

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1301, Week 36 (ending on 10/09/2023)

## Highlights



Children  
Paralyzed  
by polio

### 2022

- 22 cases of Wild Polio 1
  - 02 in Afghanistan
  - 20 in Pakistan

- 168 cases of cVDPV2
  - 05 in Somalia
  - 162 in Yemen
  - 01 in Sudan

- Zero cVDPV1 cases

### 2023

- 7 cases of Wild Polio 1
  - 05 in Afghanistan
  - 02 in Pakistan

- 4 cases of cVDPV2
  - 02 in Somalia
  - 02 in Yemen

- Zero case of cVDPV1



Sewage  
water  
sampling

### 2022

- 59 samples Wild Polio 1
  - 22 in Afghanistan
  - 37 in Pakistan

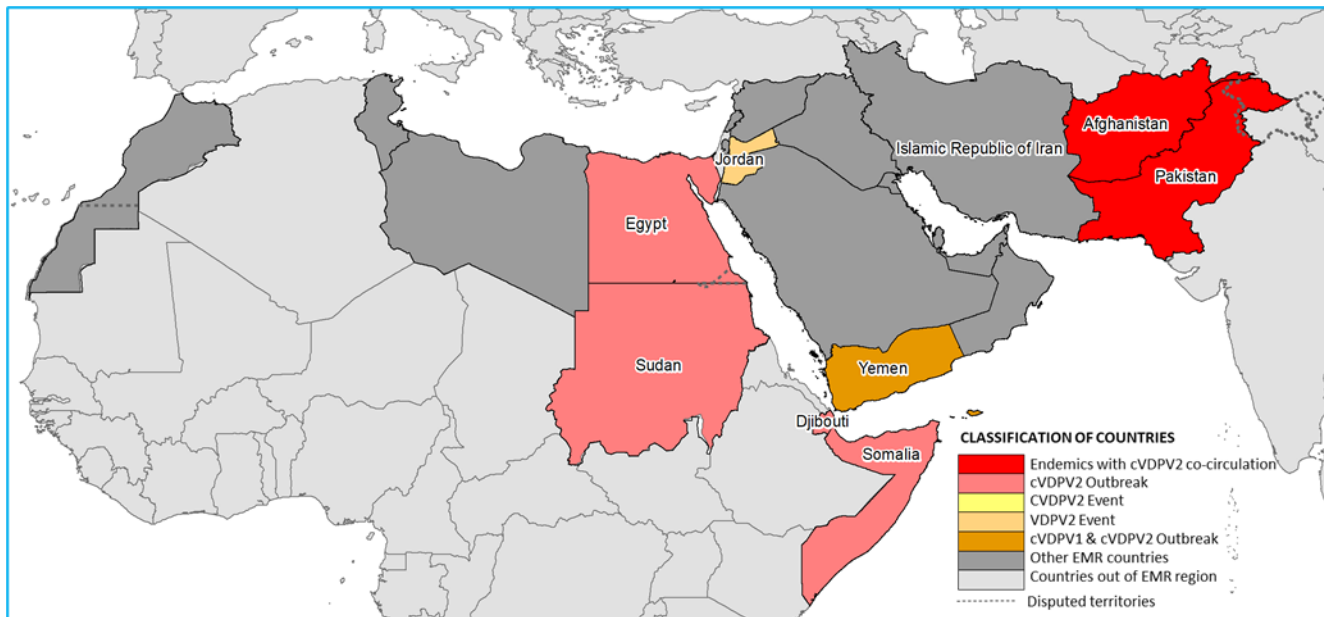
- 52 samples cVDPV2
  - 06 in Egypt
  - 12 in Djibouti
  - 06 in Somalia
  - 01 in Sudan
  - 27 in Yemen

