

## Highlights of Polio Fax Bulletin No. 1106 for Week 50 2019

### I. Wild Poliovirus Transmission

**Endemic countries (PAKISTAN & AFGHANISTAN):** The following was all reported this week:

- Nine new wild poliovirus type-1 (WPV1) cases, 2 from Afghanistan and 7 from Pakistan;
- One new cVDPV2 case from Pakistan;
- Thirteen new positive WPV1 environmental samples, 2 from Afghanistan and 11 from Pakistan;
- One new coinfection WPV1-cVDPV2 environmental sample from Pakistan; and
- Two new positive cVDPV2 environmental samples from Somalia

Advance notification: 3 new WPV1 from Pakistan; 2 from Lakki Marwat district, Khyber Pakhtunkhwa (KP) province, with dates of onset 25 and 27 November 2019 and 1 from Muzaffargarh district, Punjab province, with date of onset 26 November 2019 – details will be included in next week bulletin.

- a. *Human samples:* Nine new wild poliovirus case reported this week. Total WPV1 cases in 2019 to date are 125 (24 from Afghanistan and 101 from Pakistan). This compares with 29 cases in 2018 in the same period (Afghanistan – 21 and Pakistan – 8).

- Afghanistan: Two new WPV1 cases reported this week and details are as follows:
  - Case (1): The case is from the newly infected district Khas Uruzgan, Sindh province, with date of onset 2 November 2019. The case is a 12-month old male child. The child did not receive any OPV doses neither from routine nor from supplementary immunization activities (SIAs).
  - Case (2): The case is from the newly infected district Pul-E-Khumri, and newly infected province Baghlan, with date of onset 14 November 2019. The case is a 48-month old male child. The child received 2 OPV doses from routine and 7+ doses from SIAs.

In 2019 to date, 24 WPV1 cases are reported. They include 9 cases from Uruzgan province, 5 cases from Hilmand province, 4 from Kandahar province, 2 from Paktika province and 1 each from Kunar, Nangarhar, Badghis and Baghlan provinces. The most recent case has onset of paralysis on 14 November 2019.
- Pakistan: Seven new WPV1 cases reported this week and details are as follows:
  - Case (1): The case is from Tank district, Khyber Pakhtunkhwa (KP) province, with date of onset 30 October 2019. The case is a 12-month old female child. The child reportedly received 3 doses from routine and 7+ doses from SIAs. The index case was identified by a positive contact.
  - Case (2): The case is from Lakki Marwat district, KP province, with date of onset 16 November 2019. The case is a 3-month old male child. The child did not receive any OPV doses neither from routine nor from SIAs.
  - Case (3): The case is from the newly infected district Swabi, KP province, with date of onset 17 November 2019. The case is a 6-month old male child. The child reportedly received 3 OPV doses from routine and none from SIAs. The index case was identified by a positive contact.
  - Case (4): The case is from the newly infected district Mirpurkhas, Sindh province, with date of onset 17 November 2019. The case is a 36-month old male child. The child reportedly received 9 OPV doses out of which 2 doses were from routine and 7 doses from SIAs.
  - Case (5): The case is from Mirpurkhas district, Sindh province, with date of onset 20 November 2019. The case is a 72-month old male child. The child reportedly received 10 OPV doses out of which 3 doses were from routine and 7 doses from SIAs.

Case (6): The case is from Lakki Marwat district, KP province, with date of onset 21 November 2019. The case is an 11-month old female child. The child reportedly received 1 OPV dose from SIAs and non from routine.

Case (7): The case is from Lakki Marwat district, KP province, with date of onset 23 November 2019. The case is an 11-month old female child. The child reportedly received 2 OPV doses from SIAs and non from routine.

In 2019 to date, 101 WPV1 cases are reported from Pakistan. They include 62 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD), 16 from Sindh province, 7 from Balochistan province and 5 from Punjab province. The most recent case has onset of paralysis on 23 November 2019.

b. *Environmental samples*: Thirteen new positive WPV1 environmental samples, 2 from Afghanistan and 11 from Pakistan were reported this week:

- Afghanistan: In 2019 to date, there are 48 wild positive environmental samples with most recent positive sample collected on 25 November 2019.
- Pakistan: In 2019 to date, there are 338 WPV1 positive environmental samples including 5 combined (WPV1 and cVDPV2) with most recent positive sample collected on 2 December 2019.

## II. Circulating Vaccine Derived Polioviruses (cVDPVs)

1. PAKISTAN: One new cVDPV2 case was reported this week from Gujranwala district, Punjab province, with date of onset 22 November 2019. The case is a 24-month old male child. The child reportedly received a total of 7 OPV doses out of which 1 dose was from routine and 6 doses from SIAs. In 2019 to date, 12 cVDPV2 cases reported (onset of the most recent case is 22<sup>nd</sup> November). Cases include four from Diamir district of Gilgit-Baltistan (GB) province; two each from Torghar and Kohistan Lower, one each from Charsadda, Kohistan Upper districts in KP; one each from Islamabad and Gujranwala district, Punjab province. Environment: Nineteen positive environmental samples for cVDPV2, the recent most sample collected on 12 November 2019 (including five combined WPV1 and cVDPV2).

In addition, cVDPV2 has been isolated from 16 healthy children and 7 contacts.

