

## 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

- 12 cases of Wild Polio 1
  - 06 in Afghanistan
  - 06 in Pakistan

- 8 cases of cVDPV2
  - 05 in Somalia
  - 03 in Yemen

- Zero case of cVDPV1



Sewage  
water  
sampling

### 2022

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

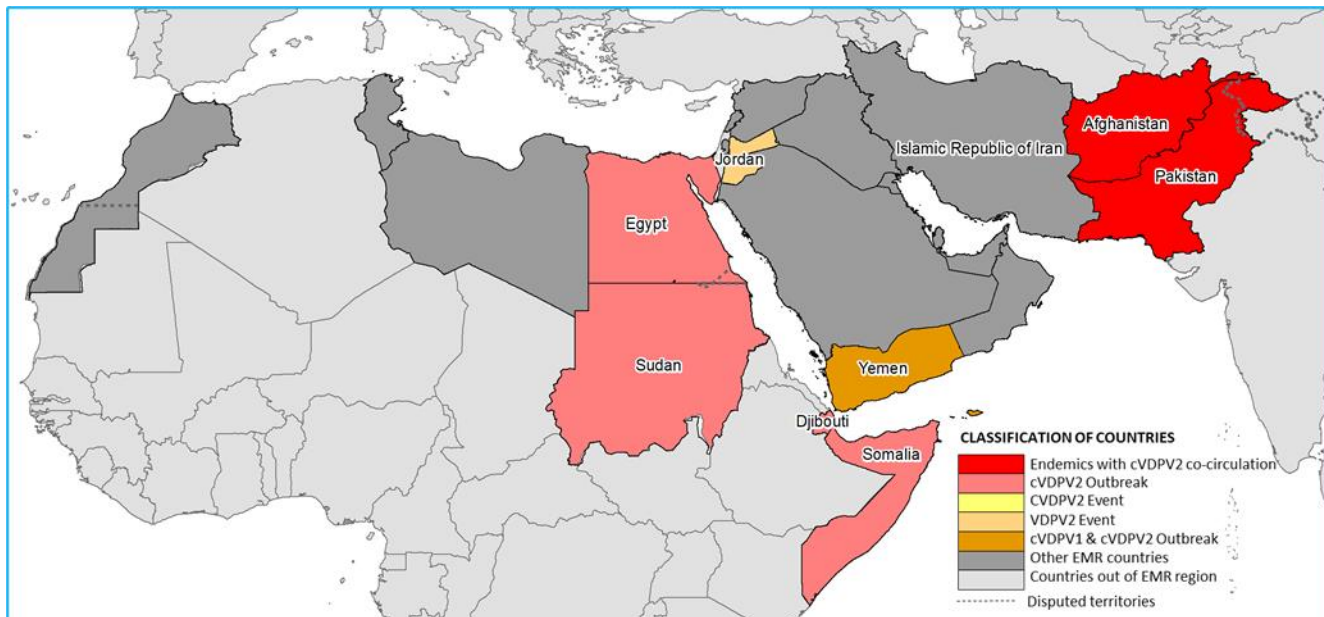
- 51 samples cVDPV2
  - 06 in Egypt
  - 12 in Djibouti
  - 06 in Somalia
  - 01 in Sudan
  - 26 in Yemen

