

POLIO GLOBAL ERADICATION INITIATIVE

Poliovirus Eradication - What are the final stumbling blocks ? 10th International Global Virus Network meeting, 28-30 November, Veyrier du Lac

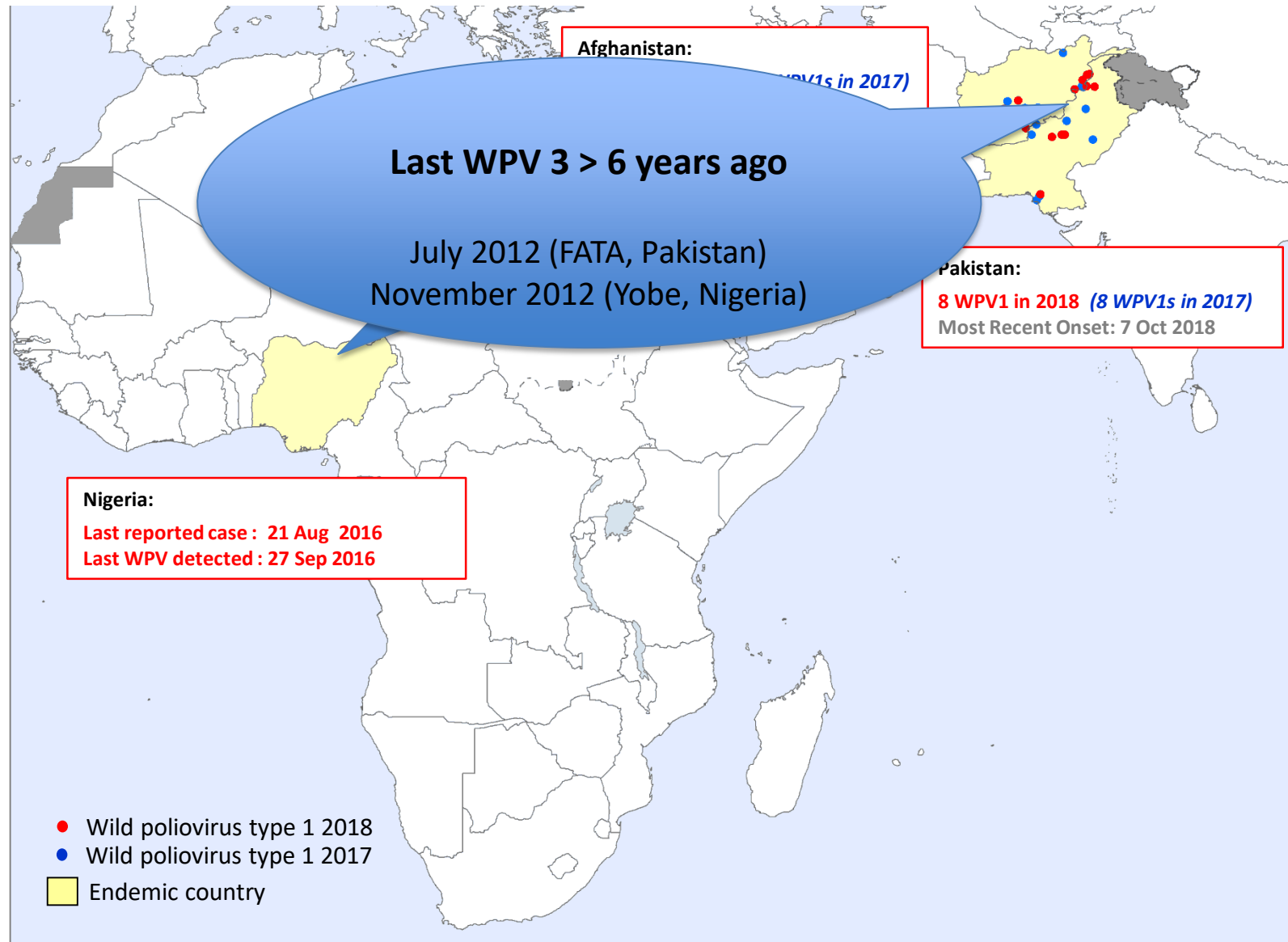
Michel Zafran, Director Polio Eradication, WHO / Chairman, GPEI Strategy Committee



BILL & MELINDA
GATES *foundation*

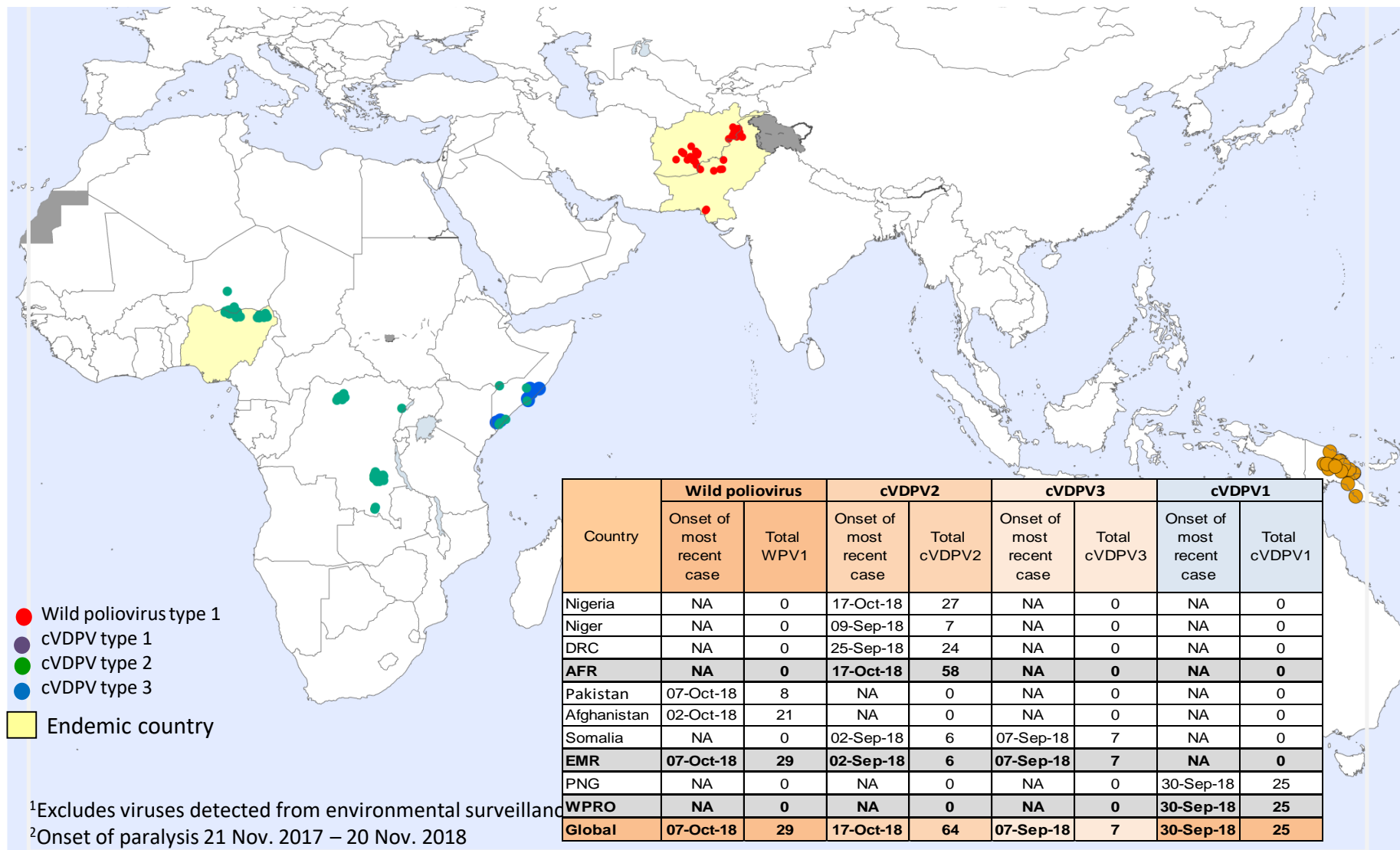


Wild Poliovirus Cases (2017 and 2018)