### 2023

- 55 samples Wild Polio 1
  - 33 in Afghanistan
  - 22 in Pakistan

- 7 samples of cVDPV2
  - 04 in Somalia
  - 03 in Yemen

## Classification of EMR countries by type of poliovirus circulation



## Highlights of the week

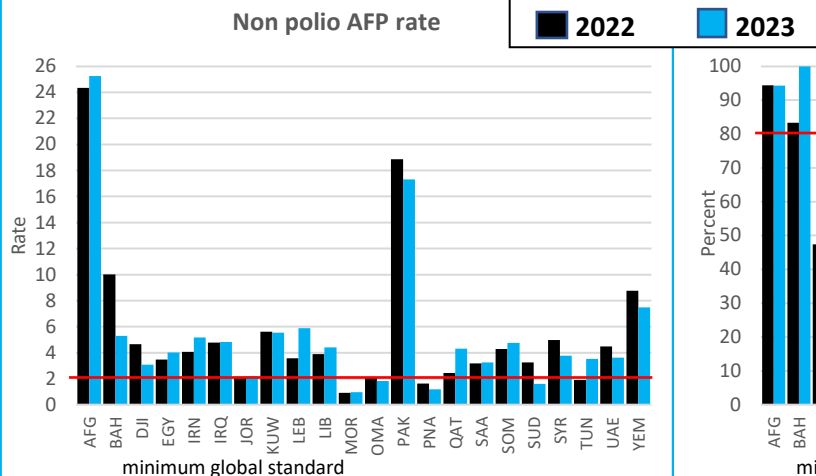
### Wild Poliovirus

- No new WPV1 cases reported this week. The WPV1 cases count in 2023 to date remains 7 (5 from Afghanistan and 2 from Pakistan) while in 2022, the WPV1 cases count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan).
- Five new WPV1 positive environmental samples reported this week from Pakistan. The new positive samples were reported from: 3 from Peshawar district of Khyber Pakhtunkhwa province with collection dates between 17-22 August 2023; one each from Khibaldia town of Sindh province with collection date 17 August 2023 and from Lahore district of Punjab province with collection date 22 August 2023. The positive WPV1 ES count in 2023 to date is 55 (33 in Afghanistan and 22 in Pakistan), while in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

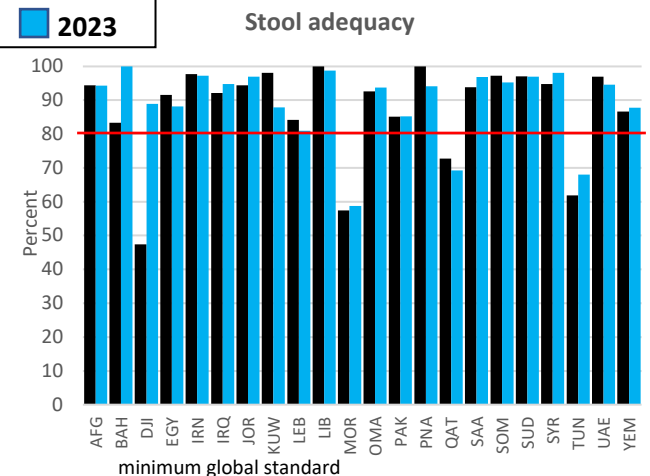
### Vaccine derived poliovirus (VDPV)

- One new cVDPV2 case reported this week from Yemen. The new cVDPV2 case is from Harad district of Hajjah province with date of onset 8<sup>th</sup> May 2023. In 2023 the count of cVDPV2 cases to date remains to be 4 (2 each from Somalia and Yemen) and in 2022 is 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen).
- No new cVDPV2 positive environmental samples reported this week. The positive cVDPV2 ES count in 2023 to date is 7 (4 from Somalia and 3 from Yemen) and in 2022, remains 52 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 27 in Yemen).
- Two new VDPV2 positive environmental samples reported this week from Egypt. The positive samples were both reported from North Sinai province, one each from Elmasseid and Eldahia districts with collection dates of 28 and 31 August 2023 respectively.

