

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1298, Week 33 (ending on 20/08/2023)

## 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

- 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

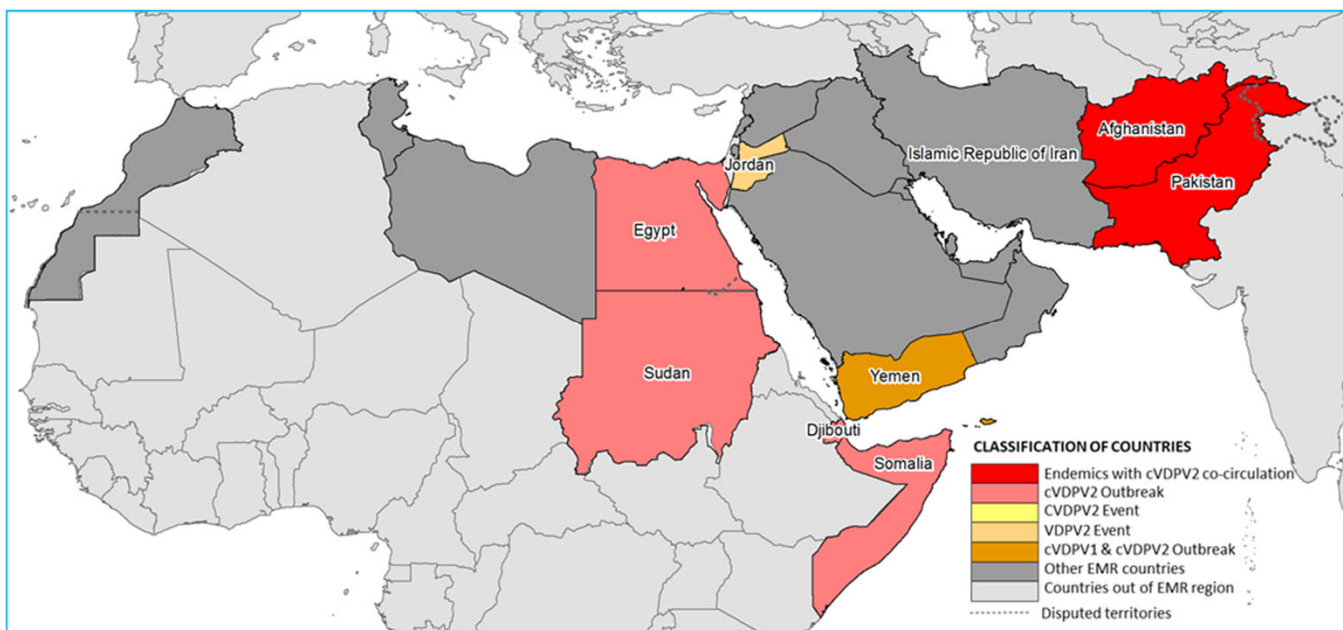
- 52 samples cVDPV2
  - 06 in Egypt
  - 12 in Djibouti
  - 06 in Somalia
  - 01 in Sudan
  - 27 in Yemen

**2023**

- 48 samples Wild Polio 1
  - 33 in Afghanistan
  - 15 in Pakistan

- 6 samples of cVDPV2
  - 03 in Somalia
  - 03 in Yemen

## Classification of EMR countries by type of poliovirus circulation



## Highlights of the week

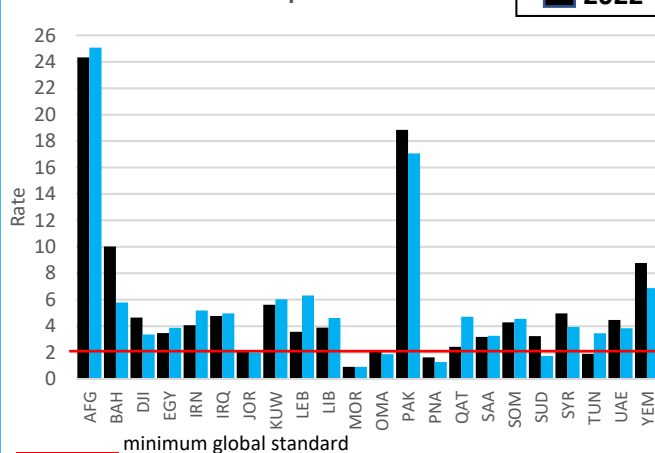
### Wild Poliovirus

- 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).
- One new WPV1 positive environmental sample reported this week from Pakistan. The new positive sample was reported from Peshawar district of Khyber Pakhtunkhwa province with collection date of 1<sup>st</sup> August 2023. The positive WPV1 ES count in 2023 to date is 48 (33 in Afghanistan and 15 in Pakistan), while in 2022, the count remains to be 59 (22 in Afghanistan and 37 in Pakistan).