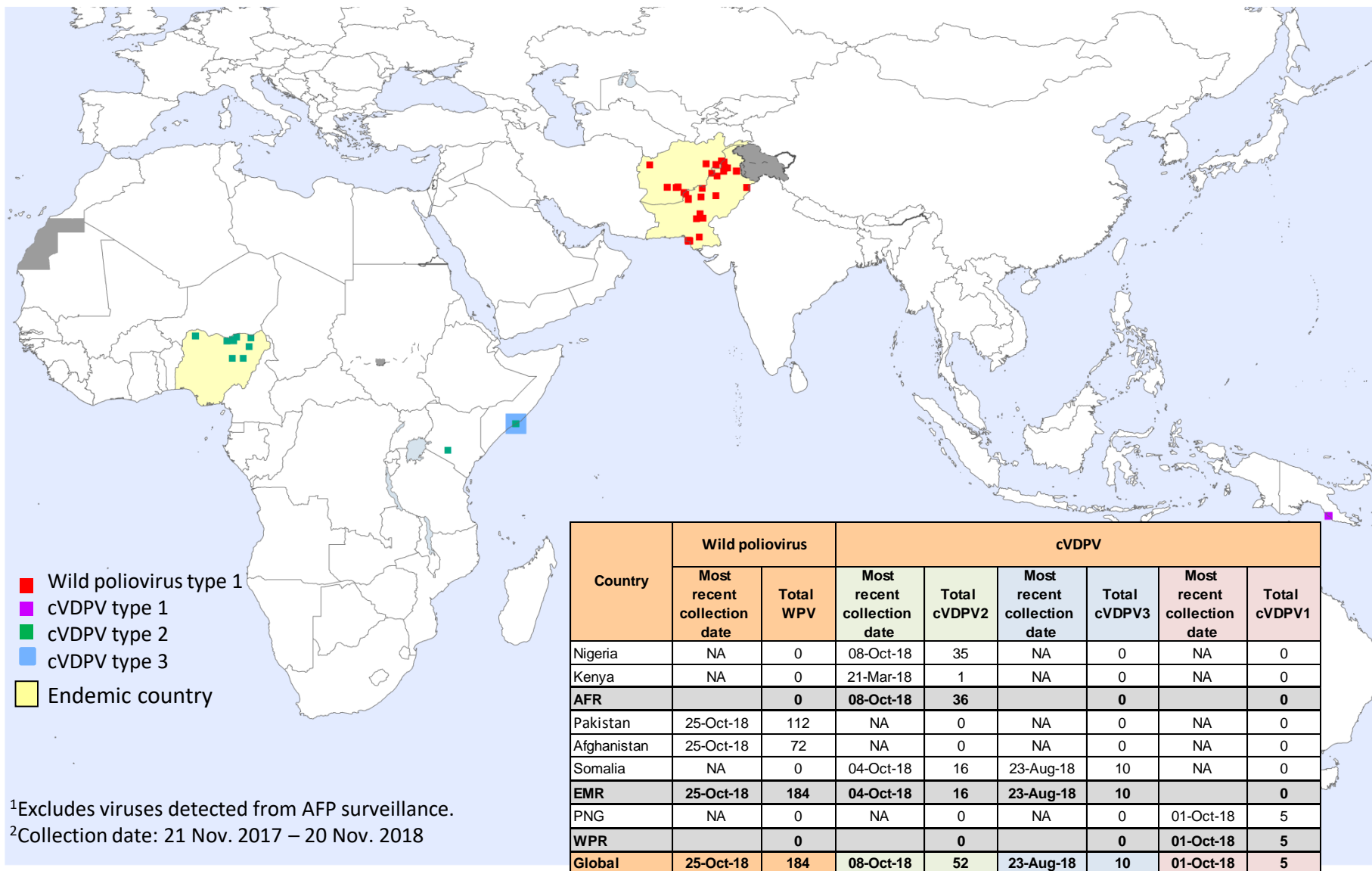
Global Wild Poliovirus & cVDPV Cases¹

Past 12 Months²



Wild Poliovirus & cVDPV Environmental Positives¹

Past 12 Months²



¹Excludes viruses detected from AFP surveillance.

²Collection date: 21 Nov. 2017 – 20 Nov. 2018

Wild Poliovirus & cVDPV Environmental Positives¹

Past 12 Months²

Public Health Emergency of International Concern

First declared under the International
Health Regulations in May 2014
Confirmed on 27 November 2018

- Wild poliovirus type 1
- cVDPV type 1
- cVDPV type 2
- cVDPV type 3
- Endemic country

Country	Wild poliovirus		cVDPV					
	Most recent collection date	Total WPV	Most recent collection date	Total cVDPV2	Most recent collection date	Total cVDPV3	Most recent collection date	Total cVDPV1
Nigeria	NA	0	08-Oct-18	35	NA	0	NA	0
Kenya	NA	0	21-Mar-18	1	NA	0	NA	0
AFR		0	08-Oct-18	36		0		0
Pakistan	25-Oct-18	112	NA	0	NA	0	NA	0
Afghanistan	25-Oct-18	72	NA	0	NA	0	NA	0
Somalia	NA	0	04-Oct-18	16	23-Aug-18	10	NA	0
EMR	25-Oct-18	184	04-Oct-18	16	23-Aug-18	10		0
PNG	NA	0	NA	0	NA	0	01-Oct-18	5
WPR		0		0		0	01-Oct-18	5
Global	25-Oct-18	184	08-Oct-18	52	23-Aug-18	10	01-Oct-18	5

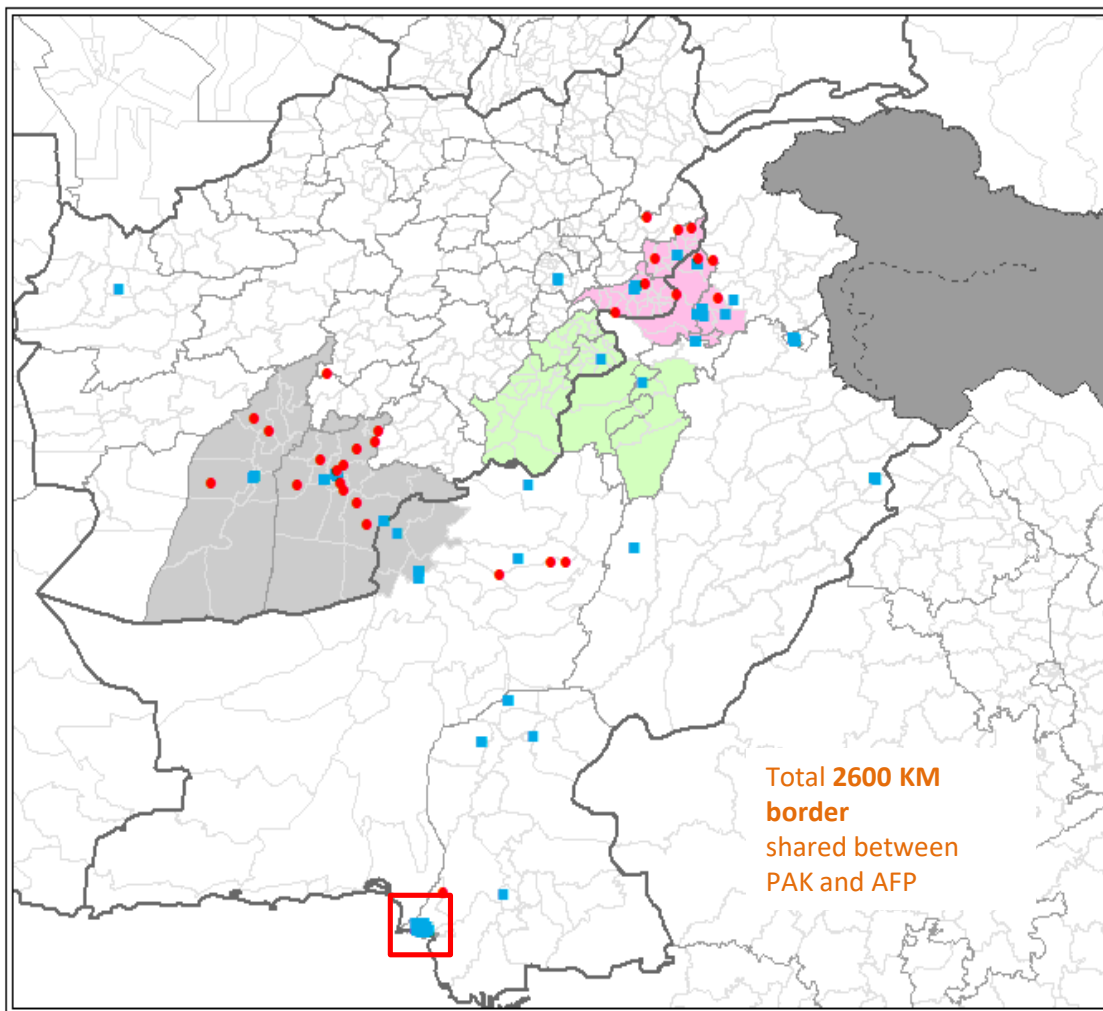
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Pakistan and Afghanistan

