

## Highlights



Children  
Paralyzed  
by polio

**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

**2022**

- **22 cases of Wild Polio 1**
  - 02 in Afghanistan
  - 20 in Pakistan

- **165 cases of cVDPV2**
  - 05 in Somalia
  - 159 in Yemen
  - 01 in Sudan

- **Zero case of cVDPV1**  
(No cVDPV1 for the last 20 months)



Sewage  
water  
sampling

**2021**

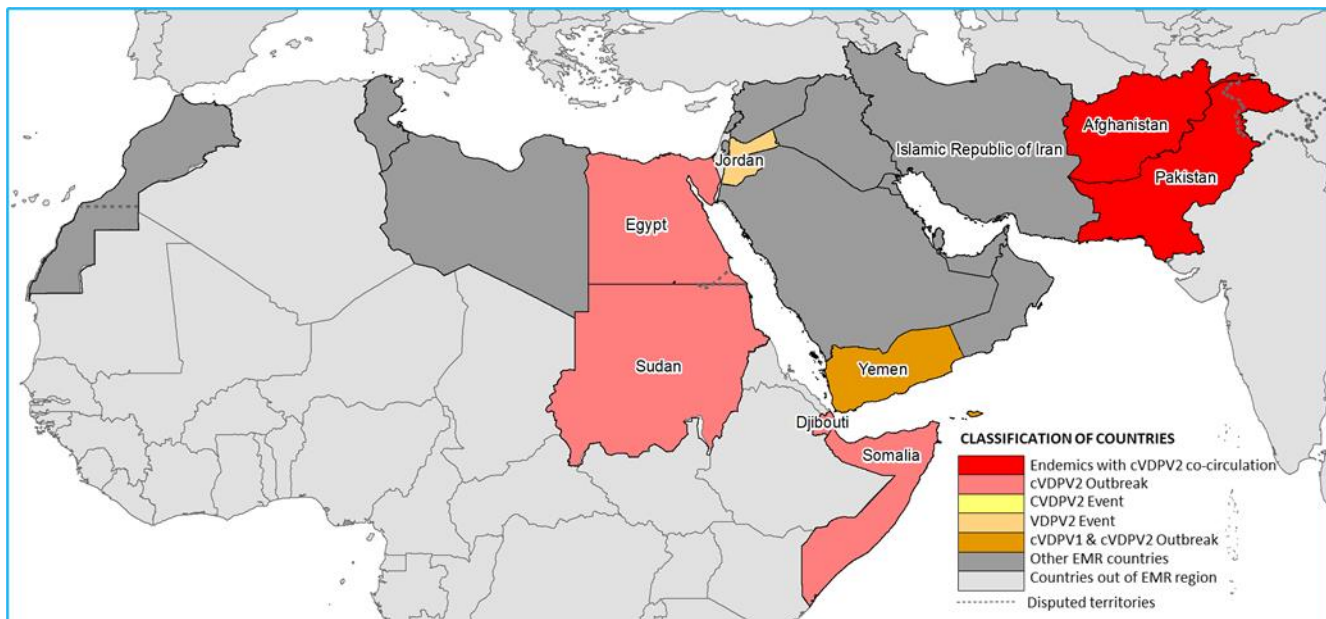
- **66 samples Wild Polio 1**
  - 01 in Afghanistan
  - 65 in Pakistan

- **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**

- **57 samples Wild Polio 1**
  - 20 in Afghanistan
  - 37 in Pakistan

- **32 samples of cVDPV2**
  - 06 in Egypt
  - 12 in Djibouti
  - 03 in Somalia
  - 01 in Sudan
  - 10 in Yemen