### 2023

- 143 samples Wild Polio 1
  - 53 in Afghanistan
  - 90 in Pakistan

- 18 samples of cVDPV2
  - 09 in Somalia
  - 03 in Yemen
  - 06 in Egypt

## Classification of EMR countries by type of poliovirus circulation



## Highlights of the week

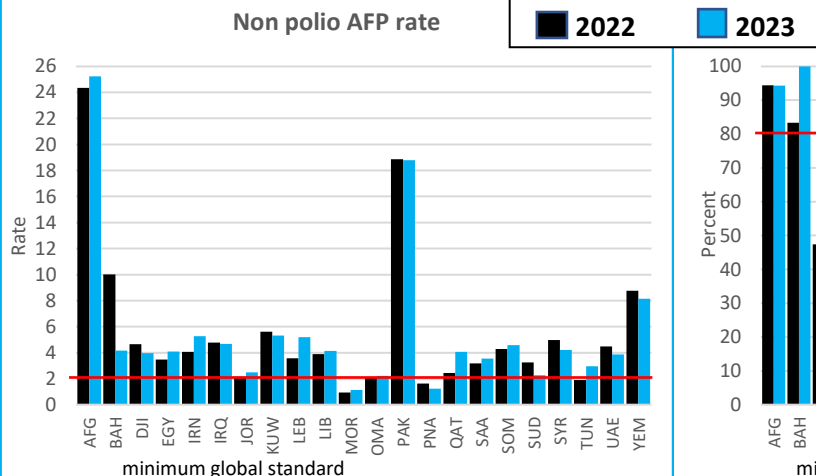
### Wild Poliovirus

- No new WPV1 cases reported this week. The WPV1 cases count in 2023 to date is 12 (6 each from Afghanistan and Pakistan) and in 2022, the WPV1 cases count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan).
- Thirteen new WPV1 positive environmental samples reported this week – seven from Afghanistan and six from Pakistan. The new reported WPV1 ES from Afghanistan are: 5 from Nangarhar province (3 from Jalalabad and 1 each from Asadabad and Behsud districts), and 1 each from Kandahar province (Kandahar district) and Zabul province (Qalat district) - with collection dates ranging between 21-22 November 2023. The new WPV1 reported from Pakistan are: 3 from Balochistan province (2 from Quetta and 1 from Hub districts), 2 from Khyber Pakhtunkhwa province (1 each from Peshawar and Tank districts), and 1 from Sindh province (Khimaliar Town) – with collection date on 20<sup>th</sup> November 2023. The positive environmental samples WPV1 count in 2023 to date is 143 (53 in Afghanistan and 90 in Pakistan), and in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

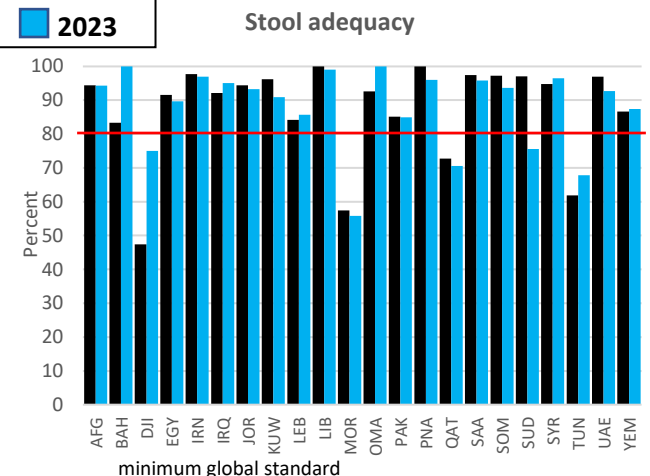
### Vaccine derived poliovirus (VDPV)

- No new cVDPV cases reported this week. The count of cVDPV2 cases in 2023 to date is 8 (5 from Somalia and 3 from Yemen) and in 2022 the count remains to be 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen).
- Two new cVDPV2 positive environmental samples reported this week from Somalia. The new cVDPV2 ES are from Banadir province (one each from Hamarweyne and Shangani districts) with collection date on 26<sup>th</sup> October 2023. The cVDPV2 positive environmental samples count in 2023 to date is 18 (9 from Somalia, 6 from Egypt and 3 from Yemen) and in 2022, the count remains 51 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 26 in Yemen).
- A new VDPV2 positive environment sample was reported this week from Egypt. The new ES is from Dahya site, North Sinai province, with collection date 13<sup>th</sup> November 2023.