Pak /Afg poliovirus transmission corridors

WPV1 (AFP and ENV) reported over the past 12 months



Northern Corridor

Torkham border used for population Movement between Peshawar and Khyber in Pakistan to Nangarhar, Kunar and Laghman in East Afghanistan

Central corridor

Southern Khyber Pakhtunkhwa and the FATA in Pakistan travelling across rugged, smaller borders crossings to Paktika, Paktia and Khost provinces in the south east of Afghanistan.

Southern Corridor

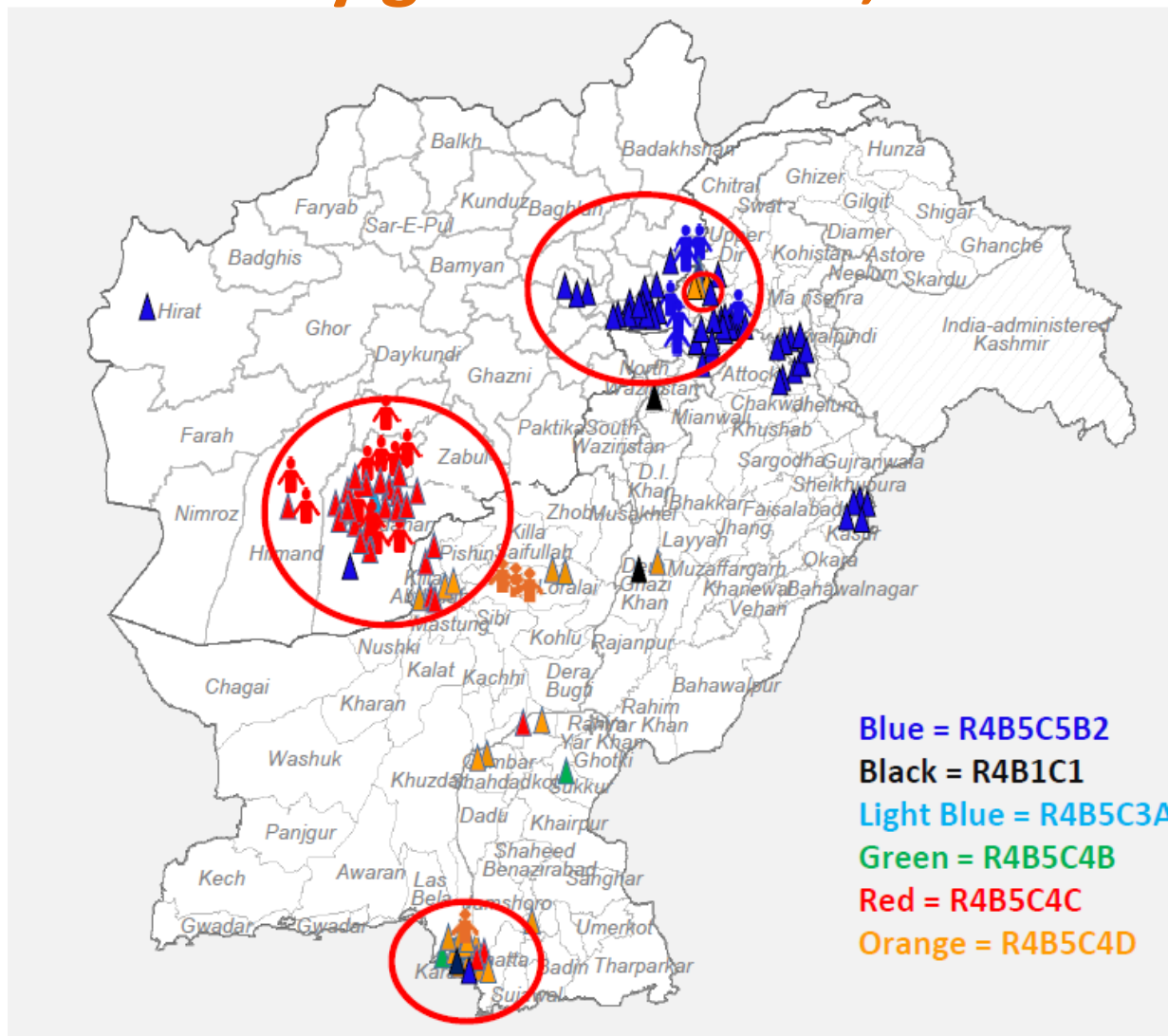
Friendship Gate (Chaman) border crossing from Pakistan's Quetta Block to the Greater Kandahar area in south Afghanistan

Karachi

■ WPV1 Env ● WPV1 Case



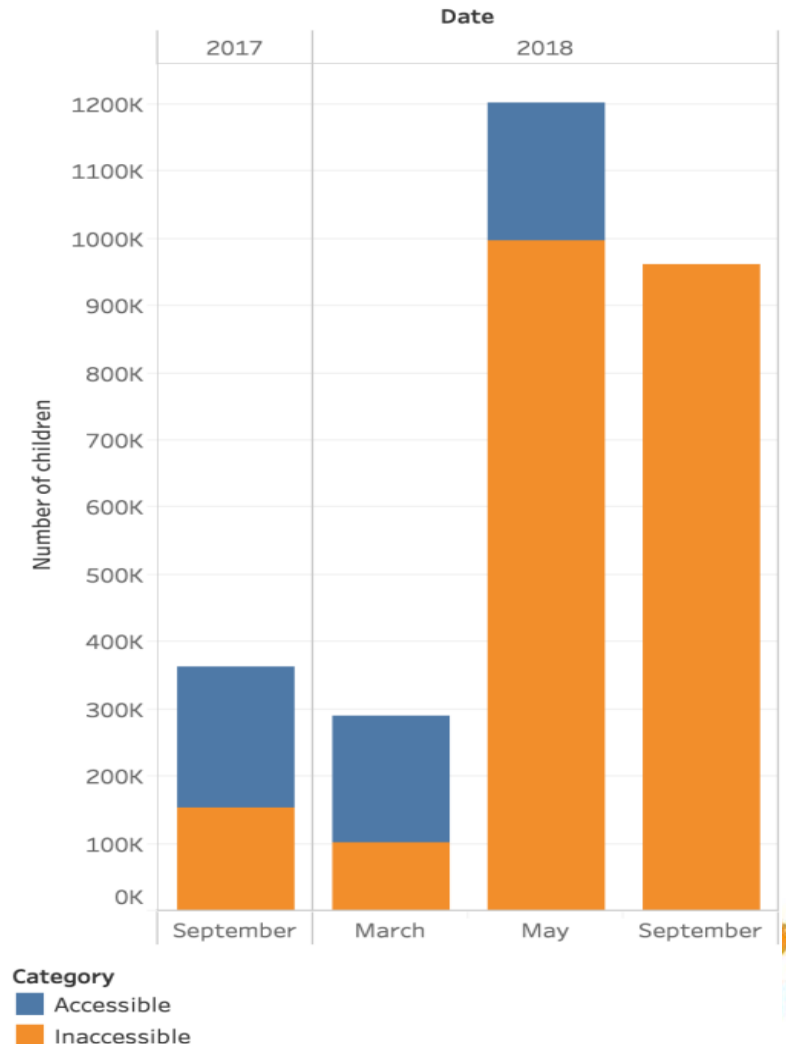
WPV1 Cases & Environmental samples by genetic cluster, 2018