### Non polio AFP rate



### Stool adequacy

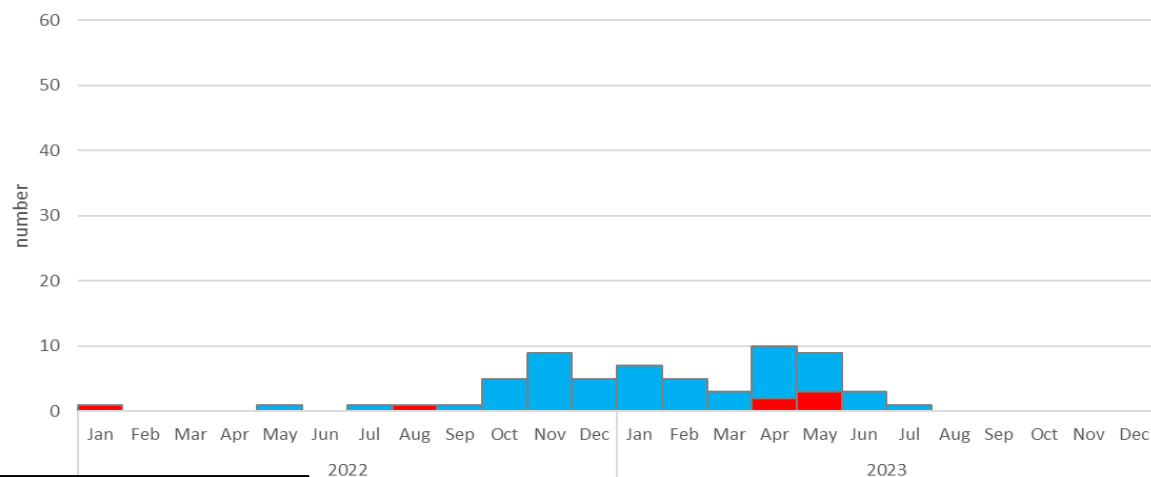


Wild Poliovirus type-1 (WPV1) Vaccine-derived Poliovirus (VDPV)

# WPV1 Positive isolates from Afghanistan and Pakistan by source

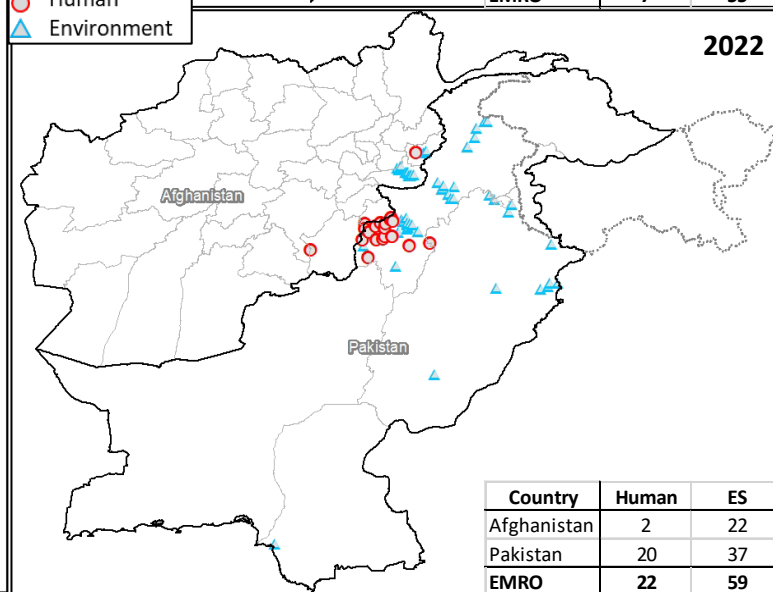
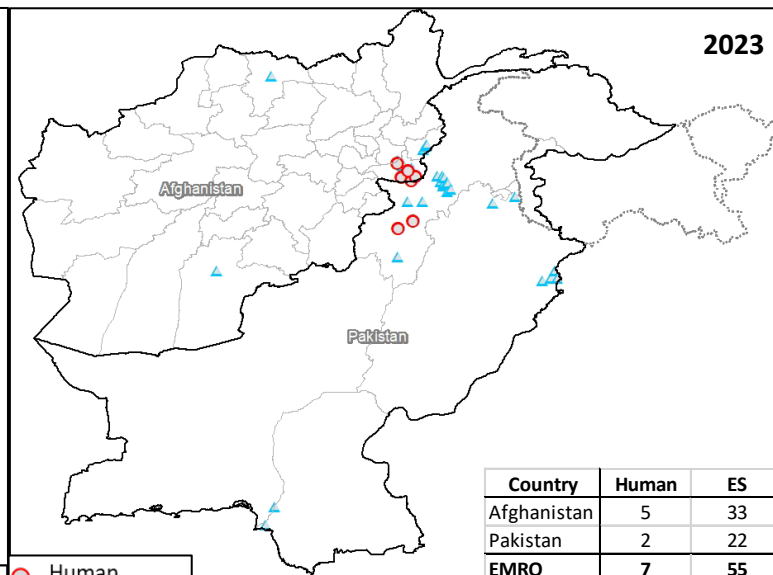
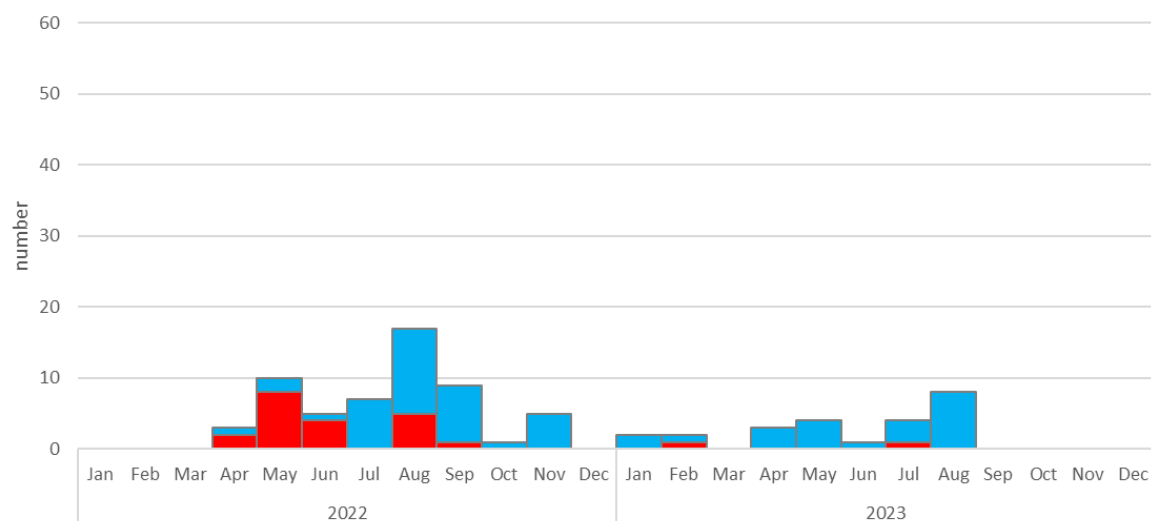
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## Afghanistan