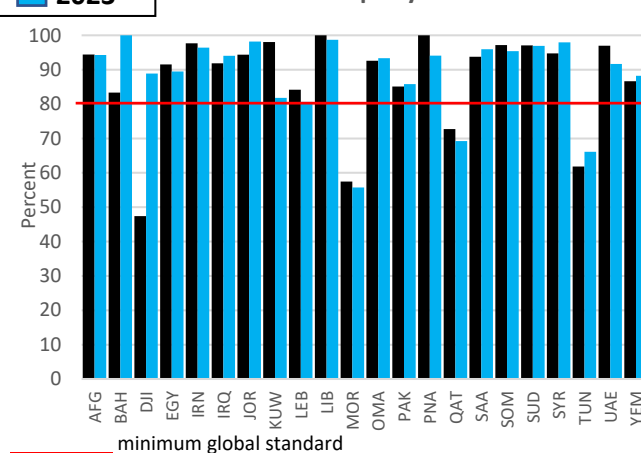
### Circulating Vaccine derived poliovirus (cVDPV)

- No new cVDPV2 isolates reported this week. In 2023 the count of cVDPV2 cases remains 2 (both from Somalia) and in 2022 is 168 cases (1 from Sudan, 5 from Somalia and 162 from Yemen). While the positive cVDPV2 ES count in 2023 to date is 6 (3 each from Somalia and Yemen) and in 2022, remains 52 (1 in Sudan, 6 in each of Egypt and Somalia, 12 in Djibouti and 27 in Yemen).
- One VDPV2 isolate has been reported from Egypt by GPLN. Final report is awaited following laboratory characterization of the isolate.

### Non polio AFP rate



### Stool adequacy



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

Contact us: WHO/EMRO – POL/SLD - Data

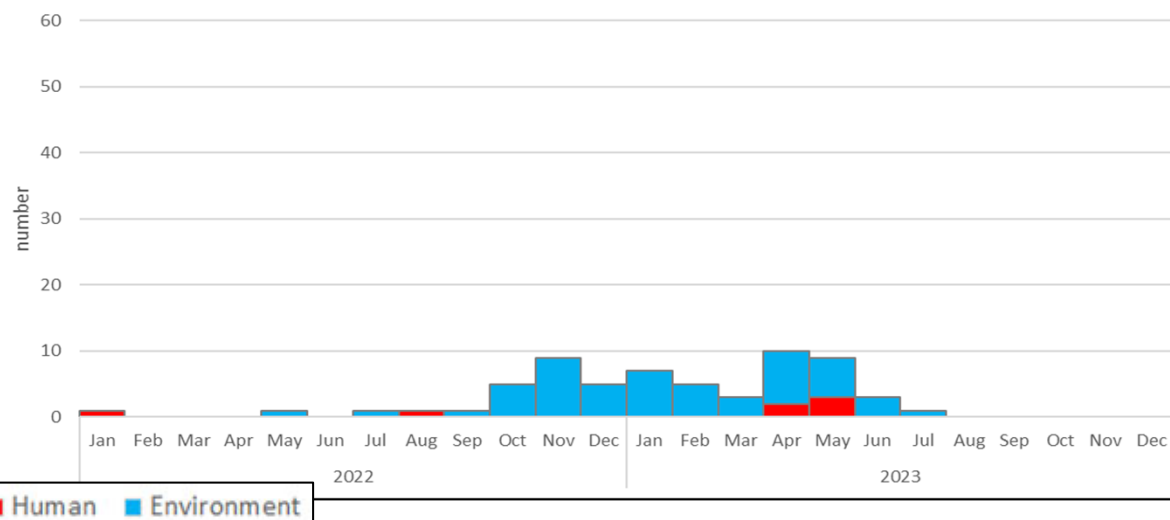
Email: [emacojorpolisd@who.int](mailto:emacojorpolisd@who.int)

