

# EMR Polio Bulletin

World Health Organization – Regional Office for Eastern Mediterranean Issue No. 1248, Week 35 (ending on 04/09/2022)

## Highlights



Children  
Paralyzed  
by polio



Sewage  
water  
sampling

### 2021

- **05 cases of Wild Polio 1**
  - 04 in Afghanistan
  - 01 in Pakistan
- **118 cases of cVDPV2**
  - 43 in Afghanistan
  - 08 in Pakistan
  - 01 in Somalia
  - 66 in Yemen

### 2021

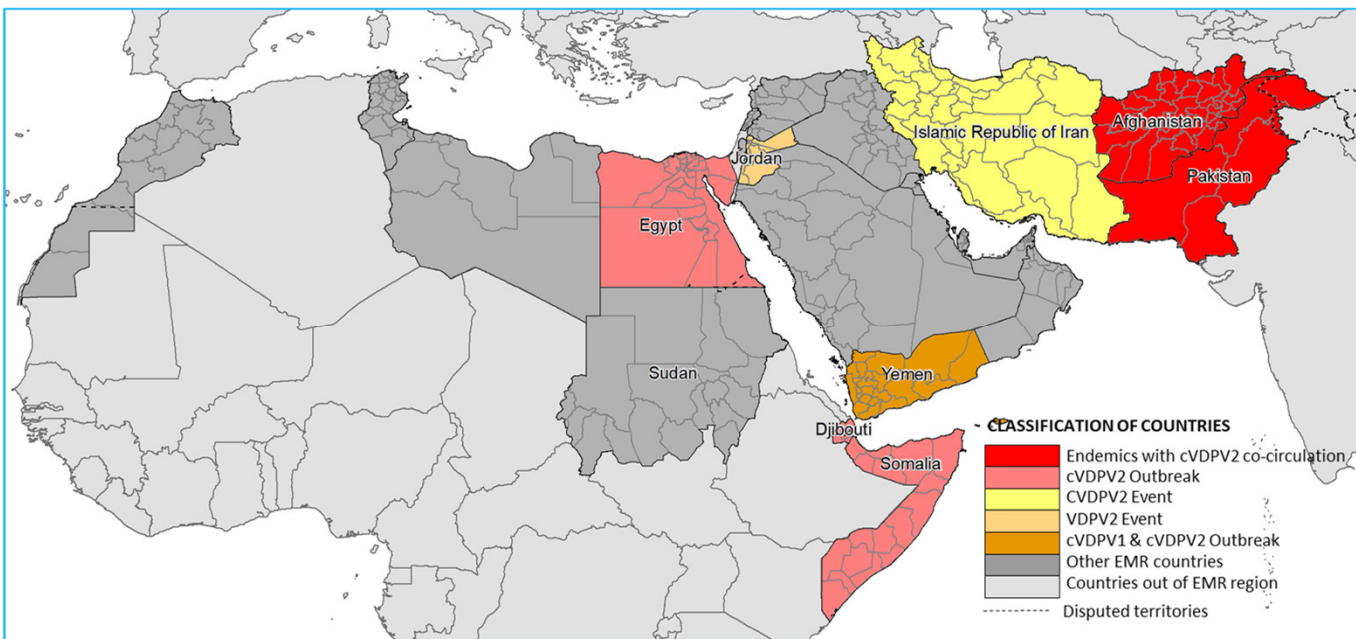
- **66 samples Wild Polio 1**
  - 01 in Afghanistan
  - 65 in Pakistan
- **107 samples cVDPV2**
  - 40 in Afghanistan
  - 35 in Pakistan
  - 12 in Egypt
  - 01 in Iran
  - 01 in Somalia
  - 05 in Djibouti
  - 13 in Yemen

### 2022

- **18 cases of Wild Polio 1**
  - 01 in Afghanistan
  - 17 in Pakistan
- **122 cases of cVDPV2**
  - 03 in Somalia
  - 119 in Yemen