■ Human ■ Environment

## Pakistan



For further details on Wild Poliovirus click: [line-list of WPV isolates](#)

# Virus isolation by country, last 12 months (Sep. 10, 2022, to Sep. 10, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>11</b>	<b>23</b>
Wild	5	3					8
cVDPV2				2	1	10	13
aVDPV2							
VDPV2			1			1	2
VDPV3							
<b>Environment</b>	<b>52</b>	<b>33</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>11</b>	<b>110</b>
Wild	52	32					84
cVDPV2			1	6	1	11	19
aVDPV2			4				4
VDPV2			2				2
VDPV3		1					1
<b>Total</b>	<b>57</b>	<b>36</b>	<b>8</b>	<b>8</b>	<b>2</b>	<b>22</b>	<b>133</b>

*Note: Viruses isolated from 'other' sources (example healthy children) are not included in this analysis; they are shown in page No. (8)*

# Confirmed Wild Polio 1 Cases by month of onset

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Country	Total year 2021	Total year 2022	10 September		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022			2023									
			2022	2023	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Afghanistan	4	2	2	5	0	0	0		0	0	2	3	0				18-May-23
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0			0		
Egypt	0	0	0	0	0	0	0	0	0	0							
Iran	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Iraq	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lebanon ****	0	0	0	0	0	0	0	0	0	0	0	0	0				
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0				
Morocco	0	0	0	0	0	0	0			0	0	0	0				
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Pakistan	1	20	19	2	0	0		0	1	0	0	0	0	1			11-Jul-23
Palestine ****	0	0	0	0	0	0	0								0		
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Somalia	0	0	0	0	0	0	0	0	0	0	0	0					
Sudan	0	0	0	0	0	0	0	0	0								
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0		0			
Yemen	0	0	0	0	0	0	0	0	0	0	0	0					
EMR	5	22	21	7	0	0	0	0	1	0	2	3	0	1	0	0	11-Jul-23