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

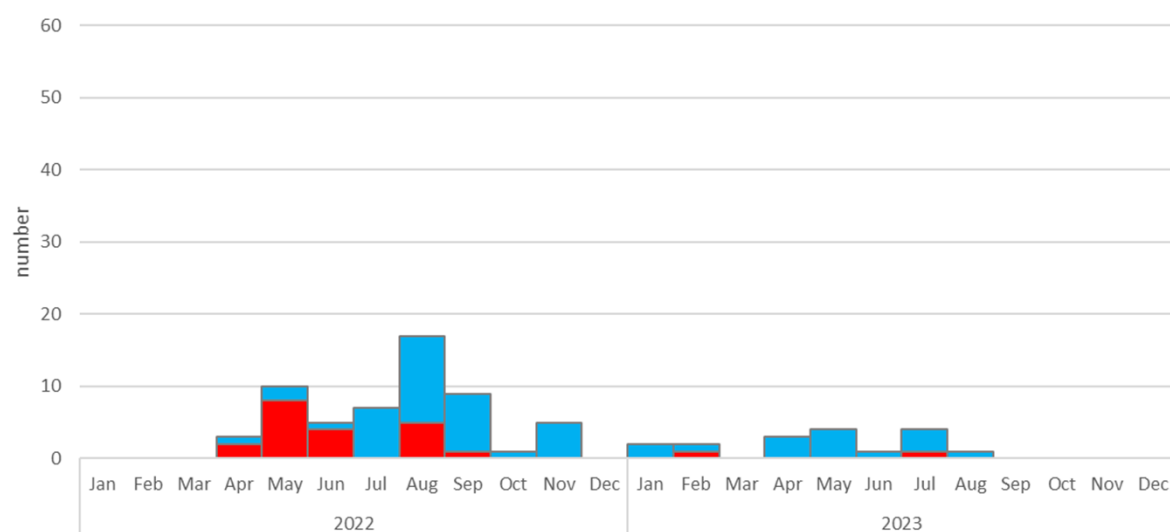
# WPV1 Positive isolates from Afghanistan and Pakistan by source

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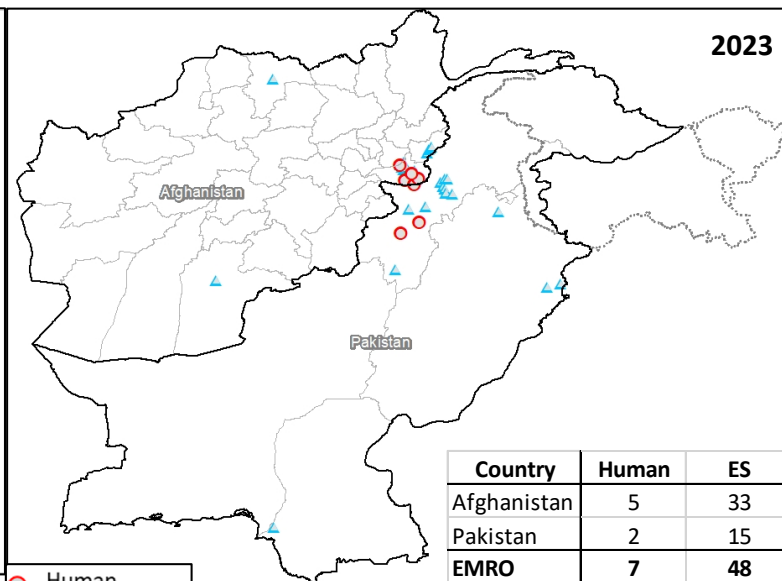
## Afghanistan



