



# **Sudan Weekly AFP Surveillance Report**




**Week 5**

**(Ending on 1 February 2009)**

**National AFP  
Surveillance system  
Sudan**

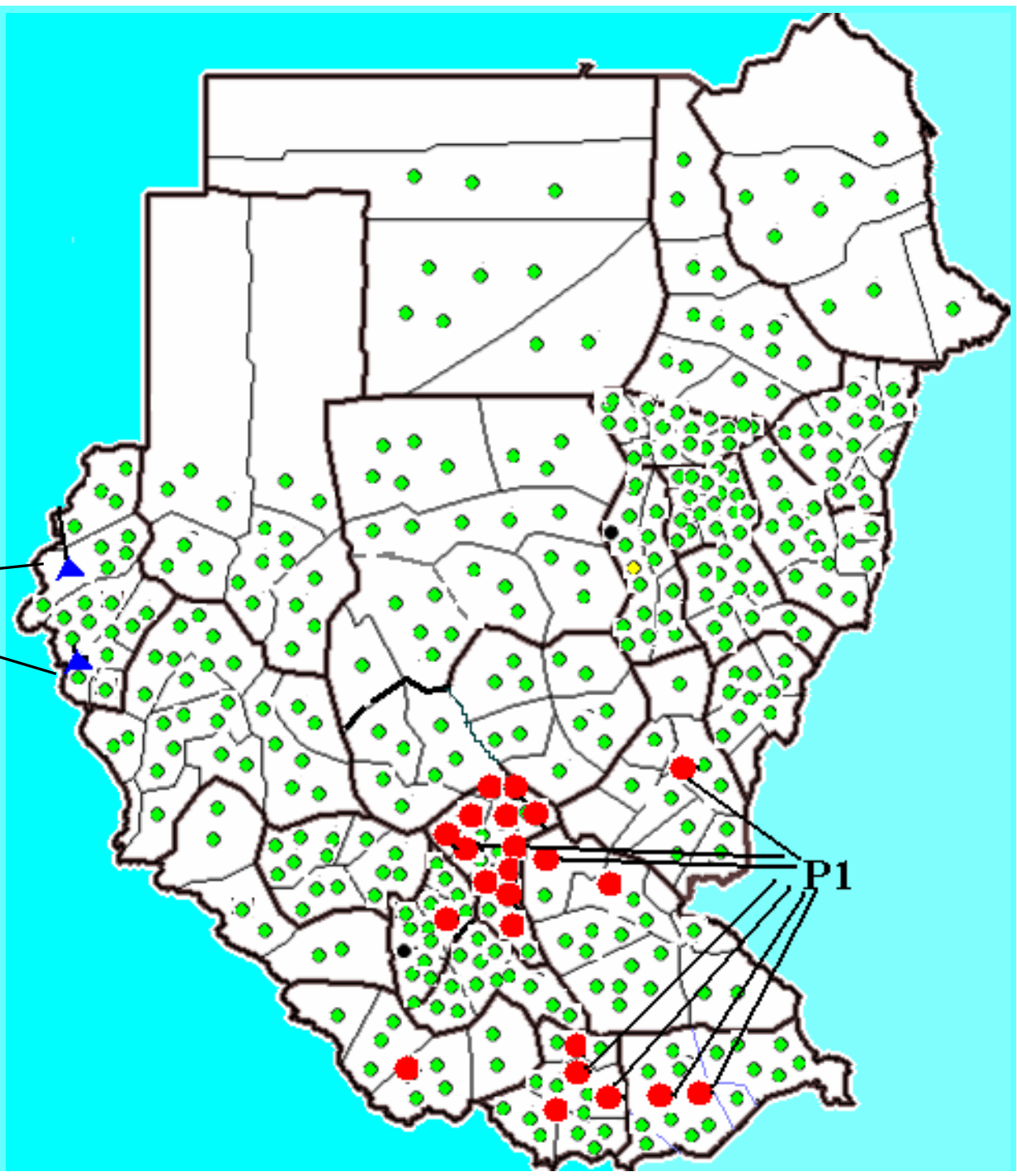


**Map 1.**  
**Distribution of**  
**AFP cases by**  
**classification**  
**Sudan 2008**

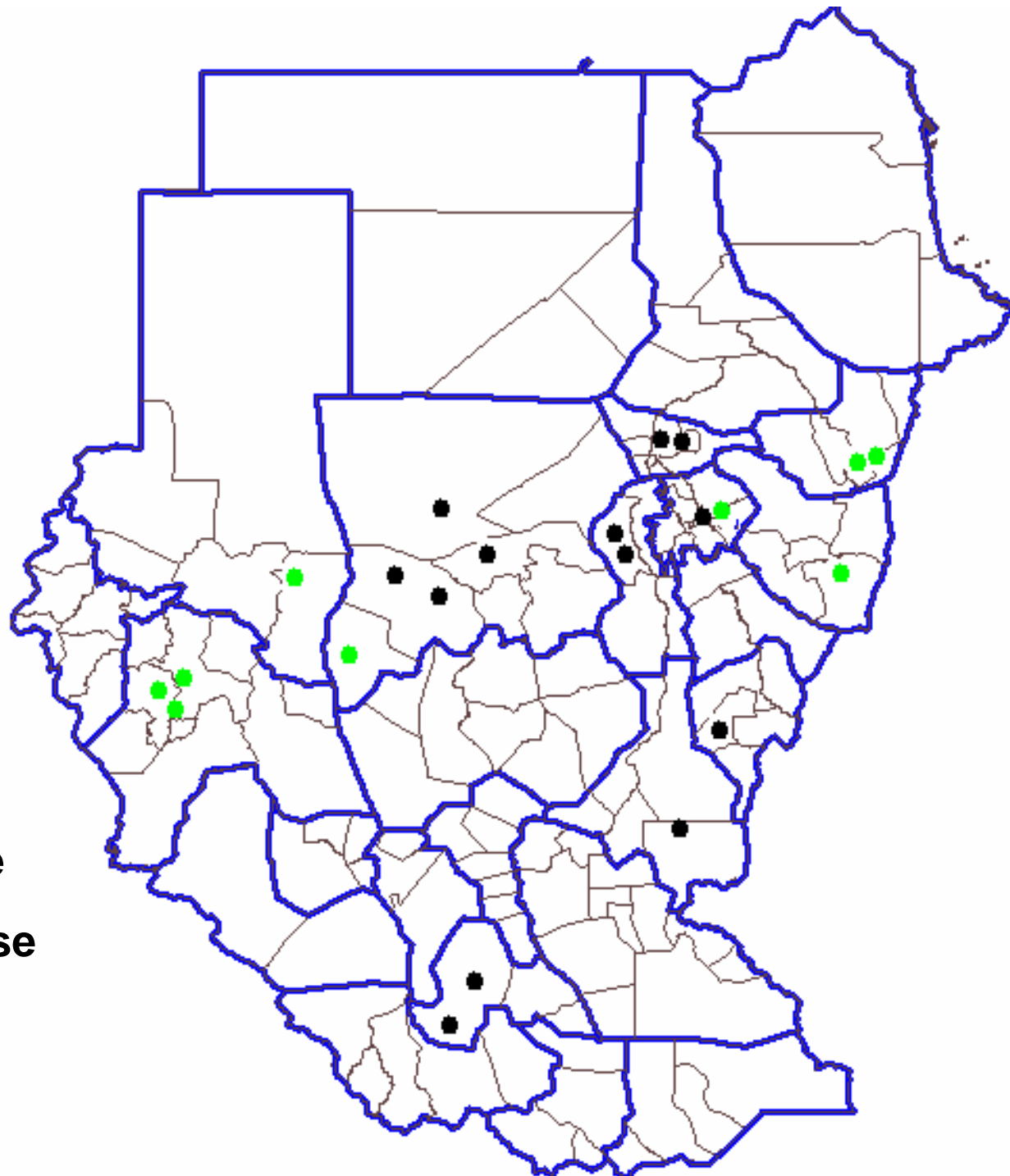
-  Pending AFP case
-  Non-polio AFP case
-  Compatible case

P3

P1



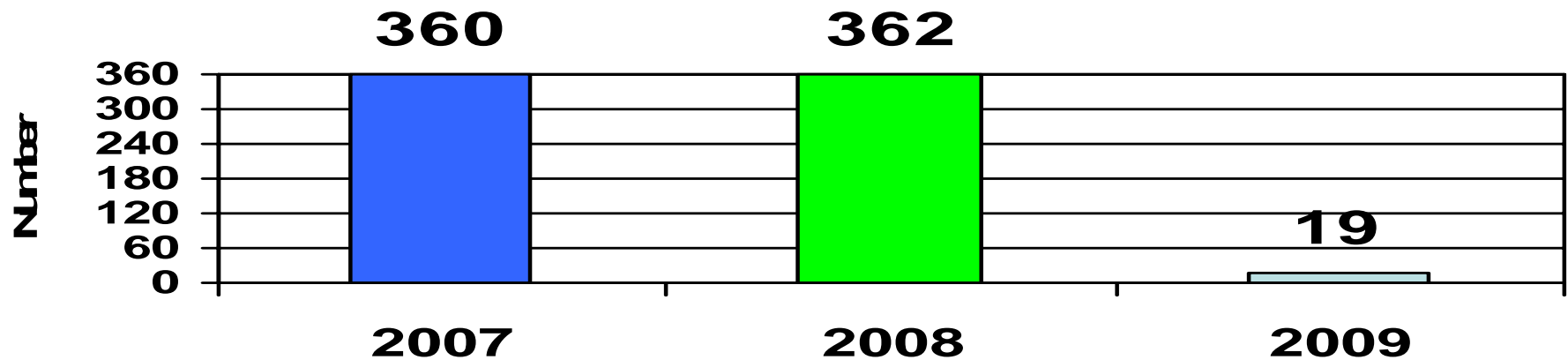
**Map 2.  
Distribution of  
AFP cases by  
classification  
Sudan 2009\***



