

## 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**

- 10 cases of Wild Polio 1
  - 06 in Afghanistan
  - 04 in Pakistan

### 7 cases of cVDPV2

- 04 in Somalia
- 03 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

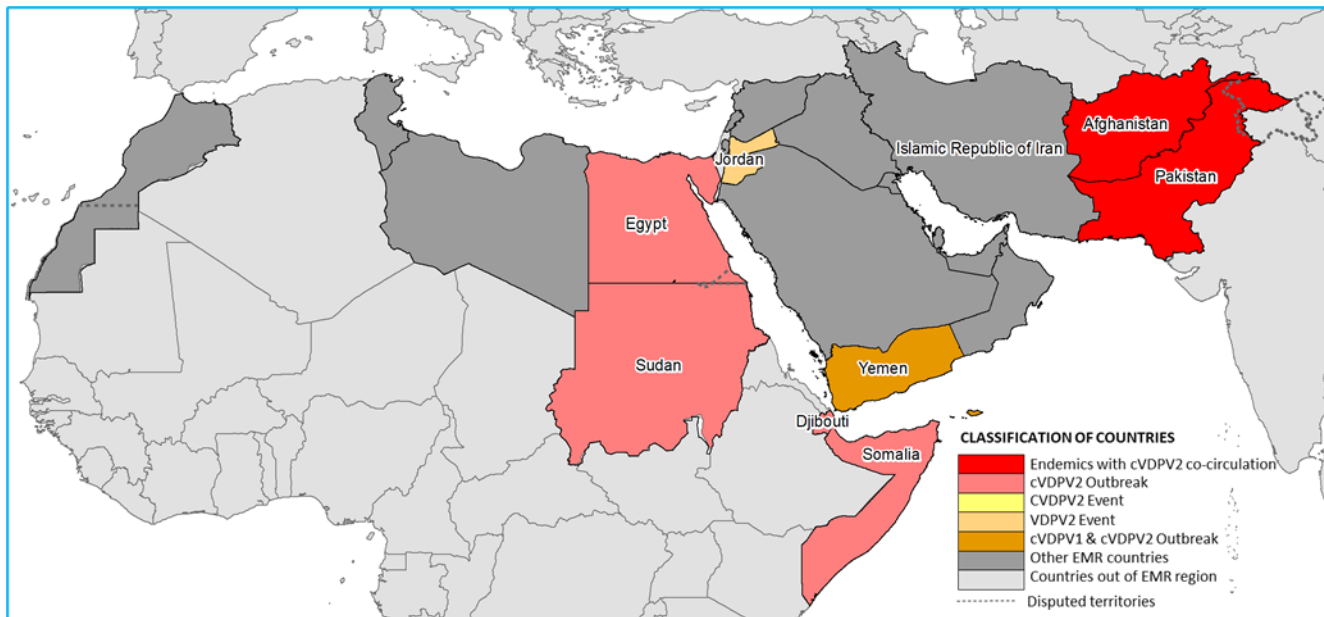
**2023**

- 94 samples Wild Polio 1
  - 39 in Afghanistan
  - 55 in Pakistan

### 14 samples of cVDPV2

- 05 in Somalia
- 03 in Yemen
- 06 in Egypt

## Classification of EMR countries by type of poliovirus circulation



## Highlights of the week

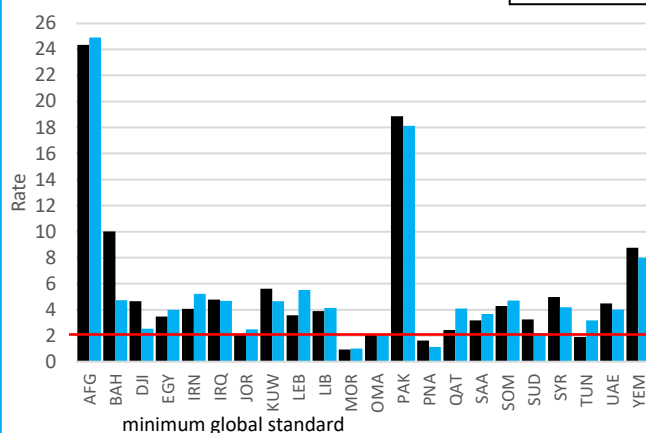
### Wild Poliovirus

- No new WPV1 cases reported this week. The WPV1 cases count in 2023 to date is 10 (6 from Afghanistan and 4 from Pakistan) and in 2022, the WPV1 cases count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan).
- One new WPV1 positive environmental sample reported this week from Pakistan. The positive sample is from Karachi district (Karachi East town) of Sindh province with sample collection date of 10<sup>th</sup> October 2023. The positive WPV1 ES count in 2023 to date is 94 (39 in Afghanistan and 55 in Pakistan), and in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

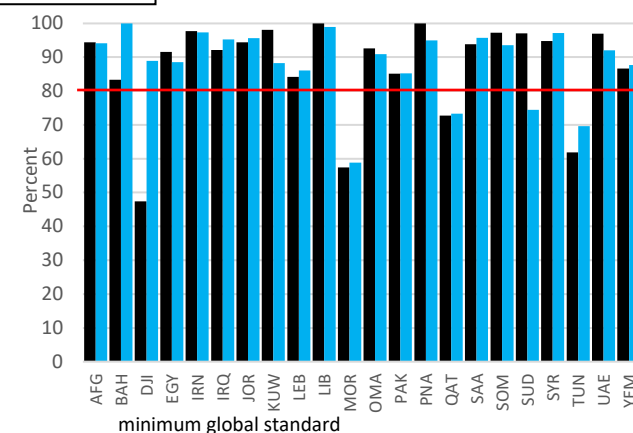
### Vaccine derived poliovirus (VDPV)

- No new cVDPV2 isolates reported this week. The count of cVDPV2 cases in 2023 remains to be 7 (4 from Somalia and 3 from Yemen) and in 2022 is 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen). While the cVDPV2 positive environmental samples in 2023 remains to be 14 (6 from Egypt, 5 from Somalia and 3 from Yemen) and in 2022, the count remains 52 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 27 in Yemen).
- One positive VDPV2 environmental sample was reported from Sudan (earlier reported in the previous bulletin as advance notification). The positive sample is from Port Sudan district of Red Sea province, with a date of collection of 18<sup>th</sup> September 2023.

