

## 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

- 03 cVDPV1 cases
  - All in Yemen

### 2021

- 66 samples Wild Polio 1
  - 01 in Afghanistan
  - 65 in Pakistan

- 104 samples cVDPV2
  - 40 in Afghanistan
  - 35 in Pakistan
  - 12 in Egypt
  - 01 in Iran
  - 01 in Somalia
  - 05 in Djibouti
  - 10 in Yemen

### 2022

- 15 cases of Wild Polio 1
  - 01 in Afghanistan
  - 14 in Pakistan

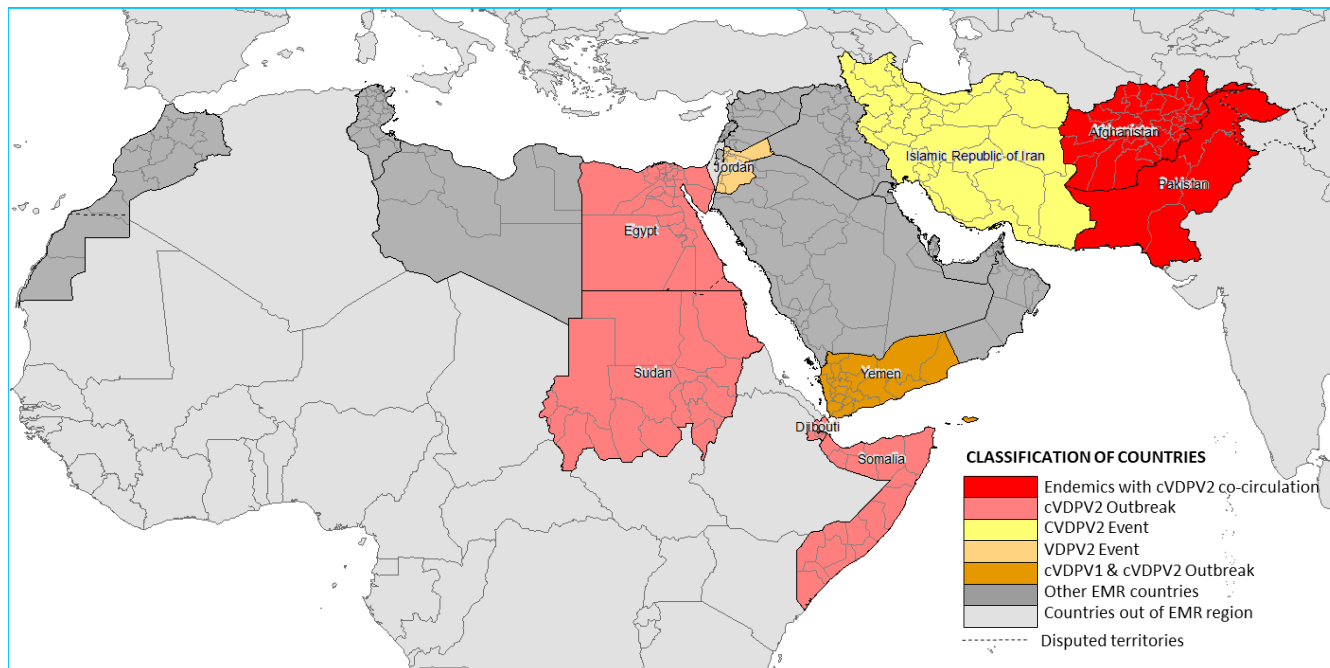
- 63 cases of cVDPV2
  - 02 in Somalia
  - 61 in Yemen

- Zero case of cVDPV1  
(No cVDPV1 for the last 15 months)