\*\*\*\* UNRWA cases are included with those of country of residence

# Investigation of AFP cases with paralysis onset in 2022 & 2023

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COUNTRY	2023									2022									Line List
	AFP cases	Case classification						Surveillance indicators		AFP cases	Case classification						Surveillance indicators		Date of latest
		Total Confirmed WPV1 Polio Cases	Polio Compatible	Discarded (non Polio AFP)	VDPV	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens		Total Confirmed WPV1 Polio Cases	Polio Compatible	Discarded (non polio AFP)	VDPV	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens	
AFGHANISTAN	3944	5	0	3653	0	5	1	25.25	94.32	5368	2	0	5365	1	0	0	24.34	94.41	10-Sep-23
BAHRAIN	11	0	0	8	0	0	0	5.30	100.00	30	0	0	30	0	0	0	10.02	83.33	10-Sep-23
DJIBOUTI	9	0	0	5	0	3	2	3.09	88.89	19	0	0	19	0	0	0	4.65	47.37	10-Sep-23
EGYPT	1147	0	0	987	0	4	0	4.01	88.14	1394	0	0	1394	0	0	0	3.48	91.54	7-Sep-23
IRAN	755	0	0	736	0	0	0	5.16	97.22	824	0	0	824	0	0	0	4.06	97.69	9-Sep-23
IRAQ	588	0	0	554	0	12	0	4.82	94.73	835	0	0	835	0	0	0	4.78	92.10	8-Sep-23
JORDAN	66	0	0	63	0	0	0	2.20	96.97	89	0	0	89	0	0	0	2.14	94.38	7-Sep-23
KUWAIT	33	0	0	33	0	0	0	5.53	87.88	52	0	0	52	0	0	0	5.62	98.08	10-Sep-23
LEBANON	63	0	0	44	0	5	0	5.89	80.95	57	0	0	57	0	0	0	3.58	84.21	3-Sep-23
LIBYA	79	0	0	72	0	0	0	4.40	98.73	101	0	0	101	0	0	0	3.89	100.00	9-Sep-23
MOROCCO	80	0	0	36	0	30	2	0.98	58.75	94	0	0	89	0	5	0	0.92	57.45	4-Sep-23
OMAN	16	0	0	15	0	0	0	1.84	93.75	27	0	0	27	0	0	0	2.10	92.59	10-Sep-23
PAKISTAN	11739	2	0	10740	0	119	0	17.32	85.18	19032	20	1	19011	0	0	0	18.86	85.14	10-Sep-23
PALESTINE	17	0	0	15	0	1	1	1.18	94.12	33	0	0	32	1	0	0	1.64	100.00	10-Sep-23
QATAR	13	0	0	3	0	8	0	4.32	69.23	11	0	0	11	0	0	0	2.44	72.73	10-Sep-23
SAUDI ARABIA	189	0	0	144	0	0	0	3.26	96.83	274	0	0	274	0	0	0	3.18	93.80	10-Sep-23
SOMALIA	295	0	0	268	2	0	0	4.74	95.25	356	0	0	349	6	0	0	4.30	97.19	10-Sep-23
SUDAN	229	0	0	154	0	66	59	1.60	96.94	650	0	0	649	1	0	0	3.25	97.08	20-Aug-23
SYRIA	203	0	0	194	0	0	0	3.78	98.03	382	0	0	382	0	0	0	4.96	94.76	9-Sep-23
TUNISIA	72	0	0	69	0	0	0	3.52	68.06	55	0	0	55	0	0	0	1.91	61.82	1-Sep-23
U.A.E.	37	0	0	24	0	11	0	3.62	94.59	66	0	0	66	0	0	0	4.47	96.97	5-Sep-23
YEMEN	827	0	0	638	3	1	0	7.48	87.79	1377	0	1	1214	162	0	0	8.77	86.64	9-Sep-23
EMR POL	20412	7	0	18455	5	265	65	10.10	88.40	31126	22	2	30925	171	5	0	10.77	88.18	

\* Confirmed polio cases refer to wild isolation from AFP cases or from contacts of negative index AFP cases

\*\* Non-polio AFP per 100,000 children <15 years

\*\*\* Adequate here refers to two stool specimens collected at least 24 hours apart, with 14 days of paralysis onset and specimens received in the lab in 'Good Condition'

\*\*\*\* Includes all VDPV cases. Further details available in page (8)

For further details on Contacts click: [detail of contact samples](#)

