

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1291, Week 26 (ending on 02/07/2023)

## 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

- 6 cases of Wild Polio 1
  - 05 in Afghanistan
  - 01 in Pakistan

- 2 cases of cVDPV2
  - 02 in Somalia

- Zero case of cVDPV1



Sewage  
water  
sampling

### 2022

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

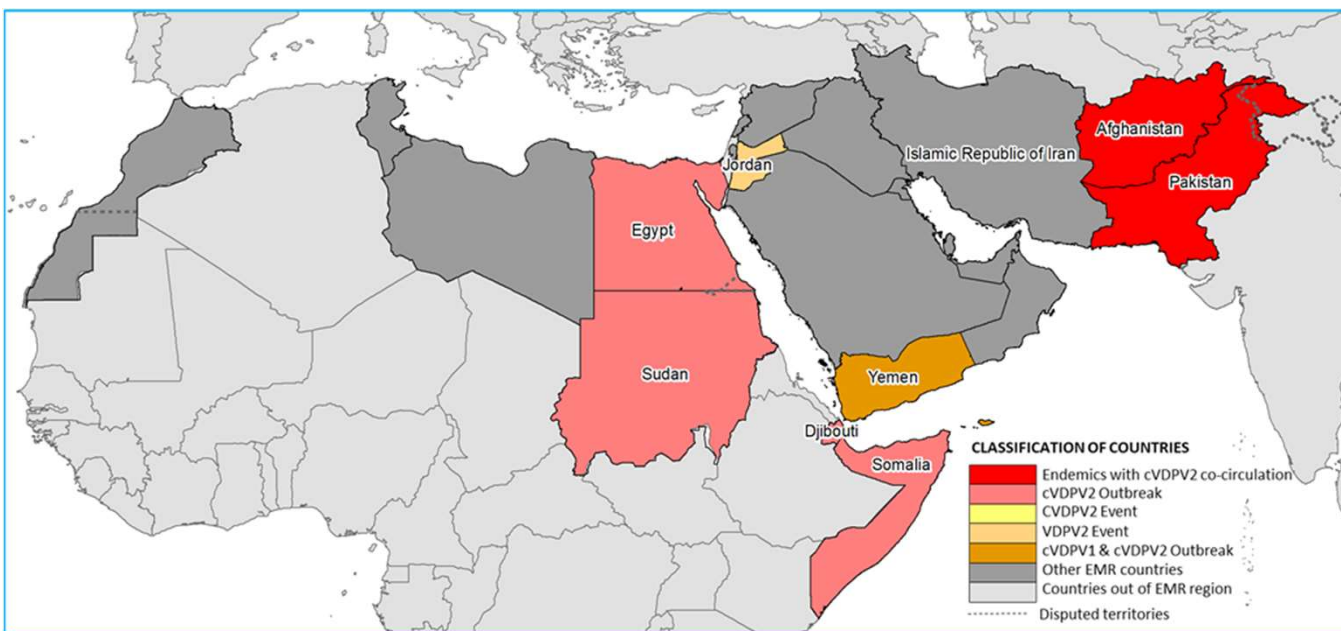
- 50 samples cVDPV2
  - 06 in Egypt
  - 12 in Djibouti
  - 06 in Somalia
  - 01 in Sudan
  - 25 in Yemen