2. SOMALIA: No new cVDPV2 or cVDPV3 isolates from human, but two new positive cVDPV2 from environmental samples from Banadir province (Hamarweyne and Shangani districts) both with stool collection on 10 November 2019 were reported this week. In 2019 to date, Somalia has reported three cVDPV2 cases. The most recent reported case has date of onset of paralysis on 8 May 2019. In addition, cVDPV2 was isolated from healthy child sample collected during community sampling on 25 May 2019. aVDPV2 was isolated from an environmental sample on 3 February 2019. 2 cVDPVs were isolated from environmental samples on 10 November 2019. In 2018: Somalia has reported a total of 12 cases due to cVDPVs, which include 5 due to cVDPV2, 6 due to cVDPV3 and 1 due to co-infection of cVDPV2 and cVDPV3. The last cVDPV3 was isolated from a sewage sample from Mogadishu collected on 23 August 2018.

## III. Surveillance performance indicators

In 2019, 20 of 22 member states are meeting the global target of both key surveillance indicators, namely non polio AFP rate of 2 per 100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.

- Djibouti has a non-polio AFP rate of 1.4
- Tunisia has a percentage of AFP cases with adequate stool specimens of 75%
- In Yemen there are AFP cases pending final classification more than 90 days due to delayed lab results because of delay shipment of specimens to reference polio laboratories.

## AFP SURVEILLANCE

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Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (50/19) / Ending on : 15/12/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W39 29 Sep 19	W40 06 Oct 19	W41 13 Oct 19	W42 20 Oct 19	W43 27 Oct 19	W44 03 Nov 19	W45 10 Nov 19	W46 17 Nov 19	W47 24 Nov 19	W48 01 Dec 19	W49 08 Dec 19	W50 15 Dec 19
Afghanistan	3094	3378	3524	55	61	79	68	73	68	63	62	52	74	47	5
Bahrain	18	35	17	1	0	0	1	0	2	0	1	0	0	1	0
Djibouti	4	0	5	0	0	0	0	0	1	0	0	1	0	0	0
Egypt	1242	1246	1280	27	21	27	36	26	27	34	39	34	28	24	2
Iran	820	896	982	15	19	11	16	26	24	31	43	32	21	7	
Iraq	699	1023	1047	24	25	19	23	24	29	29	24	34	17		
Jordan ****	116	115	110	0	1	0	1	2	4	0	1	2	0	4	
Kuwait	69	72	46	1	1	0	1	0	1	0	1	1	1	3	1
Lebanon ****	75	89	78	1	2	2	0	1	1	2	2	1	1	4	0
Libya	88	122	94	4	3	5	4	1	2	1	1	2	1	2	
Morocco	143	212	233	4	5	8	4	10	3	4	4	8	10	12	1
Oman	40	28	26	2	1	1	1	1	0	1	0	1	0	3	0
Pakistan	10319	12276	13696	291	269	299	276	314	295	290	296	308	254	109	2
Palestine ****	43	44	54	0	1	1	0	2	1	2	0	1	0	0	
Qatar	18	10	7	0	1	0	0	0	0	1	0	0	0		
Saudi Arabia	276	242	214	3	5	10	6	5	3	7	2	3	0		
Somalia	345	353	340	6	4	7	5	6	6	4	7	5	2	8	0
Sudan	570	579	561	14	21	14	19	21	20	11	10	13	12	3	0
Syria ****	362	362	343	2	5	3	4	6	6	6	3	13	8	7	1
Tunisia	67	68	76	1	1	0	4	1	0	1	1	2	1	0	
U.A.E	58	40	42	1	1	1	0	1	3	2	2	1	0	0	
Yemen	713	730	693	16	13	9	8	10	20	16	16	14	7	3	
<b>Total EMR</b>	<b>19179</b>	<b>21920</b>	<b>23468</b>	<b>468</b>	<b>460</b>	<b>496</b>	<b>477</b>	<b>530</b>	<b>516</b>	<b>505</b>	<b>515</b>	<b>528</b>	<b>437</b>	<b>237</b>	<b>12</b>

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	15/12		Confirmed polio cases by month of onset											
			2018	2019	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019
Afghanistan	14	21	21	24	2	1	3	1	5	1	2	2	3	1	3	
Bahrain	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			
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			
Iraq	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			
Kuwait	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			
Morocco	0	0	0	0	0				0			0				
Oman	0	0	0	0	0	0	0	0	0	0	0		0	0	0	
Pakistan	8	12	8	101	4	2	0	11	11	16	12	14	5	15	11	
Palestine ****	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			
Saudi Arabia	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	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			
Yemen	0	0	0	0			0									
<b>Total EMR</b>	<b>22</b>	<b>33</b>	<b>29</b>	<b>125</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>14</b>	<b>16</b>	<b>8</b>	<b>16</b>	<b>14</b>	<b>0</b>

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

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Table 3: Investigation of AFP cases with paralysis onset in 2018 &amp; 2019 up to Week (50/19) / Ending on : 15/12/2019