### 2022

- 05 sample Wild Polio 1
  - 01 in Afghanistan
  - 04 in Pakistan

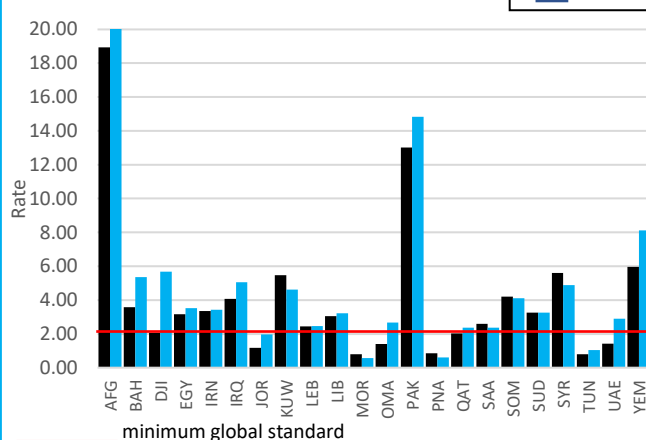
- 18 samples of cVDPV2
  - 05 in Egypt
  - 11 in Djibouti
  - 02 Somalia



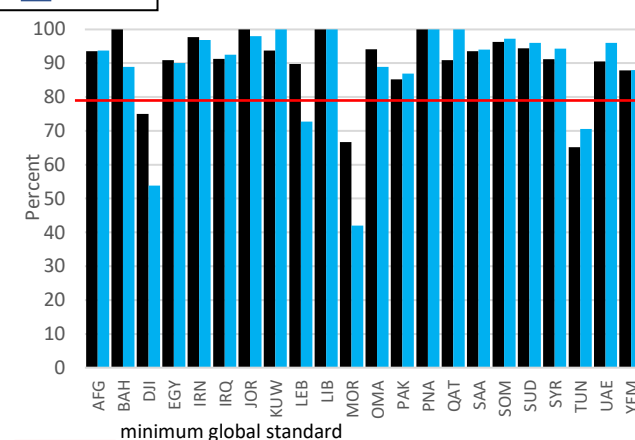
## Highlights of the week

- **Pakistan:** This week a new wild poliovirus type 1 (WPV1) case has been reported. The female case is 8 months of age from Wazir-N district, Khyber Pakhtunkhwa province, with date of onset 30th June 2022.
- **In 2022 to date,** 15 WPV1 cases have been reported (01 from Afghanistan and 14 from Pakistan)
- **Yemen:** Seven new cVDPV2 reported this week, all are from the North of Yemen
- **Sudan:** OBRA had commenced (24th July – 1st August 2022) aiming at assessing quality of the actions taken with regards to OBRA recommendations, with particular focus on: sensitive surveillance; preparedness and response to future potential poliovirus importations; population immunity and routine immunization, and vaccine management; and to determine possible outbreak closure.