**\* Up to 1/2/2009**

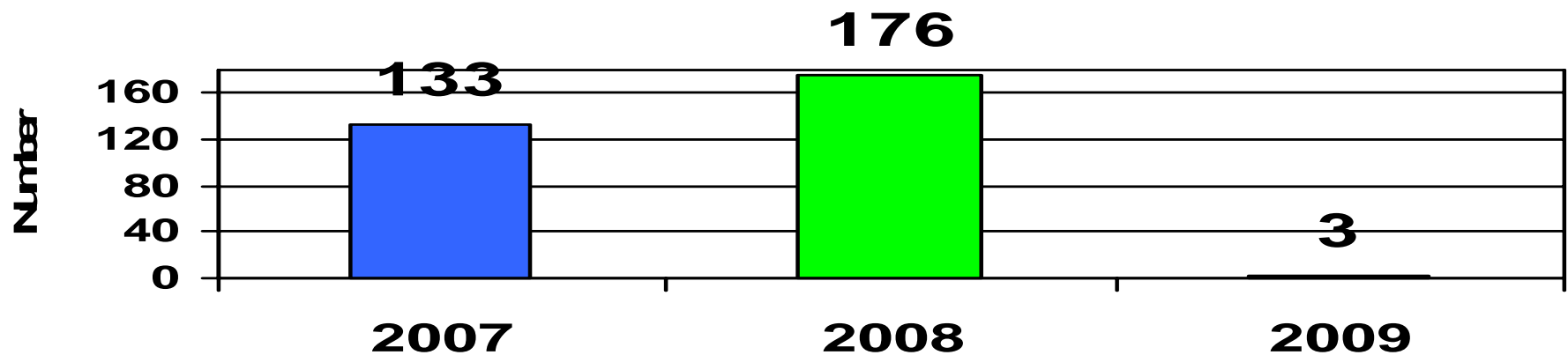
# Total AFP cases, 2007-2009

## Fig 1. North Sudan AFP cases reported

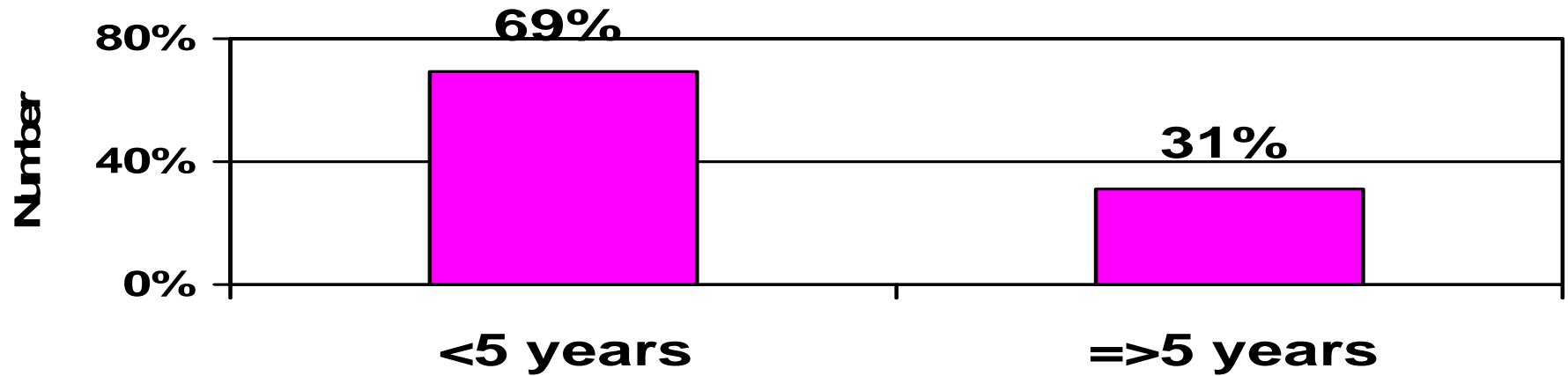


\* Up to 1/2/2009

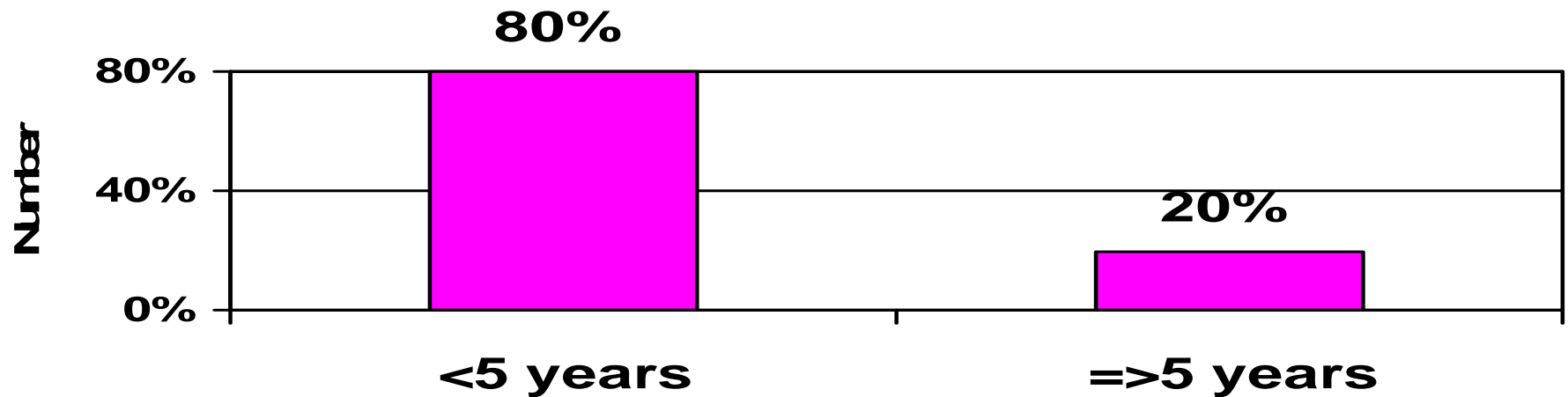
## Fig 2. Southern Sudan AFP cases reported



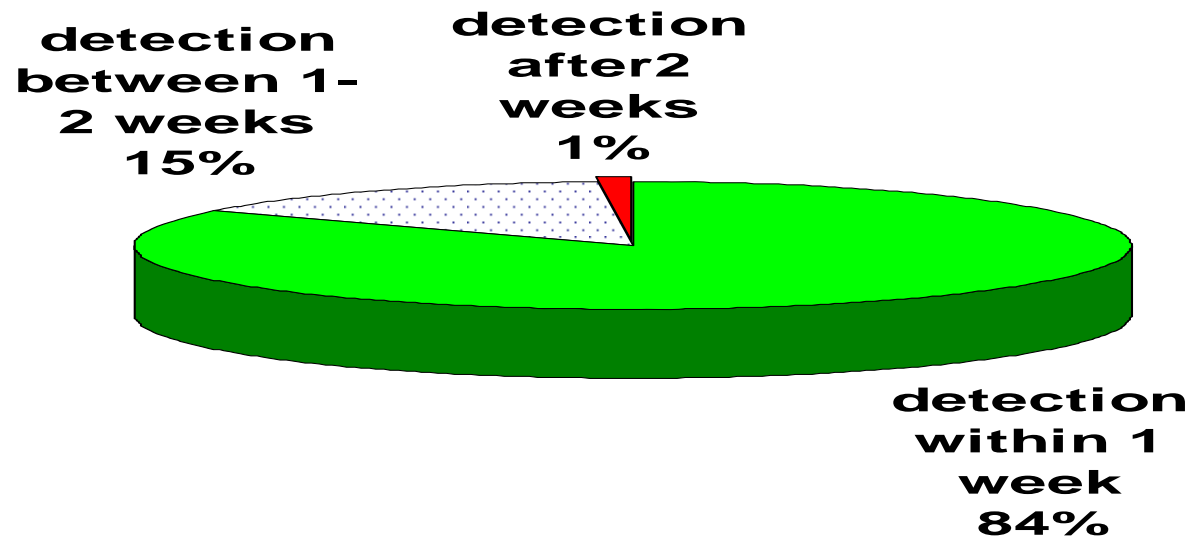
**Fig 3. North SUDAN AFP cases by age group, 2008**



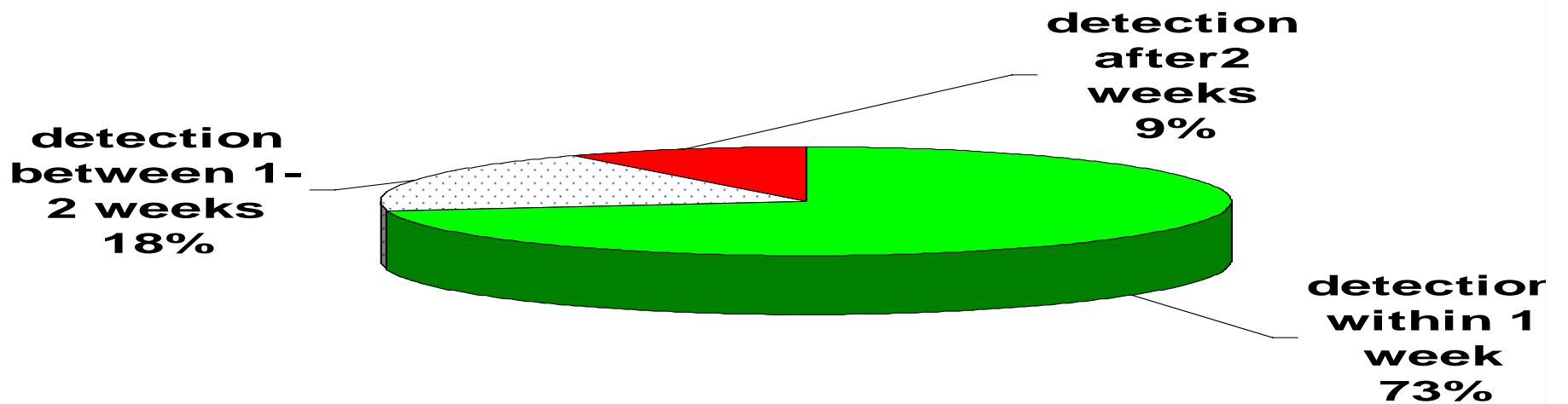
**Fig 4. South SUDAN AFP cases by age group, 2008**