COUNTRY	2018												2019												Latest line List Date		
	AFP										Specimen	Wild cases ****		AFP										Specimen		Wild cases ****	
	Total AFP cases onset 2018	Case classification					Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2019	Case classification					Annualized Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus			
		Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV								Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV									
Afghanistan	3378	21	0	0	3357	0	16.6	0	0	93.8	21	0	3524	24	1	213	3286	0	18.1	22	0	94.2	24	0	15/12/2019		
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	17	0	0	6	11	0	6.1	0	0	100.0	0	0	15/12/2019		
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	5	0	0	5	0	0	1.4	3	2	80.0	0	0	15/12/2019		
Egypt	1246	0	0	0	1245	1	3.2	0	0	93.2	0	0	1280	0	0	199	1081	0	3.5	3	2	90.5	0	0	12/12/2019		
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	982	0	0	32	949	1	5.3	0	0	96.7	0	0	14/12/2019		
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	1047	0	0	75	972	0	7.2	8	0	94.3	0	0	06/12/2019		
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	110	0	0	7	103	0	4.1	0	0	100.0	0	0	12/12/2019		
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	46	0	0	5	41	0	5.4	0	0	89.1	0	0	15/12/2019		
Lebanon	89	0	0	0	89	0	4.8	0	0	96.6	0	0	78	0	0	23	55	0	4.4	8	0	88.5	0	0	15/12/2019		
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	94	0	0	5	89	0	3.9	1	0	98.9	0	0	14/12/2019		
Morocco	212	0	0	0	212	0	2.4	0	0	77.4	0	0	233	0	0	71	162	0	2.7	36	6	83.3	0	0	13/12/2019		
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	26	0	0	3	23	0	3.0	0	0	84.6	0	0	15/12/2019		
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	13696	101	2	841	12740	12	18.2	116	0	87.6	101	0	15/12/2019		
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	54	0	0	8	46	0	3.0	0	0	98.1	0	0	08/12/2019		
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	7	0	0	4	3	0	2.0	2	0	85.7	0	0	01/12/2019		
Saudi Arabia	242	0	0	0	242	0	3.0	0	0	95.9	0	0	214	0	0	61	153	0	2.8	17	13	93.9	0	0	04/12/2019		
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	340	0	0	23	314	3	5.6	3	3	95.3	0	0	15/12/2019		
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	561	0	0	20	541	0	3.3	0	0	97.1	0	0	15/12/2019		
Syria	362	0	0	0	362	0	4.7	0	0	87.0	0	0	343	0	0	27	316	0	4.6	1	0	87.5	0	0	14/12/2019		
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	76	0	0	6	69	1	2.9	0	0	75.0	0	0	13/12/2019		
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	42	0	0	20	22	0	3.5	7	0	90.5	0	0	08/12/2019		
Yemen	730	0	0	86	644	0	5.2	86	80	91.6	0	0	693	0	0	431	262	0	5.1	291	258	89.3	0	0	14/12/2019		
EMR	21920	33	1	86	21785	15	8.7	86	80	89.8	33	0	23468	125	3	2085	21238	17	9.8	518	284	90.0	125	0			
2017	19179	22	3	8	19070	46	7.7	8	1	88.9	22	0															

\* 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 &lt;15 years

\*\*\* Adequate here refers to two stool specimens collected at least 24 hours apart, within 14 days of paralysis onset and specimens received in the lab in Good Condition

\*\*\*\* AFP cases co infected with P1 and P3 are counted separately as wild isolates

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COUNTRY	2018						2019					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1009	4	0	52	217	0	1091	8	0	45	192	59
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	1	0	0	0	0	1
EGY	495	0	0	11	58	17	459	0	0	7	48	57
IRN	145	0	0	3	6	0	175	0	0	4	6	0
IRQ	811	0	0	22	93	9	526	0	0	7	23	29
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0	0	0
LEB	229	0	0	3	16	22	24	0	0	0	3	2
LIB	1	0	0	0	0	0	6	0	0	0	3	0
MOR	161	0	0	0	9	9	71	0	0	3	1	21
OMA	70	0	0	2	16	0	74	0	0	2	26	3
PAK	4200	3	0	207	882	0	5042	15	6	178	878	216
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	5	0	0	0	0	5	0	0	0	0	0	0
SOM	1052	0	10	55	133	0	1026	0	1	43	116	64
SUD	350	0	0	3	24	88	376	0	0	0	31	82
SYR	670	0	0	8	17	0	740	0	0	12	36	45
TUN	1	0	0	0	0	0	26	0	0	0	2	1
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1559	0	0	0	0	566	396	0	0	0	0	195
<b>EMR</b>	<b>10760</b>	<b>7</b>	<b>10</b>	<b>366</b>	<b>1471</b>	<b>716</b>	<b>10033</b>	<b>23</b>	<b>7</b>	<b>301</b>	<b>1365</b>	<b>775</b>

Table 4 (B): Most recent wild contacts in EMRO, 2018-2019

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2019	Afghanistan	8	17/Aug/19
	Pakistan	15	23/Nov/19
<b>2019 Total</b>		<b>23</b>	<b>23/Nov/19</b>
2018	Afghanistan	4	7/Aug/18
	Pakistan	3	12/Oct/18
<b>2018 Total</b>		<b>7</b>	<b>12/Oct/18</b>

Table 4 (C): Number of distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2018-2019

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2019	AFG	URUZGAN	TIRINKOT	1	2-Aug-19	2-Aug-19
			MUSAQALAH	1	05-Jun-19	05-Jun-19
			SANGIN	1	06-Mar-19	06-Mar-19
	PAK	SINDH	KHIORANGI	1	28-Aug-19	28-Aug-19
			SUJAWAL	1	25-Sep-19	25-Sep-19
			JAMSHORO	1	09-Oct-19	09-Oct-19
			KILLABDULLAH	1	2-Jul-19	2-Jul-19
			SWABI	1	17-Nov-19	17-Nov-19
			TANK	1	30-Oct-19	30-Oct-19
			KHYBER PAKHTUNKHWA (KP)	3	27-May-19	04-Oct-19
TORGHAR	1	25-May-19	25-May-19			
<b>2019 Total</b>				<b>13</b>	<b>06-Mar-19</b>	<b>17-Nov-19</b>
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
			URUZGAN	1	8-Jul-18	8-Jul-18
	PAK	KHYBER PAKHTUNKHWA TRIBAL DISTRICTS (KPTD)	BAJOUR	1	1-Sep-18	1-Sep-18
			BALOCHSITAN	1	15-Apr-18	15-Apr-18
<b>2018 Total</b>				<b>4</b>	<b>15-Apr-18</b>	<b>01-Sep-18</b>

**Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (50/2019) / Ending on : (15/12/2019)**

Country	Polio laboratories  ITD / Nucleotide Sequencing (Nucleotide Sequencing performed by EGY, PAK, TUN, CDC and RIVM laboratories)	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results #										Indicators				Latest report Date			
			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**
			L20B+	L20B+/NPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	3478	270	27	543	2512	128	1	21	199						188	1	2	1	6	14%	96%	100%	98%	14/12/2019	
Bahrain	NPL Oman / CDC	11			2	9															14%	100%		0%	10/12/2019	
Djibouti	NPL Kenya / CDC	5					5																		15/12/2019	
Egypt***	RRL Egypt	1244	35	6	117	1005	45	36							20				9	3	10%	95%	100%	99%	12/12/2019	
Iran	NPL Iran / CDC	992	13		22	926	31		3	1					9	1					3%	100%	100%	99%	14/12/2019	
Iraq	RRL Egypt	1141	15		151	918	42	16	9						13						12%	100%	76%	95%	13/12/2019	
Jordan	NPL Jordan / RRL EGYPT	110			16	93	1														15%	99%		100%	15/12/2019	
Kuwait	RRL Kuwait / RIVM	50			2	43	4	1													7%	91%		100%	15/12/2019	
Lebanon	NPL Jordan / RRL EGYPT	71	1		9	59	1	1							1						13%	100%	100%	0%	15/12/2019	
Libya	RRL Tunisia / RIVM	92			6	84		2													7%	99%		99%	30/11/2019	
Morocco	NPL Morocco / RRL Tunisia	204	2		3	187	8	4							2						2%	99%	100%	95%	06/12/2019	
Oman	NPL Oman / CDC	25			4	18	2	1													24%	100%		100%	10/12/2019	
Pakistan	RRL Pakistan	13325	485	46	2218	10109	453	4	91	251		4	11		249		5	1	22		14%	97%	99%	97%	14/12/2019	
Palestine & UNRWA	RRL	54			7	44		3													14%	34%		100%	08/12/2019	
Qatar	NPL Oman / CDC	7			7																0%	100%		100%	10/12/2019	
Saudi Arabia	NPL Saudi Arabia / CDC	216	4		2	200		11							4						2%	95%	100%	100%	11/12/2019	
Somalia	NPL Kenya / CDC	340	25		65	230	8	12		7			11	3	9				1		20%	14%		98%	15/12/2019	
Sudan	NPL Sudan / RRL Egypt	562	6		77	460	18	1		5					2						12%	75%	100%	63%	15/12/2019	
Syria	NPL Syria / RRL Egypt	327	14		16	282	10	5	5						10						6%	100%	100%	53%	12/12/2019	
Tunisia	RRL Tunisia	67			5	59		3													11%	100%		98%	30/11/2019	
U.A.E	NPL Oman / CDC	34			4	28		2													11%	100%		47%	10/12/2019	
Yemen	NPL Kenya / CDC	62	3		2	12	1	44													12%	12%		0%	14/12/2019	
<b>Total EMR 2019</b>		<b>22417</b>	<b>873</b>	<b>79</b>	<b>3271</b>	<b>17285</b>	<b>752</b>	<b>152</b>	<b>112</b>	<b>494</b>	<b>1</b>	<b>15</b>	<b>14</b>	<b>507</b>	<b>2</b>	<b>16</b>	<b>5</b>	<b>29</b>			<b>13%</b>	<b>95%</b>	<b>99%</b>	<b>97%</b>		
<b>Total EMR 2018</b>		<b>20769</b>	<b>902</b>	<b>90</b>	<b>3513</b>	<b>16224</b>		<b>36</b>	<b>29</b>	<b>590</b>	<b>3</b>	<b>6</b>	<b>6 #</b>	<b>628</b>	<b>7 #</b>		<b>22</b>	<b>1</b>	<b>3</b>		<b>14%</b>	<b>92%</b>	<b>99%</b>	<b>97%</b>		

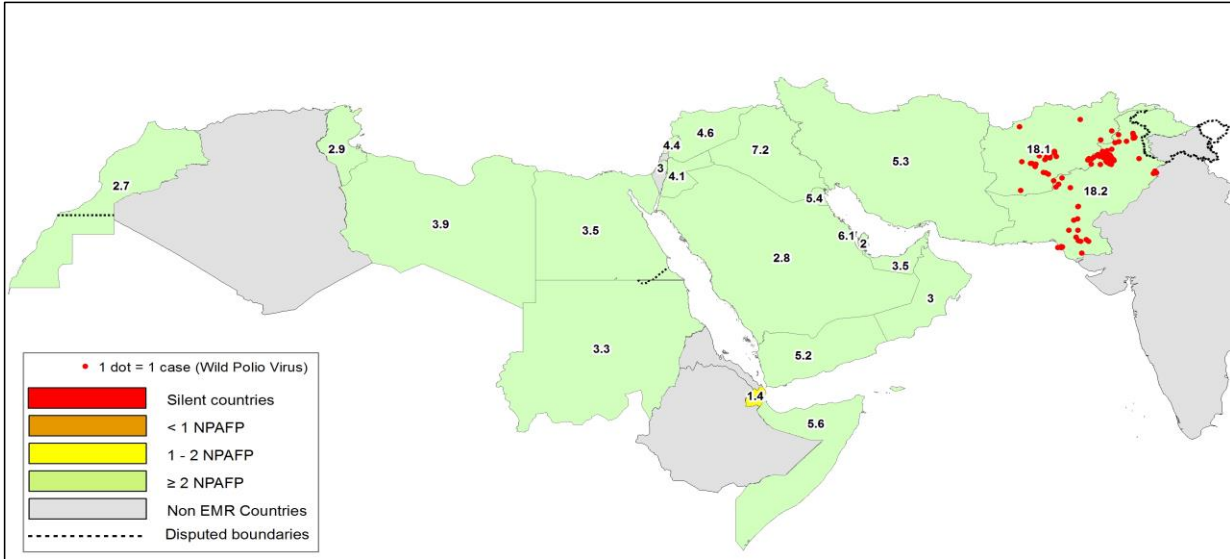
Table 6: Environmental isolate by year and type

Table with columns: COUNTRY, YEAR, RESULTS, and counts for Wild, EV/SL, Negative, Pending across years 2015-2019. Includes sub-totals for AFG, IRN, JOR, KUW, LEB, PAK, SOM, and SYR.