## Highlights of the week

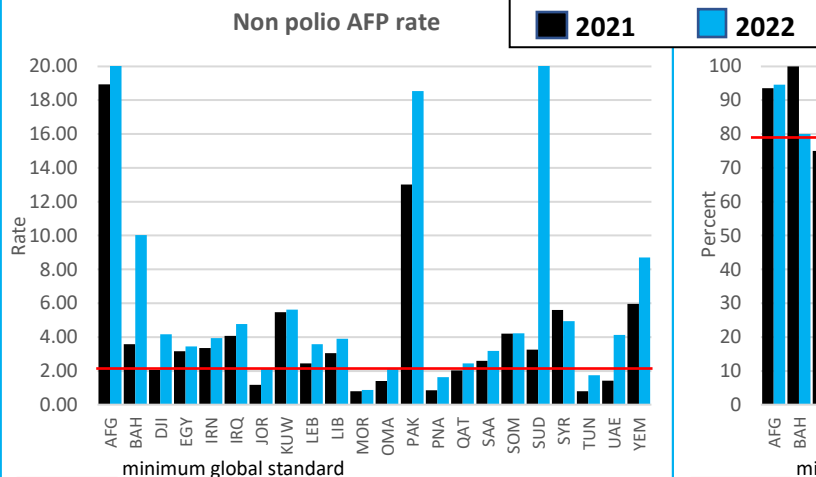
### Wild Poliovirus

- No new Wild Poliovirus isolates from human or environmental samples were reported this week. The cases count in 2022 remains to be 22 cases (2 from Afghanistan and 20 from Pakistan) and positive environmental samples are 57 (20 in Afghanistan and 37 in Pakistan).

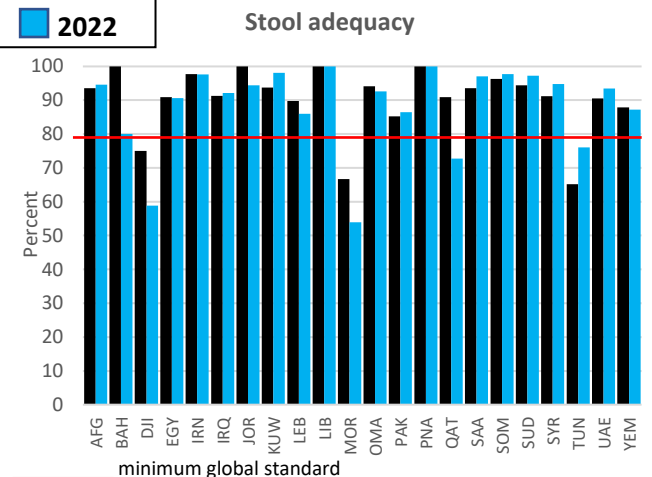
### Vaccine derived poliovirus (VDPV)

- One new cVDPV2 case was reported this week from Somalia as well as its two contacts were reported positive. The new case is from Danyile district, Banadir province, with date of onset of 23<sup>rd</sup> August 2022. The cVDPV2 cases count in 2022 to date is 165 (1 from Sudan, 5 from Somalia, and 159 from Yemen).
- No new cVDPV2 positive environmental samples reported this week and the count in 2022 remains 32 (1 in Sudan, 3 in Somalia, 6 in Egypt, 10 in Yemen and 12 in Djibouti).
- One new VDPV2 case reported this week from Somalia. The new case is from Balanbale district, Galgaduud province, with date of onset 1<sup>st</sup> September 2022. Awaiting sequencing results.