Afghanistan

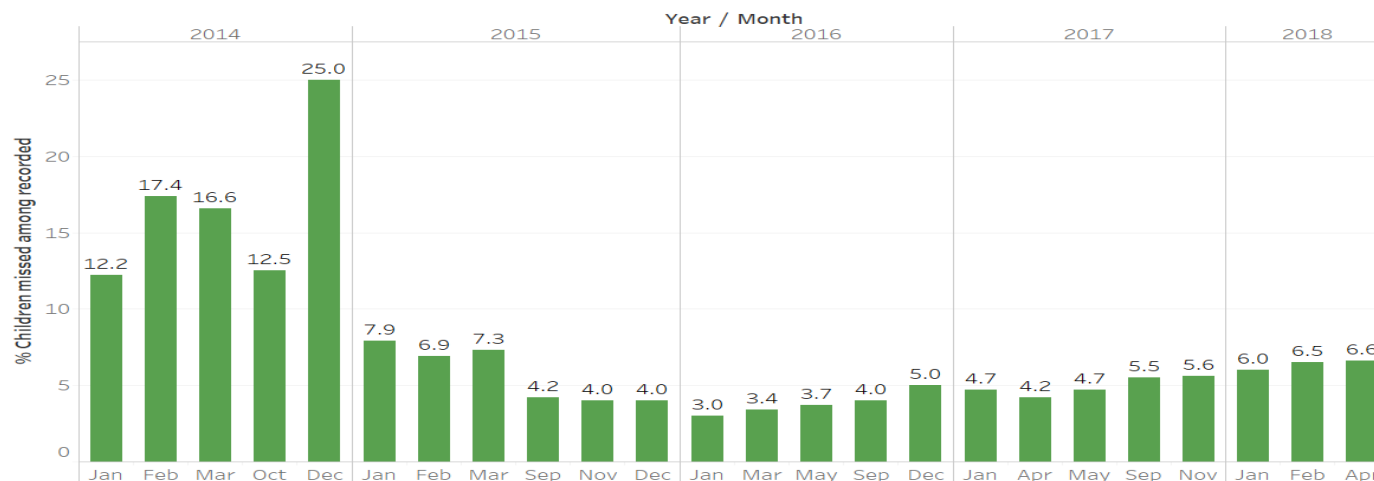
- 19 WPV1 cases in 2018 vs 10 at the same time in 2017) – Most recent case onset on 2 October, 2018
- Ongoing transmission of wild poliovirus in Northern and Southern corridors
- Genetic sequencing data shows that population groups harboring transmission in the Northern Corridor **have not been reached.**
- **Ban on house to house campaigns:** Over 1 million children missed since May
- **Gaining & maintaining access remains the most significant bottleneck to stopping transmission**

Missed Children in Afghanistan, Sept. 2017 - Sept. 2018



Pakistan

Recorded missed children remaining unvaccinated at end of campaign, Pakistan, 2014-2018



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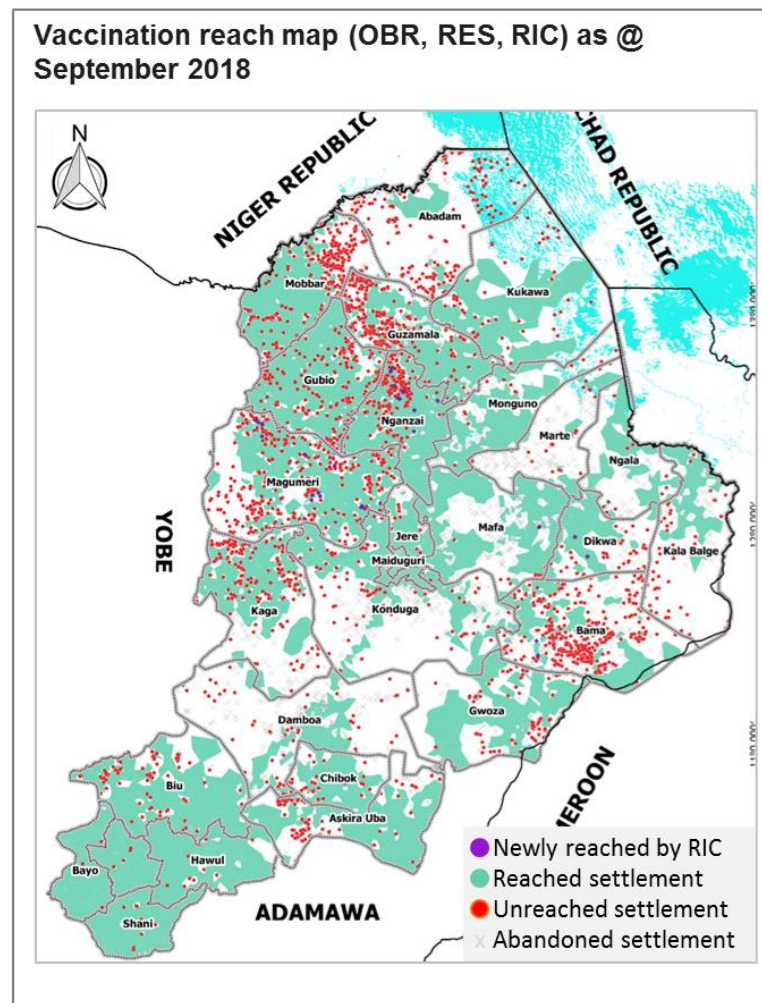
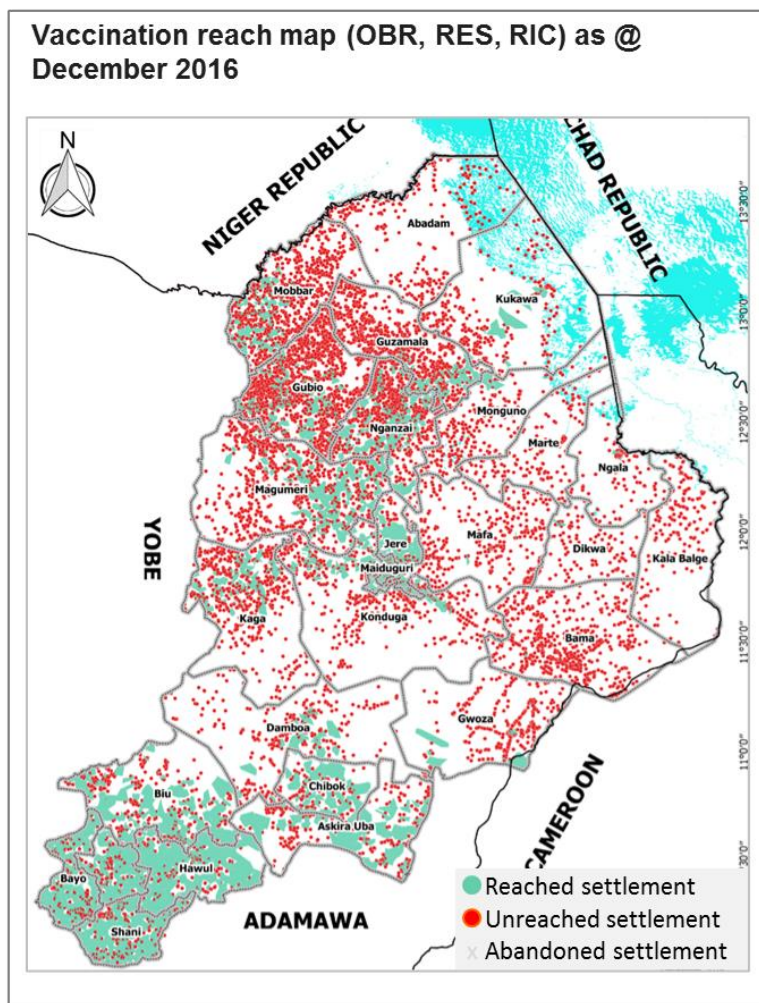
- 8 WPV1 cases in 2018 vs 5 at same date in 2017. Most recent case onset on 7 October, 2018
- Environmental positive samples isolated primarily in core reservoirs but also in many other areas of the country areas.
- General fatigue and resistance to vaccination
- Northern and Southern Transmission Corridors, and Karachi, **remain the greatest risk to polio eradication in Pakistan & Afghanistan**