### 2023

- 40 samples Wild Polio 1
  - 29 in Afghanistan
  - 11 in Pakistan

- Zero samples of cVDPV2

## Classification of EMR countries by type of poliovirus circulation



## Highlights of the week

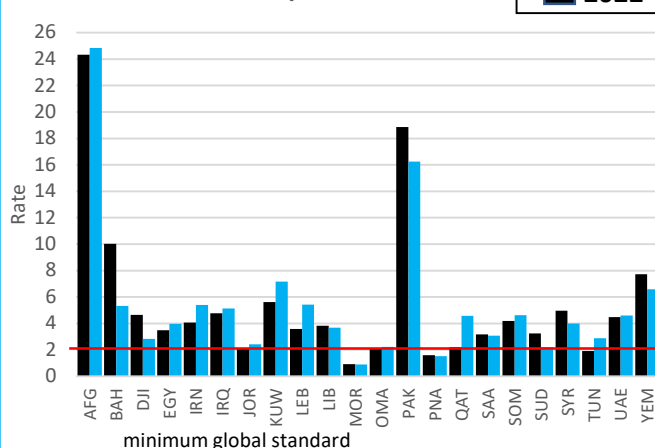
### Wild Poliovirus

- No new WPV1 cases reported this week. The WPV1 cases count in 2023 till date is 6 (5 from Afghanistan and 1 from Pakistan) while in 2022, the WPV1 cases count remains to be 22 cases (2 from Afghanistan and 20 from Pakistan).
- No new WPV1 positive environmental samples reported this week. The positive WPV1 ES count in 2023 is 40 (29 in Afghanistan and 11 in Pakistan), while in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

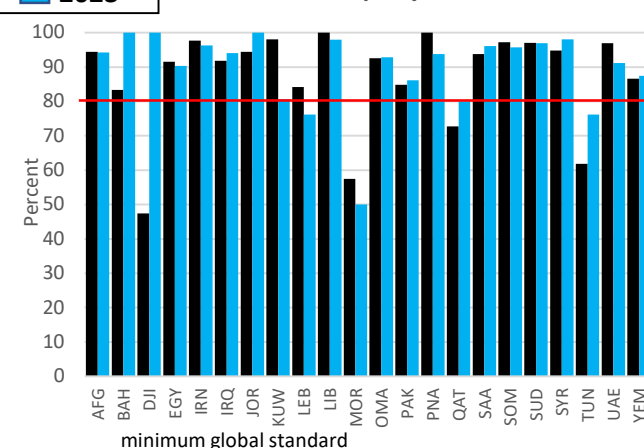
### Circulating Vaccine derived poliovirus (cVDPV)

- No new cVDPV isolates from human or environmental samples reported this week.
  - In 2023 the count of cVDPV2 cases remains to be 2 cases from Somalia while the count in 2022 is 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen).
  - In 2022 to date, the positive cVDPV2 ES count remains to be 50 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 25 in Yemen) and no cVDPV2 ES reported in 2023 till date.