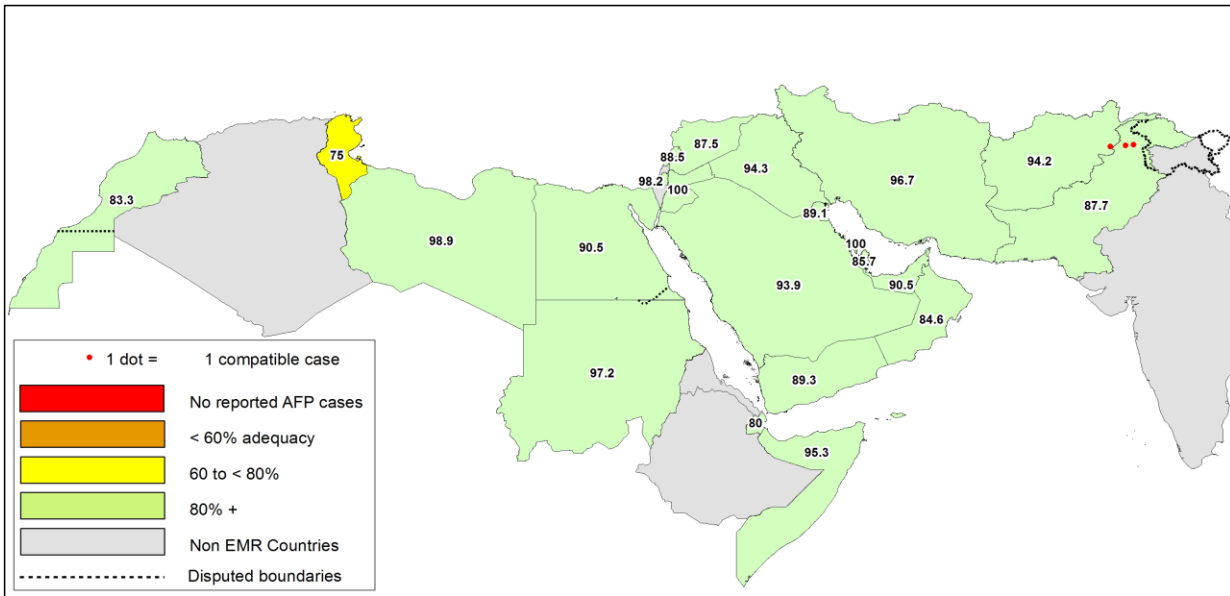
Table 7: Environmental Wild/DPV isolate by site

Table with columns: YEAR, COUNTRY, RESULTS, PROVINCE, DISTRICT, Count, First date, Last date. Provides detailed data for Wild and cVDPV2/cVDPV3 isolates across various districts in 2018 and 2019.

**Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 15/12/2019**



**Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 15/12/2019**



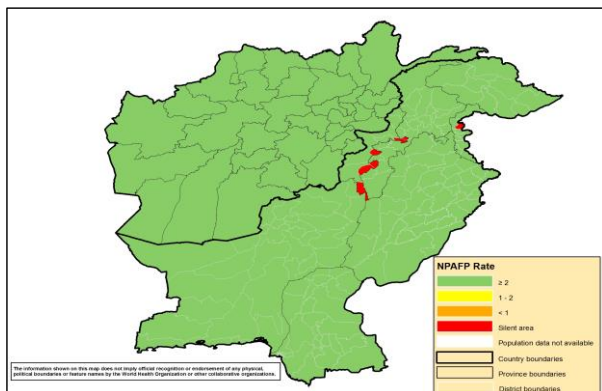
**Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019**

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
<b>2018 Total</b>		<b>33</b>	<b>1-Jan-18</b>	<b>31-Dec-18</b>
2019	AFG	24	4-Jan-19	14-Nov-19
	PAK	101	15-Jan-19	23-Nov-19
<b>2019 Total</b>		<b>125</b>	<b>4-Jan-19</b>	<b>23-Nov-19</b>

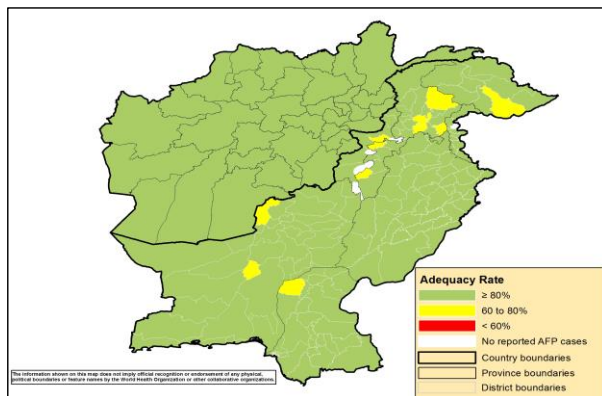
**Advance notification of 3 new WPV1 cases from Pakistan  
 2 from Lakkhi Marwat district, Khyber Pakhtunkhwa province  
 and 1 from Muzaffargarh district, Punjab**



**Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 15/12/2019**

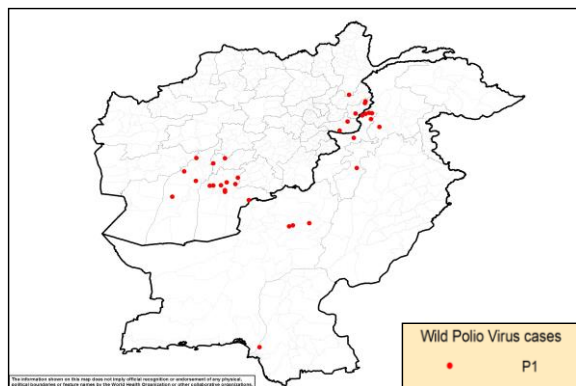


**Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 15/12/2019**

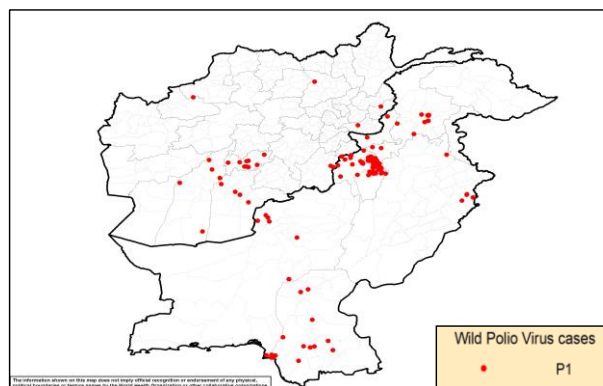


**Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan**

**5(a) 01/01/2018 - 31/12/2018**



**5(b) 01/01/2019 - 15/12/2019**



## World Health Organization – Regional Office for Eastern Mediterranean

## AFP SURVEILLANCE

Week 50, ending 15 December 2019

16-Dec-19

Number 1106

<b>Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2018-2019</b>							
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case		
<b>2018</b>	HILMAND	NAWZAD	3	1-Sep-18	6-Nov-18		
		NAD-E-ALI	1	1-Jun-18	1-Jun-18		
	URUZGAN	SHAHID-E-HASSAS	2	8-Jul-18	9-Oct-18		
	NURISTAN	PORUNS	1	26-Sep-18	26-Sep-18		
	KANDAHAR	MAYWAND	1	24-Sep-18	24-Sep-18		
		KANDAHAR	2	11-Aug-18	27-Aug-18		
		ARGHANDAB (K)	1	17-Jul-18	17-Jul-18		
		SHAHWALIKOT	3	5-Jan-18	27-Apr-18		
		KHAKREZ	1	25-Feb-18	25-Feb-18		
	NANGARHAR	SPINBOLDAK	1	6-Jan-18	6-Jan-18		
		PACHIERAGAM	1	17-Jul-18	17-Jul-18		
		KAMA	1	1-Jan-18	1-Jan-18		
	KUNAR	CHAWKAY	1	22-Jun-18	22-Jun-18		
GHAZIABAD		2	14-Feb-18	3-Mar-18			
<b>2018 Total</b>			<b>21</b>	<b>1-Jan-18</b>	<b>6-Nov-18</b>		
<b>2019</b>	BAGHLAN	PUL-E- KHUMRI	1	14-Nov-19	14-Nov-19		
	KANDAHAR	KANDAHAR	2	17-Aug-19	10-Nov-19		
		GHORAK	1	12-Jan-19	12-Jan-19		
		SPINBOLDAK	1	4-Jan-19	4-Jan-19		
	URUZGAN	KHASURUZGAN	1	2-Nov-19	2-Nov-19		
		TIRINKOT	4	19-May-19	2-Aug-19		
		CHORA	3	20-Mar-19	23-Jul-19		
		SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19		
	BADGHIS	BALAMURGHAB	1	17-Oct-19	17-Oct-19		
	PAKTIKA	BERMEL	2	15-Sep-19	28-Sep-19		
	NANGARHAR	KHOGYANI	1	18-Sep-19	18-Sep-19		
	HILMAND	GARMSER	1	26-May-19	26-May-19		
		MUSAQALAH	1	5-May-19	5-May-19		
	KUNAR	NAWZAD	1	3-Apr-19	3-Apr-19		
		WASHER	1	23-Mar-19	23-Mar-19		
		SANGIN	1	6-Mar-19	6-Mar-19		
		WATAPUR	1	8-May-19	8-May-19		
	<b>2019 Total</b>			<b>24</b>	<b>4-Jan-19</b>	<b>14-Nov-19</b>	

