



World Health  
Organization

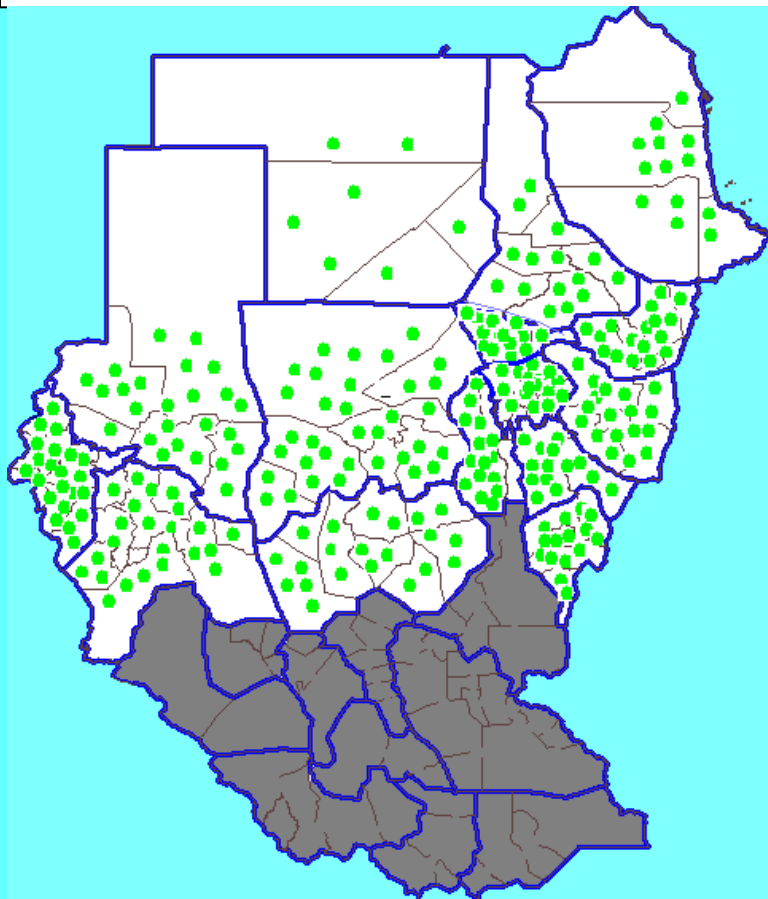


# Sudan Weekly AFP surveillance report week 15