### Non polio AFP rate



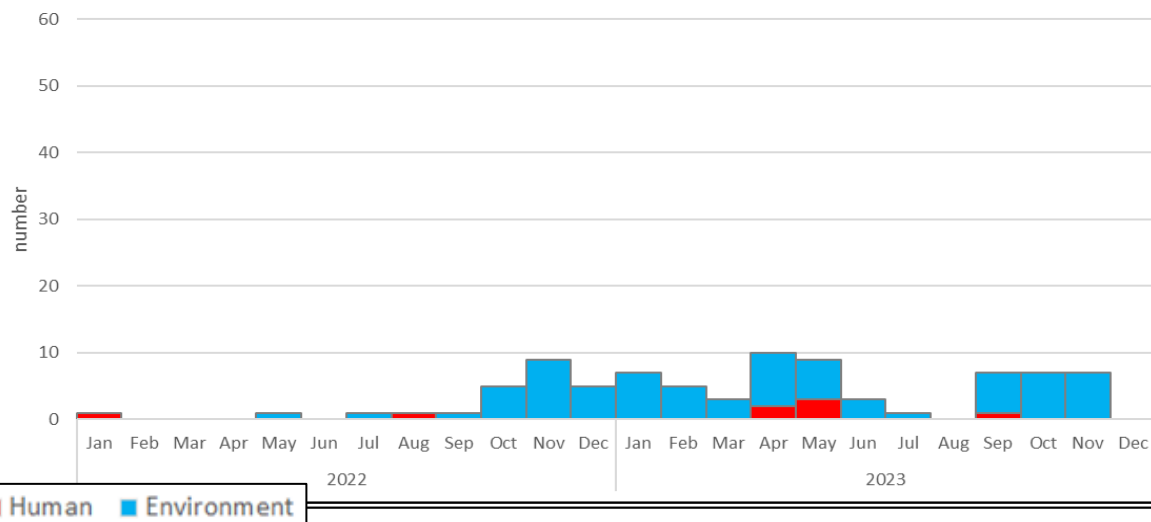
### Stool adequacy



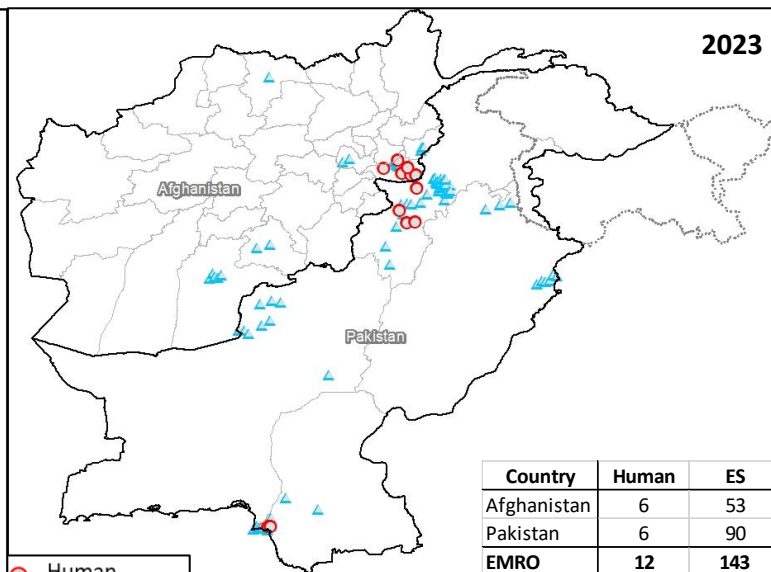
# WPV1 Positive isolates from Afghanistan and Pakistan by source

EMR Polio Bulletin - Issue No. 1314, Week 49 (ending on 10/12/2023)