### Non polio AFP rate



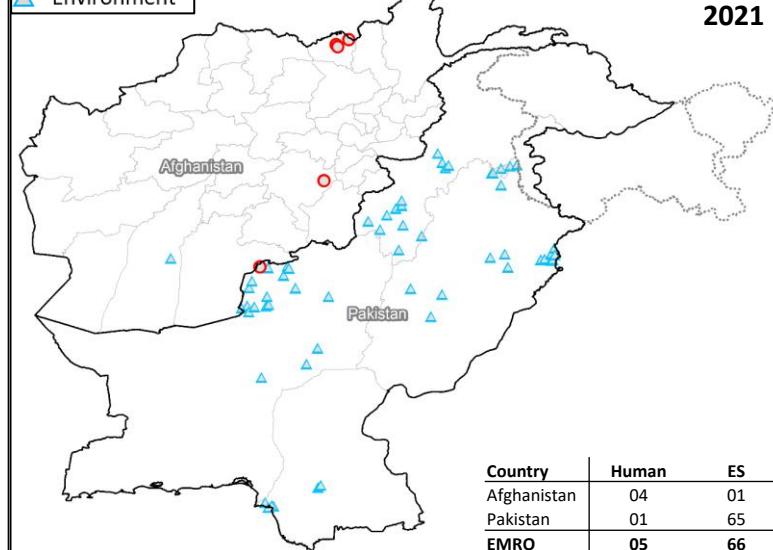
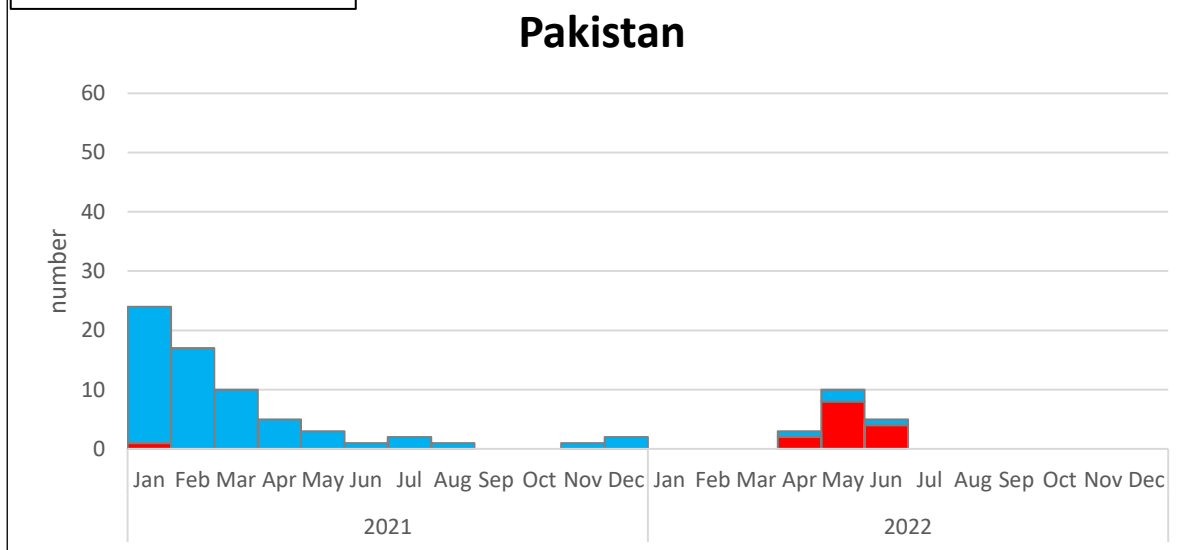
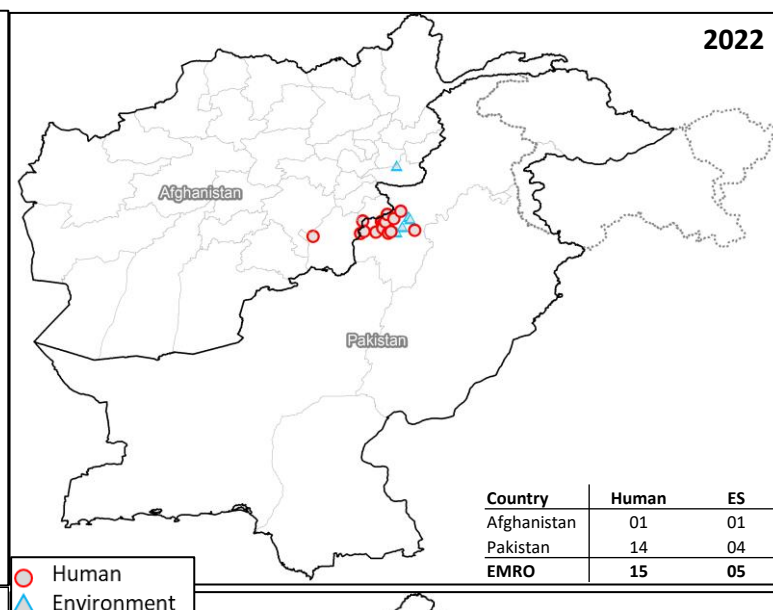
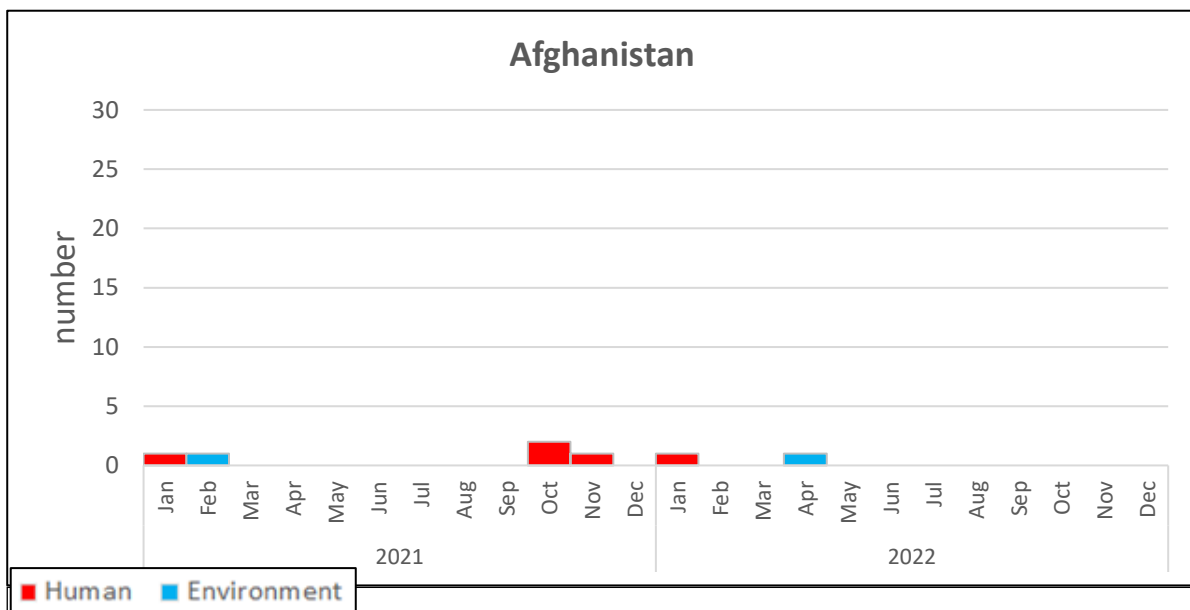
### Stool adequacy