Ending on 17 April 2011

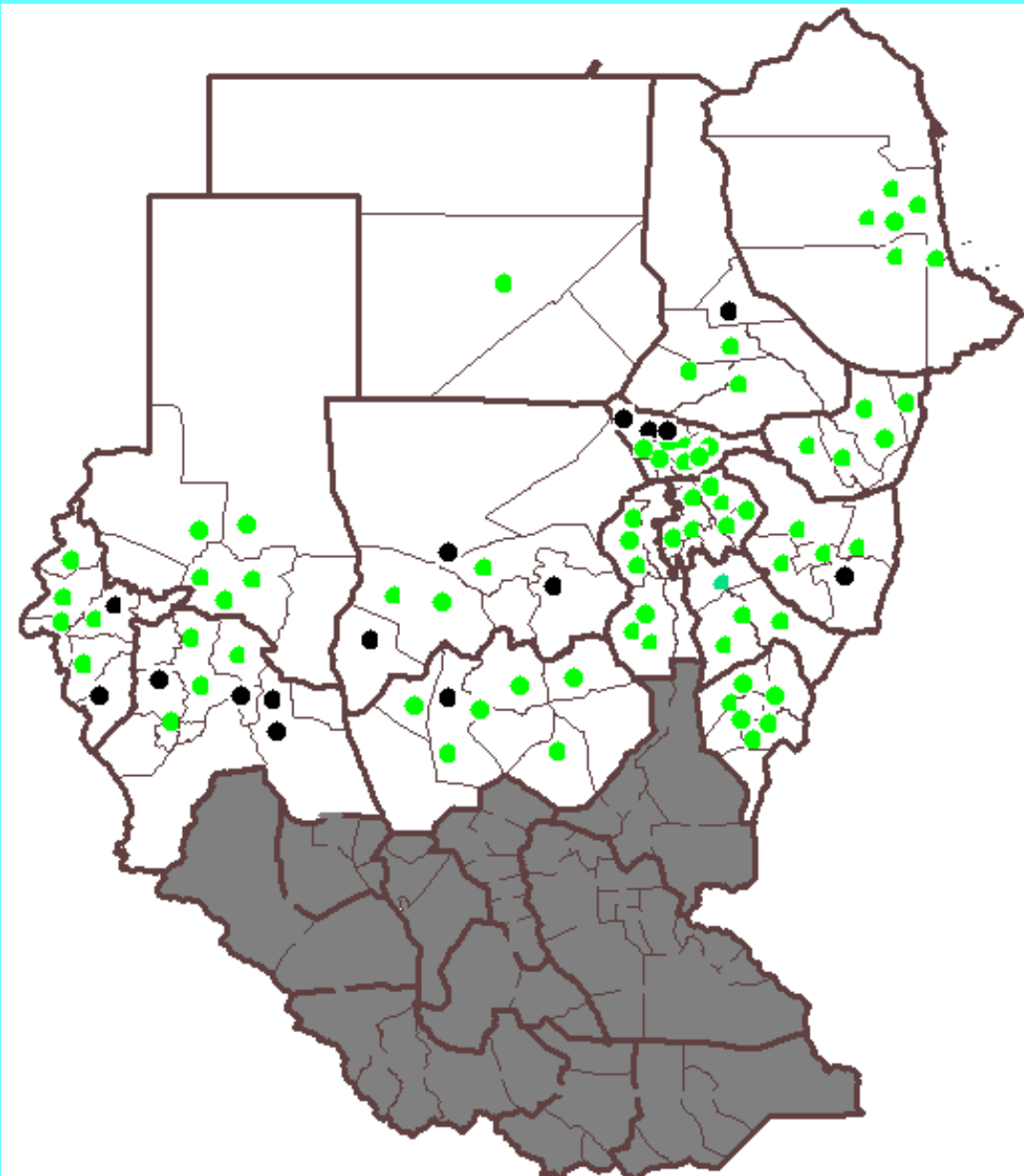
*AFP Surveillance central unit*

**Map 1. Distribution of AFP