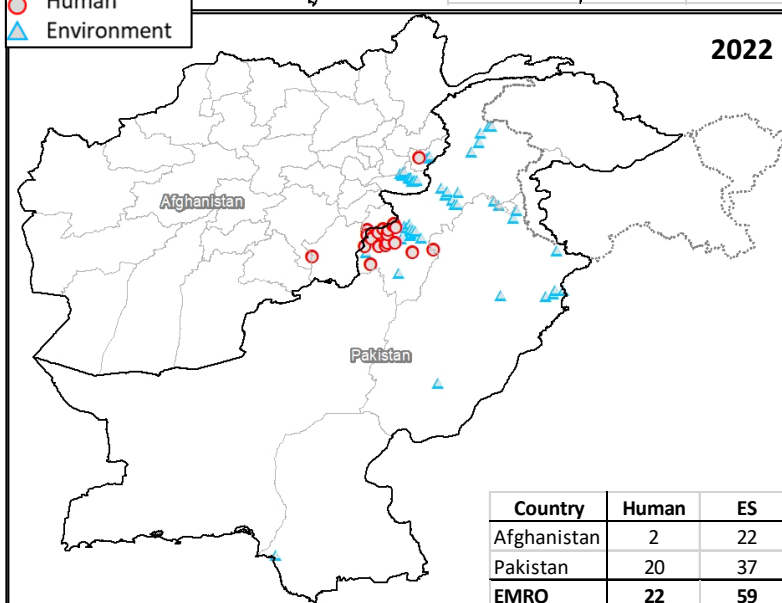
## Pakistan



2023



2022



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

# Virus isolation by country, last 12 months (Aug. 20, 2022, to Aug. 20, 2023)

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Source / Virus type	AFG	PAK	EGY	SOM	SUD	YEM	Total
<b>Human (AFP only)</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>15</b>	<b>32</b>
Wild	6	5					11
cVDPV2				3	1	14	18
aVDPV2				1			1
VDPV2			1			1	2
VDPV3							
<b>Environment</b>	<b>53</b>	<b>34</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>15</b>	<b>115</b>
Wild	53	33					86
cVDPV2			1	6	1	14	22
aVDPV2			4				4
VDPV2			1			1	2
VDPV3		1					1
<b>Total</b>	<b>59</b>	<b>39</b>	<b>7</b>	<b>10</b>	<b>2</b>	<b>30</b>	<b>147</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	20 August		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022				2023								
			2022	2023	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Afghanistan	4	2	1	5	0	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			
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	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	0			
Jordan ****	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	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	17	2	1	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	0				
Sudan	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		0		
Yemen	0	0	0	0	0	0	0	0	0	0	0						
EMR	5	22	18	7	1	0	0	0	0	1	0	2	3	0	1	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 <sup>★</sup>	Pollo Compatible	Discarded (non Polio AFP)	VDPV <sup>★★★</sup>	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate	% with adequate specimens <sup>★★★</sup>		Total Confirmed WPV1 Polio Cases <sup>★</sup>	Pollo Compatible	Discarded (non polio AFP)	VDPV <sup>★★★</sup>	Pending classification > 90 days from onset	Pending LAB classification > 90 days from onset	Annualized Non polio AFP rate <sup>★</sup>	% with adequate specimens <sup>★★★</sup>	
AFGHANISTAN	3592	5	0	3283	0	8	2	25.07	94.29	5368	2	0	5365	1	0	0	24.34	94.41	20-Aug-23
BAHRAIN	11	0	0	7	0	0	0	5.78	100.00	30	0	0	30	0	0	0	10.02	83.33	20-Aug-23
DJIBOUTI	9	0	0	5	0	0	0	3.37	88.89	19	0	0	19	0	0	0	4.65	47.37	19-Aug-23
EGYPT	1017	0	0	910	1	2	0	3.88	89.48	1394	0	0	1394	0	0	0	3.48	91.54	17-Aug-23
IRAN	695	0	0	676	0	0	0	5.19	96.40	824	0	0	824	0	0	0	4.06	97.69	19-Aug-23
IRAQ	555	0	0	501	0	13	0	4.96	94.05	835	0	0	835	0	0	0	4.78	91.86	18-Aug-23
JORDAN	55	0	0	52	0	0	0	2.00	98.18	89	0	0	89	0	0	0	2.14	94.38	16-Jul-23
KUWAIT	33	0	0	32	0	0	0	6.03	81.82	52	0	0	52	0	0	0	5.62	98.08	20-Aug-23
LEBANON	62	0	0	43	0	6	0	6.32	80.65	57	0	0	57	0	0	0	3.58	84.21	19-Aug-23
LIBYA	76	0	0	55	0	0	0	4.61	98.68	101	0	0	101	0	0	0	3.89	100.00	19-Aug-23
MOROCCO	70	0	0	29	0	30	3	0.93	55.71	94	0	0	89	0	5	0	0.92	57.45	04-Aug-23
OMAN	15	0	0	14	0	0	0	1.88	93.33	27	0	0	27	0	0	0	2.10	92.59	13-Aug-23
PAKISTAN	10609	2	0	9554	0	130	0	17.07	85.80	19032	20	1	19011	0	0	0	18.86	85.14	19-Aug-23
PALESTINE	17	0	0	14	0	1	1	1.29	94.12	33	0	0	32	1	0	0	1.64	100.00	20-Aug-23
QATAR	13	0	0	3	0	5	0	4.71	69.23	11	0	0	11	0	0	0	2.44	72.73	20-Aug-23
SAUDI ARABIA	174	0	0	125	0	0	0	3.28	95.98	274	0	0	274	0	0	0	3.18	93.80	20-Aug-23
SOMALIA	260	0	0	247	2	0	0	4.56	95.38	356	0	0	349	6	0	0	4.28	97.19	20-Aug-23
SUDAN	229	0	0	154	0	43	38	1.75	96.94	650	0	0	649	1	0	0	3.25	97.08	20-Aug-23
SYRIA	194	0	0	182	0	0	0	3.94	97.94	382	0	0	382	0	0	0	4.96	94.76	19-Aug-23
TUNISIA	65	0	0	60	0	0	0	3.46	66.15	55	0	0	55	0	0	0	1.91	61.82	04-Aug-23
U.A.E.	36	0	0	21	0	10	0	3.84	91.67	66	0	0	66	0	0	0	4.47	96.97	14-Aug-23
YEMEN	697	0	0	479	1	27	7	6.88	88.24	1377	0	1	1214	162	0	0	8.76	86.64	19-Aug-23
EMR POL	18484	7	0	16446	4	275	51	9.98	88.80	31126	22	2	30925	171	5	0	10.77	88.17	

