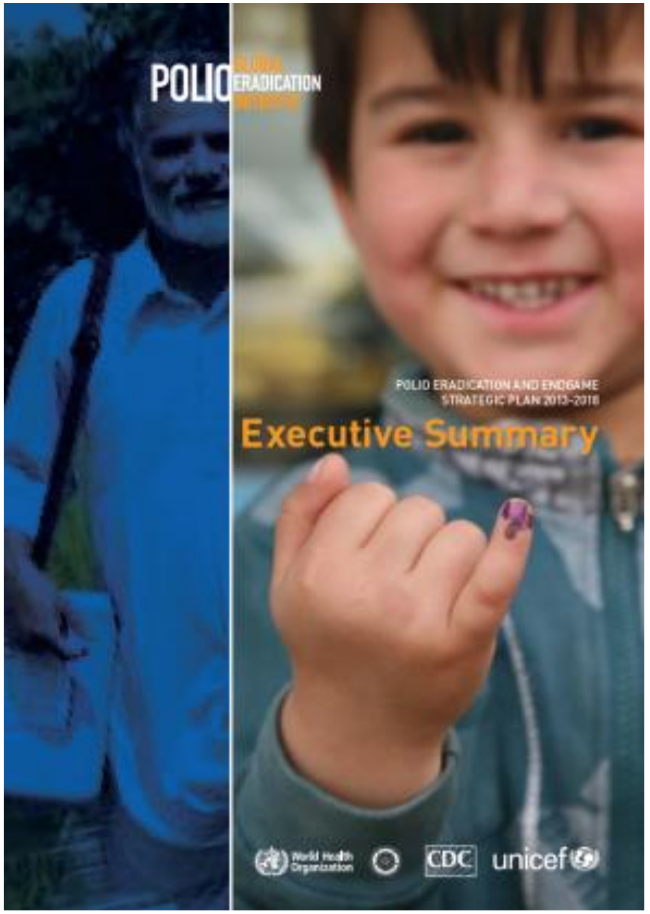
Source: WHO Database; Last updated 11 Nov 2016

Phase II. Progress/Status Update

Phase II: reduce risk in remaining facilities:	0 facilities certified against GAPIII
Containment Advisory Group (CAG):	• Address technical concerns, including guidance for completion of Phase I • Group being established through open call for nomination
GCC Containment Working Group (GCC CWG)	• Supports the Global Certification Commission with expert review of countries dossiers • Group being established
GAPIII Containment Certification Scheme (CCS) • Certificate of participation • Interim certificate of containment • Certificate of containment	CCS supersedes GAPIII, Annex 4: • Verification of containment is a national responsibility • Submission of dossier to Global Certification Commission CWG

Polio Eradication and Endgame Strategy

1. Poliovirus detection & interruption
2. OPV2 withdrawal, IPV introduction, immunization system strengthening
3. Containment & Global Certification
4. Transition Planning



EVERY LAST CHILD

Post-certification Strategy

Purpose: Define how a polio-free world will be sustained

- **Four goals**:

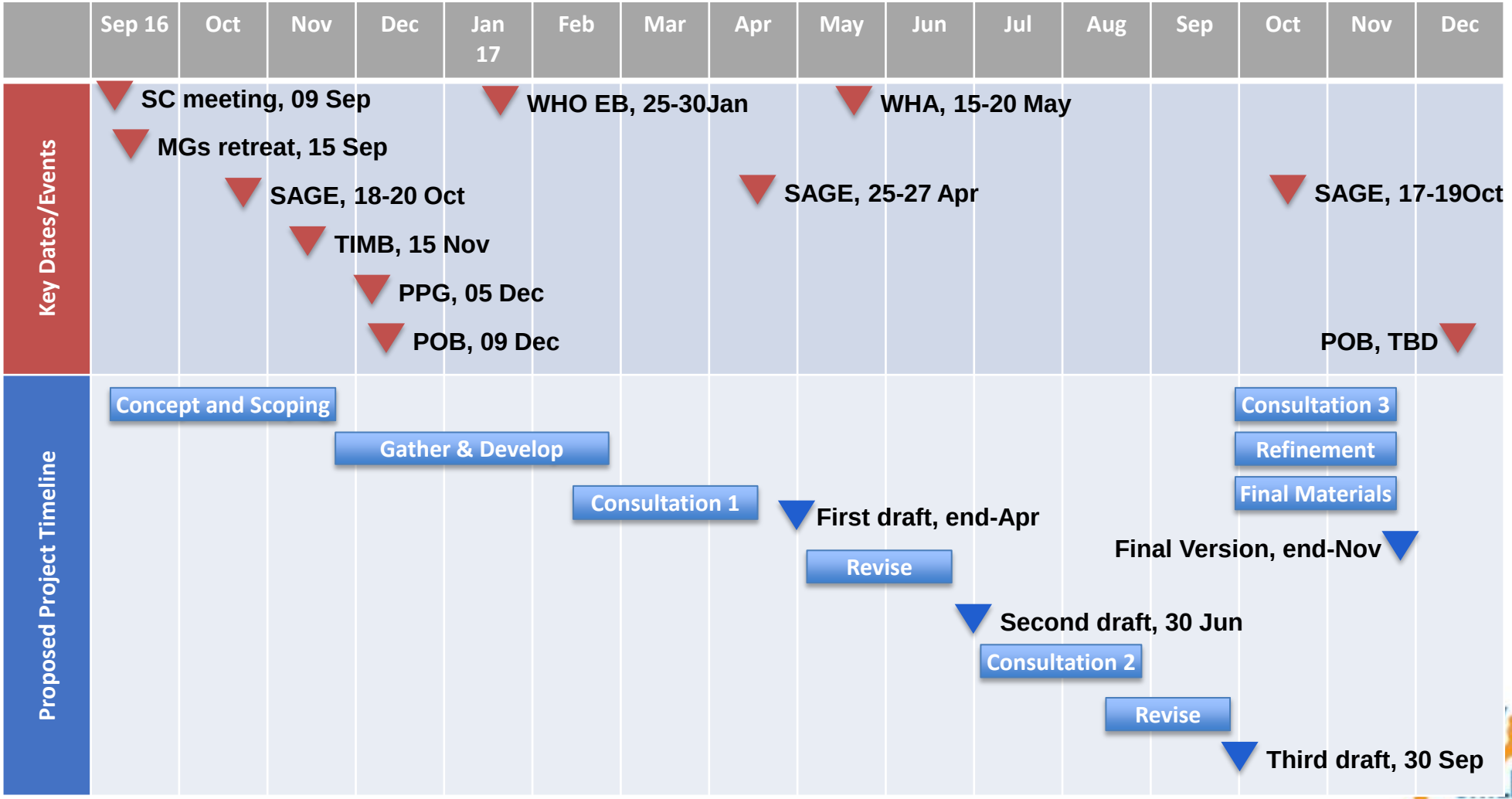
Goal 1: Contain Polio Sources	▪ Ensure potential sources of poliovirus are properly controlled or removed
Goal 2: Detect and Respond	▪ Detect any poliovirus introduction and rapidly respond to prevent transmission
Goal 3: Protect Populations	▪ Immunize current and future populations against unanticipated polio events
Goal 4: Manage Effectively and Monitor	▪ Ensure polio is embedded in existing or develop new mechanisms to sustain the goals of polio post-certification

Development process: GPEI-led but highly inclusive; approximately one year

Relationship to transition planning (TMG):

- This strategic plan defines the future state (technical and programmatic) for a polio-free world. The TMG will coordinate the implementation of the Post-certification Strategy.

Post-certification Strategy:
DRAFT High-Level Timeline



Programme Priorities

Next 6 months

Priorities

1. **Interrupt transmission in 3 endemic countries**
   - Response to Nigeria outbreak in all 5 Lake Chad basin countries
   - Continued support to Pakistan and Afghanistan to implement all NEAP activities
   - Implement effective outbreak response
2. **Tighten surveillance everywhere with a focus on security compromised and IPV deprived countries**:
   - Surveillance gaps
   - Careful management of IPV supply
3. **Intensify progress with containment**
   - Scientific guidance (CAG)
   - Launch of Certification process (CCS)
4. **Maintain momentum on transition planning**
   - Internal Agencies processes
   - Ramp down of country budgets, taking into account necessary pause for Lake Chad
5. **Political advocacy and resource mobilization**
   - Including to sustain efforts in non endemic countries

Thank you