### 2022

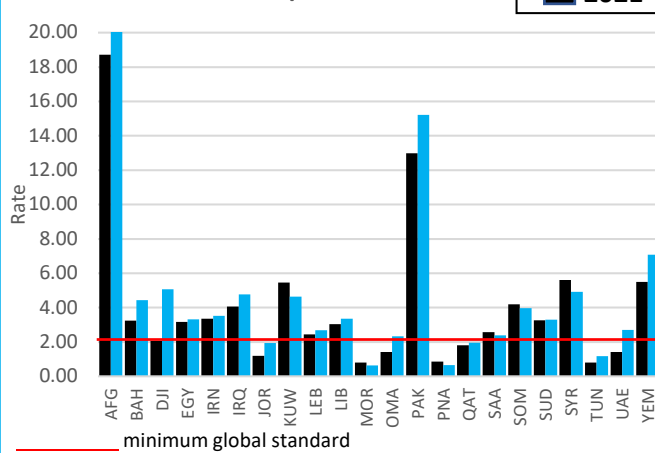
- **Zero case of cVDPV1**  
(No cVDPV1 for the last 17 months)
- **19 samples Wild Polio 1**
  - 02 in Afghanistan
  - 17 in Pakistan
- **23 samples of cVDPV2**
  - 05 in Egypt
  - 12 in Djibouti
  - 03 in Somalia
  - 03 in Yemen



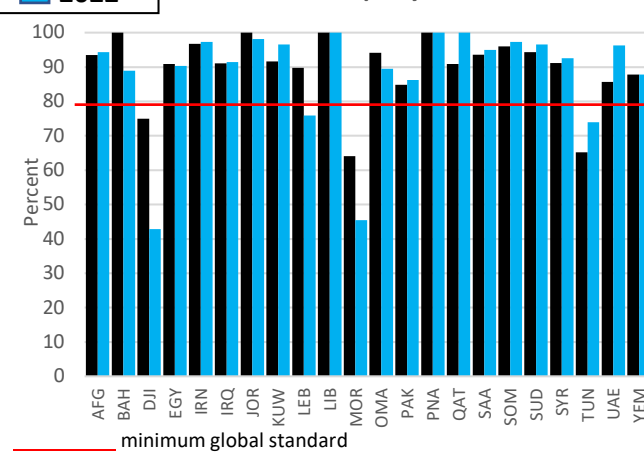
## Highlights of the week

- **Pakistan:**
  - Two new WPV1 cases were reported this week from North Waziristan and Lakkimrwat districts of Khyber Pakhtunkhwa province, both cases with a date of onset 9<sup>th</sup> August 2022.
  - One new WPV1 positive environmental sample was reported from Rawalpindi district of Punjab province, with specimen collection dates of 04<sup>th</sup> Augusts 2022.
- **Yemen:**
  - Four new cVDPV2 cases reported from 04 provinces: One from each of Amran, IBB, Sanna, and Taiz. The dates of onset ranges between 09<sup>th</sup> January – 10<sup>th</sup> June 2022.