# Laboratory investigation of AFP cases with paralysis onset in 2023

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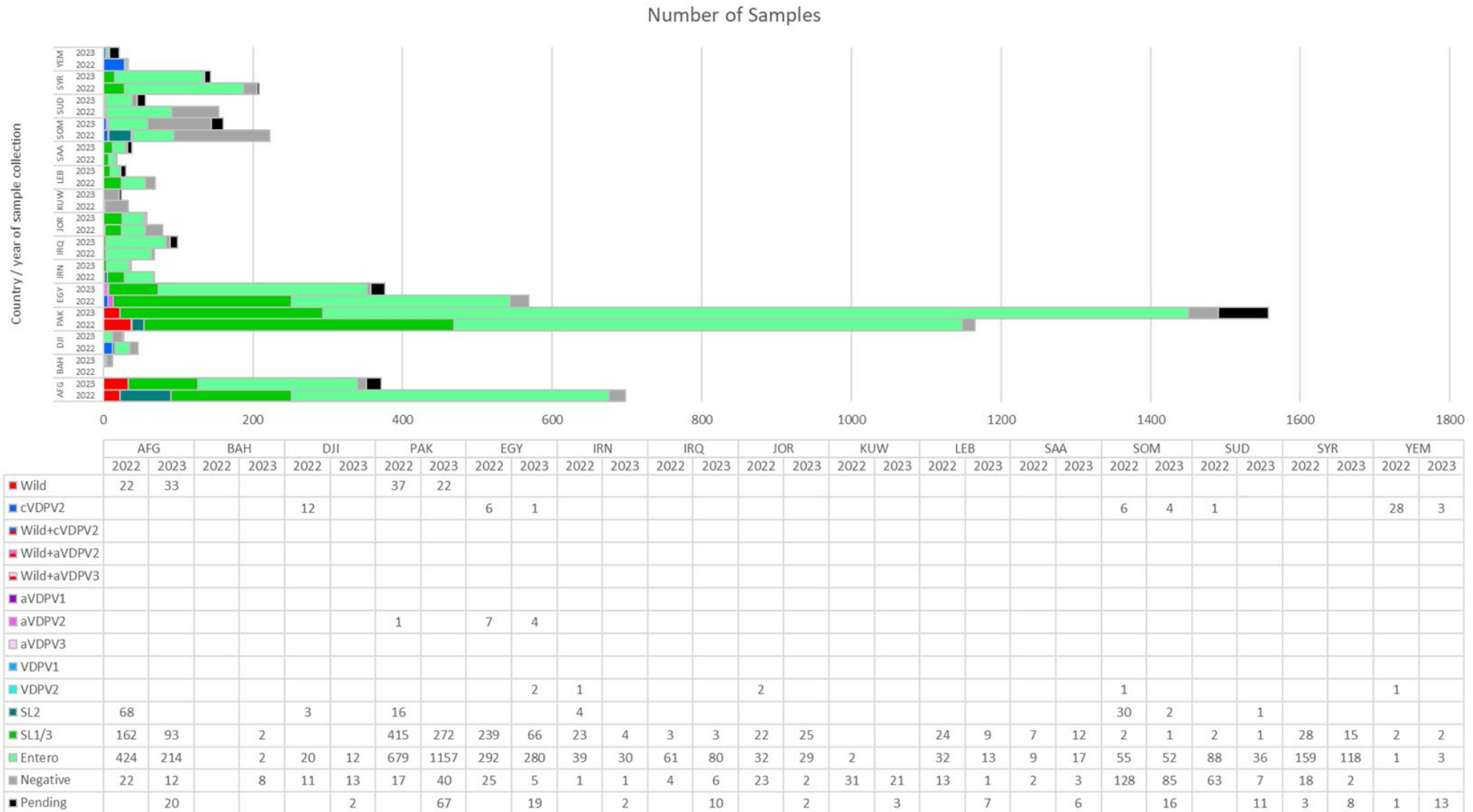
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results													Indicators					Latest report Date
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant pending sequence	NPEV by PCR	Non-EV	Pending ITD	% specimens positive for NPEV*	% AFP cases with culture results within 14 days	% AFP cases with ITD results within 7 days	% AFP cases with ITD results within 45 days of onset**		
	Sequencing performed by CDC and RIVM laboratories		L20B+	L20B+ / NPEV			received within last 14 days	received more than 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV										
Afghanistan	RRL Pakistan	3920	190	20	528	2931	143	2	4 *	130						158			2	2	2	12%	92%	100%	98%	10-Sep-23	
Bahrain	NPL Oman / CDC	11			1	10																5%	100%		45%	06-Sep-23	
Djibouti	NPL Kenya / CDC	9			1	4		4														20%	100%		100%	10-Sep-23	
Egypt	RRL Egypt	1079	11		118	904	40	7		6				1		6				1		9%	96%	100%	99%	07-Sep-23	
Iran	NPL Iran / CDC	781	7		9	743	22			5						3						1%	100%	100%	99%	09-Sep-23	
Iraq	NPL Iraq, RRL Egypt	593	3		43	518	21	8		2						2						8%	100%	100%	99%	08-Sep-23	
Jordan	NPL Jordan, RRL Egypt	64			14	49	1															21%	93%		100%	07-Sep-23	