\* 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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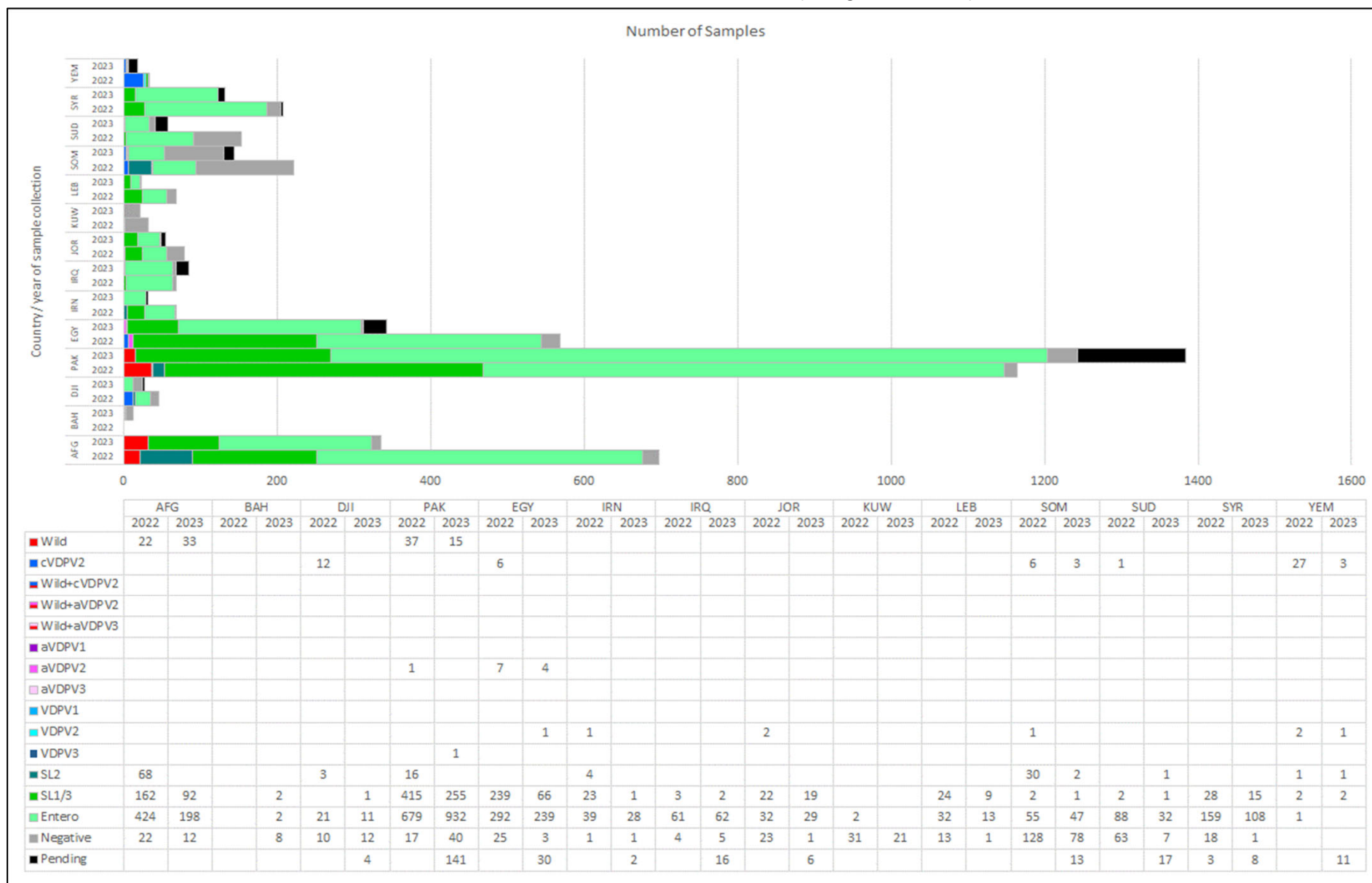
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results													Indicators				Latest report Date
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	3573	175	18	453	2652	162	5	4 *	120						144			2	2		12%	91%	100%	98%	20-Aug-23
Bahrain	NPL Oman / CDC	11			1	8	2															6%	100%		33%	17-Aug-23
Djibouti	NPL Kenya / CDC	9			1	4		4														20%	100%		100%	19-Aug-23
Egypt	RRL Egypt	993	10		97	821	63	3		6				1		6						9%	96%	100%	99%	17-Aug-23
Iran	NPL Iran / CDC	725	7		9	675	34			5						3						1%	100%	100%	99%	19-Aug-23
Iraq	NPL Iraq, RRL Egypt	560	3		38	476	35	8		2						2						8%	100%	100%	99%	17-Aug-23
Jordan	NPL Jordan, RRL Egypt	60			12	45	3															20%	93%		100%	20-Aug-23
Kuwait	RRL Kuwait / RIVM	33			3	28	1	1														10%	100%		100%	17-Aug-23
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	54				54																3%	100%			17-Aug-23
Libya	RRL Tunisia / RIVM	73	1		2	64	6			1												3%	97%	1	100%	18-Aug-23
Morocco	NPL Morocco, RRL Tunisia	70			2	66	2															4%	99%		93%	20-Aug-23