### Non polio AFP rate



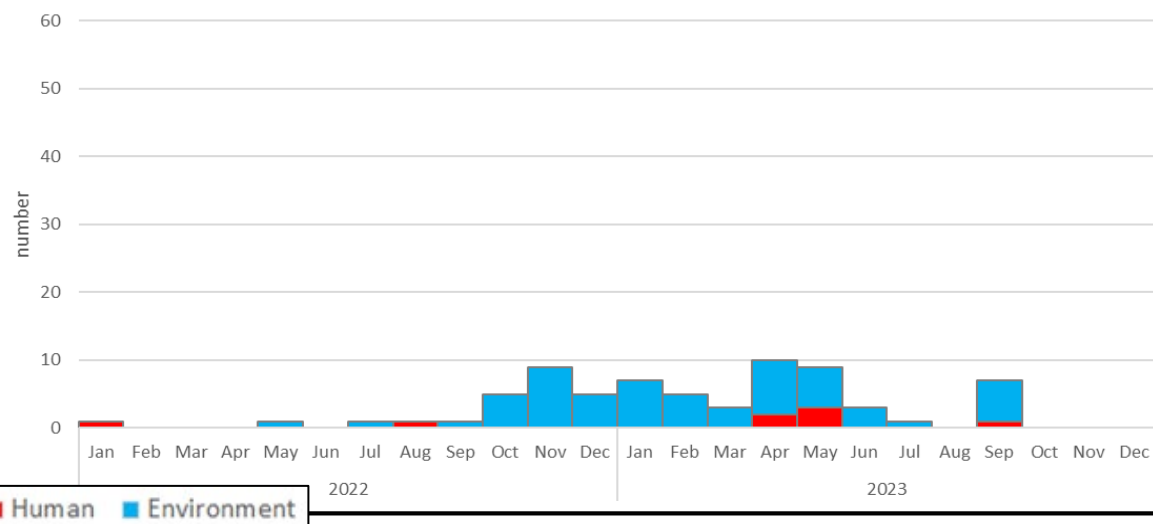
### Stool adequacy



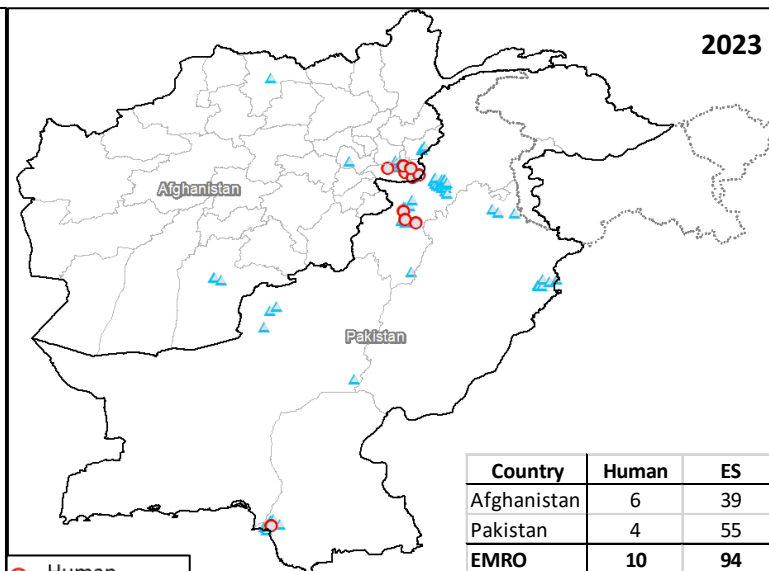
# WPV1 Positive isolates from Afghanistan and Pakistan by source

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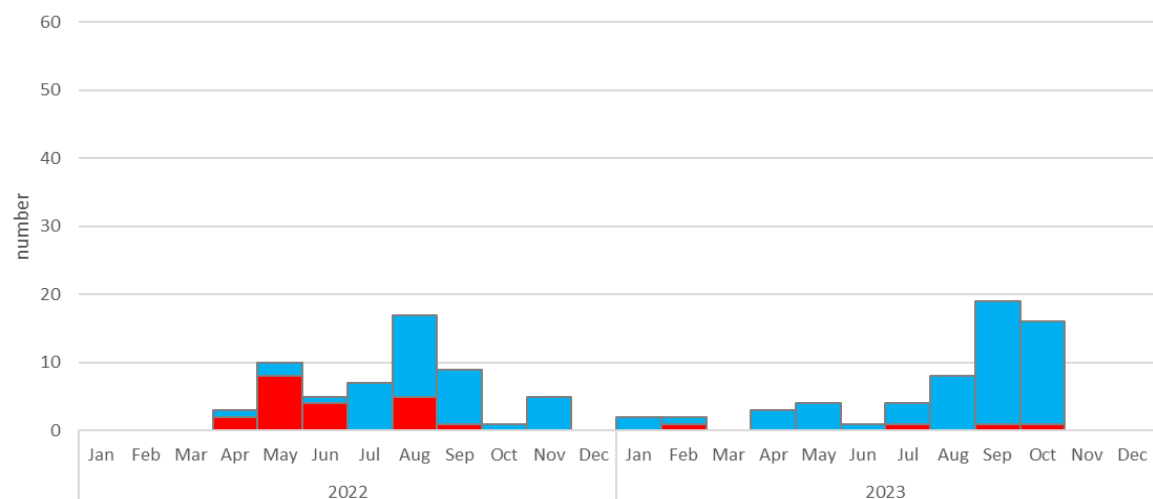
## Afghanistan