Pakistan/Afghanistan: Main risks

- Ongoing transmission in the Southern & Northern corridors
- Accessing all children in highly mobile populations
- Impact of elections and sustaining government commitment at all levels
- Systemic weaknesses in EPI throughout many parts of both countries
- Resistance to vaccination (both overt and covert)
- In Afghanistan
 - Bans on house to house campaigns in Southern Province
 - Increasing inaccessibility in Eastern region
 - Deteriorating security situation creating environment of fear
 - Challenges in getting female front line workers particularly in high risk areas

Nigeria

~70,000 Children unreached in Borno



In August 2016 ~650,000 children were trapped in Borno. Today, with innovative strategies, ~70,541 children remain unreached in ~ 6,000 settlements (data aggregated from satellite imagery, Vaccinates tracking system, Reach Inaccessible Children strategy and profiling)



cVDPV Outbreaks

The good news:

Syria cVDPV2 outbreak likely interrupted

- Last cVDPV2 sample detected 13 months ago: 21 September 2017
- Recent outbreak assessment review concluded:
 - Absence of cVDPV2 detected for 12 months, in the context of continued high quality surveillance, makes it highly likely that cVDPV2 transmission has been interrupted;
 - Extraordinary achievement on the part of Regional and Syria teams in a particularly challenging context.

Nigeria cVDPV2 outbreak

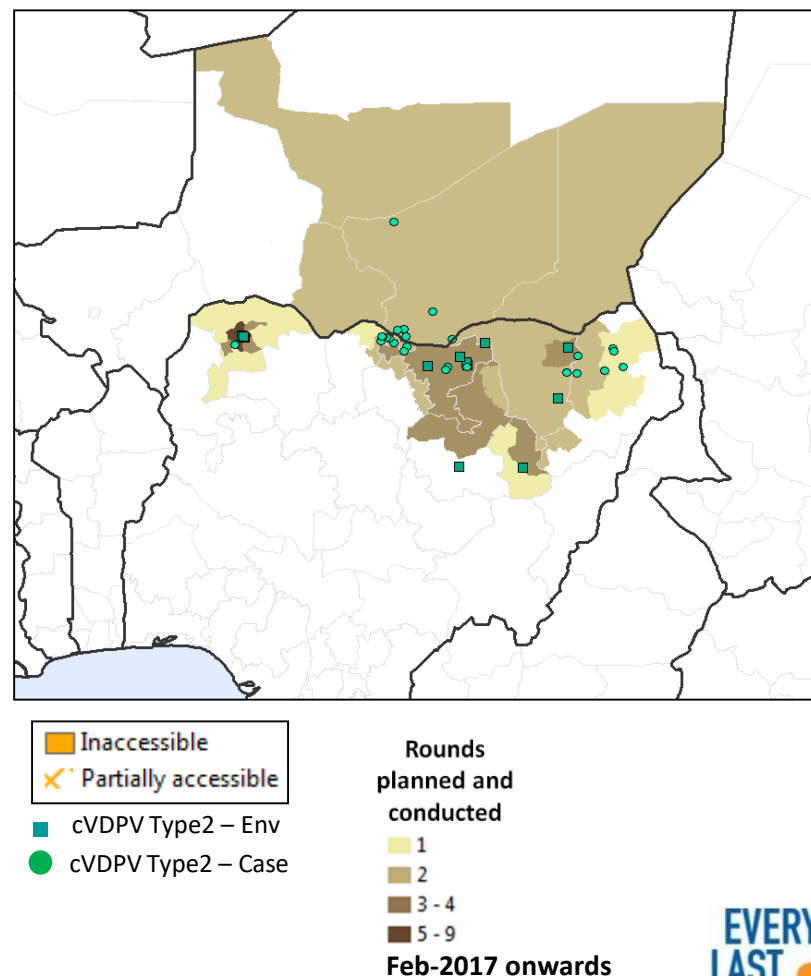
2 separate cVDPV2 outbreaks:

- **Sokoto North** – 1 case, 14 Env. positives
- **Jigawa outbreak**– 23 cases, 29 Env. positives **including 6 cases in Niger.**

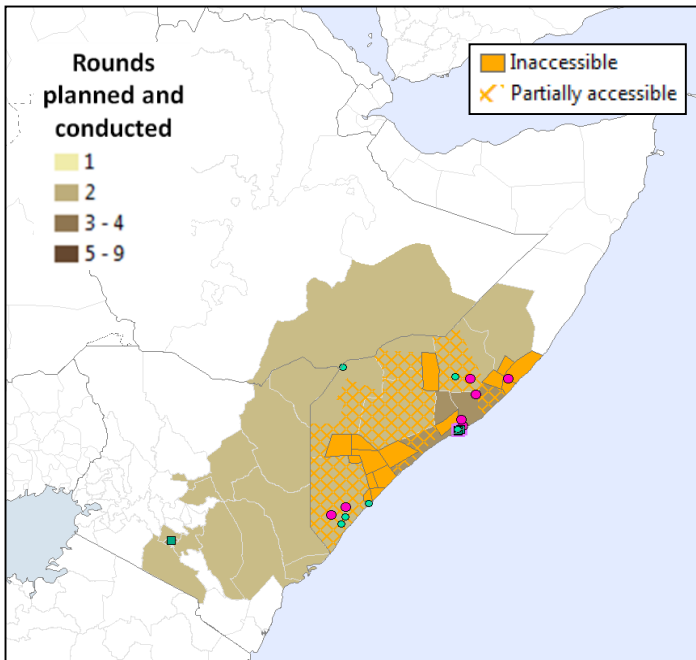
Key Risks

- Inaccessibility in Borno State
- Large scale population movement within and across the countries
- Weak political engagement in Niger