### Non polio AFP rate



### Stool adequacy



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

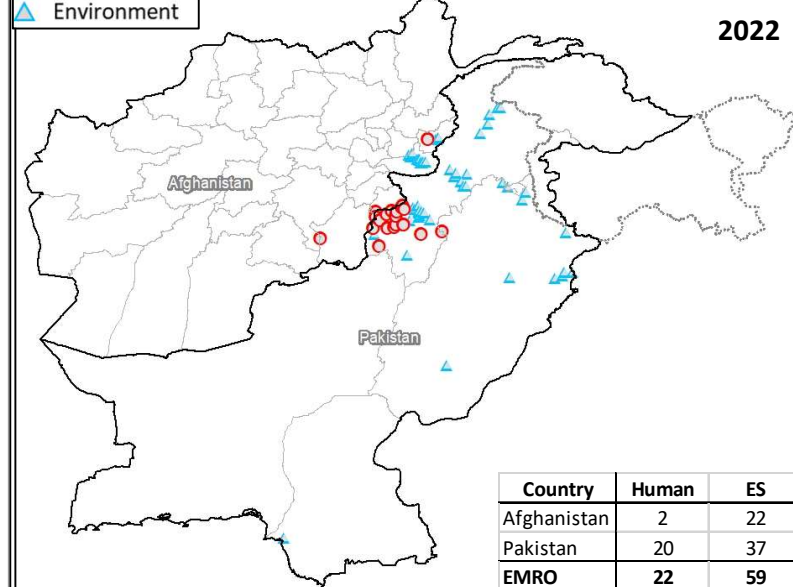