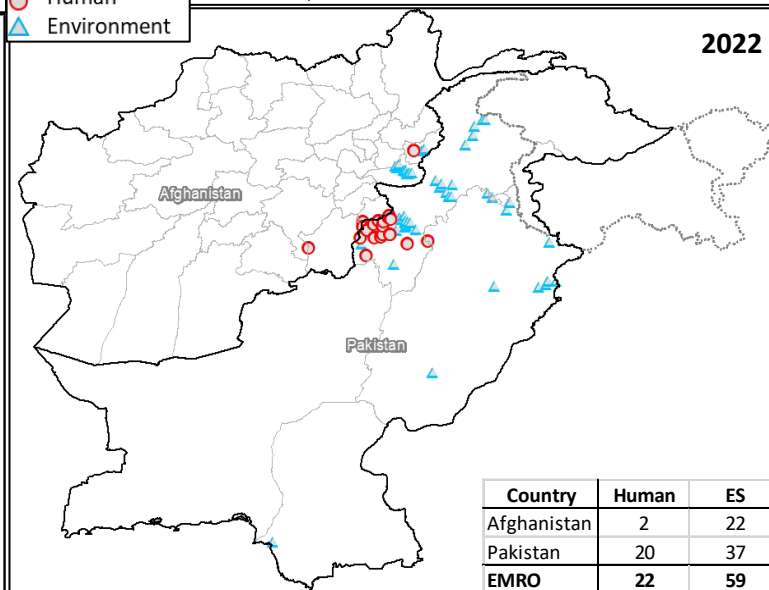
2023



## Pakistan



2022



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

# Virus isolation by country, last 12 months (Nov. 05, 2022, to Nov. 05, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>4</b>		<b>6</b>	<b>21</b>
Wild	6	4					10
cVDPV2				4		5	9
aVDPV2							
VDPV2			1			1	2
VDPV3							
<b>Environment</b>	<b>48</b>	<b>61</b>	<b>10</b>	<b>6</b>	<b>2</b>	<b>7</b>	<b>134</b>
Wild	48	60					108
cVDPV2			6	6	1	6	19
aVDPV2			4				4
VDPV2					1	1	2
VDPV3		1					1
<b>Total</b>	<b>54</b>	<b>65</b>	<b>11</b>	<b>10</b>	<b>2</b>	<b>13</b>	<b>155</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	5 November		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022	2023											
			2022	2023	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Afghanistan	4	2	2	6	0	0	0	0	2	3	0	0	0	1			04-Sep-23
Bahrain	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	0	0		
Egypt	0	0	0	0	0	0	0	0	0	0	0	0					
Iran	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				
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			
Lebanon ****	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	0			
Morocco	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	0		
Pakistan	1	20	20	4		0	1	0	0	0	0	1	0	1	1		03-Oct-23
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0	0				
Qatar	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					
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Sudan	0	0	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			
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							
EMR	5	22	22	10	0	0	1	0	2	3	0	1	0	2	1	0	03-Oct-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	4751	6	0	4467	0	5	0	24.91	94.11	5368	2	0	5365	1	0	0	24.34	94.41	29-Oct-23
BAHRAIN	12	0	0	9	0	2	0	4.74	100.00	30	0	0	30	0	0	0	10.02	83.33	5-Nov-23
DJIBOUTI	9	0	0	9	0	0	0	2.53	88.89	19	0	0	19	0	0	0	4.65	47.37	4-Nov-23