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

# WPV1 Positive isolates from Afghanistan and Pakistan by source

EMR Polio Bulletin - Issue No. 1243, Week 30 (ending on 31/07/2022)



# Virus isolation by country, last 12 months (Jul 31, 2021 to 31 24, 2022)

EMR Polio Bulletin - Issue No. 1243, Week 30 (ending on 31/07/2022)

Source / Virus type	AFG	DJI	PAK	EGY	IRN	JOR	SOM	YEM	Total
<b>Human (AFP only)</b>	<b>5</b>		<b>15</b>				<b>2</b>	<b>130</b>	<b>152</b>
Wild	4		14						18
cVDPV2	1						2	126	129
aVDPV2			1					3	4
VDPV2									
aVDPV1+cVDPV2								1	1
<b>Environment</b>	<b>2</b>	<b>16</b>	<b>26</b>	<b>46</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>10</b>	<b>109</b>
Wild	1		10						11
cVDPV2		16	2	6			2	10	36
aVDPV2	1		14		2				17
VDPV2				40	1	3	1		45
aVDPV1+cVDPV2									
<b>Total</b>	<b>7</b>	<b>16</b>	<b>41</b>	<b>46</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>140</b>	<b>261</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. 1243, Week 30 (ending on 31/07/2022)

Country	Total year 2020	Total year 2021	24 July		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2021						2022						
			2021	2022	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
Afghanistan	56	4	1	1	0	0	2	1	0	1	0	0	0	0			14-Jan-22
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			
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				
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					
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				
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	84	1	1	14	0	0	0	0	0	0	0	0	2	8	4		30-Jun-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			
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					
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	0	0		
Yemen	0	0	0	0	0	0	0	0	0	0							
EMR	140	5	2	15	0	0	2	1	0	1	0	0	2	8	4	0	30-Jun-22