Distribution of post switch cVDPV2 cases & Env. Samples in Nigeria

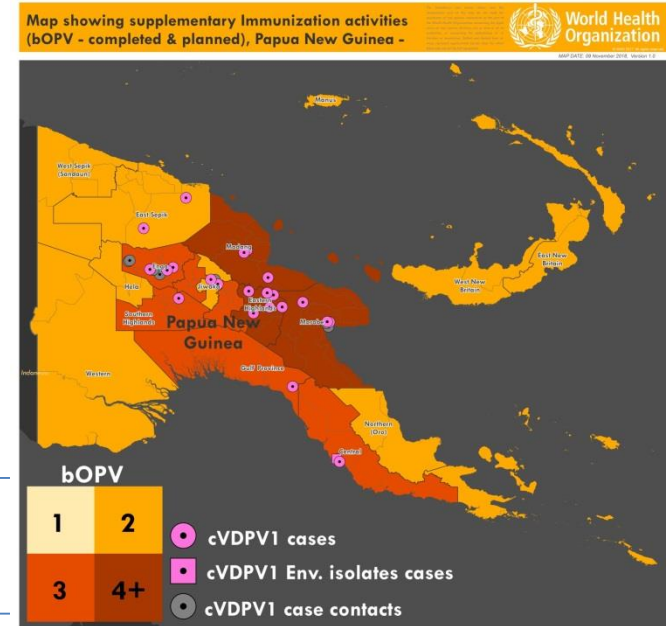
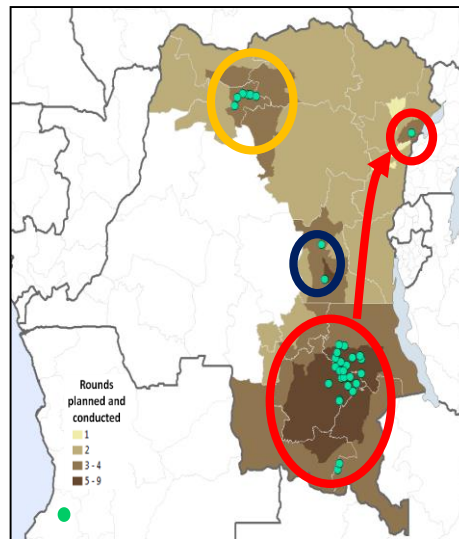


Other ongoing cVDPV outbreaks



HoA: 5 cVDPV2 cases,
6 cVDPV3 cases and
1 co-infection since
October 2017

DRC: 37 cVDPV2 cases
since May 2017



PNG: 21 cVDPV1 since
25 April 2018

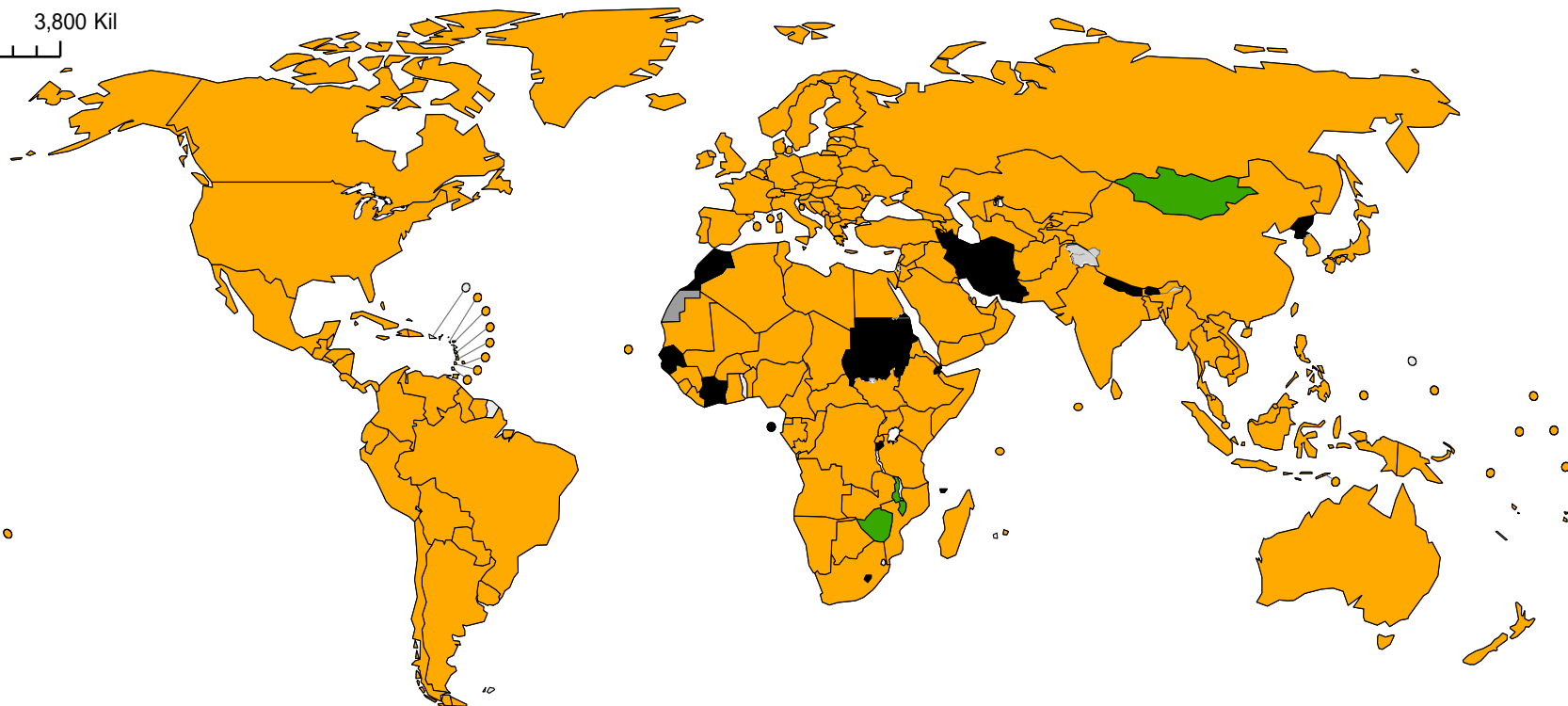
Polio Eradication and Endgame Strategy

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



Countries using IPV vaccine to date

0 950 1,900 3,800 Kil



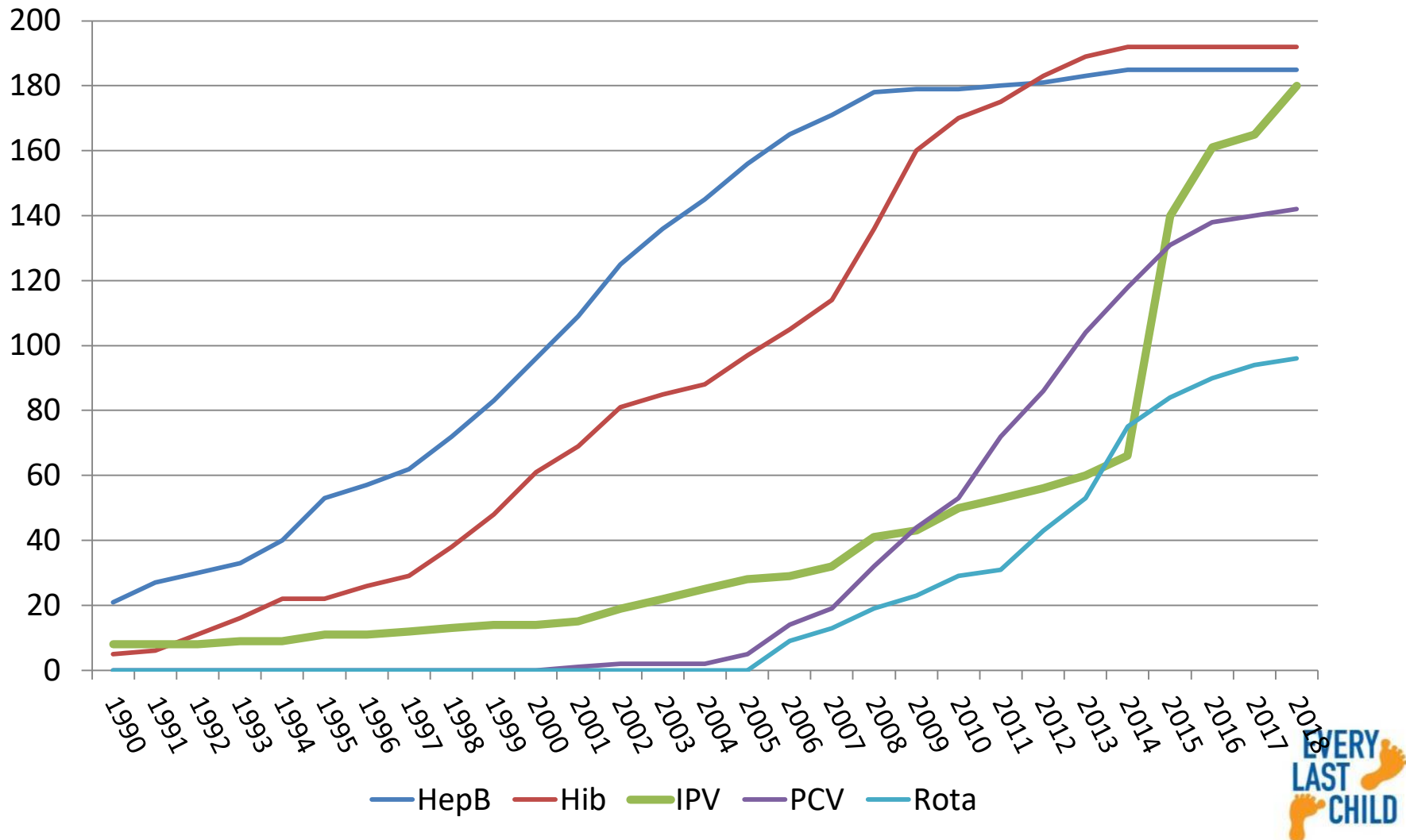
- Introduced* to date (176 countries)
- Re-introduced (15 countries)
- Formal commitment to introduce in 2018-2019 (3 countries)
- Not available
- Not applicable