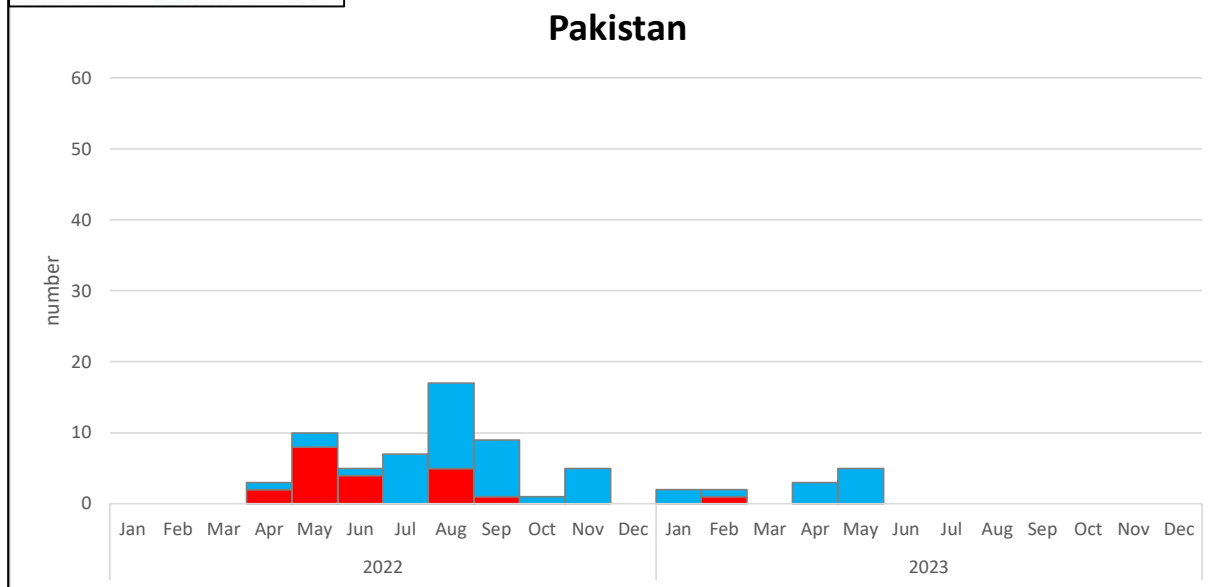
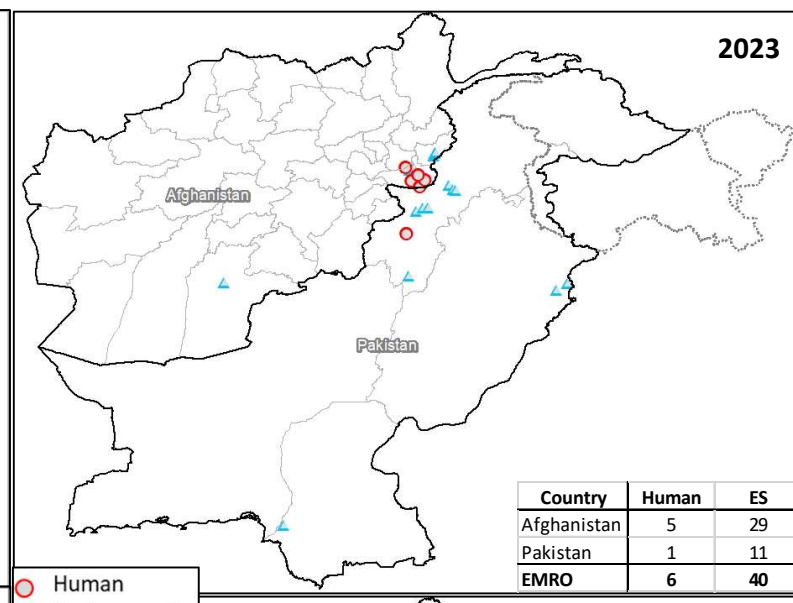
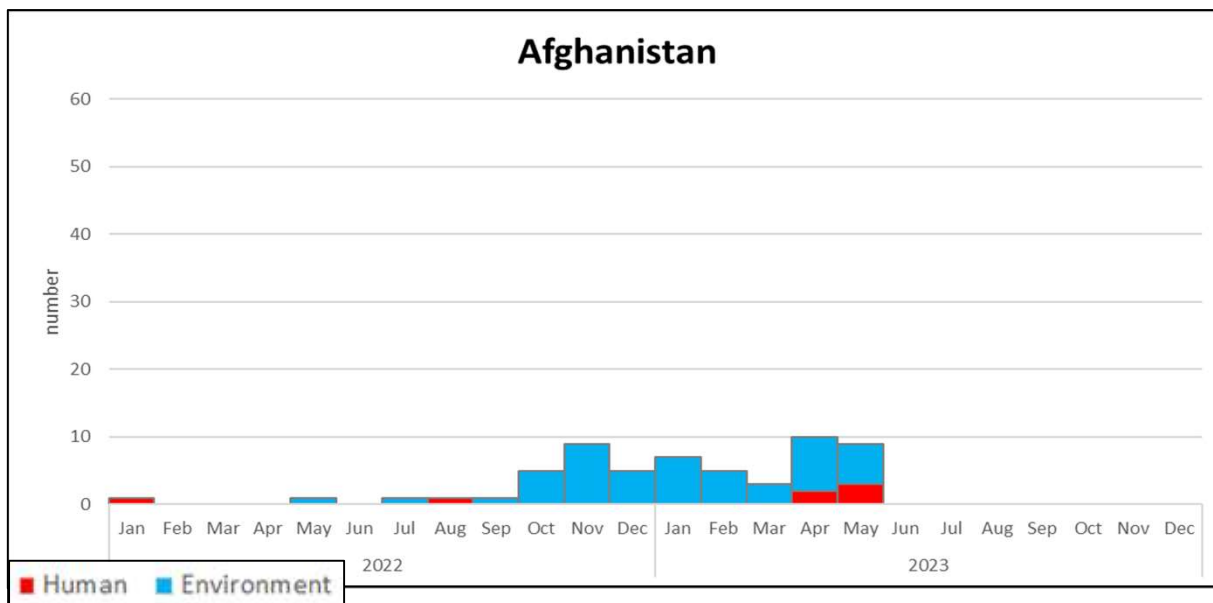
Contact us: WHO/EMRO – POL/SLD - Data