<b>Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2018-2019</b>							
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case		
<b>2018</b>	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18		
		KHYBER	1	25-Sep-18	25-Sep-18		
	KHYBER PAKHTUNKHWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18		
		CHARSADA	1	1-Aug-18	1-Aug-18		
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18		
BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18			
<b>2018 Total</b>			<b>12</b>	<b>8-Mar-18</b>	<b>31-Dec-18</b>		
<b>2019</b>	KHYBER PAKHTUNKHWA	LAKKIMRWT	22	27-May-19	23-Nov-19		
		SWABI	1	17-Nov-19	17-Nov-19		
		DIKHAN	2	5-May-19	16-Nov-19		
		BANNU	24	15-Jan-19	31-Oct-19		
		TANK	2	11-Oct-19	30-Oct-19		
		TORGHAR	7	25-May-19	13-Sep-19		
		HANGU	2	20-Jan-19	28-Jul-19		
		CHARSADA	1	21-Jul-19	21-Jul-19		
		SHANGLA	1	18-May-19	18-May-19		
		SINDH	MIRPURKHAS	2	17-Nov-19	20-Nov-19	
			LARKANA	2	17-Apr-19	9-Nov-19	
			KHIKAMARI	1	29-Oct-19	29-Oct-19	
			KHIJAMSHEED	1	24-Oct-19	24-Oct-19	
	SBENAZIRABAD		1	19-Oct-19	19-Oct-19		
	JAMSHORO		2	23-Aug-19	9-Oct-19		
	SUJAWAL		1	25-Sep-19	25-Sep-19		
	KHIORANGI		2	20-Aug-19	26-Aug-19		
	BALUCHISTAN	HYDERABAD	2	20-Jul-19	5-Aug-19		
		KHIGIQBAL	1	29-Apr-19	29-Apr-19		
		KHILAYARI	1	25-Feb-19	25-Feb-19		
		HARNAI	1	27-Sep-19	27-Sep-19		
		JAFARABAD	2	28-May-19	13-Sep-19		
		KABDULAH	3	9-Jun-19	8-Aug-19		
	KP TRIBAL DISTRICTS	QUETTA	1	6-Jul-19	6-Jul-19		
		WAZIR-S	1	20-Aug-19	20-Aug-19		
		WAZIR-N	8	4-Apr-19	21-Jul-19		
		KHYBER	1	14-Feb-19	14-Feb-19		
PUNJAB	BAJOUR	1	18-Jan-19	18-Jan-19			
	LAHORE	4	20-Jan-19	22-Jun-19			
	JHELUM	1	21-Jun-19	21-Jun-19			
<b>2019 Total</b>			<b>101</b>	<b>15-Jan-19</b>	<b>23-Nov-19</b>		

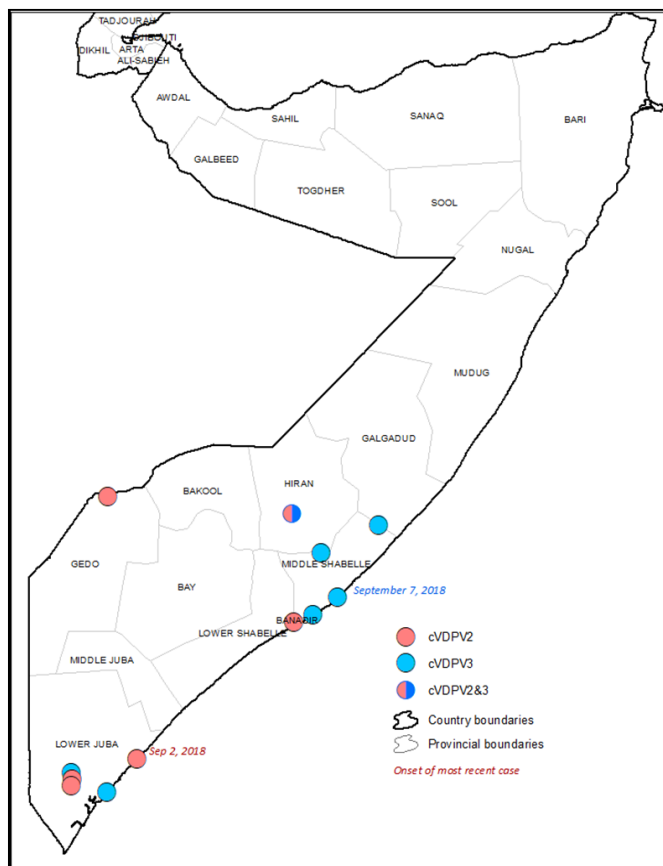
Advance notification of 3 new WPV1 cases from Pakistan, 2 from Lakki Marwat district, Khyber Pakhtunkhwa province and 1 from Muzaffargarh district, Punjab

**Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2018-2019**

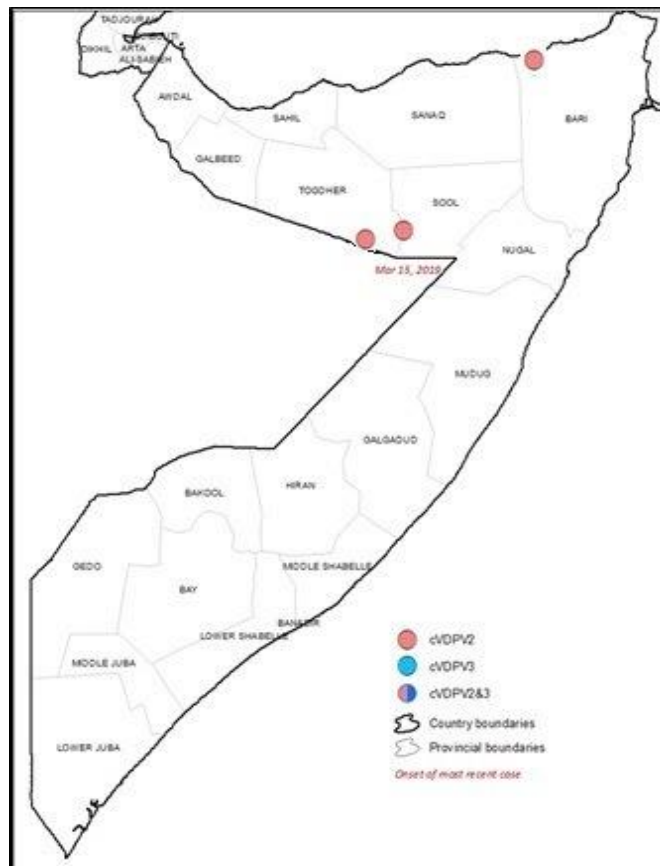
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3		
				Count	First Case	Last Case	Count	First Case	Last Case
PAK	2019	PUNJAB	GUJRANWALA	1	22-Nov-19	22-Nov-19			
			CHARSADA	1	3-Nov-19	3-Nov-19			
		KHYBER PAKHTUNKHWA	KOHISTANUPPER	1	27-Oct-19	27-Oct-19			
			KOHISTANLOWER	2	6-Oct-19	11-Oct-19			
			TORGHAR	2	4-Sep-19	28-Oct-19			
		ISLAMABAD	CDA	1	11-Sep-19	11-Sep-19			
		GILGIT BALTISTAN	DIAMER	4	7-Jul-19	28-Aug-19			
SOM	2019	BARI	BOSSASO	1	8-May-19	8-May-19			
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19			
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19			
<b>Total 2019</b>				<b>15</b>	<b>15-Mar-19</b>	<b>22-Nov-19</b>			
SOM	2018	LOWER JUBA	JAMAAME WEST	1	02-Sep-18	02-Sep-18			
			KISMAYO	2	29-Jul-18	30-Jul-18	2	4-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD				1	07-Sep-18	07-Sep-18
			MAHADAY				1	29-Jun-18	29-Jun-18
			WARSHEIKH				2	16-May-18	23-May-18
		BANADIR	DANYILE	1	10-Jul-18	10-Jul-18			
HIRAN	BULO BURTI	1	11-May-18	11-May-18	1	11-May-18	11-May-18		
GEDO	DOLO	1	26-May-18	26-May-18					
<b>Total 2018</b>				<b>6</b>	<b>11-May-18</b>	<b>2-Sep-18</b>	<b>7</b>	<b>11-May-18</b>	<b>7-Sep-18</b>