Oman	NPL Oman / CDC	15			1	13	1															15%	100%		100%	17-Aug-23
Pakistan	RRL Pakistan	10352	248	20	1367	8162	337	146	2	157						198						12%	89%	100%	96%	20-Aug-23
Palestine & UNRWA		17	1			16				1			1									0%	38%			20-Aug-23
Qatar	NPL Oman / CDC	13	1			11	1									1						0%	100%	1	100%	17-Aug-23
Saudi Arabia	NPL Saudi Arabia / CDC	152	1		5	146				1												3%	99%	100%	99%	30-Jul-23
Somalia	NPL Kenya / CDC	260	6		43	202	4	7		3			2	2		2						17%	4%		96%	20-Aug-23
Sudan	NPL Sudan / RRL Egypt	263	7		29	166		61					2			1						14%	99%	100%	42%	14-Apr-23
Syria	NPL Syria / RRL Egypt	192	3	1	10	167	11															5%	100%			17-Aug-23
Tunisia	RRL Tunisia	71	1		3	65	2									1						3%	96%	1	97%	18-Aug-23
U.A.E	NPL Oman / CDC	34			2	32																6%	94%		21%	17-Aug-23
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	581	19	1	97	368		98		10			1	1		15		1				17%	10%	100%	8%	19-Aug-23
Total EMR 2023		18111	483	40	2175	14241	664	333	7 *	306			6	4		373		1	2	2		11%	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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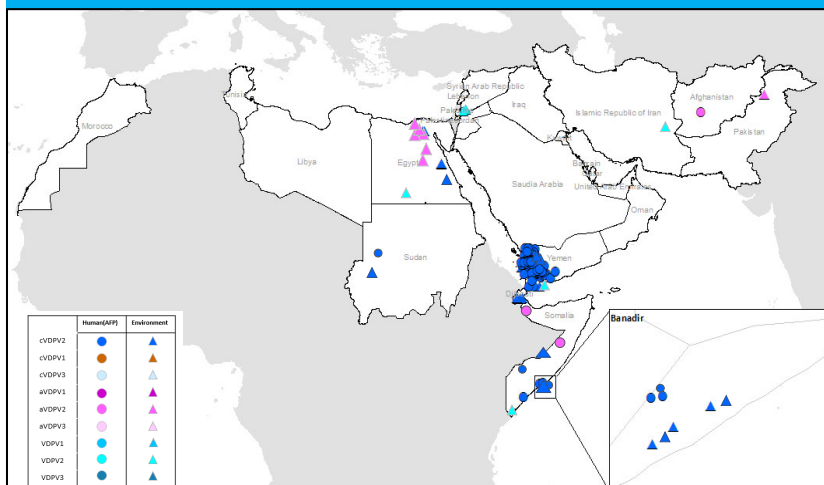