EGYPT	1393	0	0	1219	1	16	0	3.99	88.51	1394	0	0	1394	0	0	0	3.48	91.54	2-Nov-23
IRAN	935	0	0	878	0	0	0	5.23	97.33	824	0	0	824	0	0	0	4.06	97.69	4-Nov-23
IRAQ	697	0	0	629	0	14	0	4.68	95.27	835	0	0	835	0	0	0	4.78	92.10	2-Nov-23
JORDAN	92	0	0	90	0	0	0	2.50	95.65	89	0	0	89	0	0	0	2.14	94.38	2-Nov-23
KUWAIT	34	0	0	34	0	0	0	4.67	88.24	52	0	0	52	0	0	0	5.62	98.08	22-Oct-23
LEBANON	72	0	0	58	0	6	0	5.51	86.11	57	0	0	57	0	0	0	3.58	84.21	29-Oct-23
LIBYA	91	0	0	88	0	0	0	4.15	98.90	101	0	0	101	0	0	0	3.89	100.00	4-Nov-23
MOROCCO	102	0	0	42	0	39	2	1.02	58.82	94	0	0	92	0	2	0	0.92	57.45	24-Oct-23
OMAN	22	0	0	22	0	0	0	2.07	90.91	27	0	0	27	0	0	0	2.10	92.59	5-Nov-23
PAKISTAN	15006	4	0	13930	0	137	0	18.14	85.22	19032	20	1	19011	0	0	0	18.86	85.14	5-Nov-23
PALESTINE	20	0	0	16	0	1	0	1.14	95.00	33	0	0	32	1	0	0	1.64	100.00	5-Nov-23
QATAR	15	0	0	11	0	2	0	4.08	73.33	11	0	0	11	0	0	0	2.44	72.73	29-Oct-23
SAUDI ARABIA	259	0	0	180	0	0	0	3.66	95.75	274	0	0	274	0	0	0	3.18	93.80	5-Nov-23
SOMALIA	357	0	0	330	4	0	0	4.70	93.56	356	0	0	349	6	0	0	4.30	97.19	5-Nov-23
SUDAN	388	0	0	154	0	130	20	2.20	74.48	650	0	0	649	1	0	0	3.25	97.08	5-Nov-23
SYRIA	276	0	0	250	0	0	0	4.19	97.10	382	0	0	382	0	0	0	4.96	94.76	4-Nov-23
TUNISIA	79	0	0	75	0	0	0	3.17	69.62	55	0	0	55	0	0	0	1.91	61.82	3-Nov-23
U.A.E.	50	0	0	35	0	7	0	4.01	92.00	66	0	0	66	0	0	0	4.47	96.97	26-Oct-23
YEMEN	1081	0	0	839	4	7	4	8.00	87.70	1377	0	1	1214	162	0	0	8.77	86.64	4-Nov-23
EMR POL	25741	10	0	23365	9	366	26	10.43	88.01	31126	22	2	30928	171	2	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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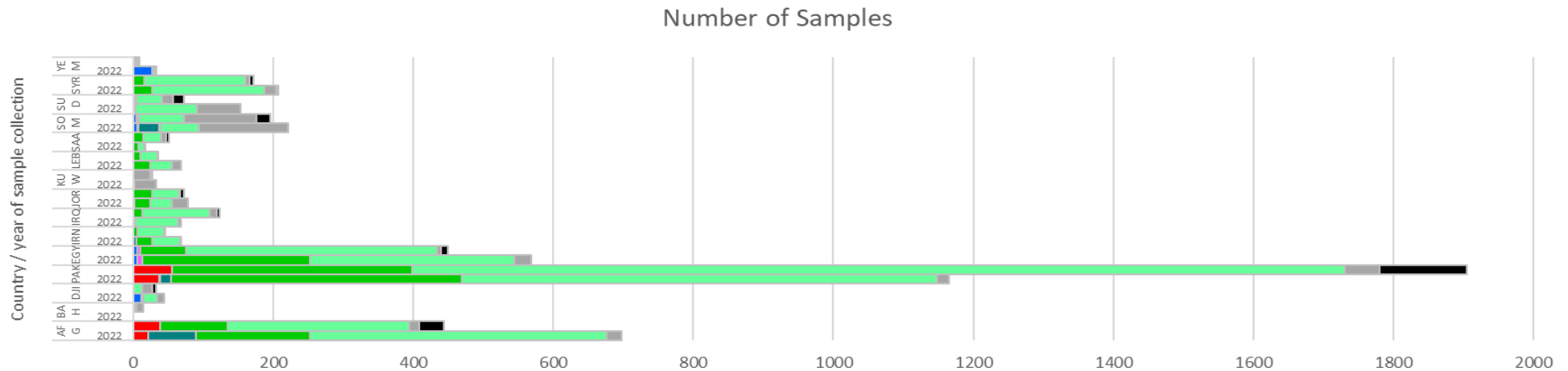
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results												Indicators				Latest report Date	
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	4703	240	26	632	3583		93	5 *	163						198			2	2	3	12%	93%	100%	98%	5-Nov-23
