

Global Polio Eradication Initiative: Program Update

SAGE, Geneva, 10 October 2019



BILL & MELINDA
GATES foundation

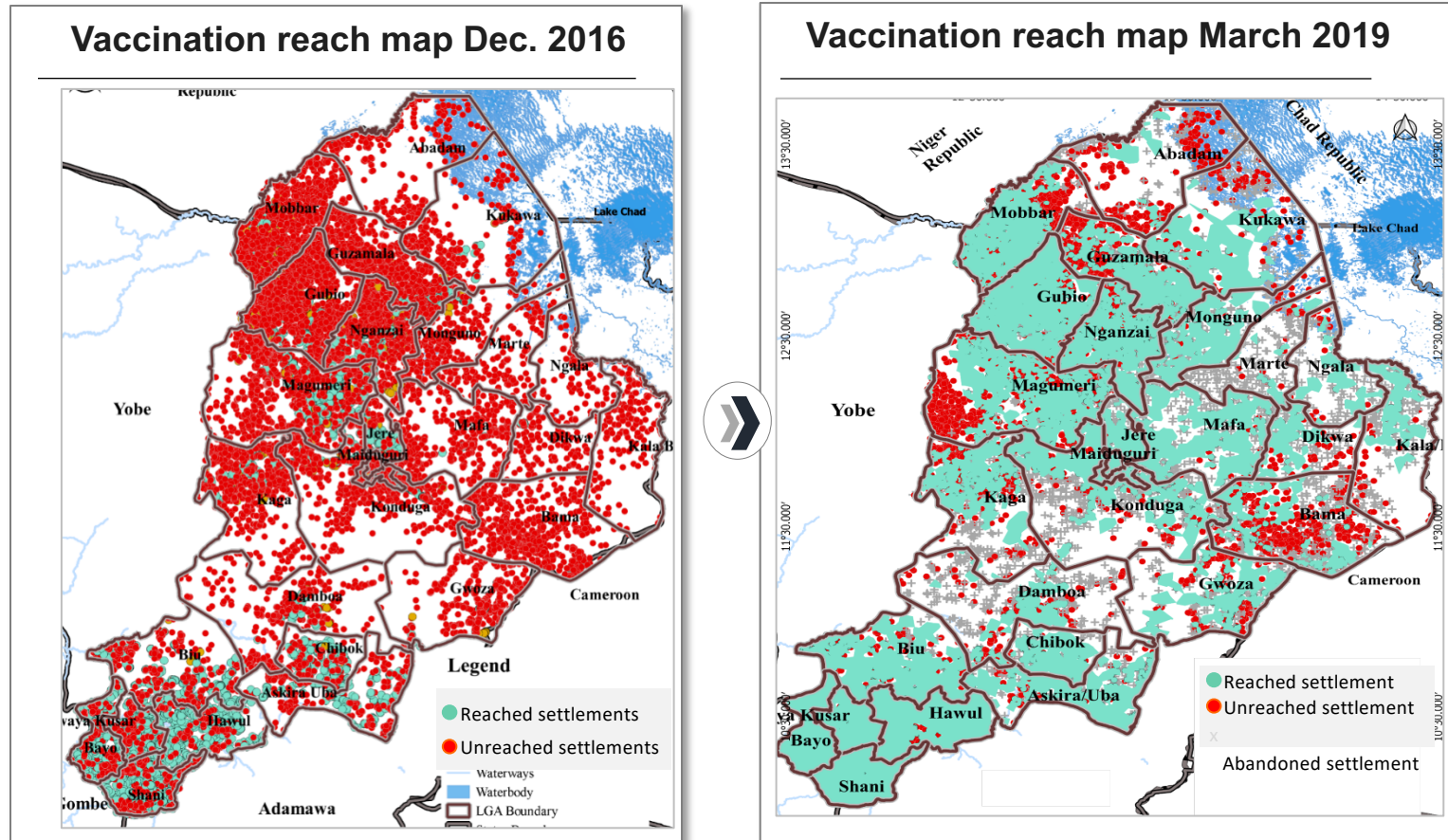


The “good” news

- 7 years have passed without detection of WILD poliovirus type 3, and GCC will deliberate next week whether the evidence is sufficient to declare eradication
- 3 years have passed with detection of WILD poliovirus in Africa, and African RCC will convene in June 2020 to determine regional certification
- IPV supplies are now sufficient for routine immunization, and catch-up of missed cohorts is in progress
- The number of inaccessible children in formerly Boko Haram controlled areas in Borno State, Nigeria has been drastically reduced
- EURO, PAHO, SEARO remain polio-free (incl. cVDPV2)
- Gavi (the Vaccine Alliance) has joined GPEI



Increasing access in Borno State, Nigeria



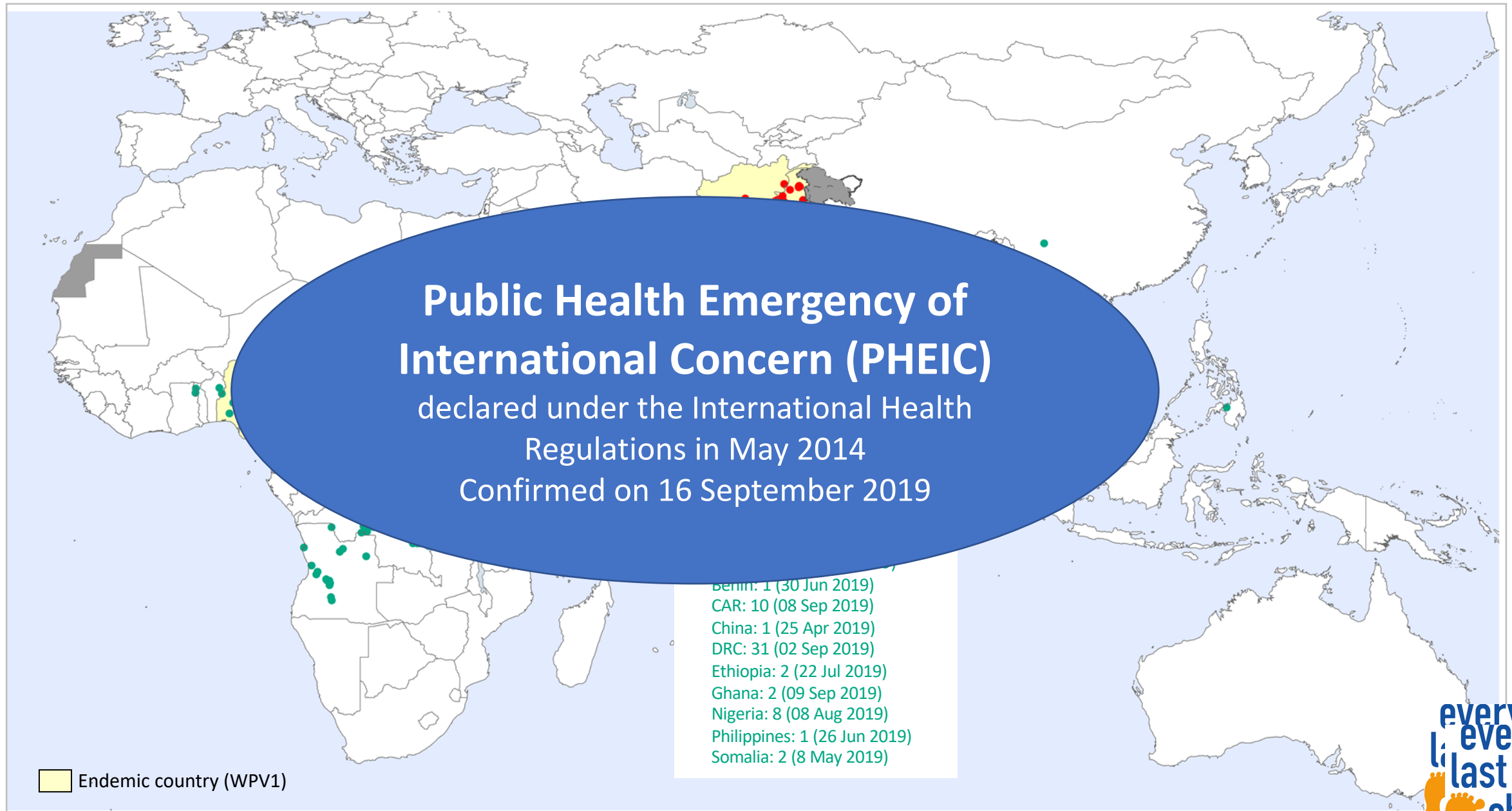
Source: Borno EOC data team analysis

- Last virus 27 September 2016 in healthy child in Borno
- Last case 21 August 2016
- **August 2016, ~ 600,000 children** unreached across over 10,000 communities
- **February 2019, ~ 60,500 children** remain unreached in ~ 3,000 settlements