### Non polio AFP rate

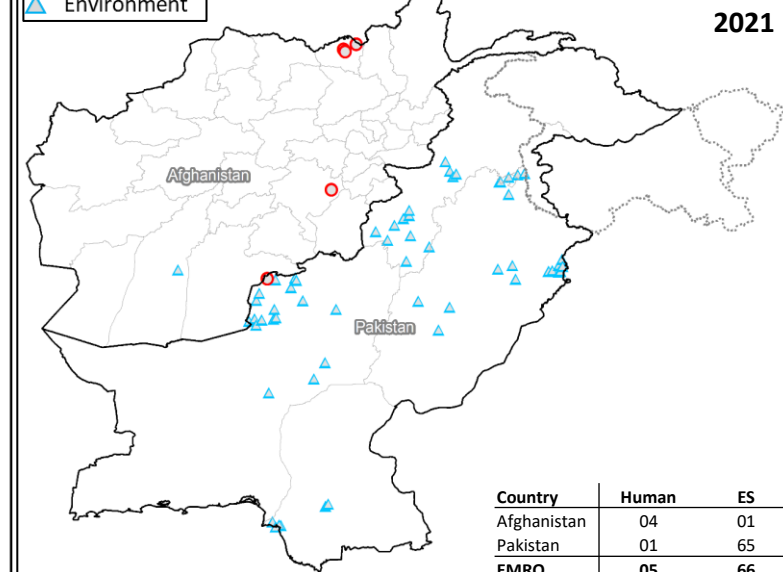
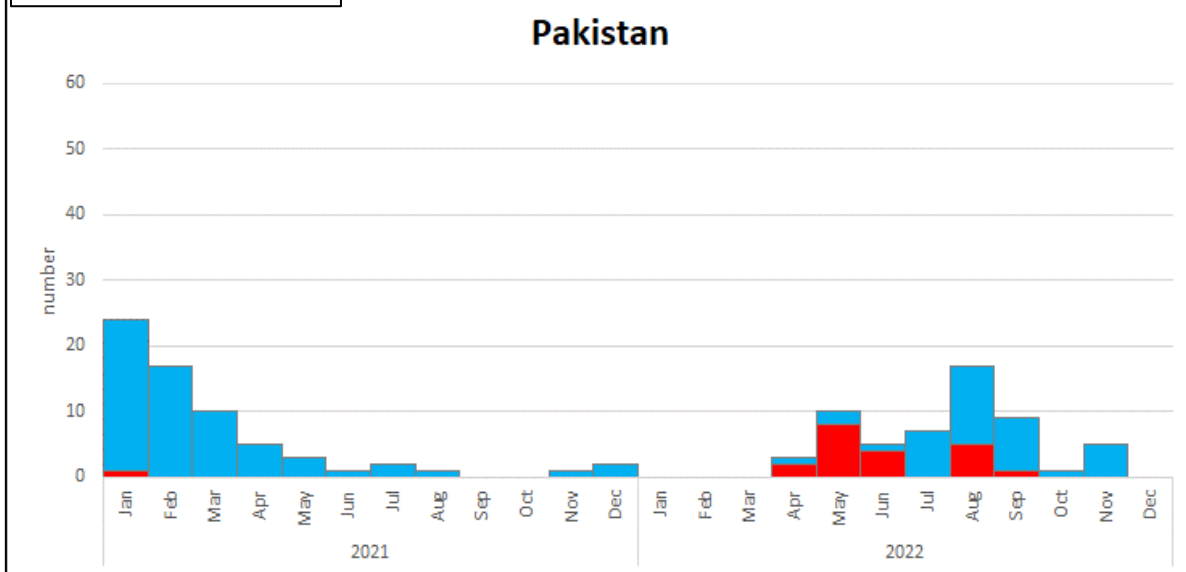