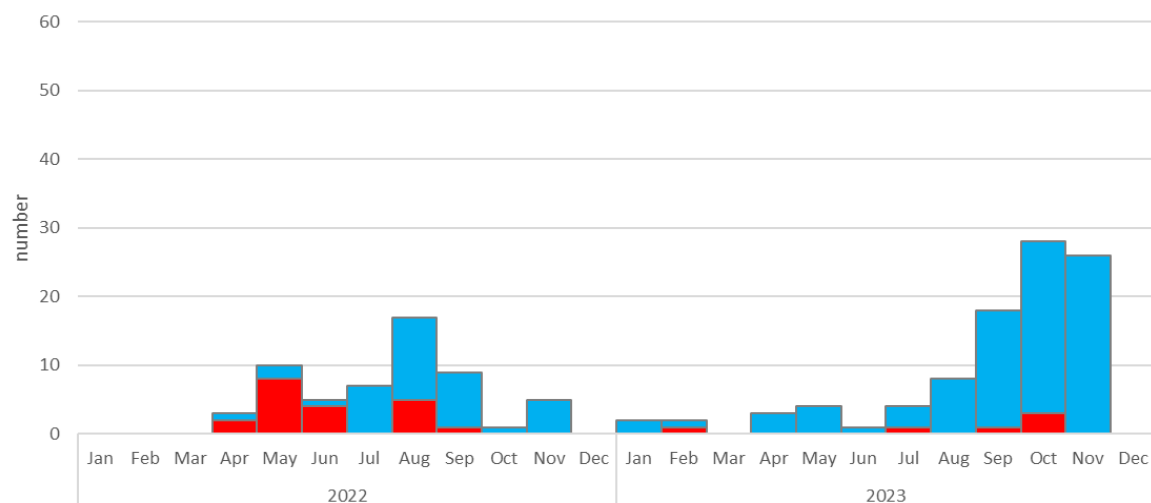
## Afghanistan



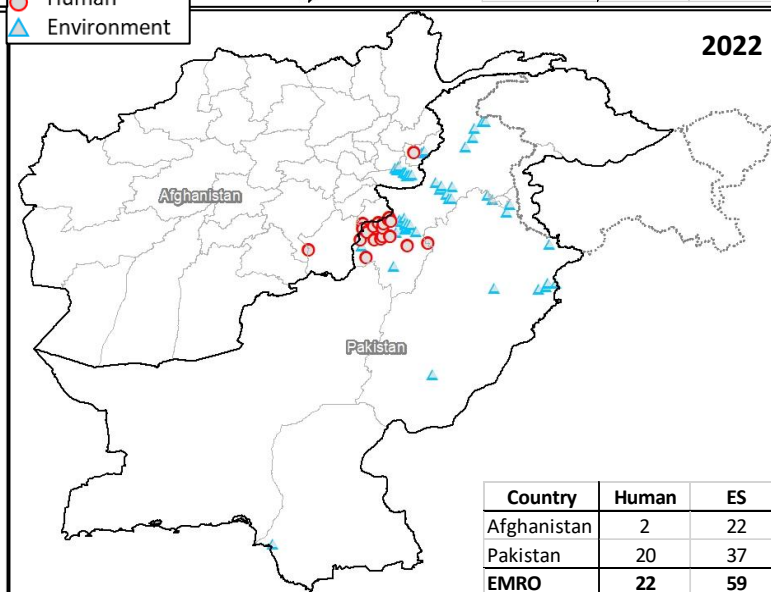
2023



## Pakistan



2022



# Virus isolation by country, last 12 months (Dec. 17, 2022, to Dec. 17, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>5</b>		<b>4</b>	<b>22</b>
Wild	6	6					12
cVDPV2				5		3	8
aVDPV2							
VDPV2			1			1	2
VDPV3							
<b>Environment</b>	<b>55</b>	<b>91</b>	<b>11</b>	<b>10</b>	<b>1</b>	<b>4</b>	<b>172</b>
Wild	55	90					145
cVDPV2			6	10		3	19
aVDPV2			4				4
VDPV2			1		1	1	3
VDPV3		1					1
<b>Total</b>	<b>61</b>	<b>97</b>	<b>12</b>	<b>15</b>	<b>1</b>	<b>8</b>	<b>194</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

EMR Polio Bulletin - Issue No. 1315, Week 50 (ending on 17/12/2023)

Country	Total year 2021	Total year 2022	17 December		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
			2023														
			2022	2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Afghanistan	4	2	2	6	0	0	0	2	3	0	0	0	1	0			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			
Egypt	0	0	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	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				
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	0			
Morocco	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	20	6	0	1	0	0	0	0	1	0	1	3			24-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	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	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					
Yemen	0	0	0	0	0	0	0	0	0	0	0	0					
EMR	5	22	22	12	0	1	0	2	3	0	1	0	2	3	0	0	24-Oct-23

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

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

EMR Polio Bulletin - Issue No. 1315, Week 50 (ending on 17/12/2023)