The “bad” news

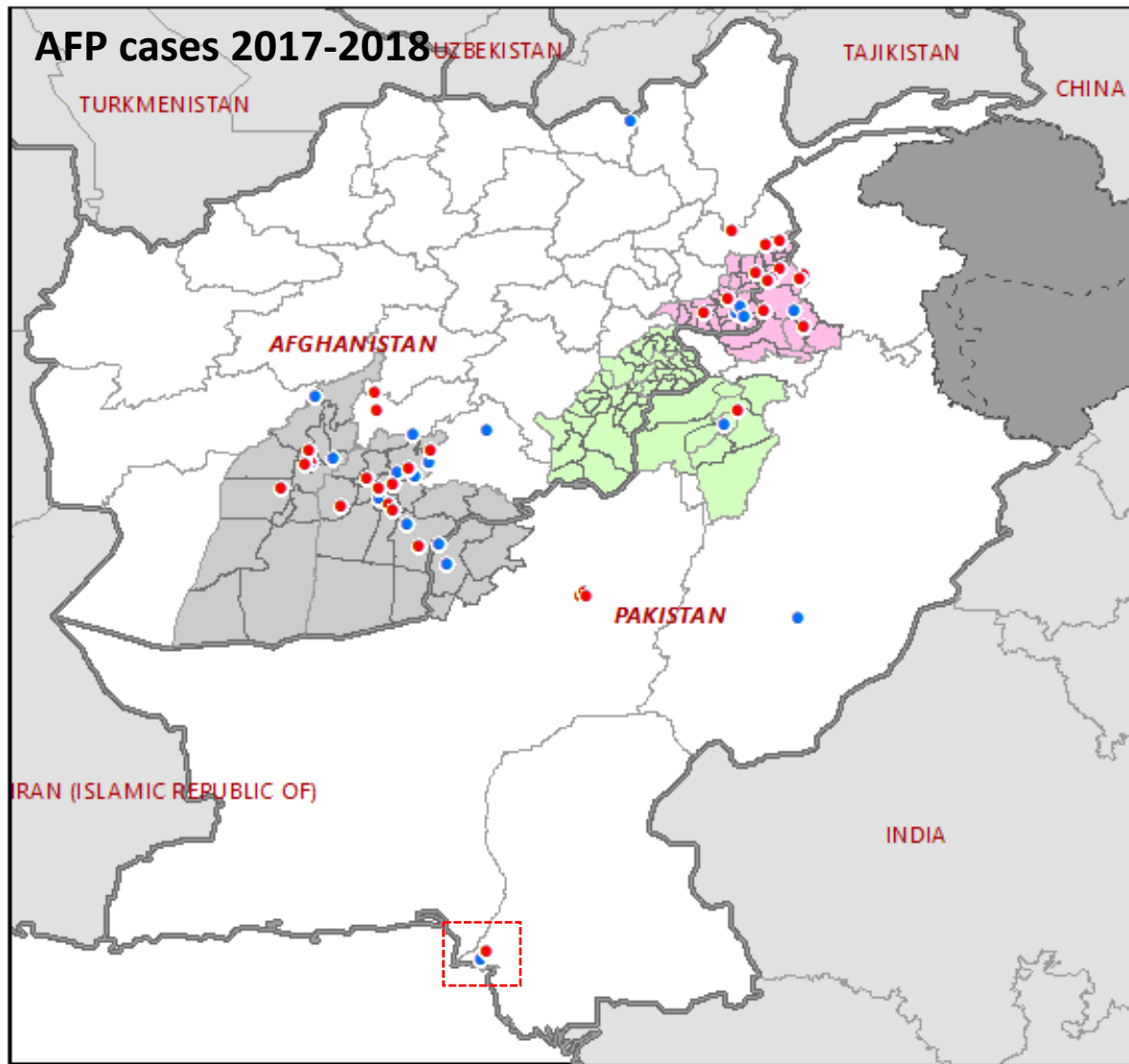
- The nation-wide Taliban ban on house-to-house vaccination in Afghanistan is severely affecting the ability of the program to carry out campaigns, and will likely lead to massive outbreaks, if not revoked soon
- In Pakistan, a new government is starting to provide national leadership – but >6 month have passed without large-scale vaccination campaigns, further facilitating the country-wide spread of WILD poliovirus type 1
- Wild type 1 cases increased from 33 cases in 2018 to 88 cases so far in 2019
- AFRO, EMRO and WPRO battle cVDPV2 outbreaks

Wild poliovirus type 1 & circulating vaccine-derived poliovirus cases¹, previous 6 months²



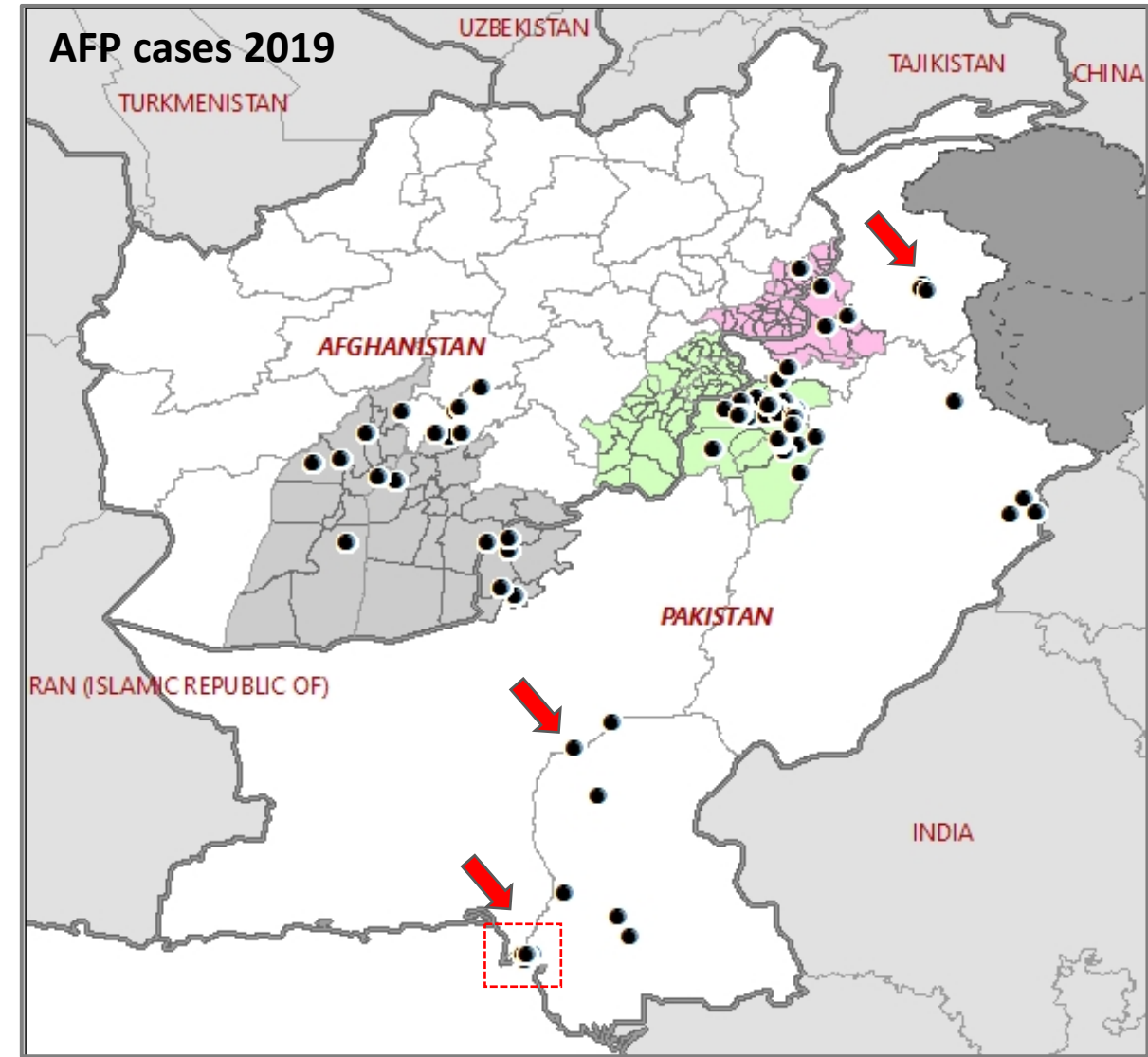
¹Excludes viruses detected from environmental surveillance ; ²Onset of paralysis: 09 Apr 2019 – 08 Oct 2019