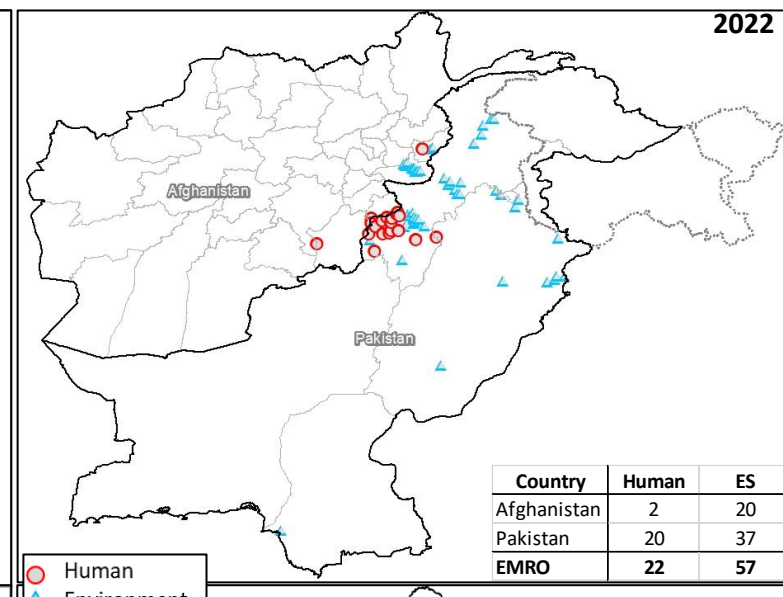
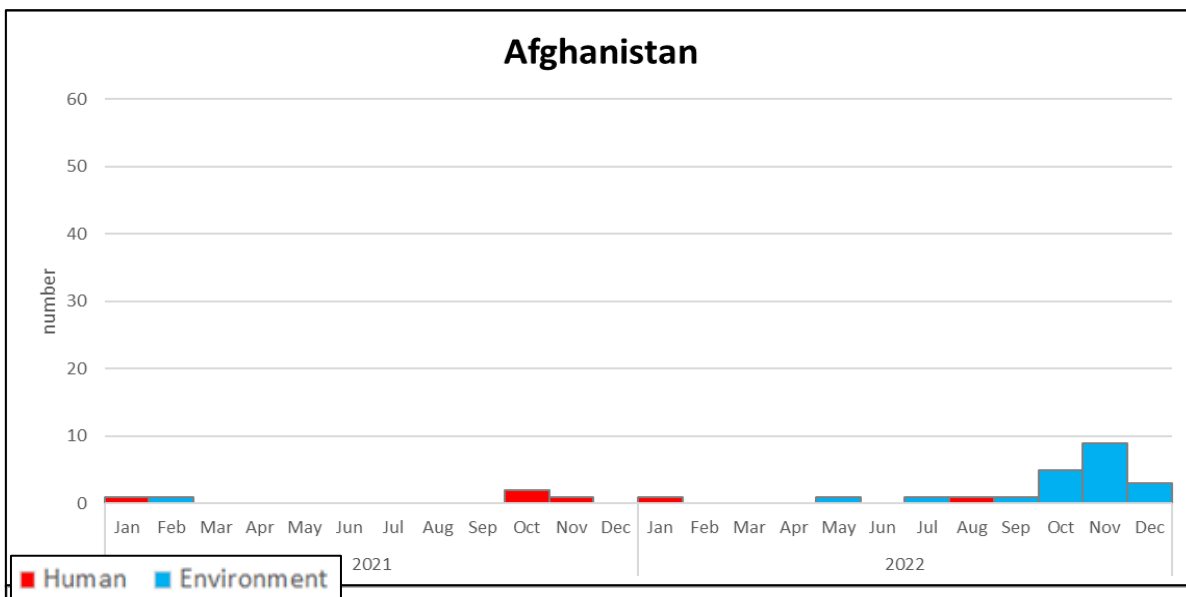