**Figure 5. Percent distribution of AFP cases by time of detection, North Sudan, 2008**



**Figure 6. Percent distribution of AFP cases by time of detection, Southern Sudan, 2008**



**Table 1. Major AFP surveillance performance indicators, Northern States, 2008**

State	U 15 yrs population	Total reported AFP cases	Non-polio AFP cases	Pending classification	Polio cases	Compatible cases	% Adequate stools	Annualized AFP rate	% NPEV
B. Nile	335,349	14	14	0	0	0	100%	4.2	14%
Gedarif	783,014	18	18	0	0	0	100%	2.3	11%
Gezira	1,768,855	45	45	0	0	0	98%	2.5	16%
Kasala	776,264	20	20	0	0	0	100%	2.6	15%
Khartom	2,154,959	53	53	0	0	0	100%	2.5	15%
N.Darf	786,139	21	21	0	0	0	95%	2.7	19%
N.Kord	1,206,410	31	31	0	0	0	100%	2.6	10%
Northern	254,978	10	10	0	0	0	80%	3.9	22%
Red Sea	327,066	11	11	0	0	0	100%	3.4	18%
River Nile	437,544	17	17	0	0	0	100%	3.9	18%
Sennar	665,628	15	15	0	0	0	93%	2.3	13%
S.Darfur	1,579,911	37	37	0	0	0	100%	2.3	8%
S. Kord	922,086	21	21	0	0	0	100%	2.3	14%
W.Darfur	884,736	25	23	0	2	0	96%	2.6	12%
W. Nile	775,659	24	22	1	0	1	79%	3.1	14%
Total	13,658,598	362	358	1	2	1	97%	2.6	14%

**Table 2. Major AFP surveillance performance indicators, Northern States, up to 1/2/2009**

State	U 15 yrs population	Total reported AFP cases	Non-polio AFP cases	Pending classification	Polio cases	Compatible cases	% Adequate stools	Annualized AFP rate	% NPEV
B. Nile	345,141	1	1	0	0	0	100%	3.0	100%
Gedarif	807,992	1	1	0	0	0	100%	1.3	0%
Gezira	1,818,206	2	1	1	0	0	100%	1.1	0%
Kasala	795,748	2	2	0	0	0	100%	2.6	0%
Khartom	2,234,046	2	0	2	0	0	100%	0.9	0%
N.Darf	810,981	1	1	0	0	0	100%	1.3	0%
N.Kord	1,224,747	5	1	4	0	0	80%	4.2	0%
Northern	259,007	0	0	0	0	0			
Red Sea	328,047	0	0	0	0	0			
River Nile	445,463	0	0	0	0	0			
Sennar	682,468	0	0	0	0	0			
S.Darfur	1,633,786	3	3	0	0	0	100%	1.9	0%
S. Kord	934,811	0	0	0	0	0			
W.Darfur	905,704	0	0	0	0	0			
W. Nile	794,818	2	0	2	0	0	100%	2.6	0%
Total	16,525,252	19	10	9	0	0	95%	1.4	10%

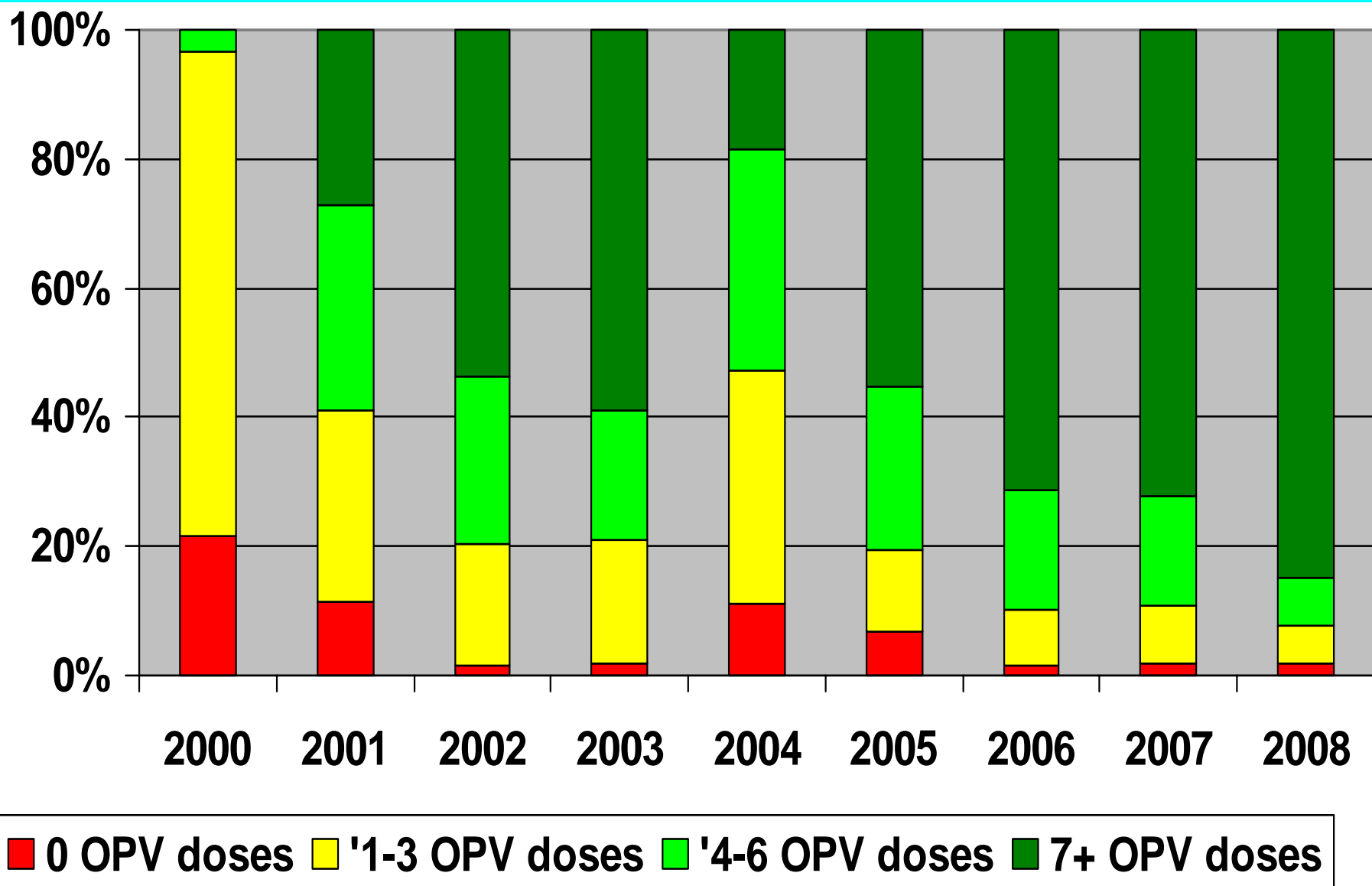
**Table 3. Major AFP surveillance performance indicators, Southern States, 2008**

State	U 15 yrs population	Total reported AFP cases	Non-polio AFP cases	Pending classification	Polio cases	Compatible cases	% Adequate stools	Annualized AFP rate	% NPEV
Bahr Elgabal	217,555	16	11	0	4	1	81%	5.5	13%
E. Equatoria	214,239	17	15	0	2	0	82%	7.0	29%
Lakes	218,533	17	16	1	0	0	94%	7.8	13%
Jongli	431,881	22	20	0	2	0	100%	4.6	23%
N.Bahr Elgazal	328,795	17	17	0	0	0	100%	5.2	0%
Unity	107,203	33	20	0	13	0	88%	18.7	9%
Upper Nile	215,941	10	9	0	1	0	90%	4.2	20%
Warap	431,884	28	27	0	1	0	82%	6.3	18%
W.Bahr Elgazal	109,597	6	6	0	0	0	83%	5.5	0%
W. Equatoria	201,500	10	9	0	1	0	100%	4.5	10%
<b>Total</b>	<b>2,477,128</b>	<b>176</b>	<b>150</b>	<b>1</b>	<b>24</b>	<b>1</b>	<b>90%</b>	<b>6.1</b>	<b>15%</b>

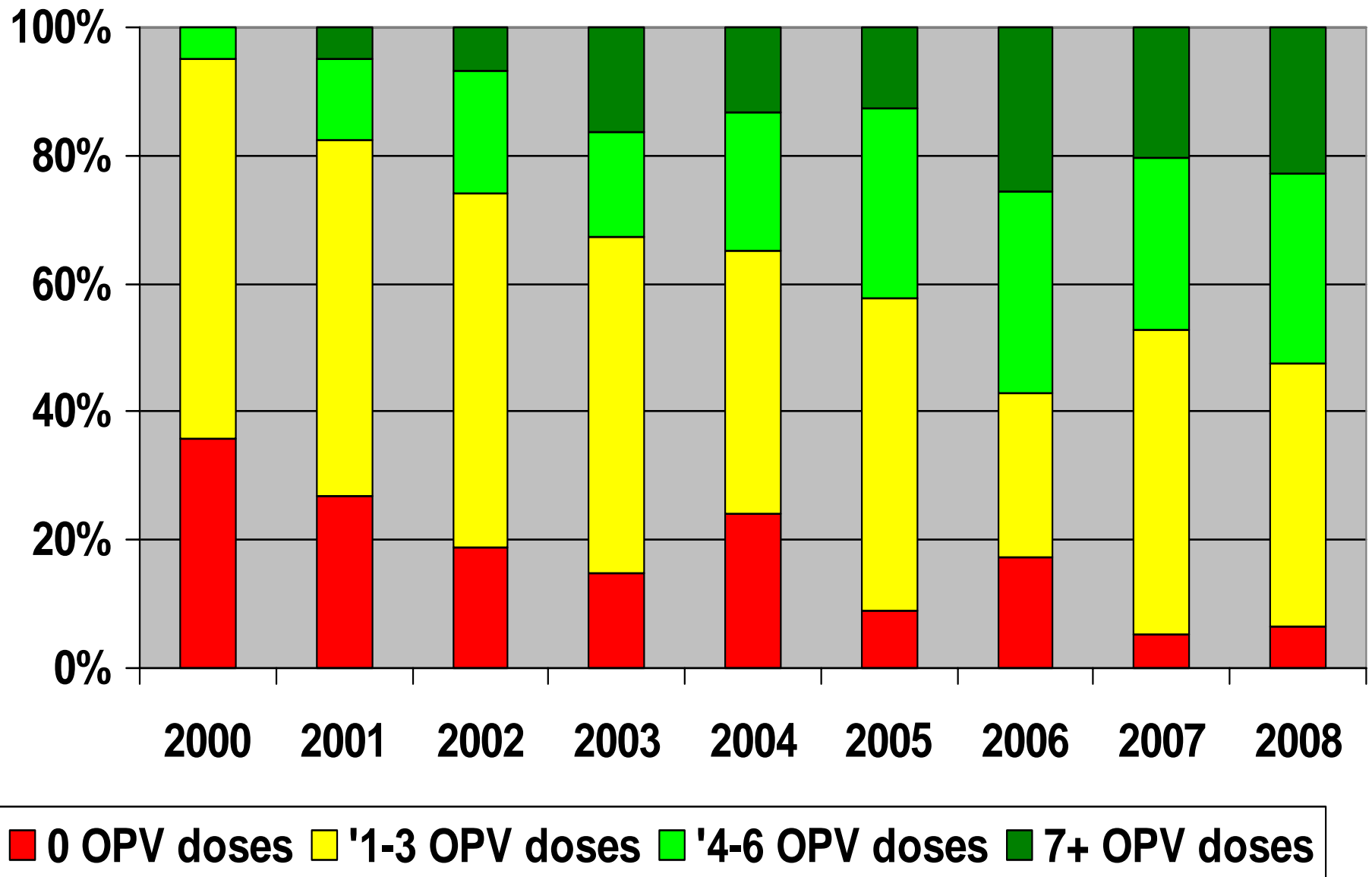
**Table 3. Major AFP surveillance performance indicators, Southern States up to 1/2/2009**