Wild poliovirus type 1 cases in Afghanistan and Pakistan 2017-2019*



- WPV1 Case 2018 (n=33) AFG=21; PAK=12
- WPV1 Case 2017 (n=22) AFG=14; PAK=8

- Northern corridor
- Central corridor
- Southern corridor
- Karachi

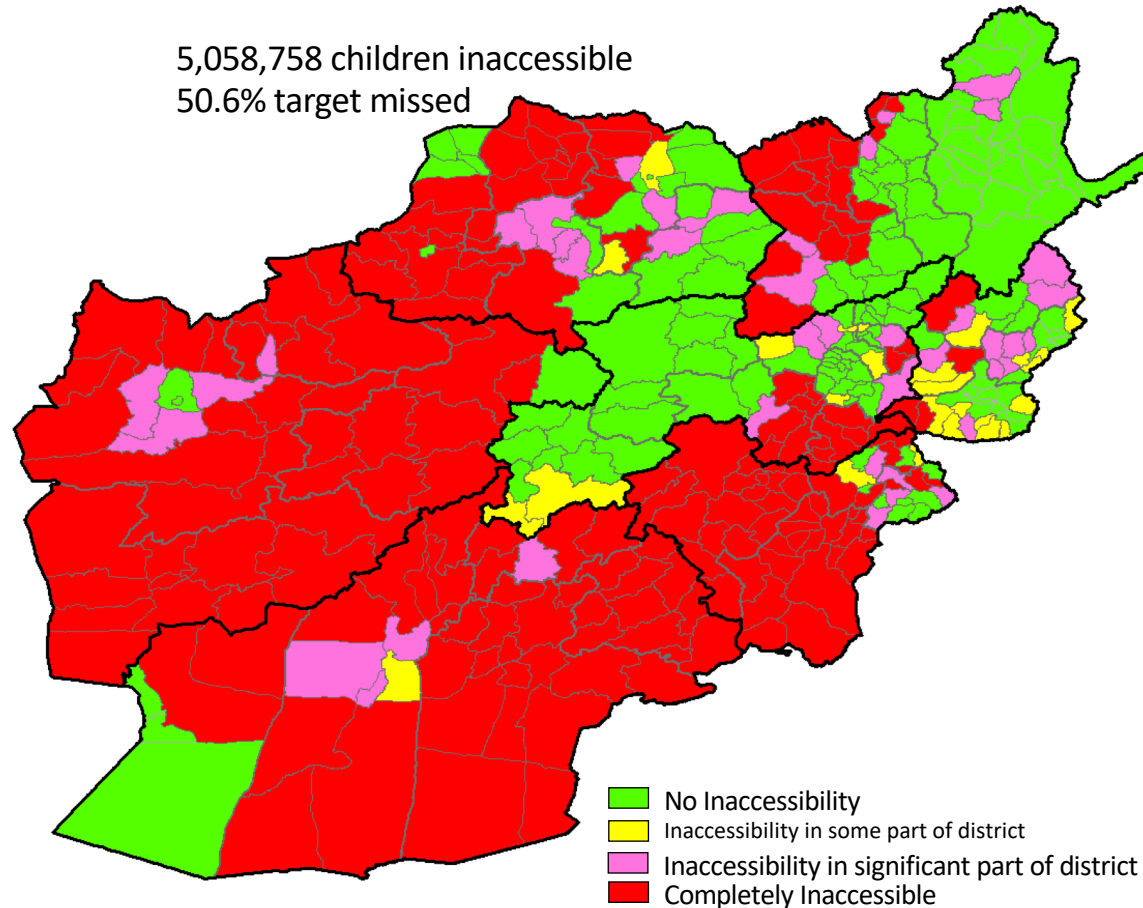


- WPV1 Case 2019 (n=88) AFG=16; PAK=72

First SIA after house-to-house vaccination ban in April 2019

Could only be implemented in limited areas from 5 August 2019, limited to 3 days

5,058,758 children inaccessible
50.6% target missed



Threats/incidents during campaign:

- Threat of exploding PEMT office if campaign implemented in East
- Campaign stopped on 3rd day in Nad-e-Ali (Helmand)
- Cluster supervisor of Barkunar (Kunar) summoned and detained for several hours, warned to stop campaign
- PEMT Kunar received threat call and warned of consequences if campaign started
- Campaign stopped in two districts of Jawzjan after threat from AGE



AFGHANISTAN

September 25, 2019

23:54 GMT

UPDATED September 26,
2019 20:17 GMT

By [RFE/RL](#)

Taliban Lifts Ban On WHO Vaccine Operations In Occupied Afghan Territories

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An Afghan health worker administers polio vaccine drops to a child in Afghanistan. (file photo)

In its September 25 statement, the Taliban offered a guarantee of safety for WHO staff. But the group also insisted that the WHO conduct only health-related work, get the extremists' permission before hiring workers, and carry out vaccine campaigns only in health centers.

25 September 2019
Statement



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13K



67



A relative mourns a female polio vaccinator killed by gunmen in Pakistan in January 2018. AP PHOTO/ARSHAD BUTT

Surging cases have dashed all hope that polio might be eradicated in 2019

By [Leslie Roberts](#) | Jul. 10, 2019 , 5:20 PM

The global initiative to eradicate polio is badly stuck, battling the virus on two fronts. New figures show the wild polio virus remains entrenched in Afghanistan and in Pakistan, its other holdout, where cases are surging. In Africa, meanwhile, the vaccine itself is spawning virulent strains. The leaders of the world's biggest public health program are now admitting that success is not just around the corner—and intensively debating how to break the impasse.

"The biggest problem for me for a long time was recognizing that we truly have a problem, and business as usual will not get us to the finish line," says Roland Sutter, who leads polio research at

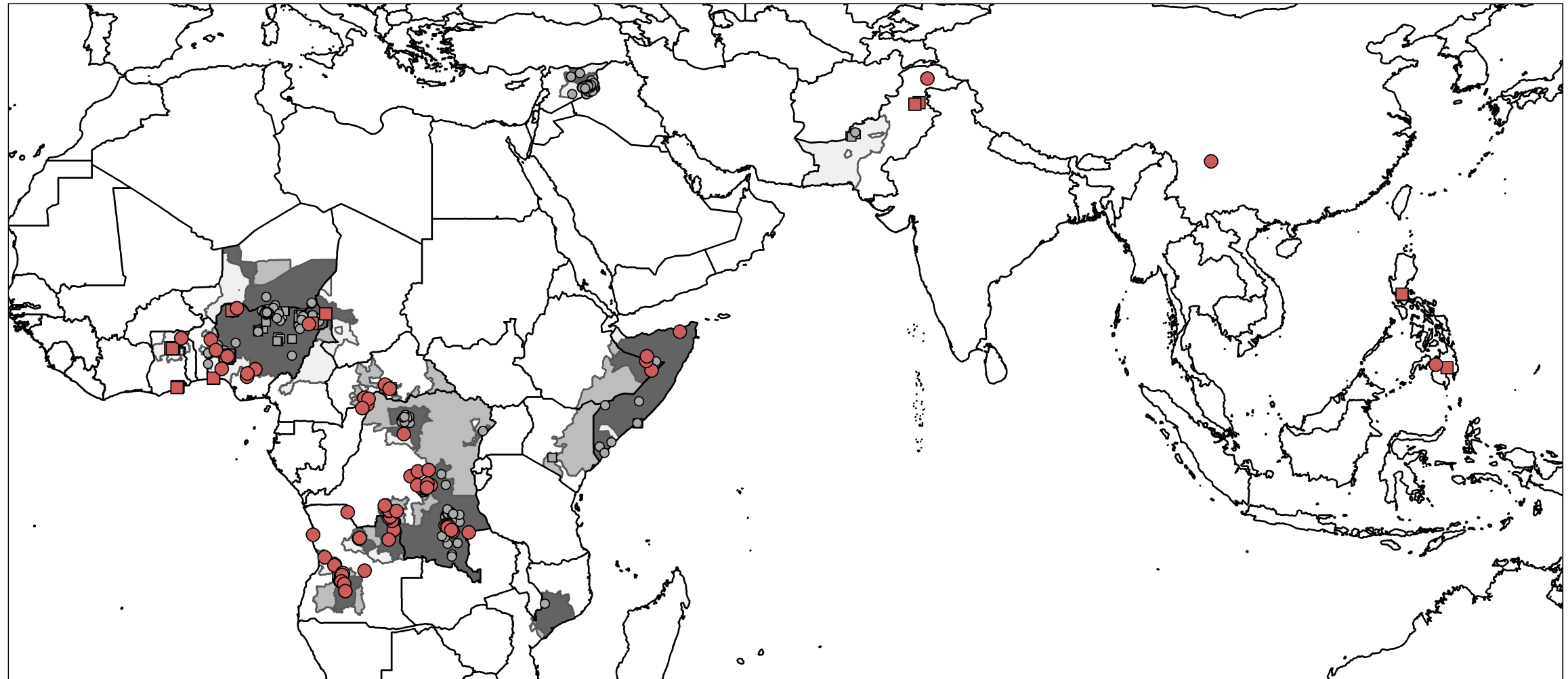
Pakistan

- Polio workers are still targeted for assassination
- Security service protection is working by-and-large
- Silent refusals an continuing problem