### Stool adequacy






# WPV1 Positive isolates from Afghanistan and Pakistan by source

EMR Polio Bulletin - Issue No. 1267, Week 02 (ending on 15/01/2023)



# Virus isolation by country, last 12 months (Jan. 15, 2022 to Jan. 15, 2023)

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Source / Virus type 	AFG	DJI	PAK	EGY	IRN	JOR	SOM	SUD	YEM	Total
 Human (AFP only)	1		20				5	1	138	165
Wild	1		20							21
cVDPV2							4	1	138	143
aVDPV2										
VDPV2							1			1
 Environment	22	12	38	6	1	3	4	1	12	99
Wild	22		37							59
cVDPV2		12		6			3	1	10	32
aVDPV2			1							1
VDPV2					1	3	1		2	7
<b>Total</b>	<b>23</b>	<b>12</b>	<b>58</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>9</b>	<b>2</b>	<b>150</b>	<b>264</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	15 Jan.		Confirmed Wild Polio 1 Cases by month of onset												Recent most Case
					2022												
			2022	2023	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Afghanistan	4	2	1	0	0	0	0	0	0	0	1	0	0	0			29-Aug-22
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					
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	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					
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	0	0	0	0	2	8	4	0	5	1	0	0			15-Sep-22
Palestine ****	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				
Sudan	0	0	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				
Tunisia	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	0					
EMR	5	22	1	0	0	0	2	8	4	0	6	1	0	0	0	0	15-Sep-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	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	75	0	0	0	0	0	0	8.29	98.67	5358	2	0	5201	1	11	0	24.27	94.55	15-Jan-23
BAHRAIN	0	0	0	0	0	0	0			30	0	0	20	0	4	0	10.02	80.00	15-Jan-23
DJIBOUTI	0	0	0	0	0	0	0			17	0	0	14	0	2	0	4.16	58.82	7-Jan-23
EGYPT	0	0	0	0	0	0	0			1379	0	0	1278	0	25	0	3.44	90.65	12-Jan-23
IRAN	0	0	0	0	0	0	0			799	0	0	788	0	0	0	3.94	97.62	7-Jan-23
IRAQ	12	0	0	0	0	0	0	1.68	100.00	833	0	0	818	0	3	0	4.77	92.08	13-Jan-23
JORDAN	1	0	0	0	0	0	0	0.60	0.00	89	0	0	85	0	0	0	2.14	94.38	12-Jan-23
KUWAIT	1	0	0	0	0	0	0	2.63	100.00	52	0	0	49	0	0	0	5.62	98.08	15-Jan-23
LEBANON	1	0	0	0	0	0	0	1.53	100.00	57	0	0	29	0	6	0	3.58	85.96	14-Jan-23
LIBYA	4	0	0	0	0	0	0	3.76	100.00	101	0	0	69	0	1	1	3.89	100.00	14-Jan-23
MOROCCO	2	0	0	0	0	0	0	0.50	0.00	89	0	0	46	0	28	1	0.88	53.93	6-Jan-23
OMAN	0	0	0	0	0	0	0			27	0	0	27	0	0	0	2.10	92.59	15-Jan-23
PAKISTAN	93	0	0	0	0	0	0	2.25	88.17	18710	20	1	17783	0	155	4	18.53	86.41	15-Jan-23
PALESTINE	2	0	0	0	0	0	0	2.42	100.00	33	0	0	17	0	0	0	1.64	100.00	15-Jan-23
QATAR	0	0	0	0	0	0	0			11	0	0	8	0	1	0	2.44	72.73	15-Jan-23
SAUDI ARABIA	0	0	0	0	0	0	0			274	0	0	209	0	7	0	3.18	97.08	8-Jan-23
SOMALIA	1	0	0	0	0	0	0	0.29	100.00	351	0	0	327	6	4	4	4.22	97.72	15-Jan-23
SUDAN	5	0	0	0	0	0	0	11.02	100.00	649	0	0	631	1	1	0	58.75	97.23	12-Jan-23
SYRIA	12	0	0	0	0	0	0	3.80	83.33	381	0	0	355	0	0	0	4.95	94.75	14-Jan-23
TUNISIA	0	0	0	0	0	0	0			50	0	0	36	0	1	1	1.74	76.00	13-Jan-23
U.A.E.	0	0	0	0	0	0	0			61	0	0	0	0	42	1	4.14	93.44	10-Jan-23
YEMEN	18	0	0	0	0	0	0	2.79	94.44	1367	0	1	1030	159	8	1	8.70	87.20	14-Jan-23
EMR POL	227	0	0	0	0	0	0	2.05	92.07	30718	22	2	28820	167	299	13	11.38	89.04	