### Non polio AFP rate



### Stool adequacy



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

Contact us: WHO/EMRO – POL/SLD - Data

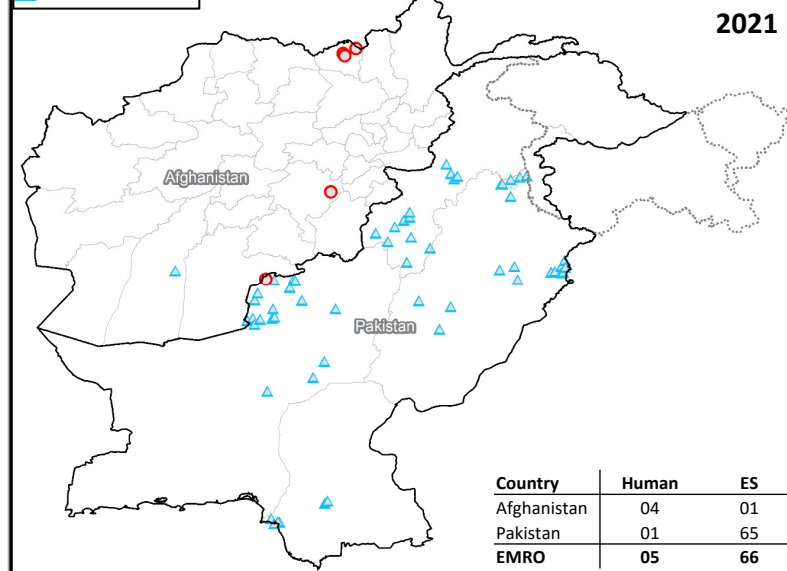
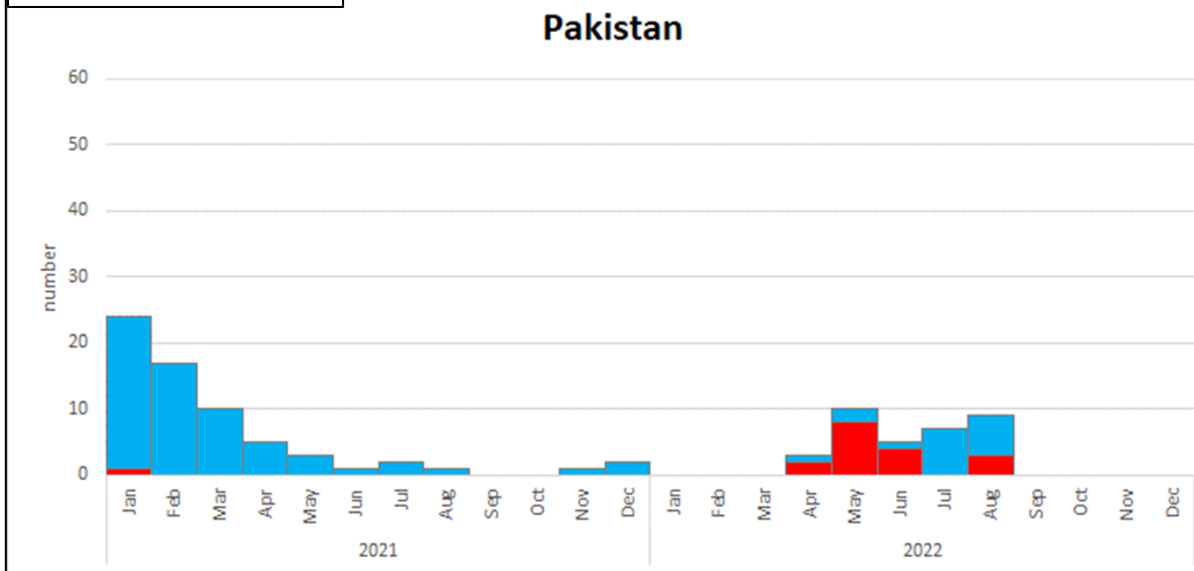
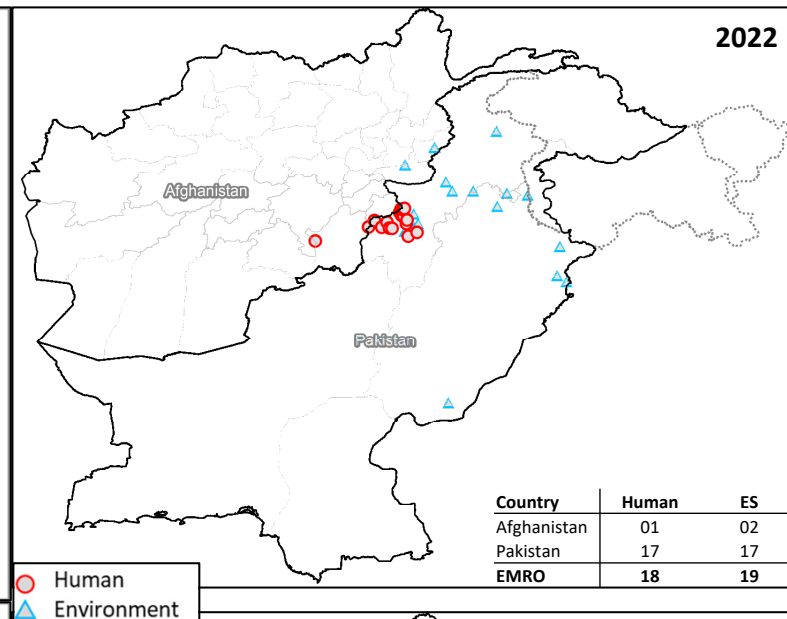
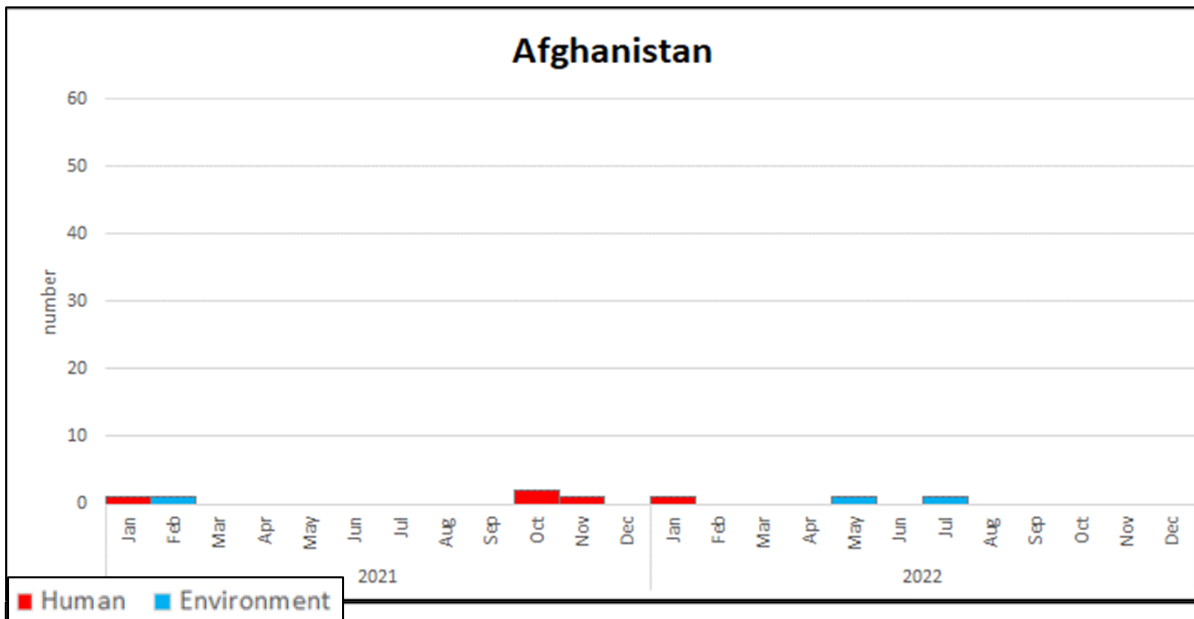
Email: [emacojorpolisd@who.int](mailto:emacojorpolisd@who.int)