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

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

EMR Polio Bulletin - Issue No. 1241, Week 28 (ending on 17/07/2022)

COUNTRY	2021									2022									Line List 2022
	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	4088	4	1	4038	45	0	0	18.71	94	2962	1	0	2680	0	20	0	23.58	94	31-Jul-22
Bahrain	11	0	0	11	0	0	0	3.25	100	9	0	0	5	0	0	0	5.18	89	28-Jul-22
Djibouti	8	0	0	7	0	1	0	2.06	75	13	0	0	3	0	0	0	4.64	54	31-Jul-22
Egypt	1251	0	0	1250	1	0	0	3.17	91	781	0	0	636	0	9	0	3.41	90	28-Jul-22
Iraq	709	0	0	709	0	0	0	4.07	91	496	0	0	433	0	25	0	4.89	92	28-Jul-22
Islamic Republic of Iran	681	0	0	680	1	0	0	3.36	97	390	0	0	368	0	0	0	3.31	97	30-Jul-22
Jordan	47	0	0	47	0	0	0	1.19	100	46	0	0	45	0	0	0	1.91	98	28-Jul-22
Kuwait	48	0	0	48	0	0	0	5.47	92	24	0	0	23	0	0	0	4.46	100	24-Jul-22
Lebanon	39	0	0	39	0	0	0	2.45	90	22	0	0	11	0	7	5	2.38	73	30-Jul-22
Libya	79	0	0	79	0	0	0	3.05	100	47	0	0	33	0	0	0	3.05	100	23-Jul-22
Morocco	78	0	0	78	0	0	2	0.80	64	33	0	0	13	0	10	0	0.55	42	15-Jul-22
Oman	17	0	0	17	0	0	0	1.41	94	18	0	0	18	0	0	0	2.58	89	24-Jul-22
Pakistan	13118	1	4	13095	18	0	1	12.99	85	8409	14	0	7400	0	187	1	14.33	86	30-Jul-22
Palestine	16	0	0	16	0	0	0	0.85	100	7	0	0	6	0	0	0	0.60	100	24-Jul-22
Qatar	11	0	0	11	0	0	0	1.80	91	6	0	0	5	0	0	0	2.29	100	23-Jul-22
Saudi Arabia	217	0	0	217	0	0	0	2.58	94	115	0	0	77	0	0	0	2.29	94	31-Jul-22
Somalia	349	0	0	348	1	0	0	4.20	96	191	0	0	170	2	1	2	3.93	97	31-Jul-22
Sudan	636	0	0	636	0	0	0	3.26	94	357	0	0	318	0	9	1	3.15	96	27-Jul-22
Syrian Arab Republic	431	0	0	431	0	0	0	5.60	91	211	0	0	195	0	0	0	4.72	94	30-Jul-22
Tunisia	23	0	0	23	0	0	0	0.81	65	17	0	0	11	0	1	1	1.02	71	28-Jul-22
United Arab Emirates	21	0	0	21	0	0	0	1.42	86	24	0	0	0	0	10	0	2.80	96	26-Jul-22
Yemen	921	0	0	849	72	0	0	5.50	88	703	0	0	299	61	95	43	7.16	88	30-Jul-22
EMR POL	22799	5	5	22650	138	1	3	7.91	88	14881	15	0	12749	63	374	53	8.88	89	