\* 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 2022

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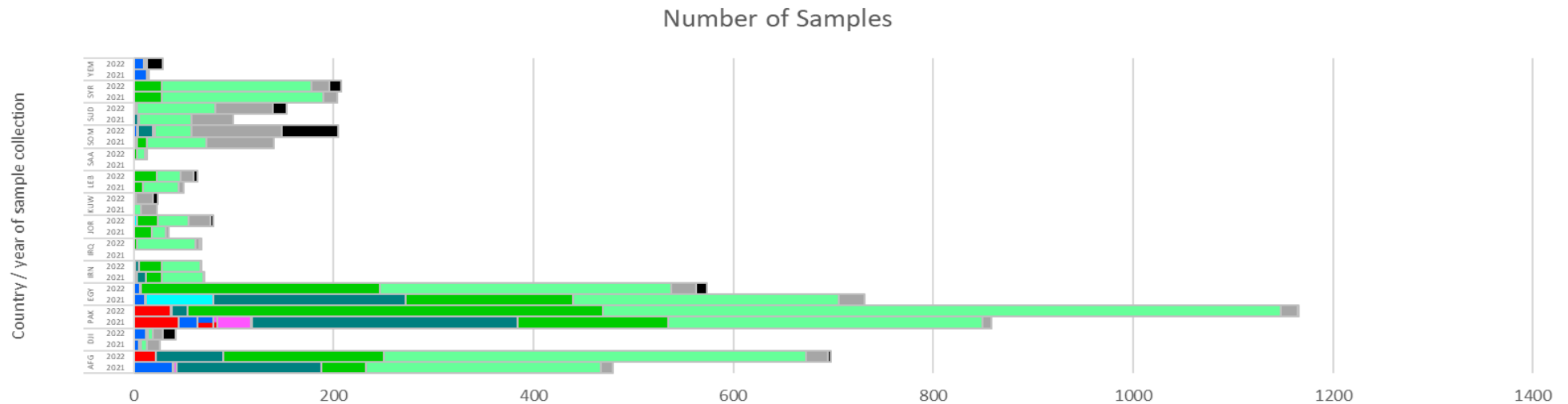
Country	Polio laboratories	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results													Indicators				Latest report Date
	ITD / Nucleotide Sequencing		Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant 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	5314	306	45	911	3937	108	1	2	234			8			266						15%	97%	100%	99%	15-Jan-23
Bahrain	NPL Oman / CDC	28			1	27																3%	96%		71%	11-Jan-23
Djibouti	NPL Kenya / CDC	17	2		5	8		2		2			2			2						33%	67%		73%	7-Jan-23
Egypt	RRL Egypt	1361	27	5	178	1106	30	15		8						14			5	1		11%	95%	100%	99%	12-Jan-23
Iran	NPL Iran / CDC	832	11		11	803	7			4	1					8						1%	100%	100%	98%	14-Jan-23
Iraq	NPL Iraq, RRL Egypt	836	3		65	753	8	7								4					2	8%	100%	50%	99%	12-Jan-23
Jordan	NPL Jordan, RRL Egypt	89	3		19	62	1	4								3						24%	99%	1	100%	15-Jan-23
Kuwait	RRL Kuwait / RIVM	53	2			49	1	1		1						1		1	1		1	2%	100%	1	100%	15-Jan-23
Lebanon	NPL Jordan, NPL Syria, RRL Egypt	42	1			33		8														0%	100%			9-Jan-23
Libya	RRL Tunisia / RIVM	75			2	70		3														3%	100%		100%	19-Nov-22
Morocco	NPL Morocco, RRL Tunisia	76			4	71	1															6%	100%		95%	13-Jan-23
Oman	NPL Oman / CDC	30			4	25		1														13%	83%		100%	11-Jan-23
Pakistan	RRL Pakistan	18257	468	60	3083	14222	383	30	17*	278			1			378						14%	98%	100%	97%	15-Jan-23
Palestine & UNRWA		33				29	3	1														0%	21%		97%	15-Jan-23
Qatar	NPL Oman / CDC	14	1			13				1												0%	93%	0	100%	11-Jan-23
Saudi Arabia	NPL Saudi Arabia / CDC	267	4		5	250		9		1						2						2%	90%	33%	98%	25-Dec-22
Somalia	NPL Kenya / CDC	351	10	1	65	260		21		2			9	6								20%	6%		88%	15-Jan-23
Sudan	NPL Sudan / RRL Egypt	652	9		158	469	15	1						1				1				24%	78%	100%	30%	12-Jan-23
Syria	NPL Syria / RRL Egypt	368	2		24	322	7	13														6%	100%			9-Jan-23
Tunisia	RRL Tunisia	37				37																1%	100%		95%	19-Nov-22
U.A.E	NPL Oman / CDC	61			2	59																2%	84%		75%	11-Jan-23
Yemen	NPLs Oman, Jordan & Kenya, RRL Egypt	1225	180	5	204	795	41			12			8	155**		25		5	1	1		16%	23%	36%	9%	14-Jan-23
Total EMR 2022		30018	1029	116	4741	23400	605	117	22	543	1		28	166		703		6	8	2	3	14%	93%	89%	93%	
Total EMR 2021		22113	1183	128	3874	16919		4	5	478	7		363	117		599	1	1	7	2	2	14%	97%	97%	93%	

\* Three 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

EMR Polio Bulletin - Issue No. 1267, Week 02 (ending on 15/01/2023)