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	5467	6	0	5230	0	9	0	25.23	94.27	5368	2	0	5365	1	0	0	24.34	94.41	17-Dec-23
BAHRAIN	12	0	0	10	0	1	0	4.17	100.00	30	0	0	30	0	0	0	10.02	83.33	10-Dec-23
DJIBOUTI	16	0	0	9	0	0	0	3.96	75.00	19	0	0	19	0	0	0	4.65	47.37	17-Dec-23
EGYPT	1623	0	0	1441	1	24	0	4.10	89.65	1394	0	0	1394	0	0	0	3.48	91.54	14-Dec-23
IRAN	1071	0	0	1040	0	0	0	5.28	96.92	824	0	0	824	0	0	0	4.06	97.69	16-Dec-23
IRAQ	792	0	0	743	0	13	0	4.69	95.08	835	0	0	835	0	0	0	4.78	92.10	16-Dec-23
JORDAN	104	0	0	99	0	0	0	2.49	93.27	89	0	0	89	0	0	0	2.14	94.38	10-Dec-23
KUWAIT	44	0	0	38	0	0	0	5.32	90.91	52	0	0	52	0	0	0	5.62	96.15	10-Dec-23
LEBANON	77	0	0	61	0	6	0	5.19	85.71	57	0	0	57	0	0	0	3.58	84.21	10-Dec-23
LIBYA	103	0	0	94	0	0	0	4.13	99.03	101	0	0	101	0	0	0	3.89	100.00	16-Dec-23
MOROCCO	129	0	0	42	0	52	8	1.14	55.81	94	0	0	92	0	2	0	0.93	57.45	10-Dec-23
OMAN	27	0	0	24	0	0	0	2.23	100.00	27	0	0	27	0	0	0	2.10	92.59	10-Dec-23
PAKISTAN	17655	6	0	16686	0	145	0	18.78	84.94	19033	20	1	19012	0	0	0	18.86	85.13	17-Dec-23
PALESTINE	25	0	0	20	0	0	0	1.25	96.00	33	0	0	32	1	0	0	1.64	100.00	17-Dec-23
QATAR	17	0	0	11	0	3	0	4.07	70.59	11	0	0	11	0	0	0	2.44	72.73	16-Dec-23
SAUDI ARABIA	285	0	0	233	0	0	0	3.55	95.79	274	0	0	274	0	0	0	3.18	97.45	17-Dec-23
SOMALIA	395	0	0	377	5	0	0	4.58	93.67	356	0	0	350	6	0	0	4.28	97.19	17-Dec-23
SUDAN	455	0	0	343	0	19	1	2.28	75.60	650	0	0	649	1	0	0	3.25	97.08	17-Dec-23
SYRIA	314	0	0	289	0	0	0	4.20	96.50	382	0	0	382	0	0	0	4.96	94.76	16-Dec-23
TUNISIA	84	0	0	82	0	0	0	2.97	67.86	55	0	0	55	0	0	0	1.91	61.82	16-Dec-23
U.A.E.	55	0	0	46	0	1	0	3.88	92.73	66	0	0	66	0	0	0	4.47	96.97	12-Dec-23
YEMEN	1249	0	0	1029	4	10	1	8.13	87.43	1377	0	1	1214	162	0	0	8.77	86.64	16-Dec-23
EMR POL	29999	12	0	27947	10	283	10	10.70	87.84	31127	22	2	30930	171	2	0	10.77	88.20	

\* 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

EMR Polio Bulletin - Issue No. 1315, Week 50 (ending on 17/12/2023)