* Including partial introduction in India

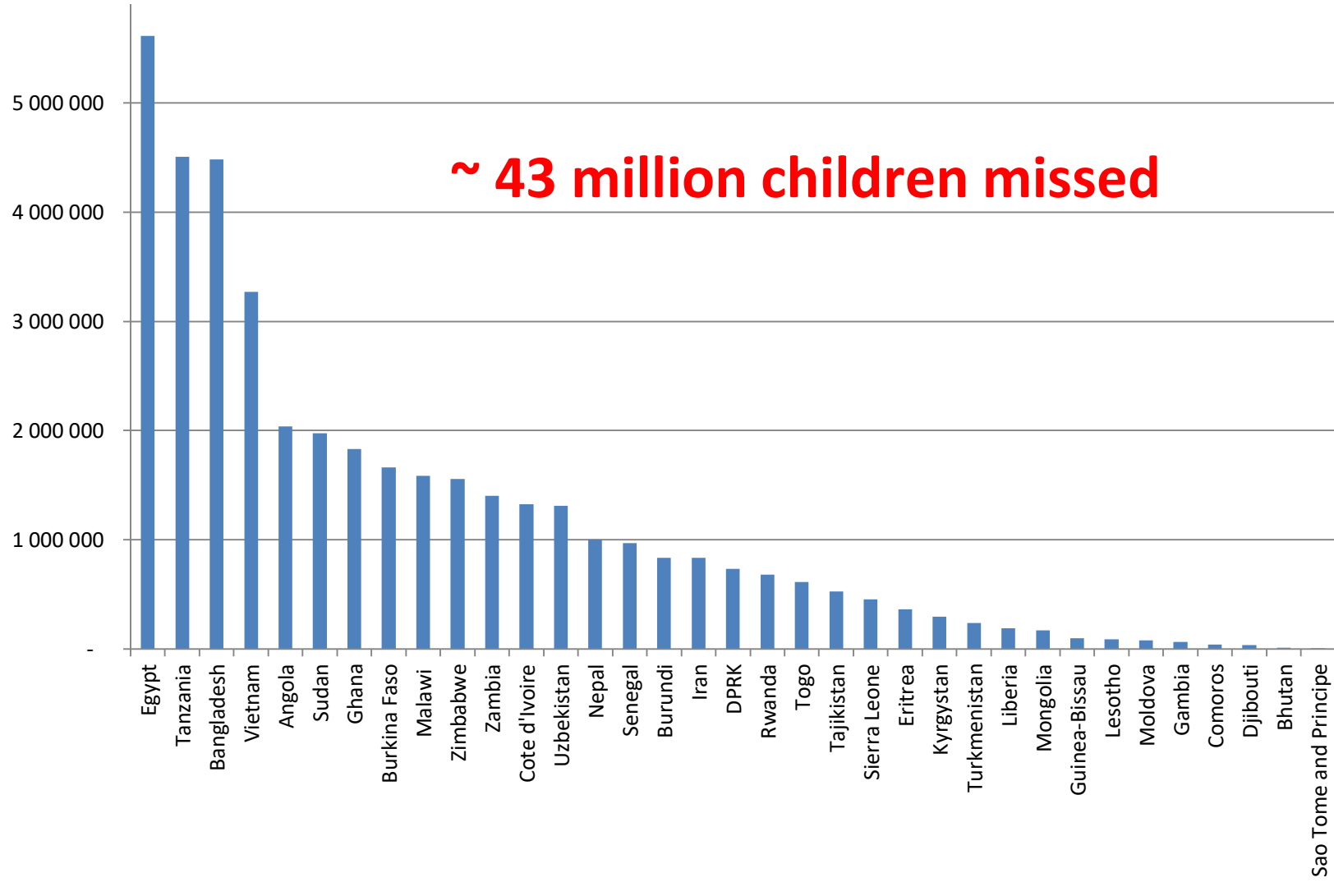
Data source: WHO/IVB Database, as of 11 October 2018
Map production Immunization Vaccines and Biologicals (IVB), World Health Organization