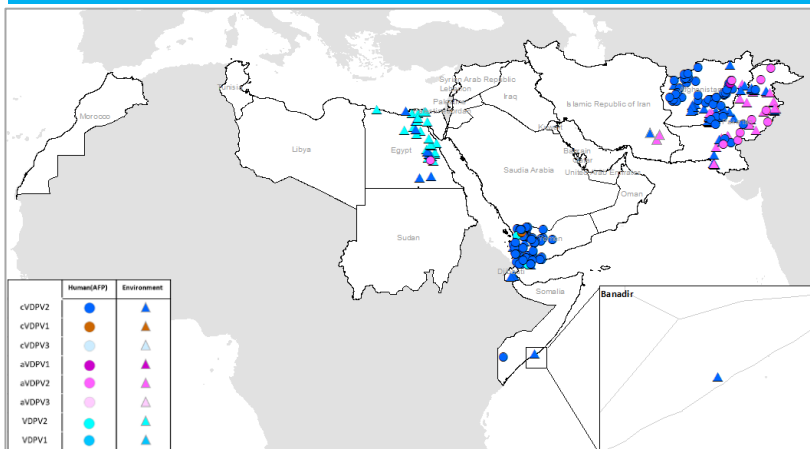


	AFG		DJI		PAK		EGY		IRN		IRQ		JOR		KUW		LEB		SAA		SOM		SUD		SYR		YEM	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Wild		22			45	37																						
cVDPV2	39		5	12	19		11	6	1												1	3		1			13	10
Wild+cVDPV2	1				16																							
Wild+aVDPV2					4																							
Wild+aVDPV3																												
aVDPV1																												
aVDPV2	3				33	1			2																			
aVDPV3																												
VDPV1					1		1																					
VDPV2							68	1		1			3									1						2
SL2	145	68			266	16	192		9	4											2	15	4					1
SL1/3	44	160	2	2	151	415	168	239	16	23		3	18	21			9	23		3	10	2	1	2	28	28	1	
Entero	235	423	6	5	314	679	265	292	42	39		59	14	31	7	2	36	24		8	60	37	53	79	162	150	1	
Negative	12	22	13	10	9	17	26	25	1	1		4	3	22	16	17	5	13		2	67	90	41	57	14	18		
Pending		3		13		1		11				2		3		5		4				57		14		12		16

# VDPVs isolations by Source and Country

EMR Polio Bulletin - Issue No. 1267 Week 02 (ending on 15/01/2023)

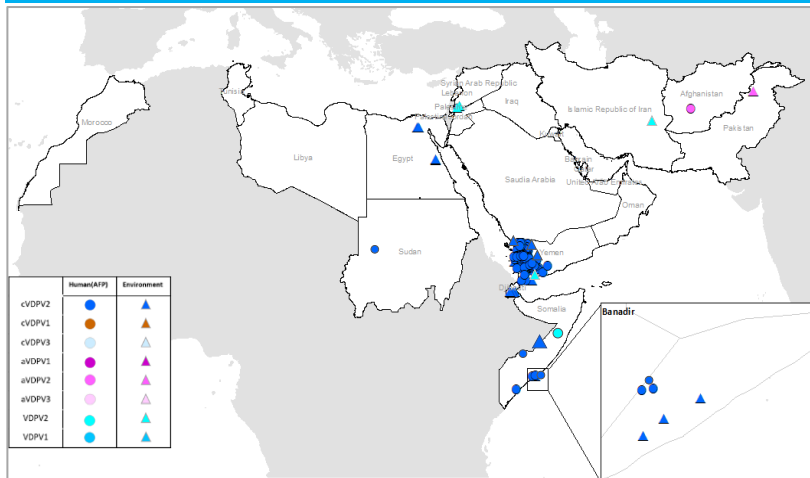
## VDPV Isolates, EMR countries, 2021



## 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	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	23-08-22	3	1	11		5	31-08-22	2	19	5	26	1	3	19-05-22			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	
	Syria	74						21-09-17	63					12-09-17									4					20-08-17	
Yemen					66	159	24-10-22				23	38	05-08-22					13	10		28-05-22								
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																					
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		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	5		3	22	37	1	15-02-22								
	Somalia															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																					
	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							
	Somalia						1	01-09-22																					
VDPV2	Yemen																			1	24-04-22								

## VDPV Isolates, EMR countries, 2022





## Important Links

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