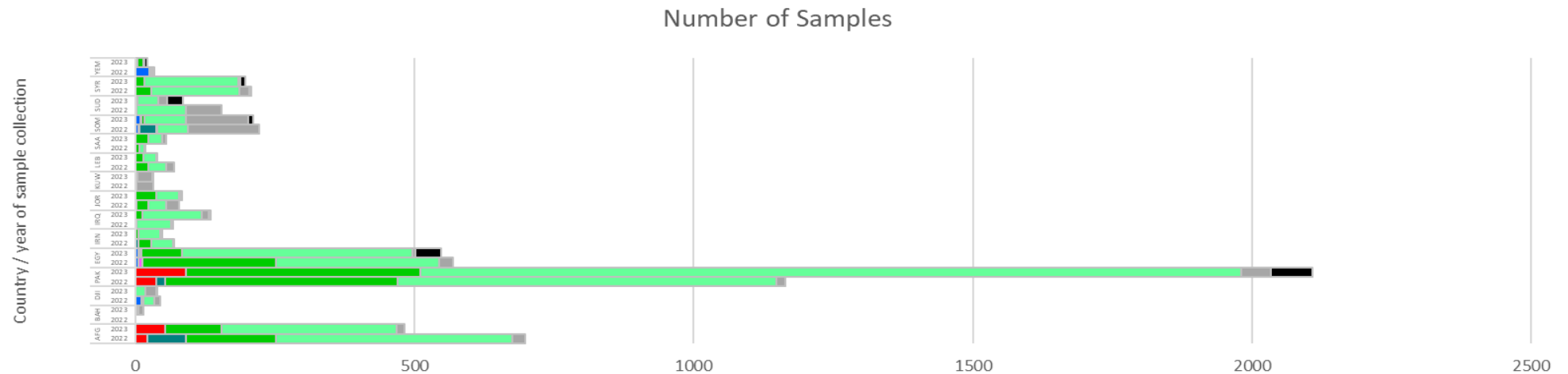
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results												Indicators				Latest report Date	
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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									
Afghanistan	RRL Pakistan	5437	280	28	739	4194	154	4	5 *	192						231			2	2	1	12%	94%	100%	98%	17-Dec-23
Bahrain	NPL Oman / CDC	11			1	10																5%	100%		45%	17-Dec-23
Djibouti	NPL Kenya / CDC	16			2	11	1	2														15%	46%		77%	17-Dec-23
Egypt	RRL Egypt	1550	16		171	1294	51	19		8				1		11				1		10%	92%	100%	99%	14-Dec-23
Iran	NPL Iran / CDC	1049	7		8	1009		25		5						3						1%	100%	100%	99%	2-Dec-23
Iraq	NPL Iraq, RRL Egypt	792	6		56	690	28	12		5						2						8%	100%	100%	99%	15-Dec-23
Jordan	NPL Jordan, RRL Egypt	106			18	86	2															16%	95%		100%	17-Dec-23
Kuwait	RRL Kuwait / RIVM	47	1		6	34	1	5												1		12%	98%		100%	7-Dec-23
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	74			1	73																4%	100%			7-Dec-23
Libya	RRL Tunisia / RIVM	98	1		3	89	2	3		1												3%	98%	1	100%	10-Dec-23
Morocco	NPL Morocco, RRL Tunisia	118			3	111	3	1														3%	99%		94%	15-Dec-23
Oman	NPL Oman / CDC	27			1	26																9%	100%		100%	17-Dec-23
Pakistan	RRL Pakistan	17225	490	41	2617	13586	460	21	5 *	334						388						13%	93%	100%	96%	17-Dec-23
Palestine & UNRWA		25	1			20		4		1			1									0%	40%		100%	17-Dec-23
Qatar	NPL Oman / CDC	15	1			14										1						0%	100%	1	100%	17-Dec-23
Saudi Arabia	NPL Saudi Arabia / CDC	284	2		5	271		6		2						1						2%	98%	100%	100%	7-Dec-23
Somalia	NPL Kenya / CDC	394	10		60	312	1	12		4			2	5		2						16%	4%		95%	17-Dec-23
Sudan	NPL Sudan / RRL Egypt	443	10	1	73	266	75	17					3			2			2			19%	99%	100%	31%	14-Apr-23
Syria	NPL Syria / RRL Egypt	303	5	1	24	259	5	9														8%	100%			7-Dec-23
Tunisia	RRL Tunisia	91	1		3	84	1	2								1						3%	97%	1	98%	10-Dec-23
U.A.E	NPL Oman / CDC	51			3	48																6%	96%		27%	17-Dec-23
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	1078	25	2	225	825		1		11			1	4		19						17%	21%	100%	21%	16-Dec-23
Total EMR 2023		29234	856	73	4019	23312	784	143	12 *	563			7	10		661			4	3	2	12%	90%	100%	93%	
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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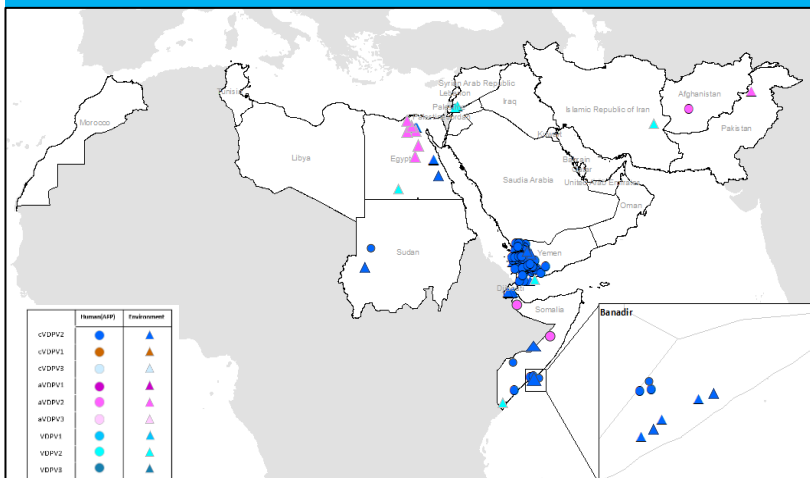