cases by classification, N Sudan, 2010**



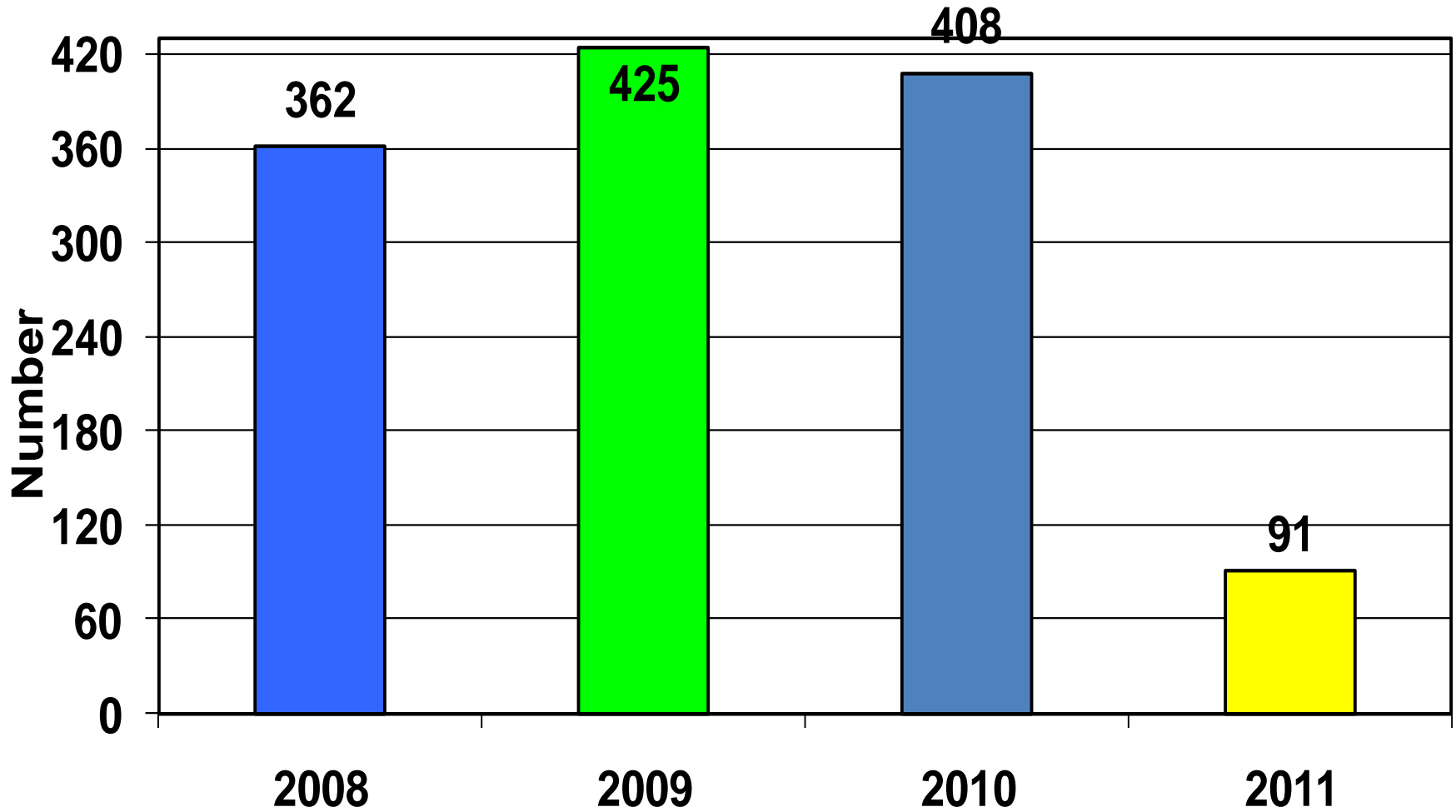
- Non-polio AFP
- Pending classification