State	U 15 yrs population	Total reported AFP cases	Non-polio AFP cases	Pending classification	Polio cases	Compatible cases	% Adequate stools	Annualized AFP rate	% NPEV
Bahr Elgabal	217555	0	0	0	0	0			
E. Equatoria	214239	0	0	0	0	0			
Lakes	218533	2	0	2	0	0	100%	9	0
Jongli	431881	0	0	0	0	0			
N.Bahr Elgazal	328795	0	0	0	0	0			
Unity	107203	0	0	0	0	0			
Upper Nile	215941	1	0	1	0	0	100%	4.8	0
Warap	431884	0	0	0	0	0			
W.Bahr Elgazal	109597	0	0	0	0	0			
W. Equatoria	201500	0	0	0	0	0			
Total	2477128	3	0	3	0	0	100%	1.2	0

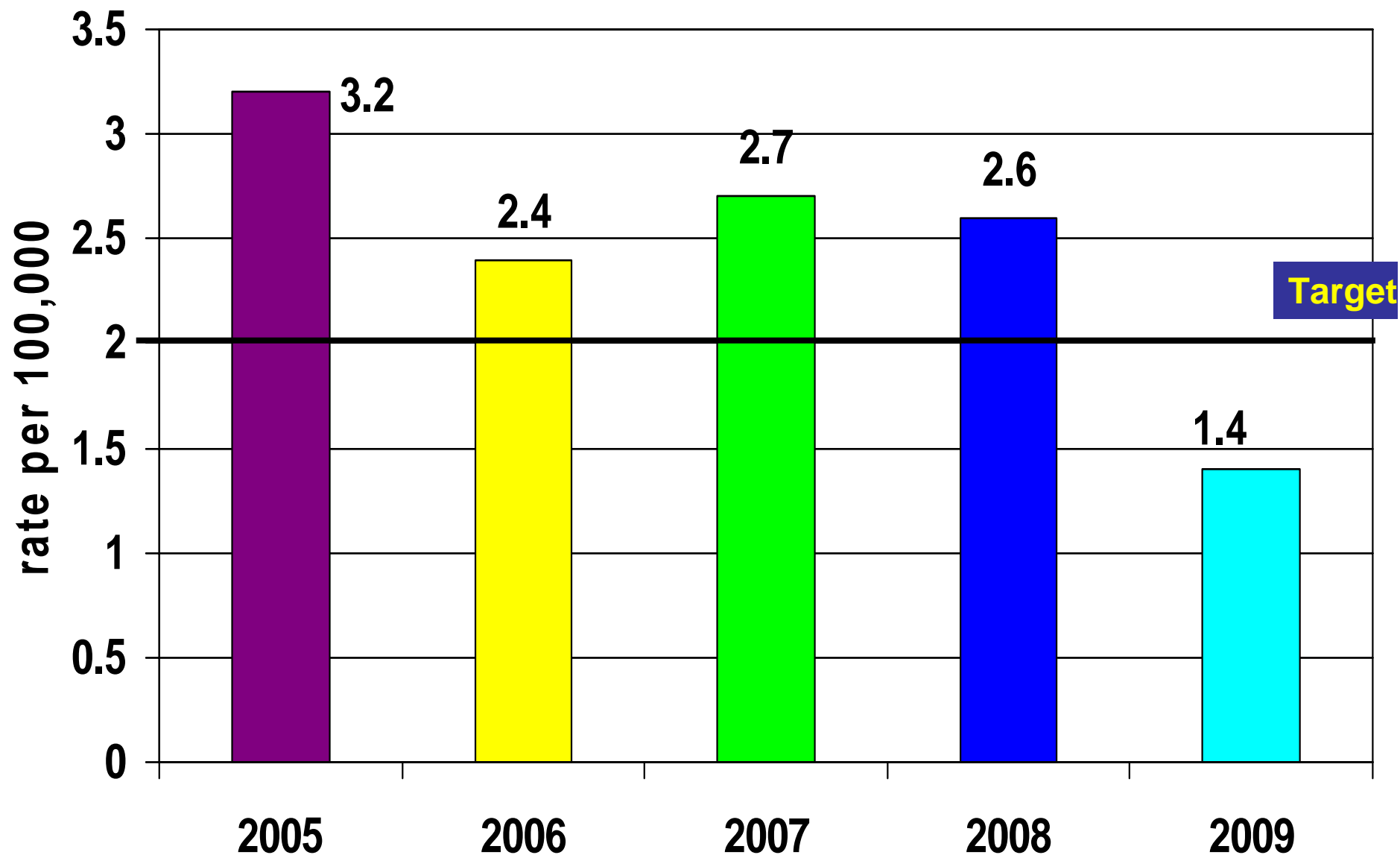
**Fig 7. Percent distribution of AFP cases < 60 months by number of OPV doses, North Sudan 2000-08**