	AFG		BAH		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SAA		SOM		SUD		SYR		YEM	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Wild	22	53					37	90																						
cVDPV2					12				6	6													6	9	1				26	3
Wild+cVDPV2																														
Wild+aVDPV2																														
Wild+aVDPV3																														
aVDPV1																														
aVDPV2							1		7	4																				
aVDPV3																														
VDPV1																														
VDPV2									1	1					2								1			1			3	1
VDPV3							1																							
SL2	68				2		16				4											30	2		1				1	
SL1/3	162	102		2		1	415	420	239	73	23	6	3	13	22	38		2	24	14	7	24	2	5	2	2	28	17	2	10
Entero	424	313		3	20	18	679	1470	292	413	39	38	61	107	32	41	2	2	32	24	9	25	55	74	88	38	159	167	1	2
Negative	22	14		10	11	18	17	53	25	5	1	1	4	11	23	2	31	27	13	1	2	7	128	113	63	15	18	5		
Pending						3		74		45		3		4		2		1					9		29	3	8			6

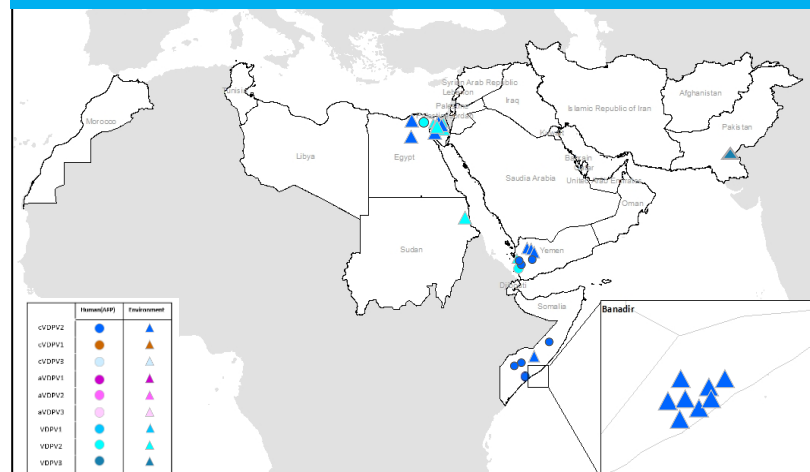
# VDPVs isolations by Source and Country

EMR Polio Bulletin - Issue No. 1315 Week 50 (ending on 17/12/2023)

## 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	2023	Most recent	2018	2019	2020	2021	2022	2023	Most recent	2018	2019	2020	2021	2022	2023	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	5	16-09-23	3	1	11		6	3	03-08-23	19	5	26	1	6	9	26-10-23		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	3	28-08-23				23	40	1	11-06-23				13	26	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				1			22-08-22	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													1	13-11-23							
	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												3	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)