**Figure 6: Somalia cVDPV cases by type and district**

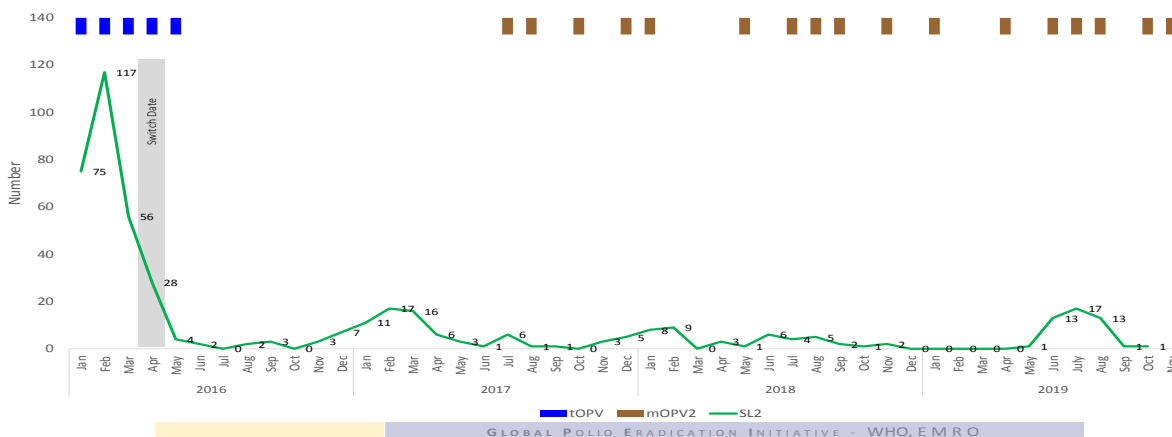
**6(a) 01/01/2018 - 31/12/2018**



**6(b) 01/01/2019 - 15/12/2019**

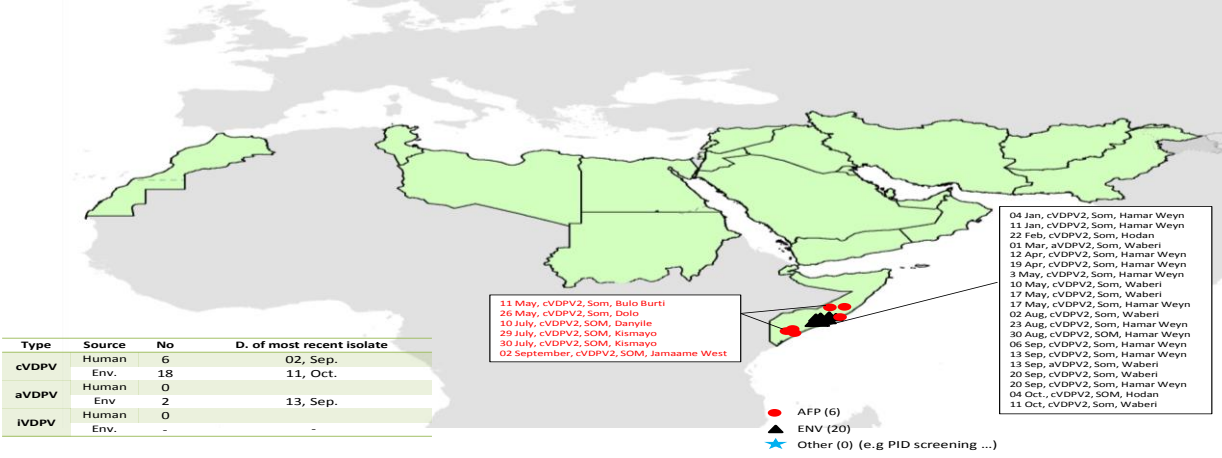


### Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2019



GLOBAL POLIO ERADICATION INITIATIVE - WHO, EMRO

### VDPV2 isolates, EMR countries, 2018



### VDPV2 isolates, EMR countries, 2019