Kuwait	RRL Kuwait / RIVM	33	1		3	29															1	10%	100%		100%	31-Aug-23	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	67				52	13	2														3%	100%			07-Sep-23	
Libya	RRL Tunisia / RIVM	79	1		2	74	2			1												3%	97%	1	100%	08-Sep-23	
Morocco	NPL Morocco, RRL Tunisia	81			2	78	1															3%	99%		94%	08-Sep-23	
Oman	NPL Oman / CDC	16			1	14	1															14%	100%		100%	06-Sep-23	
Pakistan	RRL Pakistan	11403	274	25	1708	9006	116	175	2	175						221						13%	90%	100%	96%	10-Sep-23	
Palestine & UNRWA		17	1			16				1				1								0%	38%			10-Sep-23	
Qatar	NPL Oman / CDC	13	1			12										1						0%	100%	1	100%	06-Sep-23	
Saudi Arabia	NPL Saudi Arabia / CDC	169	1		5	163				1												3%	98%	100%	99%	20-Aug-23	
Somalia	NPL Kenya / CDC	295	6		47	220	9	16		3				2	2		2					17%	5%		96%	10-Sep-23	
Sudan	NPL Sudan / RRL Egypt	263	10		39	197		17						3			1		2			15%	99%	100%	30%	14-Apr-23	
Syria	NPL Syria / RRL Egypt	202	4	1	11	179	7															5%	100%			07-Sep-23	
Tunisia	RRL Tunisia	78	1		3	70	4									1						3%	96%	1	97%	08-Sep-23	
U.A.E	NPL Oman / CDC	34			2	32																6%	94%		21%	06-Sep-23	
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	674	20	1	127	483	43			10				1	3		15		1			17%	15%	100%	12%	09-Sep-23	
Total EMR 2023		19881	531	47	2664	15784	423	231	7 *	334				7	6		410		1	4	3	3	12%	88%	100%	94%	
Total EMR 2022		30461	1066	119	4831	24432		9	22 *	556	2			38	169 **		723		6	8	2	1	13%	93%	89%	92%	