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

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# 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 (Sep 04, 2021 to Sep 04, 2022)

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Source / Virus type	AFG	DJI	PAK	EGY	IRN	JOR	SOM	YEM	Total
<b>Human (AFP only)</b>	<b>4</b>		<b>18</b>				<b>3</b>	<b>185</b>	<b>210</b>
Wild	4		17						21
cVDPV2							3	182	185
aVDPV2			1					3	4
VDPV2									
<b>Environment</b>	<b>2</b>	<b>17</b>	<b>29</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>13</b>	<b>88</b>
Wild	2		20						22
cVDPV2		17		6			3	13	39
aVDPV2			9		1				10
VDPV2				12	1	3	1		17
<b>Total</b>	<b>6</b>	<b>17</b>	<b>47</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>198</b>	<b>298</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 2020	Total year 2021	21 Aug.		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2021						2022						
			2021	2022	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Afghanistan	56	4	1	1	0	2	1	0	1	0	0	0	0	0	0		14-Jan-22
Bahrain	0	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	0	
Egypt	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	0		
Jordan ****	0	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	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			0		
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan	84	1	1	17	0	0	0	0	0	0	0	2	8	4		3	09-Aug-22
Palestine ****	0	0	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			0			
Syria ****	0	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	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						
EMR	140	5	2	16	0	2	1	0	1	0	0	2	8	4	0	3	09-Aug-22