\* 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

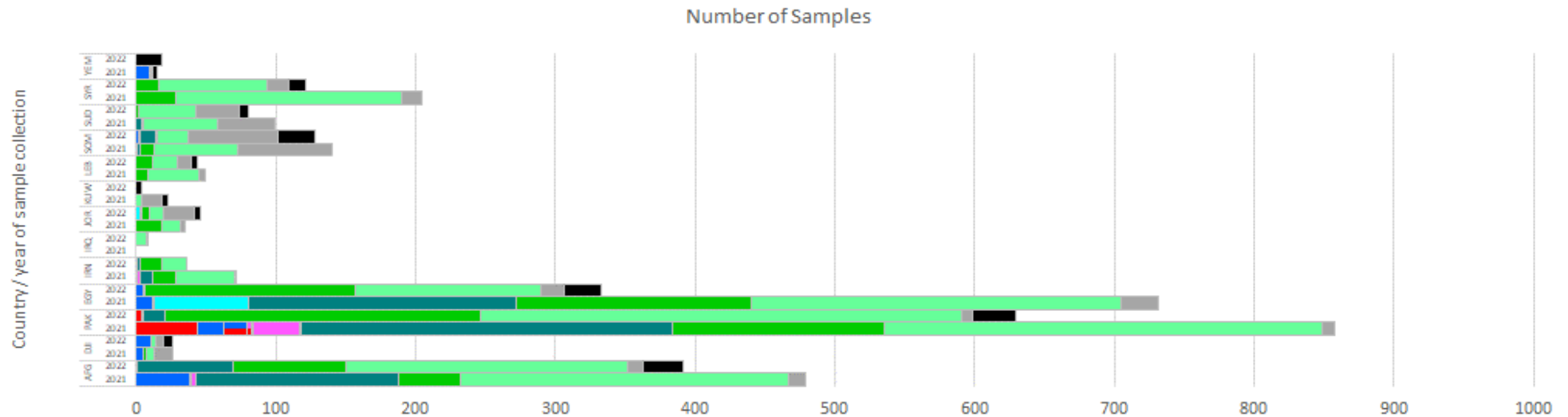
EMR Polio Bulletin - Issue No. 1243, Week 29 (ending on 24/07/2022)

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	2790	171	25	473	1912	148	19	1	126			8			142					1	15%	96%	100%	99%	24-Jul-22
Bahrain	NPL Oman / CDC	9				9																0%	100%		100%	24-Jul-22
Djibouti	NPL Kenya / CDC	13	2		1	2		8								2						33%	0.4		33%	24-Jul-22
Egypt***	RRL Egypt	746	17	3	96	573	19	38		7						12			3	1		12%	98%	100%	99%	21-Jul-22
Iran	NPL Iran / CDC	394	7		4	366	16	1		2	1					6						1%	100%	100%	99%	24-Jul-22
Iraq	NPL Iraq, RRL Egypt	481	1		43	428	7	2								2						10%	100%	50%	99%	22-Jul-22
Jordan	NPL Jordan, RRL Egypt	67	2		19	43		3								2						29%	100%	1	100%	24-Jul-22
Kuwait	RRL Kuwait / RIVM	24	1			15		8		1						1		1	1			5%	100%	1	100%	24-Jul-22
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	20	1			19																0%	100%			7-Jul-22
Libya	RRL Tunisia / RIVM	48				46	2															0%	100%		100%	18-Jul-22
Morocco	NPL Morocco, RRL Tunisia	30			3	24	3															10%	100%		93%	22-Jul-22
Oman	NPL Oman / CDC	20			3	17																15%	80%		100%	24-Jul-22
Pakistan	RRL Pakistan	7943	286	40	1337	5862	372	42	11 *	156			1			250					2	14%	97%	100%	96%	24-Jul-22
Palestine & UNRWA		7				7																0%	14%		86%	24-Jun-22
Qatar	NPL Oman / CDC	6	1			5				1												0%	83%	0	100%	24-Jul-22
Saudi Arabia	NPL Saudi Arabia / CDC	91	1		3	82		5								1						4%	86%	0%	97%	3-Jul-22
Somalia	NPL Kenya / CDC	179	7		35	130	1	8		2			7									20%	7%		99%	24-Jul-22
Sudan	NPL Sudan / RRL Egypt	337	8		92	231	6															29%	62%		100%	21-Jul-22
Syria	NPL Syria / RRL Egypt	188	2		13	167		6														6%	99%			7-Jul-22
Tunisia	RRL Tunisia	18				18																0%	100%		94%	18-Jul-22
U.A.E	NPL Oman / CDC	22				22																0%	100%		68%	24-Jul-22
Yemen	NPL Oman, NPL Kenya, RRL Egypt	476	108		47	269	25	28		4				30		7		55	1	1	17	10%	49%	26%	1%	23-Jul-22
Total EMR 2022		13909	615	68	2169	10247	599	168	14	299	1		16	30		425		56	5	2	20	13%	93%	89%	95%	
Total EMR 2021		22113	1183	128	3874	16919		5	5	478	7		363	107		599	1	11	7	2	2	14%	97%	97%	93%	