Bahrain	NPL Oman / CDC	11			1	10																5%	100%		45%	5-Nov-23
Djibouti	NPL Kenya / CDC	9			2	7																22%	67%		78%	4-Nov-23
Egypt	RRL Egypt	1338	13		143	1100	60	23		7				1		8				1		10%	96%	100%	99%	2-Nov-23
Iran	NPL Iran / CDC	961	7		9	910	33	2		5						3						1%	100%	100%	99%	5-Nov-23
Iraq	NPL Iraq, RRL Egypt	699	6		49	607	28	9		5						2						8%	100%	100%	99%	2-Nov-23
Jordan	NPL Jordan, RRL Egypt	90			15	75																15%	94%		100%	5-Nov-23
Kuwait	RRL Kuwait / RIVM	37	1		3	31	2														1	9%	97%		100%	2-Nov-23
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	70			1	69																4%	100%			17-Oct-23
Libya	RRL Tunisia / RIVM	88	1		3	84				1												3%	98%	1	100%	31-Oct-23
Morocco	NPL Morocco, RRL Tunisia	101			3	97	1															3%	99%		93%	3-Nov-23
Oman	NPL Oman / CDC	22			1	21																11%	100%		100%	5-Nov-23
Pakistan	RRL Pakistan	14893	436	32	2259	11562	487	108	3 *	294						337						13%	92%	100%	96%	5-Nov-23
Palestine & UNRWA		20	1			18		1		1			1									0%	44%		100%	5-Nov-23
Qatar	NPL Oman / CDC	15	1			14										1						0%	100%	1	100%	5-Nov-23
Saudi Arabia	NPL Saudi Arabia / CDC	202	2		5	195				2						1						2%	98%	100%	100%	21-Sep-23
Somalia	NPL Kenya / CDC	356	9		54	271	10	13		4			2	4		2						16%	5%		95%	5-Nov-23
Sudan	NPL Sudan / RRL Egypt	368	10	1	73	266		17					3	1		2			2			19%	99%	100%	31%	14-Apr-23
Syria	NPL Syria / RRL Egypt	266	4	1	19	226	9	7														7%	100%			17-Oct-23
Tunisia	RRL Tunisia	81	1		3	76	1									1						3%	96%	1	98%	31-Oct-23
U.A.E	NPL Oman / CDC	46			2	40	4															5%	95%		24%	5-Nov-23
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	894	24	2	174	629	65			11			1	4		18						18%	20%	100%	22%	4-Nov-23
Total EMR 2023		25270	756	62	3451	19891	700	273	10 *	493			7	10		573			4	3	4	12%	90%	100%	94%	
Total EMR 2022		30461	1068	119	4831	24435		2	22 *	556	2		38	169 **		723		6	8	2	1	13%	93%	89%	92%	