**Fig 8. Percent distribution of AFP cases <60 months by number of OPV doses, South Sudan 2000-2008**

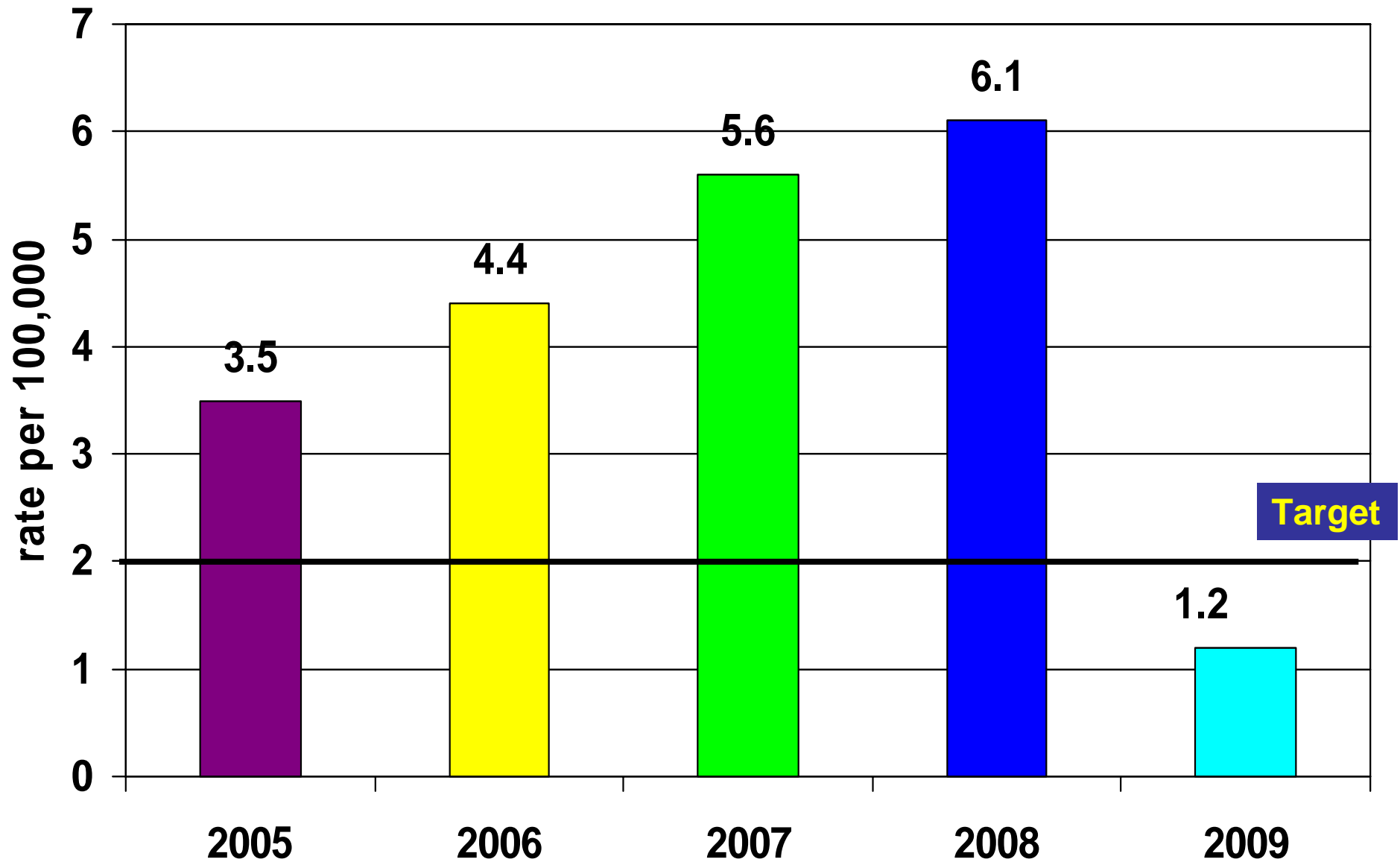


**Fig 9. Annualized Non-Polio AFP rate per 100,000 children under 15 years of age, North Sudan, 2005 – 2009\***



\* Up to 1/2/2009

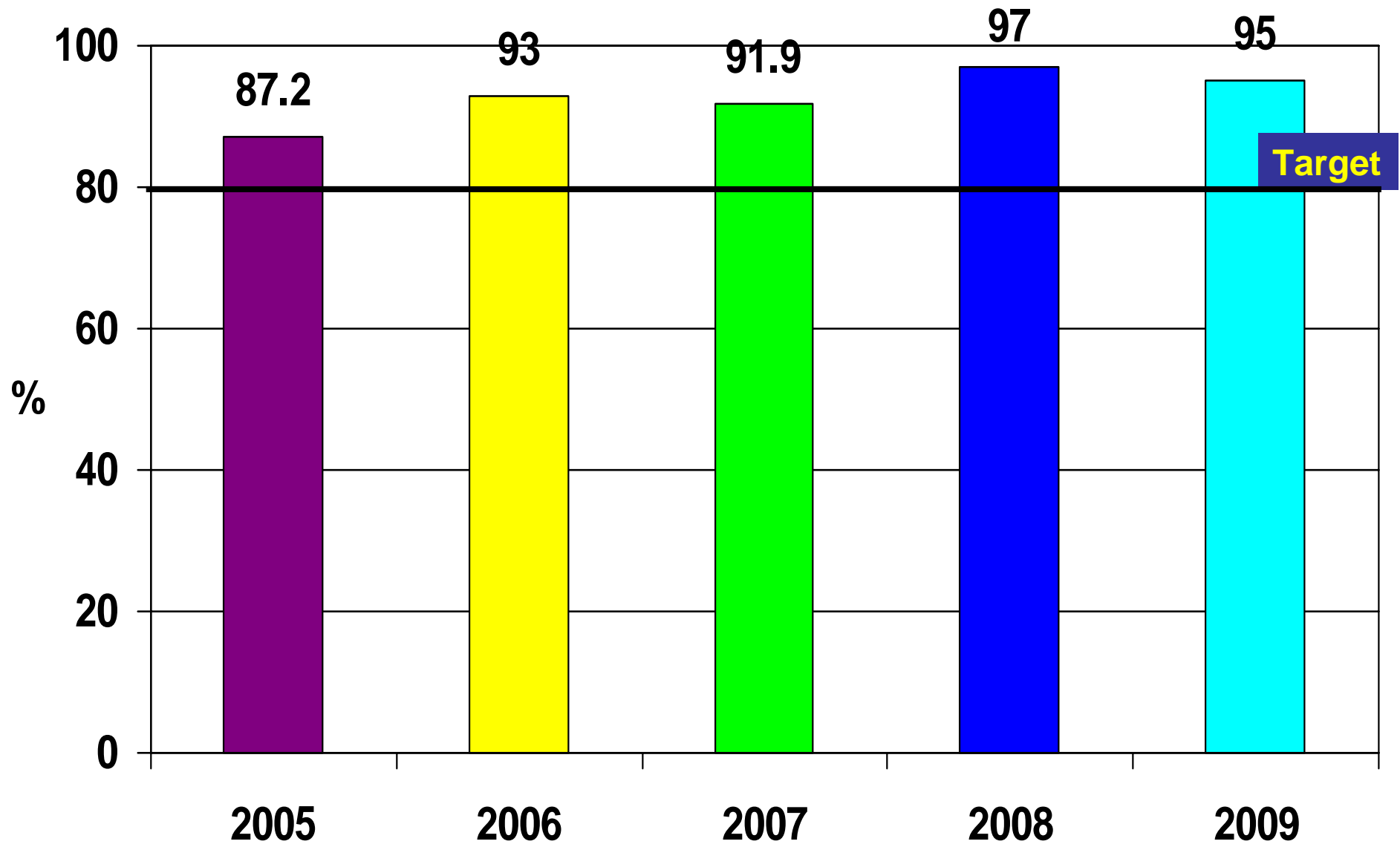
**Fig 10. Annualized Non-Polio AFP rate per 100,000 children under 15 years of age, southern Sudan 2005 – 2009\***



\* Up to 1/2/2009

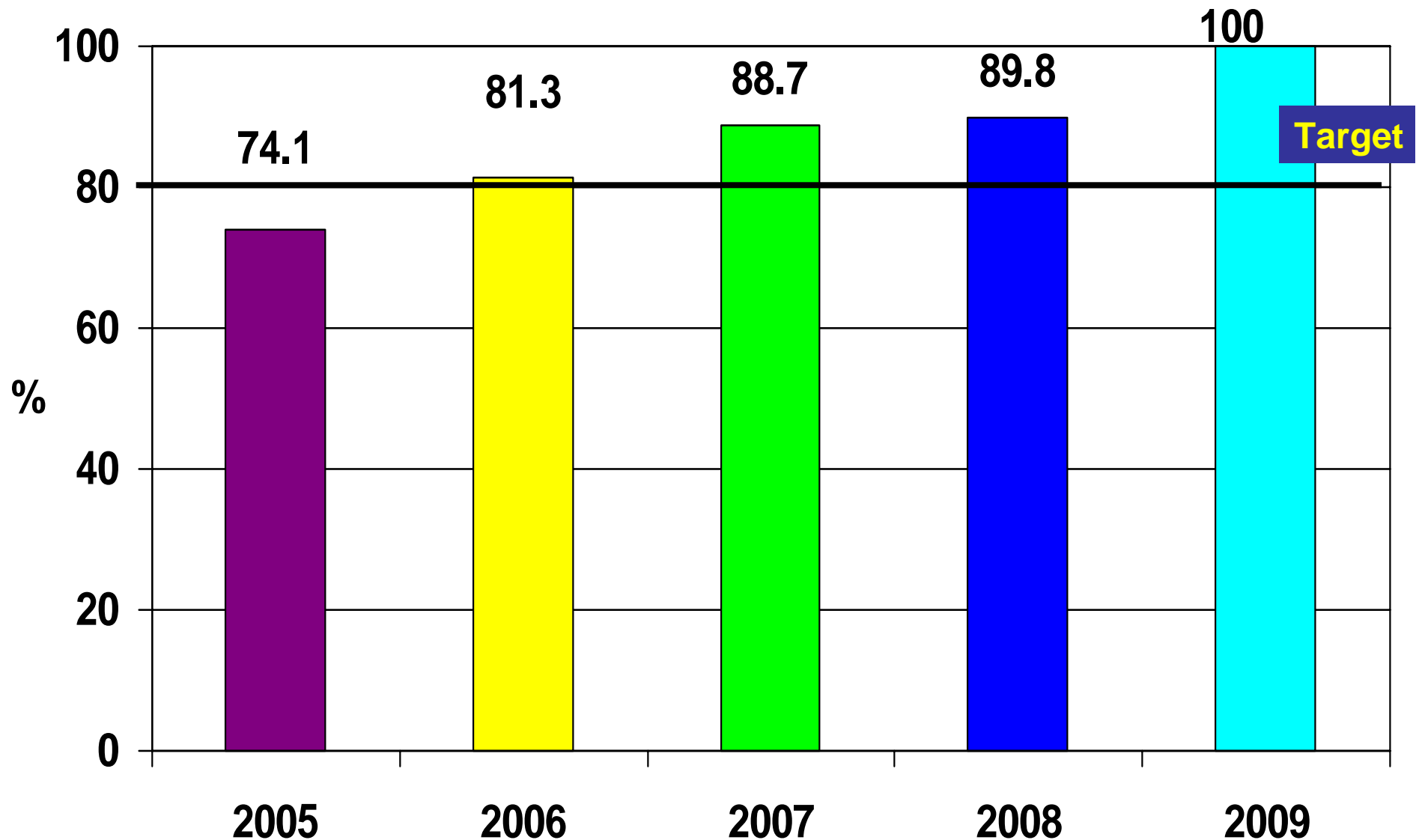
# Fig 11. Adequate stool collection rate