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

# Environmental Surveillance Isolation by Classification

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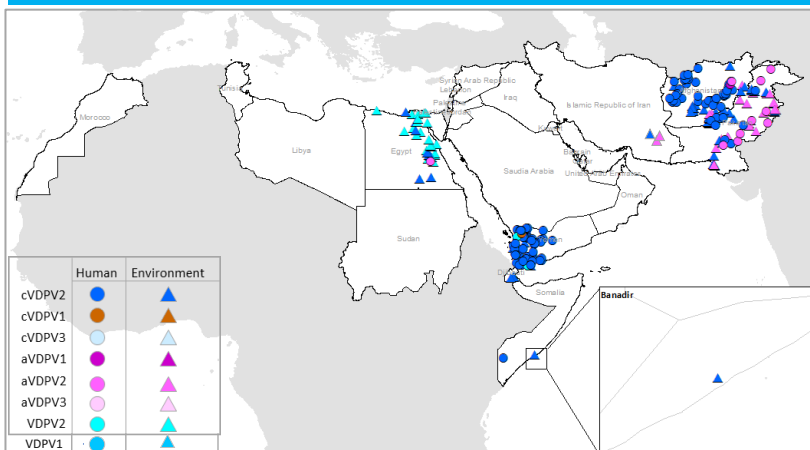


	AFG		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild		1			44	4																				
cVDPV2	39		5	11	19		12	5	1										1	2					10	
Wild+cVDPV2	1				16																					
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	11	4					
SL1/3	44	81	2		151	225	168	151	16	15			18	6			9	12	10	1	1	2	28	16	1	
Entero	235	202	6	3	314	345	265	133	42	18		7	14	10	4		36	18	60	22	53	41	162	78	1	
Negative	12	11	13	6	9	7	26	16	1				3	22	15		5	10	67	64	41	31	14	15		
Pending		29		6		32		27				1		4	4	4		4		27		7		13	3	18

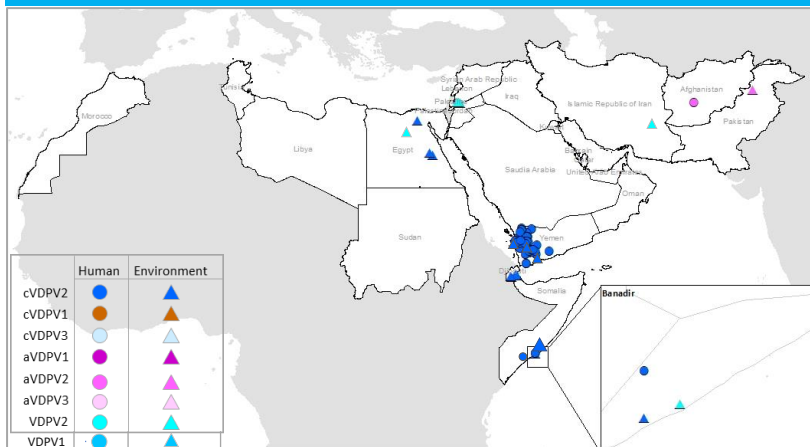
# VDPVs isolations by Source and Country

EMR Polio Bulletin - Issue No. 1243 Week 30 (ending on 31/07/2022)

## 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	2022	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	11		24-04-22						
	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	2		18-02-22	3	1	11		3	22-02-22	2	19	5	26	1	2		21-04-22			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	61	29-03-22				23	22	26-01-22					10			29-11-21								
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. 1243, Week 30 (ending on 31/07/2022)

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