An “evolving” new challenge

- The program is battling many outbreaks of cVDPV2 in Sub-Saharan Africa (and at risk of re-establishing poliovirus type 2 endemicity in Africa) – and a change in epidemiology recently
- Detection of cVDPV2 outbreaks in Asia (China, Pakistan and the Philippines) may herald a global emerging problem
- Rapid depletion of global mOPV2 stockpile requires urgent action

CVDPV2 EPIDEMIOLOGY



CVDPV2 EPIDEMIOLOGY

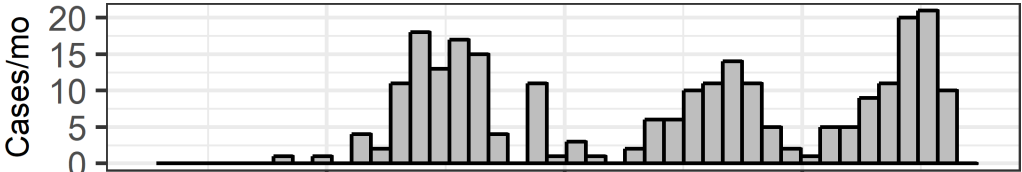
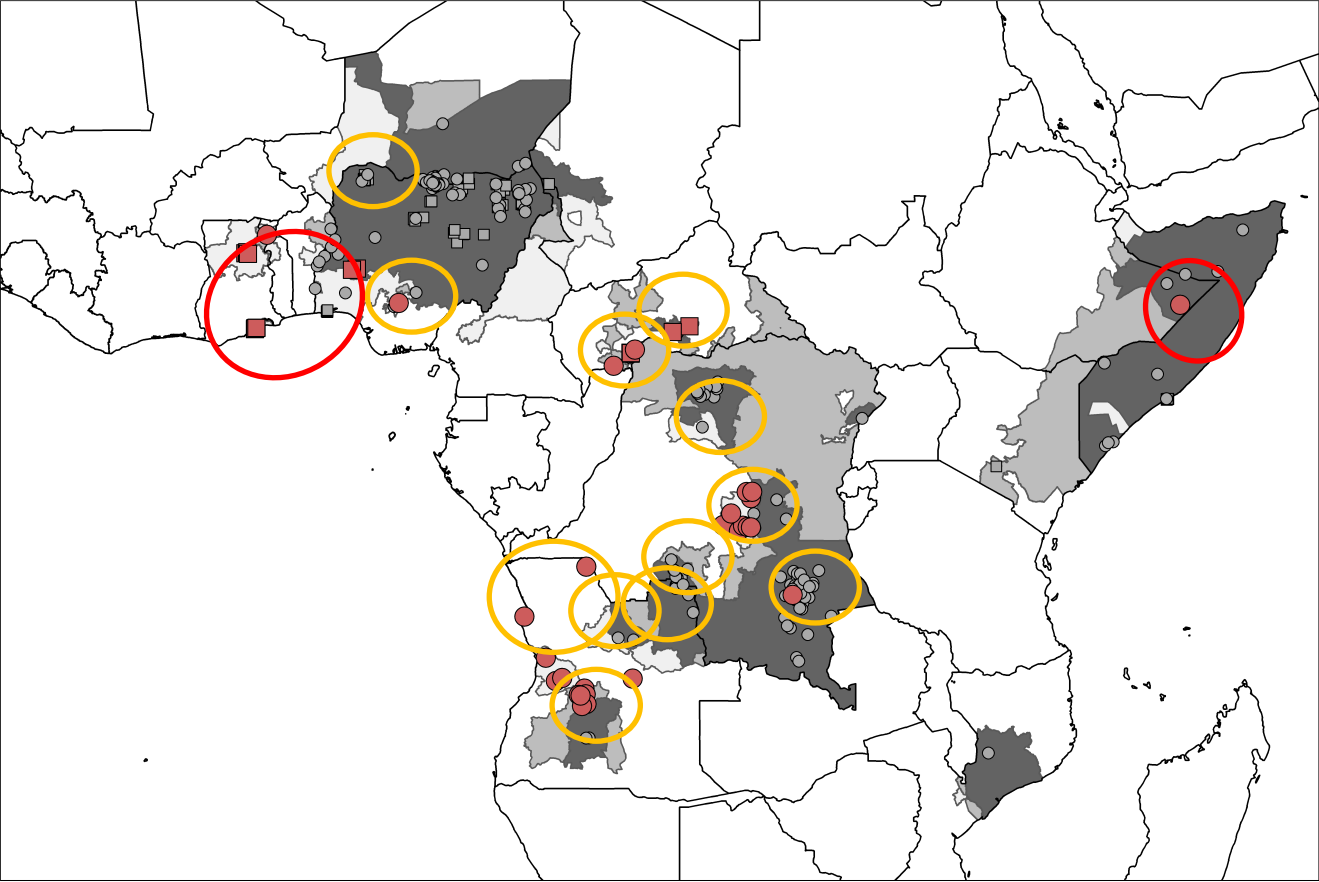
mOPV2 SIAs



Detected in the
last 3 months
(since July 2019)



Detected > 3
months ago



CAF-BIM-3
ANG-HUA-2
ANG-HUA-1
PHL-1
NIE-KGS-2
NIE-KGS-1
ANG-LNO-3
RDC-KAS-3
CAF-BIM-2
CAF-BIM-1
CAF-BAM-2
RDC-TPA-1
NIE-SOS-5
CAF-BAM-1
ANG-HUI-1
RDC-SAN-1
ANG-LNO-2
ANG-LNO-1
RDC-KAS-2
NIE-SOS-4
RDC-HLO-2
RDC-KAS-1
MOZ-ZAM-2
RDC-HKA-1
DRC-MON-1
CHN XXX
NIE-JIS-1
NIE-SOS-3
SOM-BAN-1
SYR-1
DRC-MAN-1
DRC-HLO-1
NIE-SOS-2
PAK-QTA-1
SYR-DEI-1
cVDPV-A