North Sudan, 2005 – 2009\*



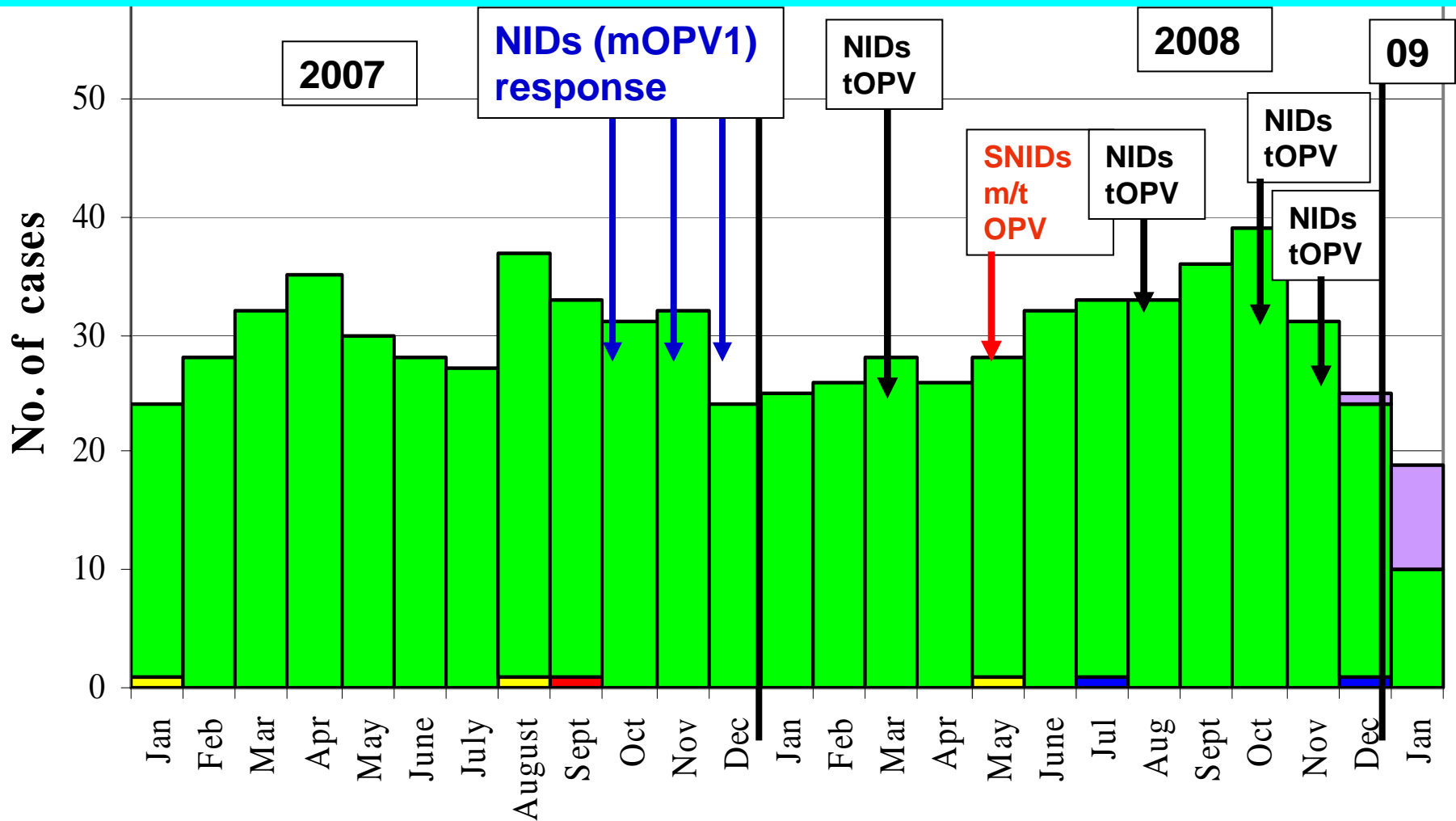
\* Up to 1/2/2009

**Fig 12. Adequate stool collection rate**  
**Southern Sudan 2005 – 2009\***



\* Up to 1/2/2009

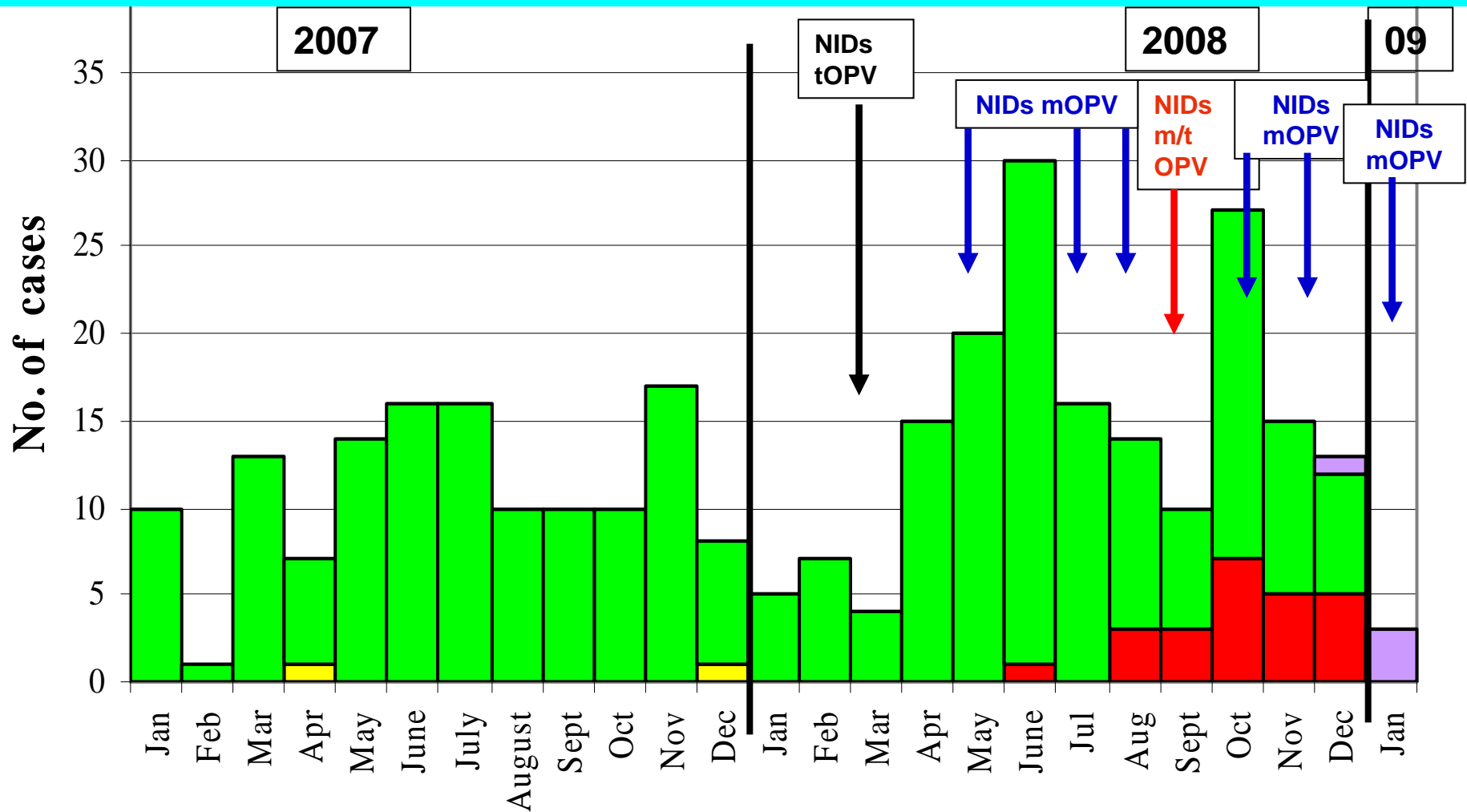
**Fig 13. Distribution of polio and non-polio AFP Cases by classification, month of onset & SIA response to the poliovirus importation in N SUDAN 2007-09\***



■ P3 ■ P1 ■ Compatible ■ Non-polio ■ Pending classification

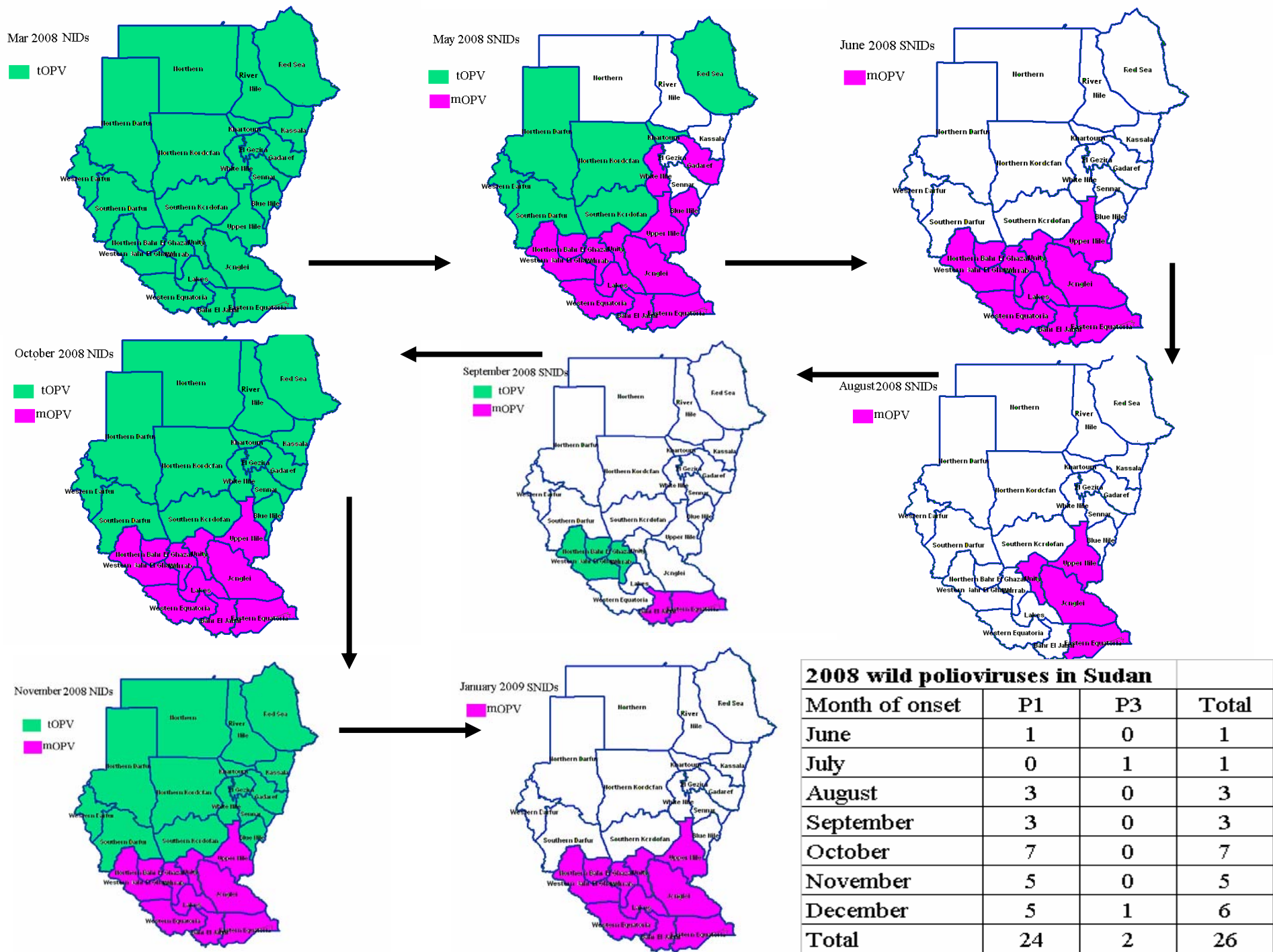
\* Up to 1/2/2009

**Fig 14. Distribution of polio and non-polio AFP Cases by classification, month of onset & SIA response to the poliovirus importation in S SUDAN 2007-09\***