For further details on Environmental Samples Results click: [Detail of environmental surveillance samples](#)

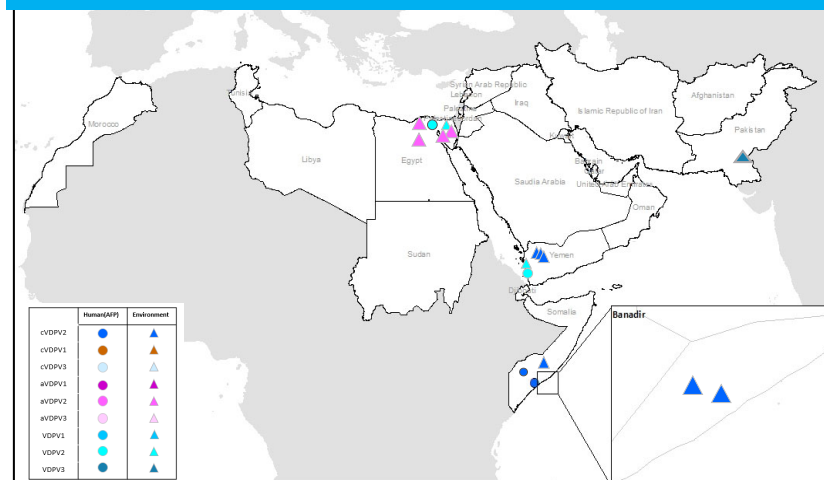
# VDPVs isolations by Source and Country

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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						
		2018	2019	2020	2021	2022	2023	Most recent	2018	2019	2020	2021	2022	2023	Most recent	2018	2019	2020	2021	2022	2023	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	3	25-05-23
	Sudan			58		1		31-10-22		18					08-10-20			14		1		28-11-22
	Yemen					66	162	14-12-22			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														
aVDPV2	Yemen				1			20-07-21														
	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
aVDPV3	Yemen				3			01-11-21			1				09-12-21							
	Afghanistan		1					23-06-20														
	Egypt																	2				30-09-20
	Pakistan																		1			05-04-21
VDPV1	Libya		1					15-01-20														
VDPV1	Egypt																		1			11-07-21
VDPV2	Egypt						1	17-07-23												1		12-07-23
	Iran																			1		04-02-22
	Jordan																		2			25-05-22
	Somalia					1		01-09-22												1		22-04-23
VDPV3	Yemen						1	09-05-23												2	1	26-04-23
	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)