\* In 2023 – Two WPV1 cases are confirmed due to positive contacts 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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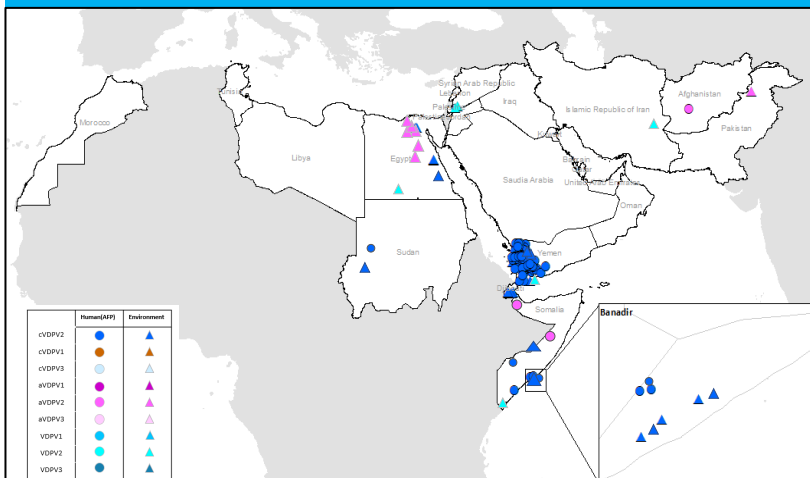