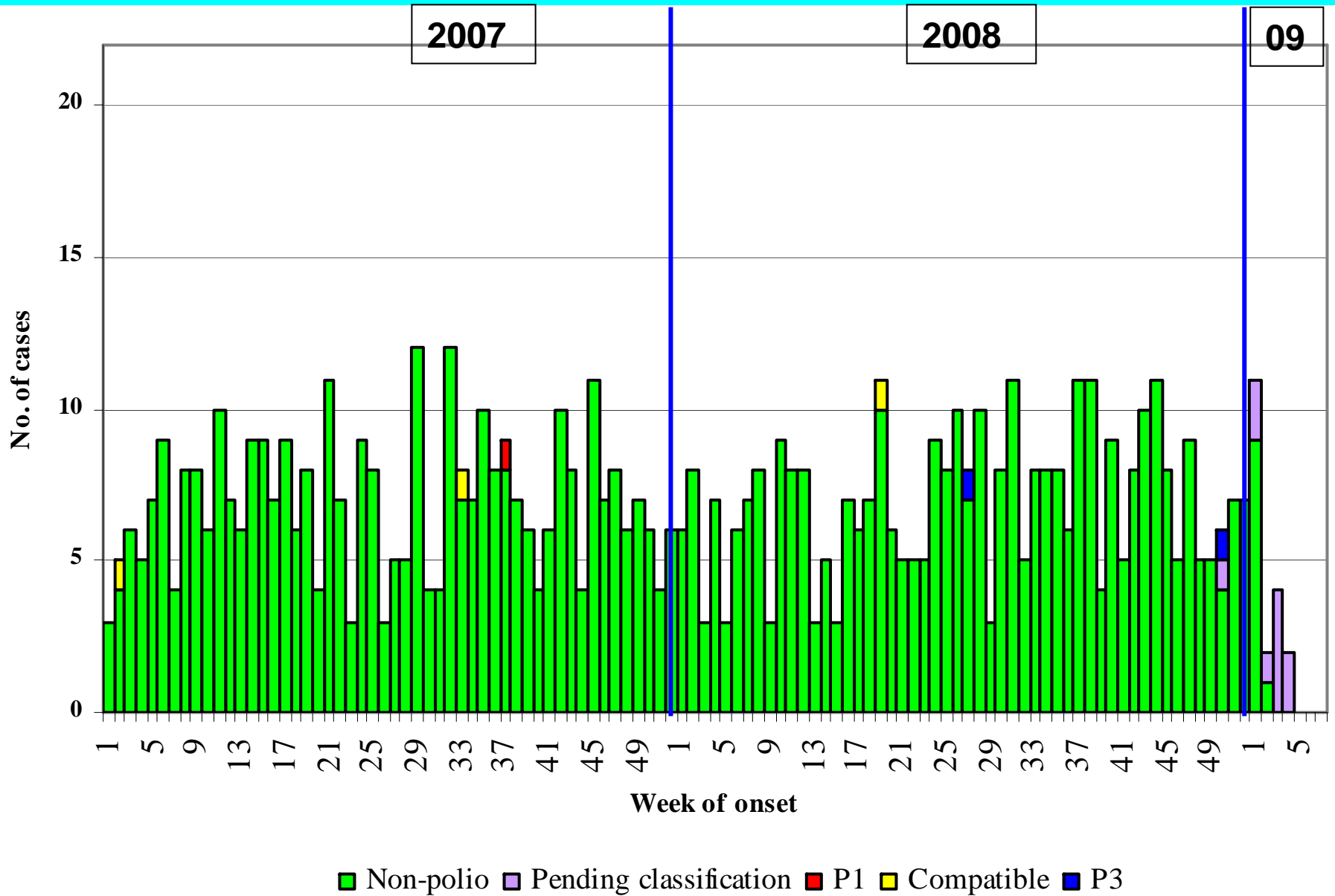


■ P3 ■ P1 ■ Compatible ■ Non-polio ■ Pending classification

\* Up to 1/2/2009

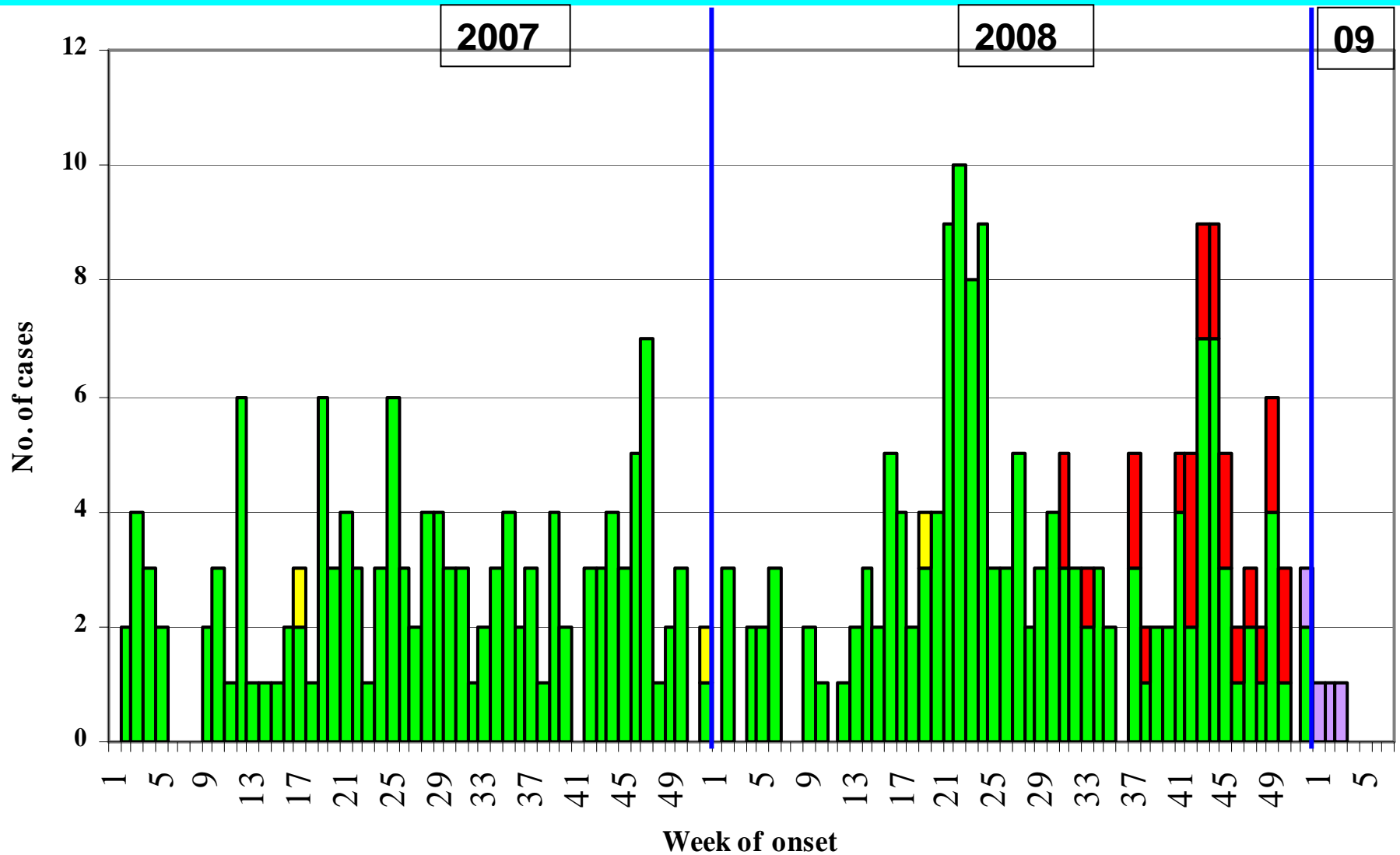


**Fig 15. Distribution of AFP cases by classification and week of onset, N Sudan 2007 – 2009\***



\* Up to 1/2/2009

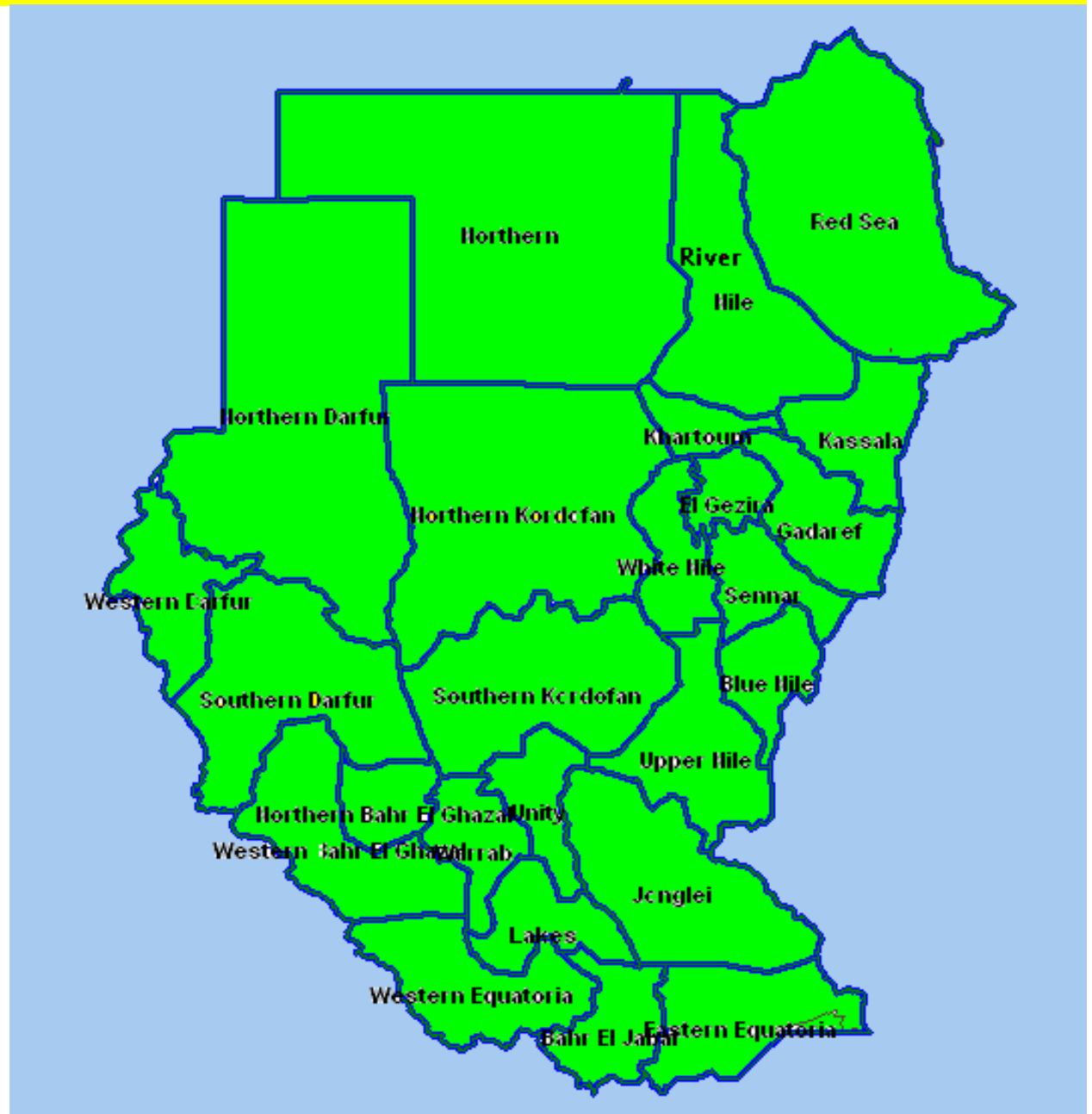
**Fig 16. Distribution of AFP cases by classification and week of onset, S Sudan 2007 – 2009\***