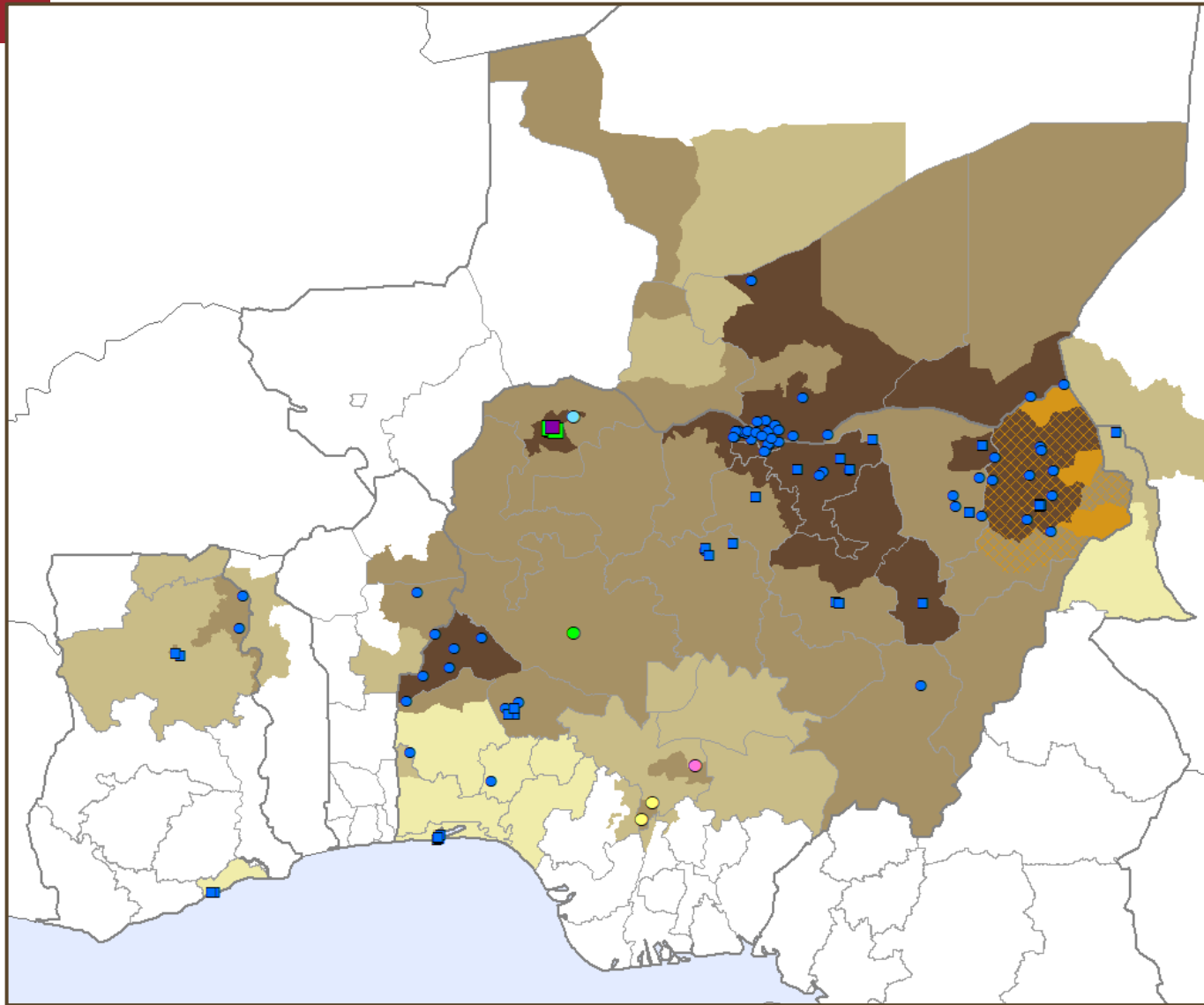
Outbreaks new in 2019

Established outbreaks

2017 2018 2019

NIGERIA/NIGER/CAMEROON/GHANA cVDPV2 outbreaks, 2018-2019

mOPV2 rounds from 01-Feb-2017 to 31-Dec-2019



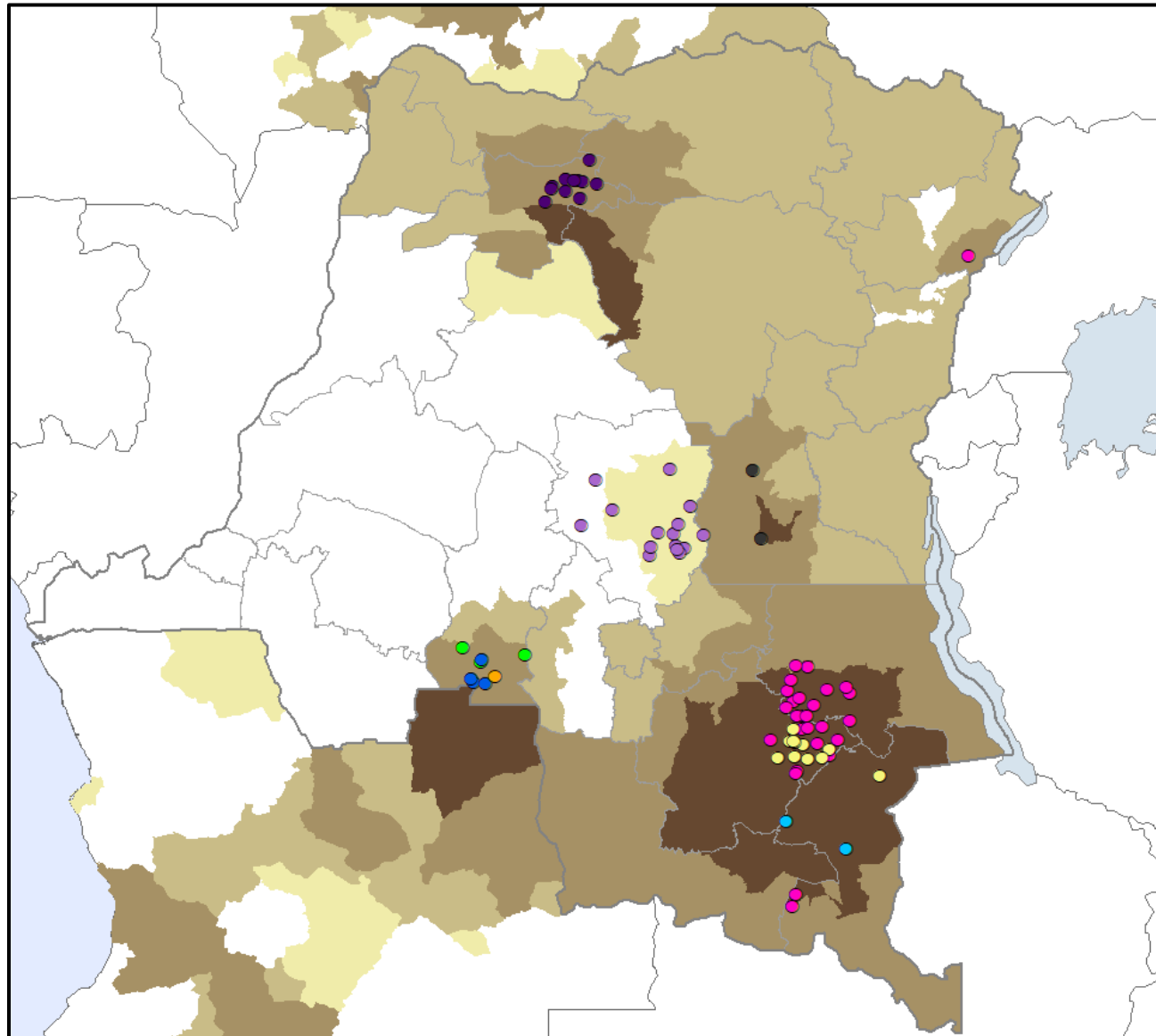
		BENIN	CAMEROON	GHANA	NIGER	NIGERIA					
Emergence Group		NIE-JIS-1					NIE-KGS-2	NIE-KGS-1	NIE-SOS-5	NIE-SOS-4	NIE-SOS-3
Total Isolates (All Sources)		1	1	8	22	192	6	2	2	3	15
AFP	No. of positive AFP case	1	0	2	11	45	2	1	1	0	1
	Onset of 1st case	30-Jun-19		23-Jul-19	18-Jul-18	15-Apr-18	20-Jun-19	13-Jun-19	20-May-19		18-Mar-19
	Onset of last case	30-Jun-19		09-Sep-19	03-Apr-19	20-Jun-19	08-Aug-19	13-Jun-19	20-May-19		18-Mar-19
ES	No. of positive ES samples	0	1	6	0	82	0	0	0	3	14
	1st collection date		20-Apr-19	11-Jun-19		10-Jan-18				18-Mar-19	30-Jan-18
	Last collection date		20-Apr-19	10-Sep-19		27-Aug-19				10-Jun-19	26-Jun-18
Others (Human)	No. of other positive samples	0	0	0	11	65	4	1	1	0	0
	First collection date				25-Sep-18	24-Jun-18	23-Jul-19	22-Jul-19	13-Jun-19		
	Last collection date				16-Mar-19	21-Jul-19	24-Jul-19	22-Jul-19	13-Jun-19		
Summary	Most recent virus isolation	30-06-2019	20-04-2019	10-09-2019	03-04-2019	27-08-2019	08-08-2019	22-07-2019	13-06-2019	10-06-2019	18-03-2019
	Interval between 1st & last isolation (days)	0	0	91	259	594	49	39	24	84	412
	NT change range	29--29	25--25	6--31	20--26	13--33	7--10	8--9	14--15	16--20	6--14
	Interval between today & last isolation (days)	100	171	28	188	42	61	78	117	120	204



DRC, cVDPV2 outbreaks, 2017-2019

post-switch mOPV2* rounds

- Haut-Katanga (RDC-HKA-1)
- Haut Lomami (RDC-HLO-1)
- Kasai (RDC-KAS-1)
- Sankuru (RDC-SAN-1)
- Maniema (RDC-MAN-1) **outbreak closed**
- Mongala (RDC-MON-1)
- Kasai (RDC-KAS-2)
- Haut Lomami (RDC-HLO-2)
- Kasai (RDC-KAS-3)