	AFG		BAH		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SAA		SOM		SUD		SYR		YEM	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
🇷🇺 Wild	22	39					37	55																						
🇧🇩 cVDPV2					12				6	6												6	5	1					28	3
🇷🇺 Wild+cVDPV2																														
🇷🇺 Wild+aVDPV2																														
🇷🇺 Wild+aVDPV3																														
🇲🇰 aVDPV1																														
🇲🇰 aVDPV2							1		7	4																				
🇲🇰 aVDPV3																														
🇲🇰 VDPV1																														
🇲🇰 VDPV2											1				2								1			1			1	1
🇲🇰 VDPV3								1																						
🇲🇰 SL2	68				2		16				4											30	2		1			1	2	
🇲🇰 SL1/3	162	96		2			415	342	239	66	23	6	3	13	22	28			24	10	7	15	2	2	2	2	28	16	2	1
🇲🇰 Entero	424	260		3	20	13	679	1333	292	358	39	38	61	96	32	37	2		32	24	9	25	55	64	88	38	159	145	1	1
🇲🇰 Negative	22	14		10	11	15	17	49	25	5	1	1	4	10	23	2	31	24	13	1	2	7	128	103	63	15	18	5		
🇲🇰 Pending		35				5		124		11				5		6		3				4		20		16	3	6		

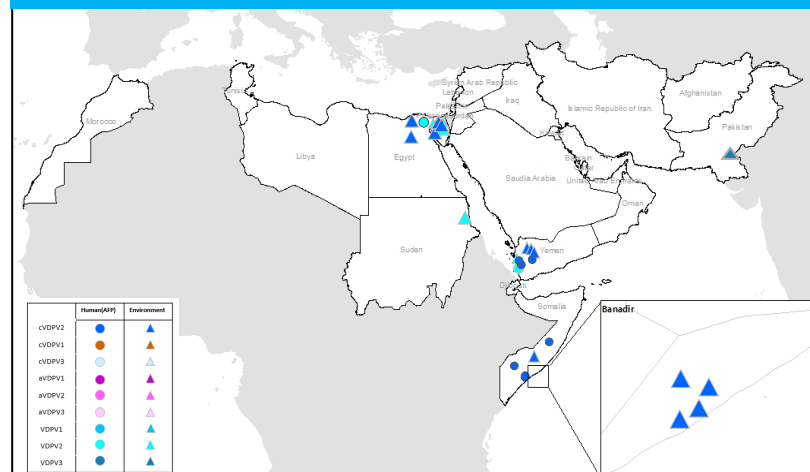
# VDPVs isolations by Source and Country

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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	6		13-09-23					
	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	4	21-08-23	3	1	11	5		31-08-22	19	5	26	1	6	5			1	5		1	10-03-22
	Sudan			58		1		31-10-22			18			08-10-20			14		1				4				24-08-20
	Yemen				66	162	3	28-08-23				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																				
	Iran																		1		04-02-22						
	Jordan																		2		25-05-22						
	Somalia					1	01-09-22											1		22-04-23							
	Sudan																		1	18-09-23							
	Yemen						1	09-05-23											2	1	26-04-23						
VDPV3	Pakistan																		1	14-02-23				8			



## 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)