Email: [emacojorpolsld@who.int](mailto:emacojorpolsld@who.int)

Web: <http://www.emro.who.int/polio/strategy-surveillance/em-polio-fax-issues.html>

# WPV1 Positive isolates from Afghanistan and Pakistan by source

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

# Virus isolation by country, last 12 months (July 02, 2022, to July 02, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>6</b>	<b>7</b>		<b>6</b>	<b>1</b>	<b>32</b>	<b>52</b>
Wild	6	7					13
cVDPV2				4	1	32	37
aVDPV2				2			2
VDPV2							
<b>Environment</b>	<b>50</b>	<b>44</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>13</b>	<b>113</b>
Wild	50	44					94
cVDPV2			1	3	1	13	18
aVDPV2							
VDPV2			1				1
<b>Total</b>	<b>56</b>	<b>51</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>45</b>	<b>165</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	18 June		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022						2023						
			2022	2023	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Afghanistan	4	2	1	5	0	1	0	0	0	0		0	0	2	3		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	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	0			
Iraq	0	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	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		0	0				
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	1	20	12	1	0	5	1	0	0		0	1	0	0			20-Feb-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			
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	0	0			
Sudan	0	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	0				
Yemen	0	0	0	0	0	0	0	0	0	0							
EMR	5	22	13	6	0	6	1	0	0	0	0	1	0	2	3		18-May-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	2810	5	0	2519	0	4	4	24.84	94	2710	1	0	2709	0	0	0	12.29	95	02-Jul-23
Bahrain	8	0	0	5	0	1	0	5.33	100	21	0	0	21	0	0	0	7.01	81	02-Jul-23
Djibouti	6	0	0	5	0	0	0	2.84	100	6	0	0	6	0	0	0	1.47	67	02-Jul-23
Egypt	820	0	0	678	0	11	1	3.96	90	647	0	0	647	0	0	0	1.62	91	26-Jun-23
Iraq	453	0	0	398	0	10	0	5.13	94	366	0	0	366	0	0	0	2.09	92	29-Jun-23
Islamic Republic of Iran	572	0	0	526	0	0	0	5.41	96	448	0	0	448	0	0	0	2.21	98	02-Jul-23
Jordan	53	0	0	47	0	0	0	2.43	100	46	0	0	46	0	0	0	1.11	91	02-Jul-23
Kuwait	31	0	0	31	0	0	0	7.18	81	29	0	0	29	0	0	0	3.13	97	25-Jun-23
Lebanon	42	0	0	24	0	5	0	5.42	76	32	0	0	32	0	0	0	2.01	88	19-Jun-23
Libya	49	0	0	37	0	1	0	3.69	98	53	0	0	53	0	0	0	2.04	100	17-Jun-23
Morocco	54	0	0	18	0	22	1	0.90	50	56	0	0	52	0	4	1	0.55	66	12-Jun-23
Oman	14	0	0	14	0	0	0	2.22	93	9	0	0	9	0	0	0	0.70	100	02-Jul-23
Pakistan	7975	1	0	7281	0	77	0	16.26	86	11040	6	0	11033	0	1	3	10.94	85	02-Jul-23
Palestine	16	0	0	7	0	2	1	1.53	94	26	0	0	25	1	0	0	1.24	100	02-Jul-23
Qatar	10	0	0	3	0	3	0	4.59	80	5	0	0	5	0	0	0	0.89	40	11-Jun-23
Saudi Arabia	129	0	0	92	0	2	0	3.08	96	168	0	0	168	0	0	0	1.96	94	18-Jun-23
Somalia	210	0	0	197	2	0	0	4.62	96	170	0	0	166	4	0	0	1.99	98	02-Jul-23
Sudan	229	0	0	154	0	23	16	2.21	97	314	0	0	313	1	0	0	1.56	98	25-Jun-23
Syrian Arab Republic	155	0	0	142	0	0	0	3.99	98	184	0	0	184	0	0	0	2.39	96	01-Jul-23
Tunisia	42	0	0	33	0	1	1	2.88	76	36	0	0	36	0	0	0	1.25	61	25-Jun-23
United Arab Emirates	34	0	0	17	0	7	0	4.60	91	42	0	0	42	0	0	0	2.85	98	26-Jun-23
Yemen	527	0	0	337	0	18	9	6.59	87	707	0	1	674	32	0	0	4.28	87	24-Jun-23
EMR POL	14239	6	0	12565	2	187	33	9.73	89	17115	7	1	17064	38	5	4	5.91	88	