Democratic Republic of the Congo										
Emergence Group	FDC-HLO-2	FDC-SAN-1	FDC-TPA-1	FDC-KAS-3	FDC-KAS-2	FDC-KAS-1	FDC-MON-1	FDC-HKA-1	FDC-HLO-1	FDC-MAN-1
Total Isolates (All Sources)	16	19	6	3	4	3	21	2	50	3
AFP	No. of positive AFP case	11	15	0	3	4	1	11	2	27
	Onset of 1st case	10-Feb-19	21-Apr-19		03-Jun-19	03-Apr-19	08-Feb-19	26-Apr-18	06-Oct-18	20-Feb-17
	Onset of last case	02-Sep-19	18-Aug-19		30-Jun-19	07-Jun-19	08-Feb-19	13-Sep-18	07-Oct-18	27-May-18
ES	No. of positive ES samples	0	0	0	0	0	0	0	0	0
	1st collection date									
	Last collection date									
Others (Human)	No. of other positive samples	5	4	6	0	0	2	10	0	23
	First collection date	23-Jun-19	22-Jun-19	27-Jun-19			17-Mar-19	07-May-18		20-Jul-17
	Last collection date	21-Jul-19	27-Aug-19	14-Aug-19			17-Mar-19	08-Nov-18		19-May-18
Summary	Most recent virus isolation	02-09-2019	27-08-2019	14-08-2019	30-06-2019	07-06-2019	17-03-2019	08-11-2018	07-10-2018	27-05-2018
	Interval between 1st & last isolation (days)	204	128	48	27	65	37	196	1	461
	NT change range	8-12	6-13	7-11	8-12	6-11	6-7	18-26	7-8	14-29
	Interval between today & last isolation (days)	36	42	55	100	123	205	334	366	499

RDC-TAP-1 has only positive AFP contacts and does not show on map

○ cVDPV2 AFP

*from 1 May 2016 to 31 Oct 2019

Data in WHO HQ as of 08 Oct. 2019

‘The switch’ was supposed to be a major step toward eradicating polio. Now it’s a quandary

By HELEN BRANSWELL @HelenBranswell / SEPTEMBER 13, 2019



A child is vaccinated against polio in Kajiado, Kenya.
YASUYOSHI CHIBA/AFP/GETTY IMAGES

Three years ago, the leaders of the international campaign to eradicate polio pulled off a landmark feat, [phasing out a problematic component of the vaccine](#) used in developing countries, and introducing a newer version that they hoped would put the world on a better footing to finally eliminate a global scourge.

Now, some organizers are weighing whether “the switch,” as the process was known, needs to be reversed.

If it’s not, some fear, the world could face a heightened risk of spread of the disease, currently confined to its last redoubt, Pakistan and Afghanistan.

Quandary (definition):

- a state of perplexity or uncertainty over what to do in a difficult situation

Ways forward – wild poliovirus

- Afghanistan, ideal would be a political solution to conflict (minimum revoking the ban on house-to-house vaccination)
 - In the meantime, program focuses on maximizing vaccination efforts
- Pakistan in process to strengthen program (after halt on SIAs and change in government)
 - Ensure staff in place at all levels
 - Focus on quality & overcome vaccine hesitancy
- GPEI is establishing hub in Amman Jordan for overseeing the operations in Afghanistan & Pakistan
 - Closer to the field, better support to country teams
 - Streamline funding streams and deployment of field staff
 - EMR polio director recruited and hub director pending – new energy for a difficult geography

Ways forward -- cVDPV2

- Problem:
 - Old cVDPV2 virus spreads beyond outbreak control zone
 - Outbreak control quality not sufficient to prevent emergence of new VDPV2/cVDPV2 in outbreak control zone in some instances
 - Sabin virus exported to neighboring areas, and slowly emerges into new VDPV2/cVDPV2
- Way forward:
 - Prevent cVDPV2 spread into new geographies
 - Rapid deployment of mOPV2
 - Increase scope and quality of mOPV2 SIAs
 - Accelerate development & regulatory review of novel OPV2 -- EUL

Regulatory Approval -- Emergency Use Listing

- EUL = Emergency Use Listing
- Owner: Essential Medicine Department (EMP, PQ)
- Goal: make “experimental” health products available for emergency response
- Products listed under EUL so far: 0
- Eligibility criteria nOPV2: Polio PHEIC
- Fastest way to obtain regulatory review and approval
- And a stepping stone towards licensure

Ways forward -- mOPV2 supply

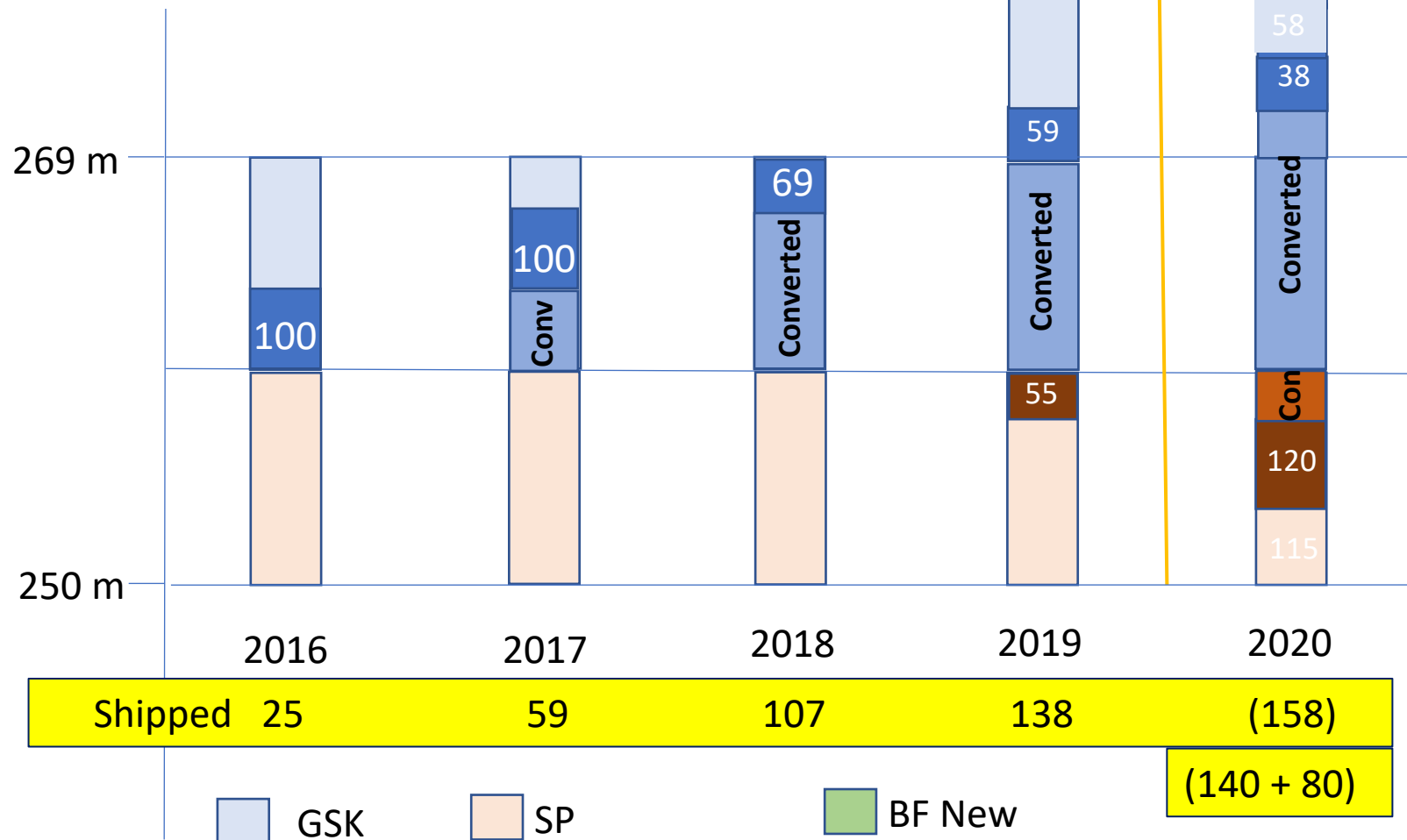
- *Issues:*

- Original stockpile from Sanofi & GSK is depleting rapidly
- The real and continuing bottle neck is filling capacity

- *Progress:*

- Additional bulk is being mobilized (~1 billion doses) from Sanofi & BioFarma
 - Efforts are under way to expand the filling capacity, best option remains India
 - New rapid filling line installed in one manufacturer (functional in 2021)
 - Increase vial size from 20- to 40 doses reduces filling line requirements
- OPV2 bulk production re-start may be necessary
 - The one-drop (versus two-drop) option may have to be exercised sooner than expected, if mOPV2 supplies deplete further