IPV introduction

An unprecedented achievement



Missed cohorts in affected countries

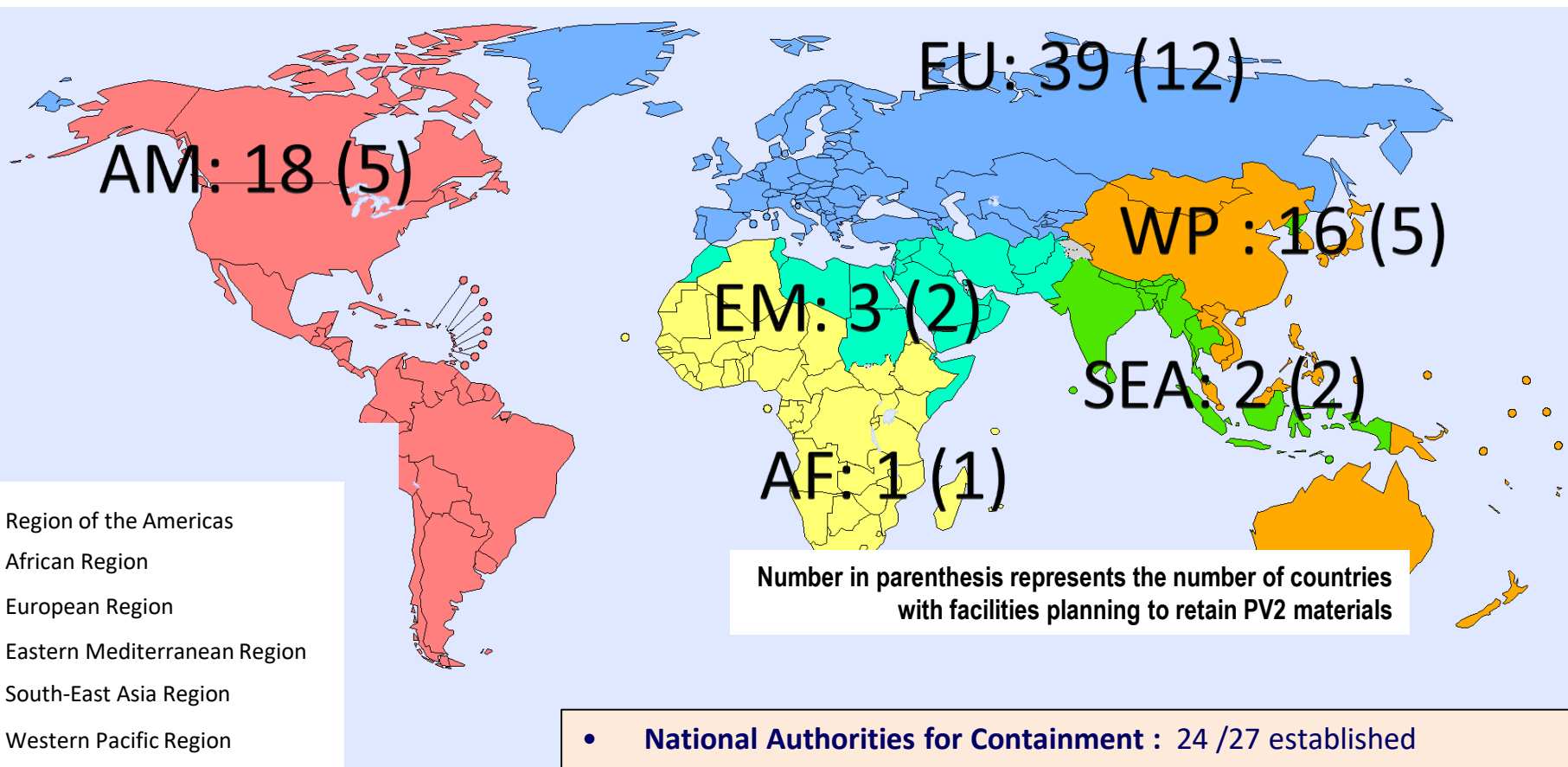


Polio Eradication and Endgame Strategy

1. Poliovirus detection & interruption
2. OPV2 withdrawal, IPV introduction, immunization system strengthening
- 3. Containment & Global Certification**
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27 countries plan to retain poliovirus type 2 materials in 79 Facilities



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the 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.

- **National Authorities for Containment** : 24 /27 established
- **Poliovirus Essential facilities** : 6 applications for containment certification (certificate of participation) submitted to GCC
 - Application endorsed by GCC: 1
 - Applications on hold: 2
 - Applications under review: 3

Certification of polio eradication

Global Certification Commission: 29 October – 1 November

- **Certification of the eradication of the wild polio virus** will follow a sequential approach with WPV3 eradication being certified ahead of WPV1
- **The validation of the absence of cVDPVs** will only be possible after the total cessation of use of all OPVs

The sequential approach:

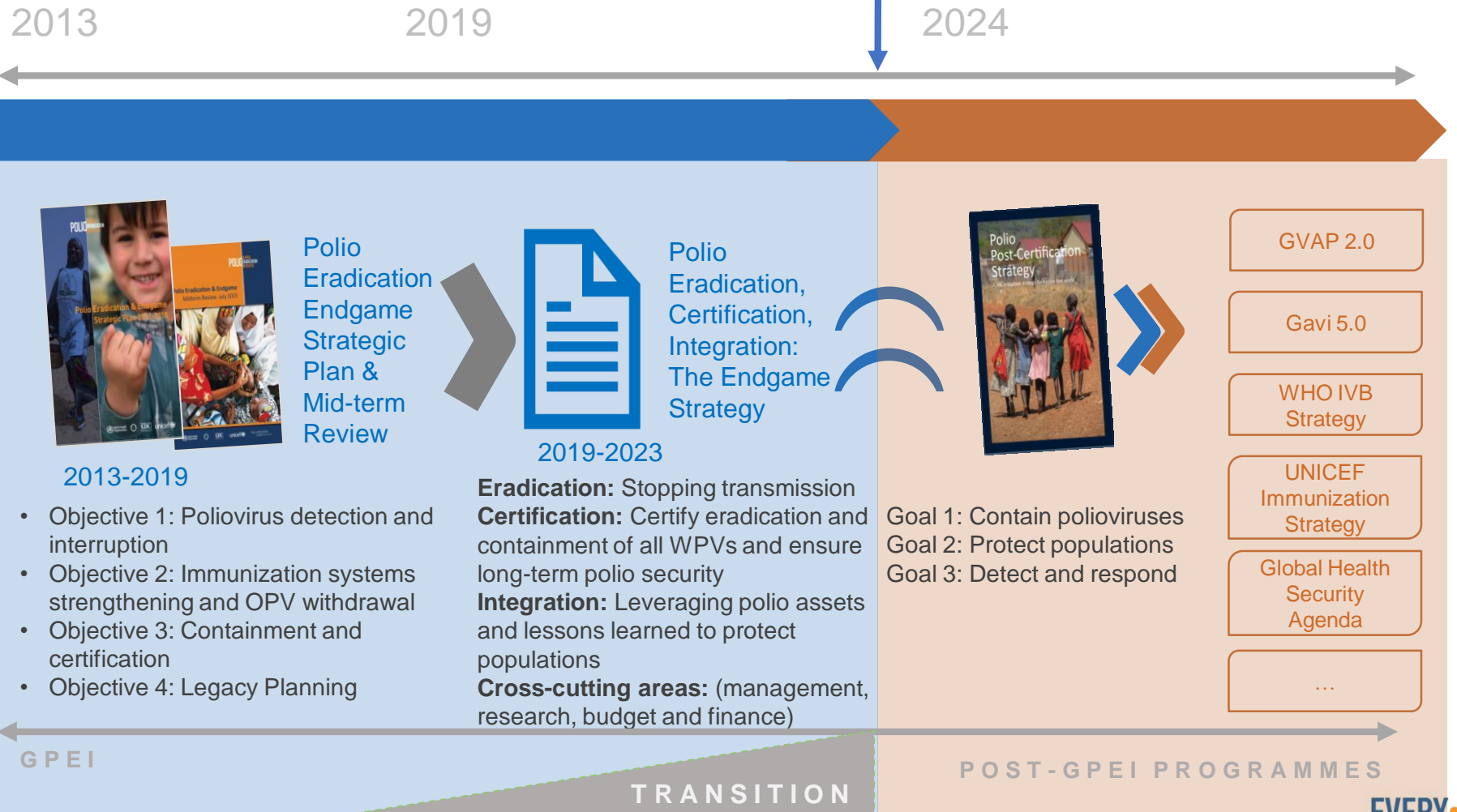
- WPV type 3 eradication certification (after African region certification)
- Certification of WPV1 eradication (~ 3 years after last WPV1 detection)
- Validation of the absence of cVDPVs (after global OPV cessation)

GPEI Strategy 2019-2023

GPEI Strategy 2019-2023

- The Polio Eradication & Endgame Strategic Plan (PEESP) 2013-2018 was developed to guide the program to the anticipated goal of polio eradication with a cost of \$5.5B
 - The PEESP was updated in 2015 after a mid-term review, and extended through 2019 and an additional \$1.5B
- Though progress continues, transmission has not been interrupted in Pakistan and Afghanistan.
- The polio program is being extended to achieve eradication
 - A new budget for the period 2019-2023 was approved by the Polio Oversight Board in September 2018 to support the program's work at the level of US \$ 4.3bn, of which US \$ 3.27bn must be mobilized;
 - Overlap with the WHO GPW budget in the context of transition will be clarified.
 - GPEI is reviewing current strategies to define the changes and innovations required to achieve eradication

Overview



What's next ?

Main activities for the next six months

Global

- Develop strategy for 2019-2023
- Address outcomes of IMB external review and reflect in new strategy
- Mobilize resources to support 2019-2023 strategy

Endemic countries

- Maintain political commitment in the face of changes of governments
- Maintain momentum in spite of “fatigue”
- Continue deployment of qualified personnel

Outbreak Countries

- Improve the quality of outbreak response in DRC, PNG, HoA, Nigeria and Niger
- Secure high level political commitment to respond to these outbreaks
- Identify ways to leverage GPEI efforts to contribute to strengthening routine immunization beyond initial acute outbreak response

Thank you

Merci