■ Non-polio ■ Pending classification ■ P1 ■ Compatible ■ P3

\* Up to 1/2/2009

**Map 3. Annualized non-polio AFP rate per 100,000 by state, 2008**



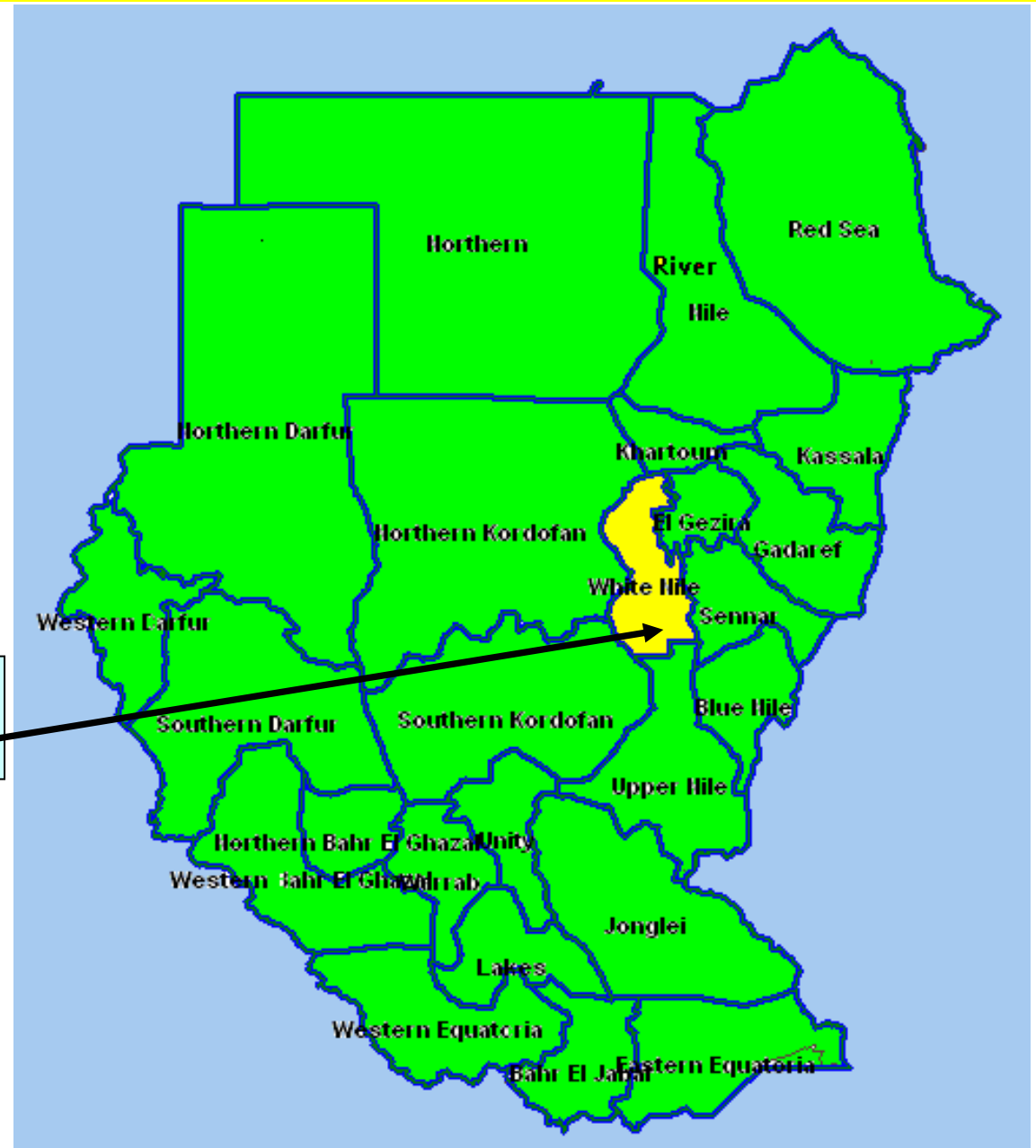
# Map 4. Percent distribution of AFP cases having adequate stool samples by state, 2008

80% - 100%

60% - 79%

<60%

• White Nile: 79% stool adequacy rate



**Table 4. National polio lab performance indicators  
North Sudan, 2006-2008**

Indicator	2006	2007	2008
Total AFP cases tested in NPL	305	355	361
Cases with wild poliovirus (imported P1)	0	1	0
Cases with wild poliovirus (imported P3)	0	0	2
Cases with non-polio enterovirus	19%	15%	14%
SL viruses No. & (%) from AFP cases	10(3.3%)	10(3%)	7 (2%)
Median days from the time of samples received in the lab to primary culture report or L20B result	18 days	14 days	11 days
Number of AFP contacts tested in the NPL	121	326	407
Contacts with non-polio enterovirus	12.4%	10.4%	8.1%
Sabin like viruses No. & (%) from contacts	6(5%)	4(1%)	9(2.3%)
Number of contacts with imported WP1	0	2	0
Number of healthy children with WP3	0	0	1
Number of healthy children with imported WP1	0	1	0

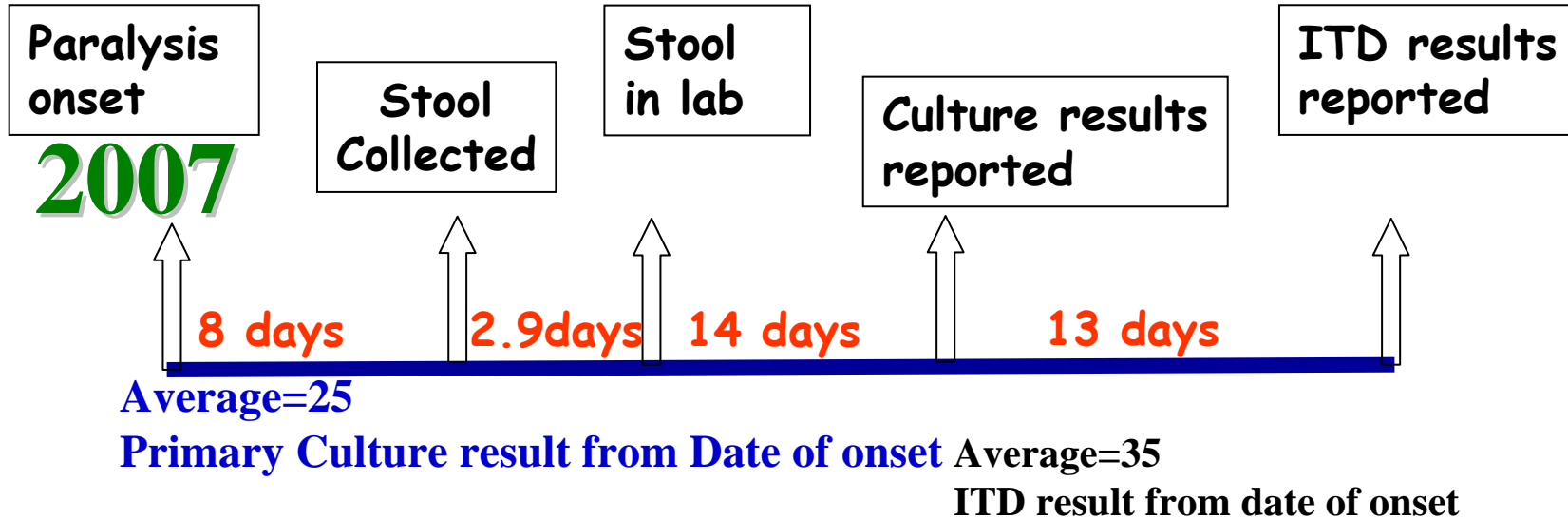
## Table 5. Polio lab performance North Sudan, 2007 and 2008

Week of onset	Total AFP Cases	AFP Cases under process	L20B +ve pending ITD	Negative cases	NPEV positive	% NPEV	Result reported within 14 days*	Arrival within 3 days of being collected	Arrival within 3 days of being sent
2007	355	0	0	302	53	15 %	100%**	74.9%	97.5%
2008	361	1	0	310	50	14 %	94.9%	68.2%	98.1%

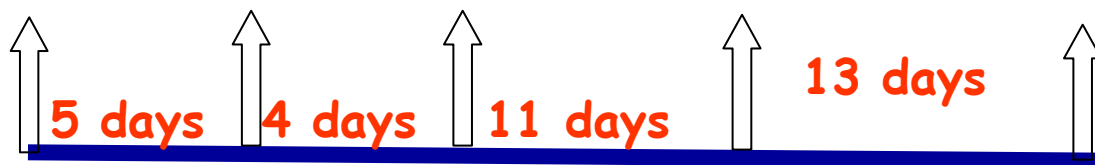
\* The time for reporting Lab result has changed from 28 days to 14 days as Sudan has applied the new algorithm in culturing stool samples.

\*\* As per the old algorithm (result to be reported within 28 days).

# Fig 22. Specimens' timeliness, NPL, 2007-2008



**2008**



**Average=21**  
Primary Culture result from Date of onset

**Average=29**  
ITD result from date of onset  
N=5 cases