\* 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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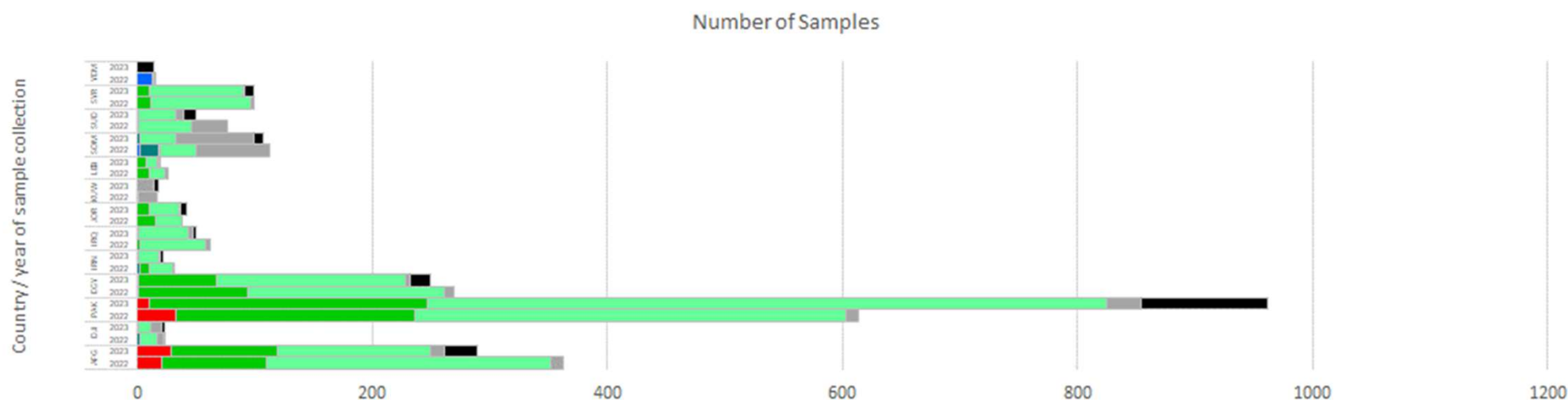
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results											Indicators				Latest report Date		
	ITD Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	2766	148	14	302	2091	127	2	4	102						120		2	2		10%	91%	100%	98%	01-07-23	
Bahrain	PNL Oman	7				7															0%	100%		14%	25-06-23	
Djibouti	PNL Kenya	6			1	4		1													20%	100%		100%	30-06-23	
Egypt***	RRL Egypt	787	6		60	652	49	21		4						4					7%	97%	100%	100%	26-06-23	
Iran	PNL Iran / CDC	562	5		5	509	16	27		4						1					1%	100%	100%	99%	24-06-23	
Iraq	PNL Iraq, RRL Egypt	455	3		28	377	37	10		2						2					8%	100%	100%	99%	26-06-23	
Jordan	PNL Jordan, RRL Egypt	52			9	42	1														17%	91%		100%	02-07-23	
Kuwait	RRL Kuwait	31			3	26		2													11%	100%		100%	20-06-23	
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	42				42															1%	100%			25-06-23	
Libya	RRL Tunisia / RIVM																								10-06-23	
Morocco	PNL Morocco, RRL Tunisia	37			2	32		3													3%	100%		91%	14-04-23	
Oman	PNL Oman / CDC	14			1	13															15%	100%		100%	25-06-23	
Pakistan	RRL Pakistan	7740	218	15	842	6402	169	17	1	137						176					9%	89%	100%	96%	01-06-23	
Palestine & UNRWA		15				13		2													0%	42%		100%	08-06-23	
Qatar	NPL Qatar / CDC	10				10															0%	100%		100%	25-06-23	
Saudi Arabia	PNL Saudi Arabia / CDC	127	1		4	113		9		1											3%	100%	100%	99%	25-06-23	
Somalia	PNL Kenya	202	6		35	146		15		3			2	2		2					19%	5%		95%	30-06-23	
Sudan	PNL Sudan, RRL Egypt	212	5		28	137		42								1					16%	99%	100%	100%	13-04-23	
Syria	PNL Syria, RRL Egypt	149	1	1	6	134	6	1													5%	100%			25-06-23	
Tunisia	RRL Tunisia																								10-06-23	
U.A.E	PNL Oman / CDC	26			1	23	2														4%	100%		21%	25-06-23	
Yemen	PNLs Oman, Jordan, Kenya, RRL Egypt	371	11		63	297				6			1			9					15%	13%	100%	8%	25-06-23	
Total EMR 2022		13611	404	30	1390	11070	407	152	5	259			3	2		315		2	2		9%	88%	100%	94%		
Total EMR 2021		30459	1066	119	4831	24430		0	22	556	2		38	169		723		6	8	2	1	13%	93%	89%	92%	