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

# Investigation of AFP cases with paralysis onset in 2021 & 2022

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COUNTRY	2021									2022									Line List
	AFP cases	Case classification						Surveillance indicators		AFP cases	Case classification						Surveillance indicators		2022
		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	4088	4	1	4038	45	0	0	18.71	94	3519	1	0	3228	0	40	0	24.05	94	04-Sep-22
Bahrain	11	0	0	11	0	0	0	3.25	100	9	0	0	5	0	2	0	4.44	89	04-Sep-22
Djibouti	8	0	0	8	0	0	0	2.06	75	14	0	0	14	0	0	0	5.06	43	04-Sep-22
Egypt	1251	0	0	1250	1	0	0	3.17	91	887	0	0	799	0	8	1	3.32	90	04-Sep-22
Iraq	709	0	0	709	0	0	0	4.07	91	563	0	0	464	0	49	0	4.77	91	03-Sep-22
IRAN	681	0	0	680	1	0	0	3.36	97	483	0	0	450	0	0	0	3.51	97	03-Sep-22
Jordan	47	0	0	47	0	0	0	1.19	100	54	0	0	52	0	0	0	1.93	98	01-Sep-22
Kuwait	48	0	0	48	0	0	0	5.47	92	29	0	0	25	0	1	1	4.63	97	04-Sep-22
Lebanon	39	0	0	39	0	0	0	2.45	90	29	0	0	16	0	6	1	2.69	76	03-Sep-22
Libya	79	0	0	79	0	0	0	3.05	100	60	0	0	51	0	0	0	3.36	100	27-Aug-22
Morocco	78	0	0	78	0	0	2	0.80	64	44	0	0	16	0	14	1	0.63	45	01-Sep-22
Oman	17	0	0	17	0	0	0	1.41	94	19	0	0	19	0	0	0	2.33	89	04-Sep-22
Pakistan	13118	1	4	13095	18	0	1	12.99	85	10407	17	1	9168	0	143	0	15.22	86	04-Sep-22
Palestine	16	0	0	16	0	0	0	0.85	100	9	0	0	7	0	0	0	0.66	100	04-Sep-22
Qatar	11	0	0	11	0	0	0	1.80	91	6	0	0	5	0	0	0	1.96	100	14-Aug-22
Saudi Arabia	217	0	0	217	0	0	0	2.58	94	140	0	0	97	0	0	0	2.39	95	04-Sep-22
Somalia	349	0	0	348	1	0	0	4.20	96	226	0	0	209	3	0	2	3.98	97	04-Sep-22
Sudan	636	0	0	636	0	0	0	3.26	94	435	0	0	382	0	12	3	3.30	97	01-Sep-22
Syria	431	0	0	431	0	0	0	5.60	91	256	0	0	235	0	0	0	4.92	93	03-Sep-22
Tunisia	23	0	0	23	0	0	0	0.81	65	23	0	0	20	0	1	1	1.18	74	02-Sep-22
U.A.E	21	0	0	21	0	0	0	1.42	86	27	0	0	0	0	20	1	2.70	96	31-Aug-22
Yemen	921	0	0	849	72	0	0	5.50	88	859	0	0	440	119	33	14	7.09	88	03-Sep-22
EMR POL	22799	5	5	22651	138	0	3	7.91	88.05	18098	18	1	15702	122	329	25	9.25	89.08	

\* 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)

# Laboratory investigation of AFP cases with paralysis onset in 2022

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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	3339	202	32	583	2354	44	84	1	149			8			173				1	15%	95%	100%	98%	28-08-22	
Bahrain	PNL Oman	9				9															0%	100%		100%	01-09-22	
Djibouti	PNL Kenya	14	2		4	8				2			2			2					29%	71%		71%	02-09-22	
Egypt***	RRL Egypt	874	17	5	122	680	45	5		8						12			4	1	12%	99%	100%	99%	01-09-22	
Iran	PNL Iran	462	8		4	437		13		3	1					6					1%	100%	100%	99%	27-08-22	
Iraq	PNL Iraq, RRL Egypt	548	2		50	481	9	6								2				1	10%	100%	50%	99%	25-08-55	
Jordan	PNL Jordan, RRL Tunisia	54	2		12	36		4								2					26%	100%	100%	100%	28-08-22	
Kuwait	RRL Kuwait	26	1			24		1		1						1		1	1		3%	100%	100%	100%	01-09-22	
Lebanon	RRL Egypt	25	1			24															0%	100%			01-09-22	
Libya	RRL Tunisia	64			1	58	5														2%	100%		100%	01-09-22	
Morocco	PNL Morocco, RRL Tunisia	30			3	24		3													10%	100%		93%	01-09-22	
Oman	PNL Oman	23			4	19															15%	83%		100%	01-09-22	
Pakistan	RRL Pakistan	9710	303	40	1728	6917	266	446	15*	163			1			260					15%	96%	100%	96%	28-08-22	
Palestine & UNRWA		9				9															0%	33%		89%	28-08-22	
Qatar	RRL Kuwait	6	1			5				1											0%	83%	0%	100%	28-08-22	
Saudi Arabia	PNL Saudi Arabia, NPL Oman	91	1		3	82		5								1					4%	86%	0%	97%	15-08-22	
Somalia	PNL Kenya	226	9	1	40	163	9	7		2			9	3							19%	7%		99%	02-09-22	
Sudan	PNL Sudan, RRL Egypt	436	8		108	297	22	1										1			26%	67%	100%	22%	01-09-22	
Syria	PNL Syria, RRL Egypt	242	2		14	213	13														5%	100%			01-09-22	
Tunisia	RRL Tunisia	25				24	1														1%	100%		96%	01-09-22	
U.A.E	PNL Oman	27				27															0%	81%		63%	01-09-22	
Yemen	PNL Oman, RRL Egypt	694	151	3	72	369		101		8			6	115**		19		15	1	1	1	13%	39%	25%	1%	01-09-22
Total EMR 2022		16934	710	81	2748	12260	414	676	18	337	1		26	122		478		16	7	2	3	14%	92%	85%	93%	
Total EMR 2021		22113	1183	128	3874	16919		5	5	478	7		363	107		599	1	1	7	7	2	14%	97%	97%	93%	