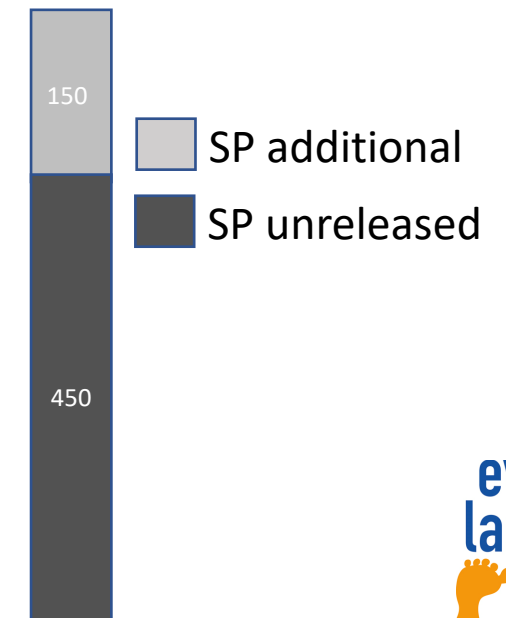
mOPV2 bulk, product shipped, and predicted availability



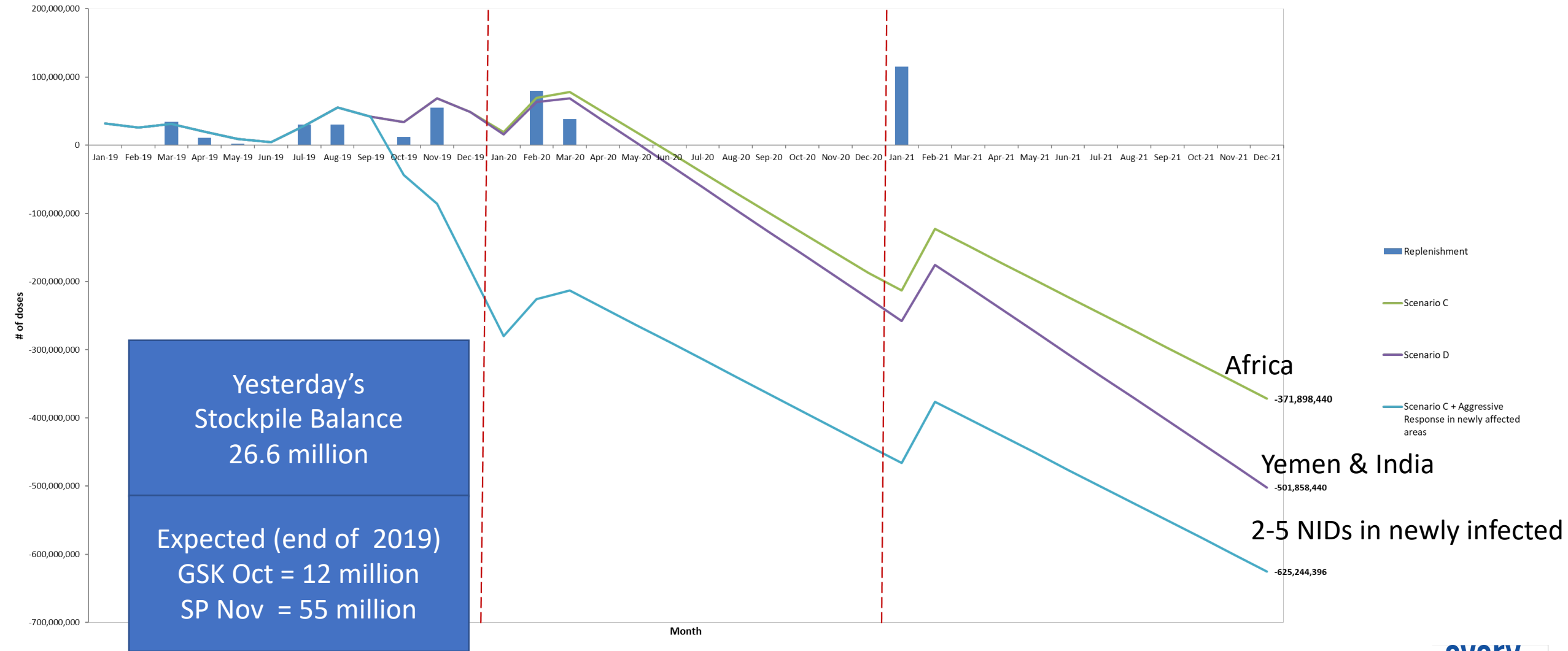
Initial stockpile = 519 million
 SP remain = 115 million
 Total shipped = 331 million

GSK additional = 155 million
 BF 2019 = 61 million

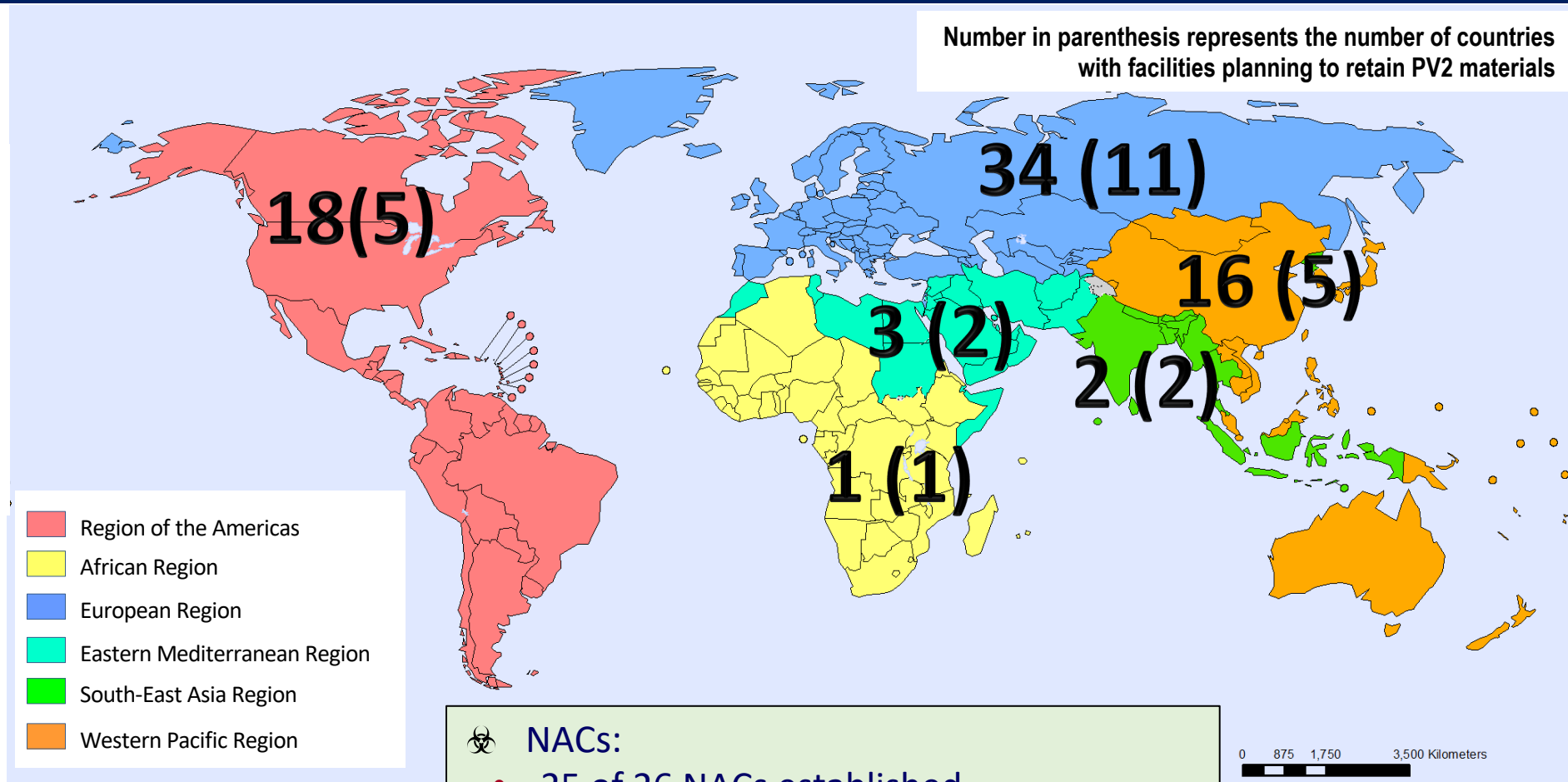
BF 2020+ = 351 million



Current & projected mOPV2 stockpile balances



26 countries plan to retain poliovirus type 2 materials in 74 designated PEFs



Data reported by WHO Regional Offices as of 30 September 2019 and subject to change

The boundaries and names shown and the designations used on this map do not imply the endorsement 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.