\* In 2022 - Three WPV1 cases are 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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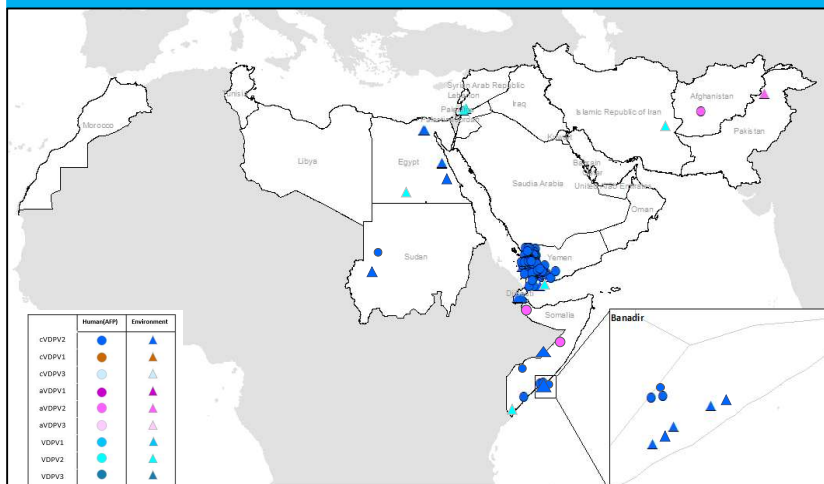
	AFG		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Wild	21	29			33	11																				
cVDPV2							1												3		1				13	
Wild+cVDPV2																										
Wild+aVDPV2																										
Wild+aVDPV3																										
aVDPV1																										
aVDPV2																										
aVDPV3																										
VDPV1																										
VDPV2							1																			
SL2			2						2										16	2						
SL1/3	89	90		1	203	236	93	66	8	1	3	1	16	11			11	8	1			1	12	11	1	
Entero	242	131	15	11	367	578	167	162	21	18	55	43	22	25	1		13	9	31	31	46	32	85	79		
Negative	11	11	6	9	10	29	9	3	1	1	4	4		1	16	14	3	1	62	67	30	7	3	1		
Pending		28	1	3		107		18		2		2		5		4		1		8		10		9	1	15

For further details on Environmental Samples Results click: [Detail of environmental surveillance samples](#)

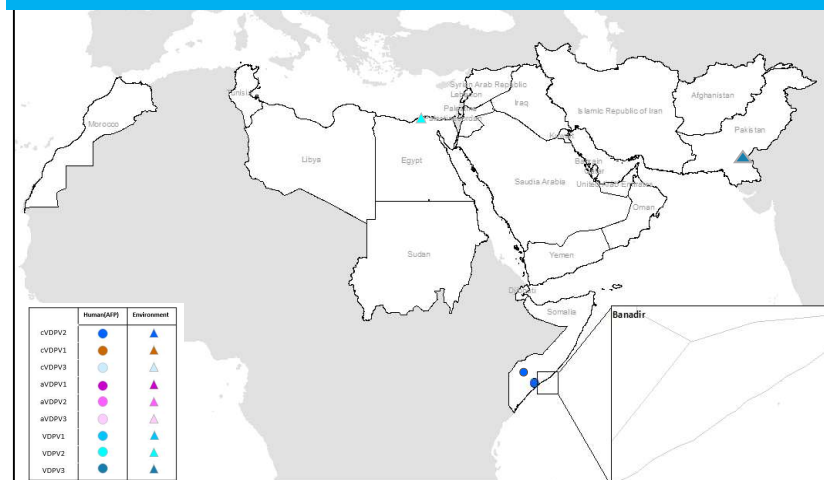
# VDPVs isolations by Source and Country

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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	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		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		22-12-22		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	14-12-22				23	40		19-12-22				13	25		28-11-22							
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			30-05-21				1		14-06-21			1					21-09-20							
	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	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	27-02-23										67	1			12-01-22							
	Iran																		1			04-02-22							
	Jordan																		2			25-05-22							
	Somalia					1		01-09-22																					
	Yemen																		1			24-04-22							
VDPV3	Pakistan																		1		14-02-23								



# Important links

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## 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)