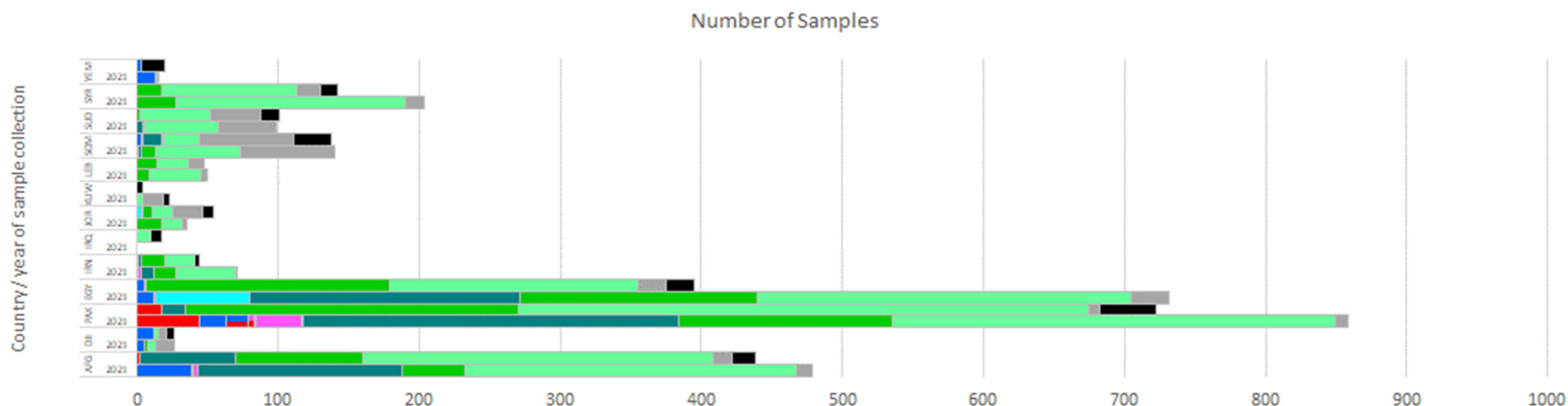
\* Two WPV1 cases are confirmed due to positive contacts (Index cases were negative for WPV1)

\*\* Four cVDPV2 cases are identified by positive contacts (Index cases were negative for cVDPV2)