NACs:

- 25 of 26 NACs established



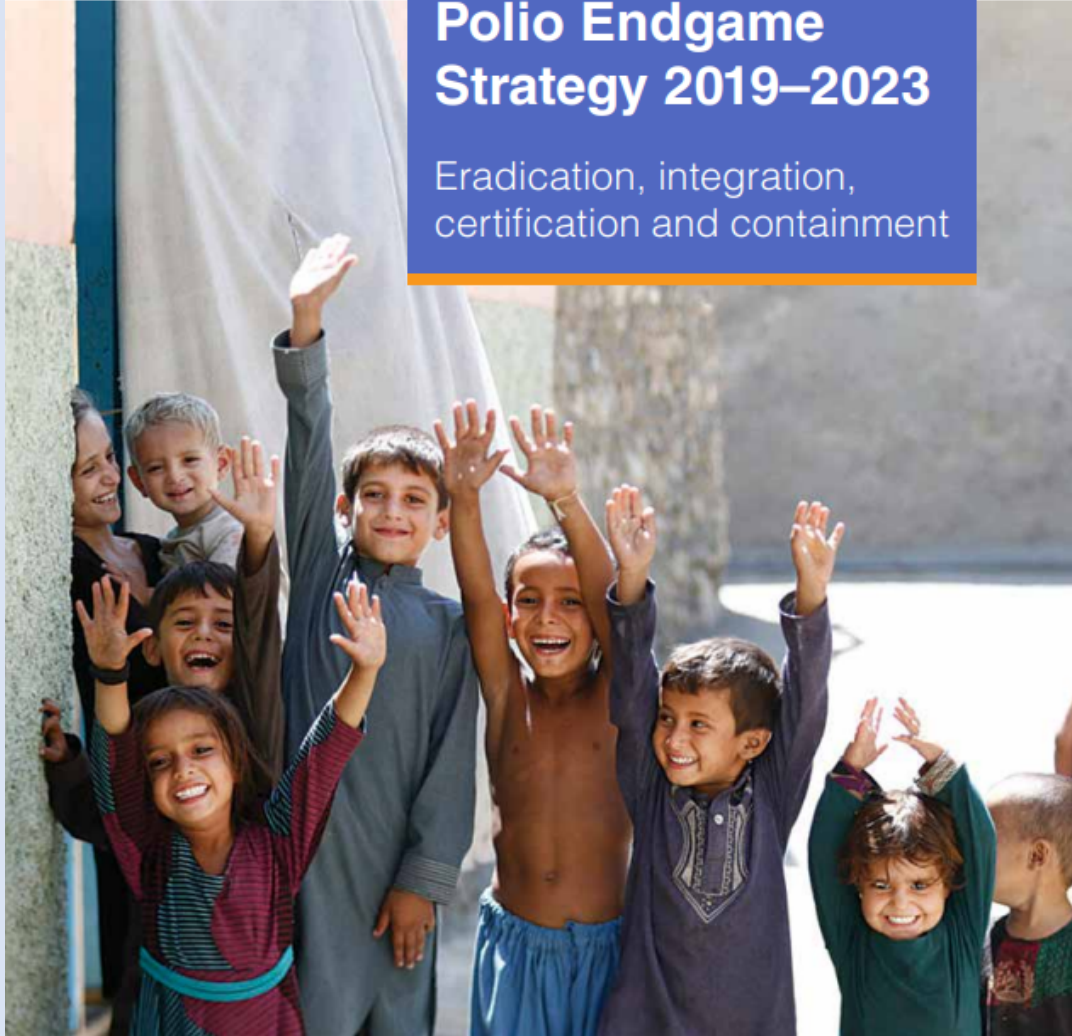
PEFs:

- Applications submitted to GCC via NAC: 14
 - CPs endorsed by GCC: 10
 - CPs in process: 4

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.

Polio Endgame Strategy 2019–2023

Eradication, integration,
certification and containment



- Eradication
- Integration
- Certification
- Containment

Full cost to achieve & secure polio eradication

Five-year GPEI budget
2019-2023: \$4.2 billion

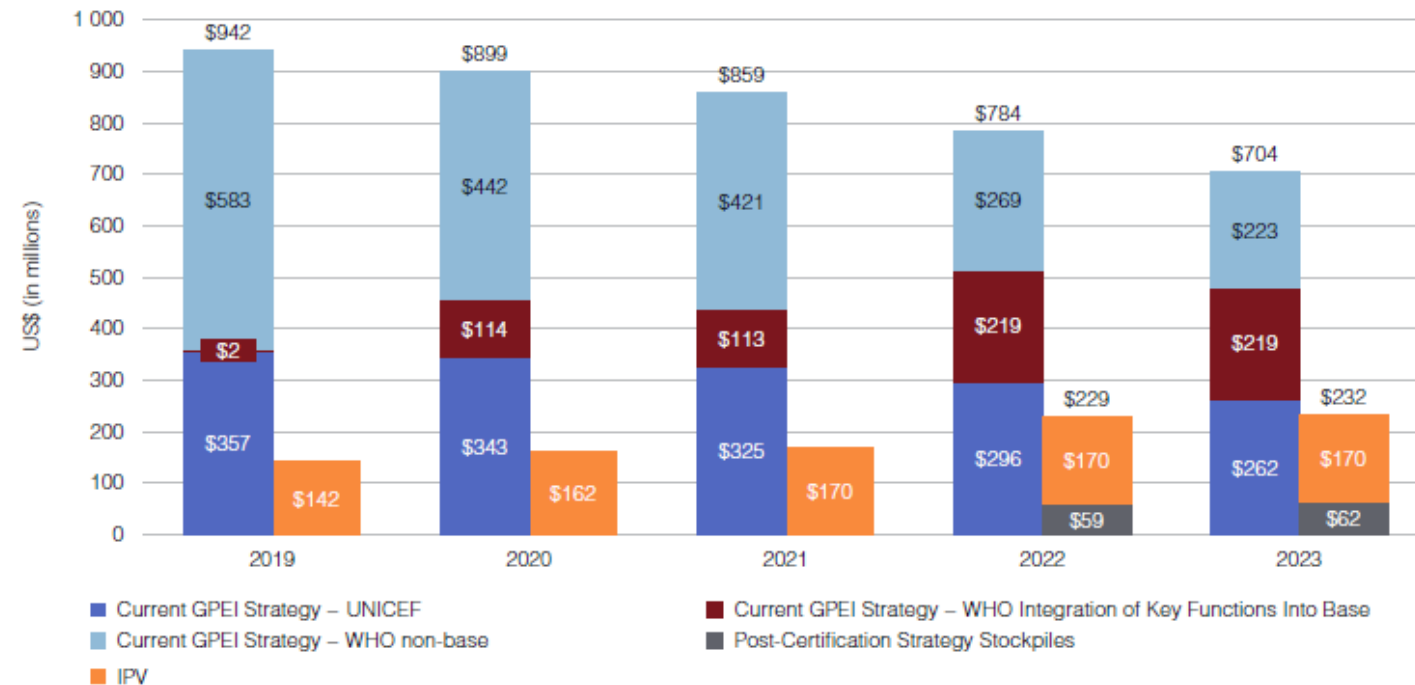
IPV: \$814 million

OPV: \$121 million

New GPEI financing
required 2020 – 2023
- \$3.27 billion

Dark red segments represent WHO share of GPEI budget that will move onto WHO base budget as sustainable source of support for core functions

TOTAL \$5.1 billion
to achieve and sustain polio
eradication



GPEI: Global Polio Eradication Initiative; IPV: Inactivated polio vaccine.
Source: WHO.

Summary – Minimize paralytic disease

- Polio eradication made further progress in 2019, but encountered serious challenges
- Wild poliovirus eradication requires access in Afghanistan and vaccination quality improvements in Pakistan
- cVDPV2 outbreaks threaten the success of “switch” and may lead to re-establishment of type 2 endemicity
- mOPV2 needs to be replaced as soon as feasible by genetically more stable novel OPV2 (accelerate development, prioritize regulatory reviews and plan for introduction)
- In the meantime, need to ensure that all contingency options must remain open to the program – including the ONE drop mOPV2 option
- A 2nd dose of IPV in RI is under discussion when supplies allow
- Securing the funds to run the program is a very high priority

will
It may get ~~worse~~
before it gets better,
but it will get better.

QuotesGate
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Thank you for your attention!



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