\* In 2023 – one WPV1 case is confirmed due to positive contact while in 2022 - three WPV1 cases were confirmed due to positive contacts (Index cases were negative for WPV1)

\*\* In 2022 - Five cVDPV2 cases are identified by positive contacts (Index cases were negative for cVDPV2)

# Environmental Surveillance Isolation by Classification

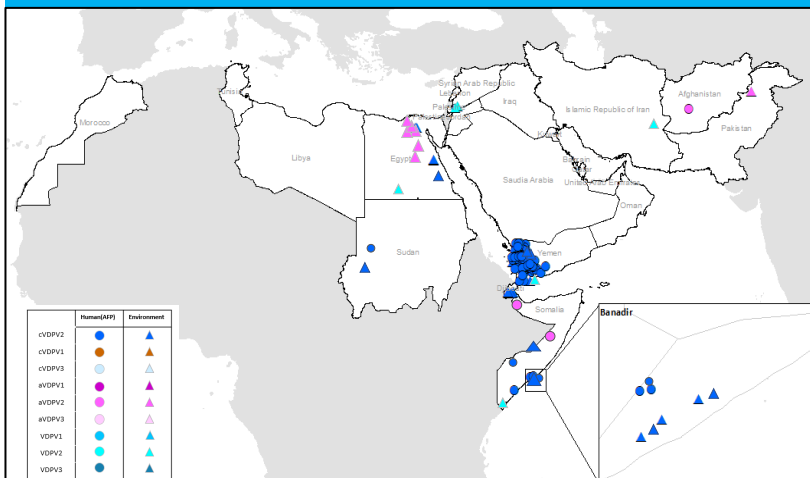
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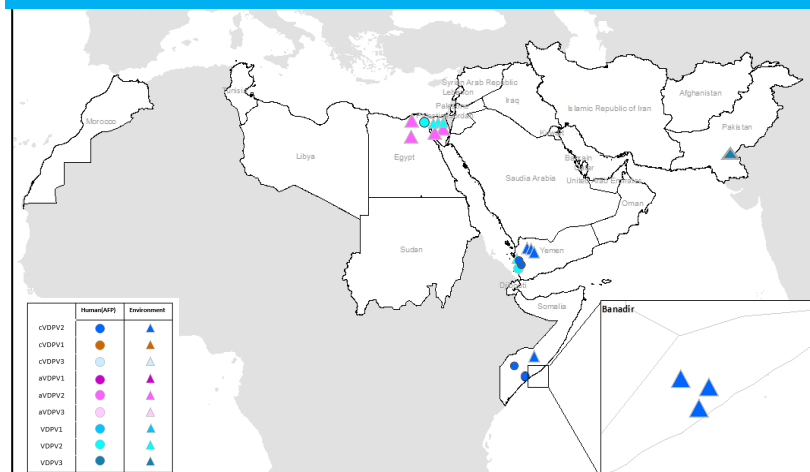
# VDPVs isolations by Source and Country

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## VDPV Isolates, EMR countries, 2022



## VDPV Isolates, EMR countries, 2023



## VDPVs isolated from 2018-2023

VDPV Isolate type	EMR Country	Sources																												
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)										
		2018	2019	2020	2021	2022	Most recent	2018	2019	2020	2021	2022	Most recent	2018	2019	2020	2021	2022	Most recent	2017	2018	2019	2020	2021	2022	Most recent				
cVDPV2	Afghanistan			307	43		09-07-21										174	40			23-06-21									
	Djibouti																5	12			22-05-22									
	Egypt																12	6			29-08-22									
	Iran																3	1			20-02-21									
	Pakistan		22	135	8		23-04-21									38	135	35			11-08-21									
	Somalia	6	3	14	1	5	2	02-03-23	3	1	11		5		31-08-22	19	5	26	1	6	4	13-07-23		1	5		1		10-03-22	
	Sudan			58		1		31-10-22			18				08-10-20			14		1		28-11-22			4				24-08-20	
	Yemen					66	162	2					23	40	19-12-22			13	27	3		29-05-23								
cVDPV1	Yemen		1	31	3		27-03-21		2					10-07-19																
cVDPV3	Somalia	7					07-09-18	7						30-06-18	12						23-08-18									
aVDPV1	Afghanistan				1		22-02-21																							
	Egypt																1				16-07-20									
	Pakistan																	1				10-02-21								
	Somalia			1			26-01-20																							
	Yemen				1		20-07-21																							
aVDPV2	Afghanistan			3	1	1	01-01-22			75	15	1		14-02-22			2	3			25-07-21									
	Egypt											1		14-06-21			1	67	7	4	13-04-23									
	Iran																		2		23-09-21									
	Pakistan			7	8		24-09-21		8	19	1			28-04-21		3	22	37	1		15-02-22									
	Somalia					2	01-09-22									2	1				03-02-19									
	Yemen				3		01-11-21				1			09-12-21																
aVDPV3	Afghanistan			1			23-06-20																							
	Egypt																2				30-09-20									
	Pakistan																	1			05-04-21									
	Libya			1			15-01-20																							
VDPV1	Egypt																	1			11-07-21									
VDPV2	Egypt						1	17-07-23												3		31-08-23								
	Iran																		1			04-02-22								
	Jordan																		2			25-05-22								
	Somalia					1		01-09-22												1		22-04-23								
	Yemen						1	09-05-23												2	1	26-04-23								
VDPV3	Pakistan																			1		14-02-23								



## Important Links

- [Global Polio Eradication Initiative](#)
- [IMST – Outbreak Response Dashboard](#)
- [nOPV2 Tracker](#)
- [Pol-MIS](#) (restricted to registered users)
- [Containment](#) (restricted to registered users)
- [Certification \(e-ACR\)](#) (restricted to registered users)