# Environmental Surveillance Isolation by Classification

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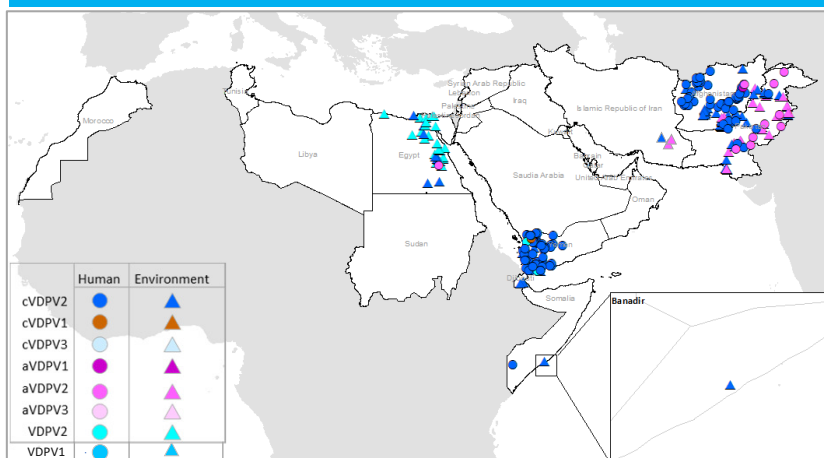
	AFG		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild		2			44	17																				
cVDPV2	39		5	12	19		12	5	1										1	3					13	3
Wild+cVDPV2	1				16																					
Wild+aVDPV2					4																					
Wild+aVDPV3					1																					
aVDPV1																										
aVDPV2	3				33	1			2																	
aVDPV3																										
VDPV1					1		1																			
VDPV2							67	1	1				3						1							
SL2	145	68			266	16	192		9	2			1					2	14	4						
SL1/3	44	90	2		151	236	168	173	16	17			18	7			9	14	10	1	1	2	28	18	1	
Entero	235	249	6	3	314	405	265	176	42	21		10	14	14	4		36	22	60	25	53	50	162	95	1	
Negative	12	13	13	6	9	8	26	20	1				3	22	15		5	12	67	67	41	36	14	17		
Pending		17		5		39		20		3		8		7	4	4				27		13		12		17

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

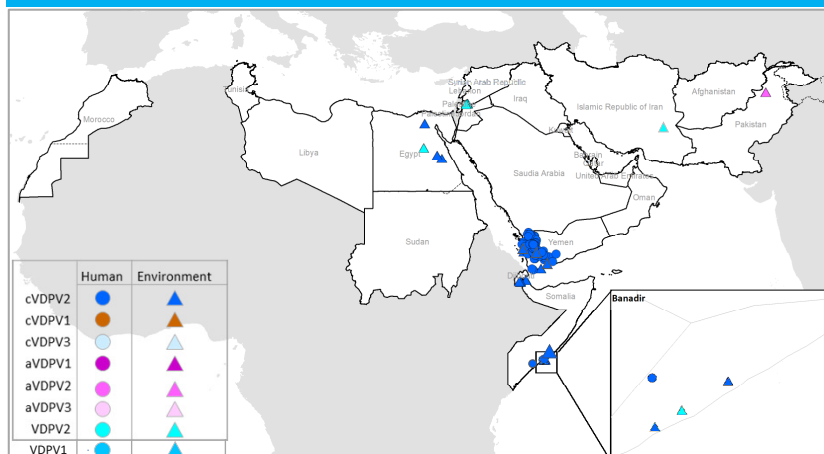
# VDPVs isolations by Source and Country

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## VDPV Isolates, EMR countries, 2021



## VDPV Isolates, EMR countries, 2022



## VDPVs isolated from 2017-2022

VDPV Isolate type	EMR Country	Sources																										
		AFP cases(Human)						Contacts(Human)						Environment						Other Sources (Healthy Children)								
		2017	2018	2019	2020	2021	Most recent	2017	2018	2019	2020	2021	2022	Most recent	2017	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	5	28-04-22							
	Iran																	3	1		20-02-21							
	Pakistan			22	135	8	23-04-21										38	135	35		11-08-21							
	Somalia	6	3	14	1	3	14-05-22	3	1	11		3	22-02-22	2	19	5	26	1	3	19-05-22			1	5		1	10-03-22	
	Sudan				58		18-12-20			18			08-10-20				14			09-11-20				4			24-08-21	
	Syria	74					21-09-17	63					12-09-17								4						20-08-17	
Yemen					66	119	16-06-22				23	33	21-05-22					13	3	31-01-22								
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			21-09-21								
	Iran																	2		23-09-21								
	Pakistan			7	8		24-09-21			8	19	1	28-04-21	5		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																	67	1	12-01-22								
	Iran																		1	04-02-22								
	Jordan																		3	25-05-22								
	Pakistan																		1	15-02-22								



# Important links

EMR Polio Bulletin - Issue No. 1247, Week 34 (ending on 28/08/2022)

## Important Links

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