**Map 2. Distribution of AFP cases by classification, N Sudan, 2011\***



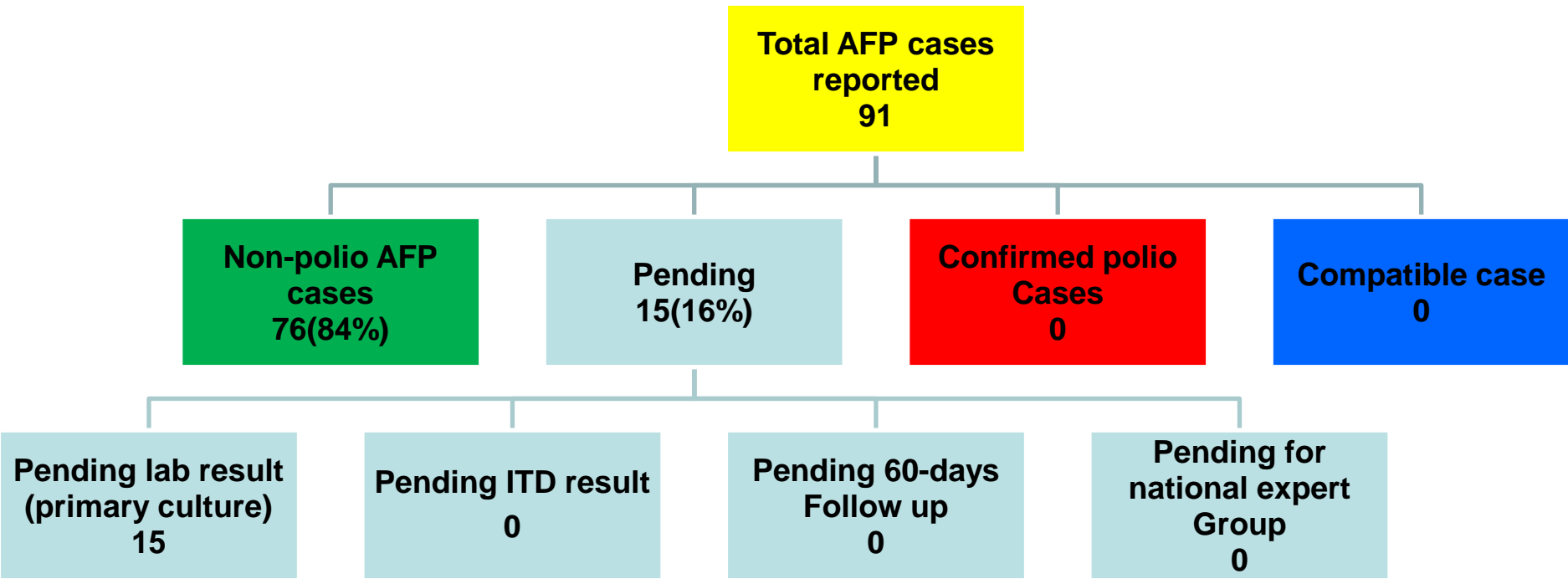
**\* Up to 17/4/2011**

**Fig. 1: Total AFP cases, North Sudan  
2008-2011\***



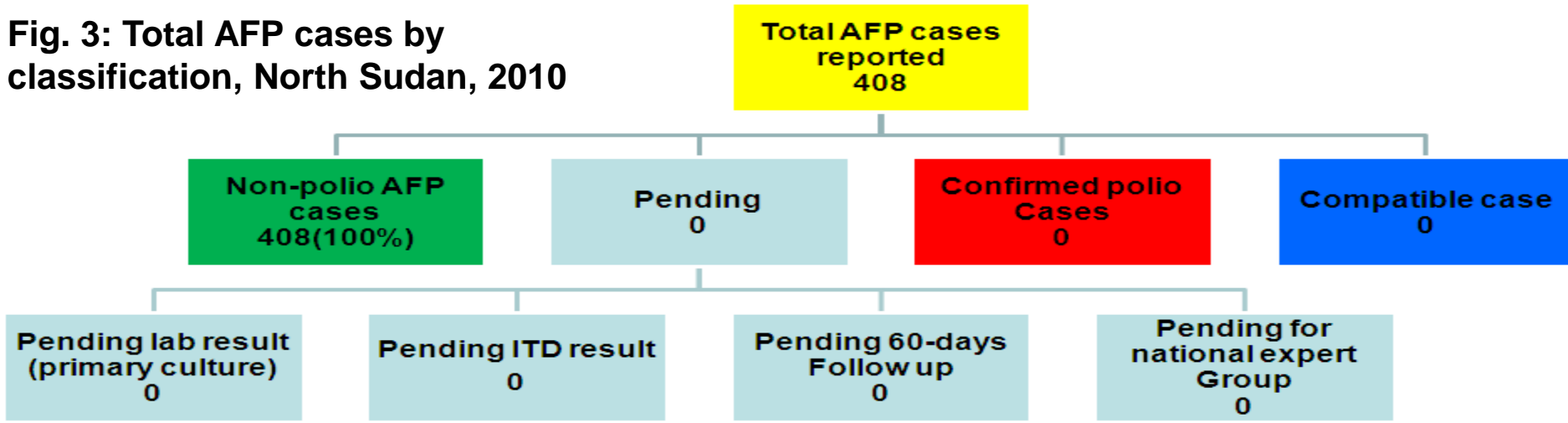
**\* Up to 17/4/2011**

**Fig. 2: Total AFP cases by classification, North Sudan, 2011\***

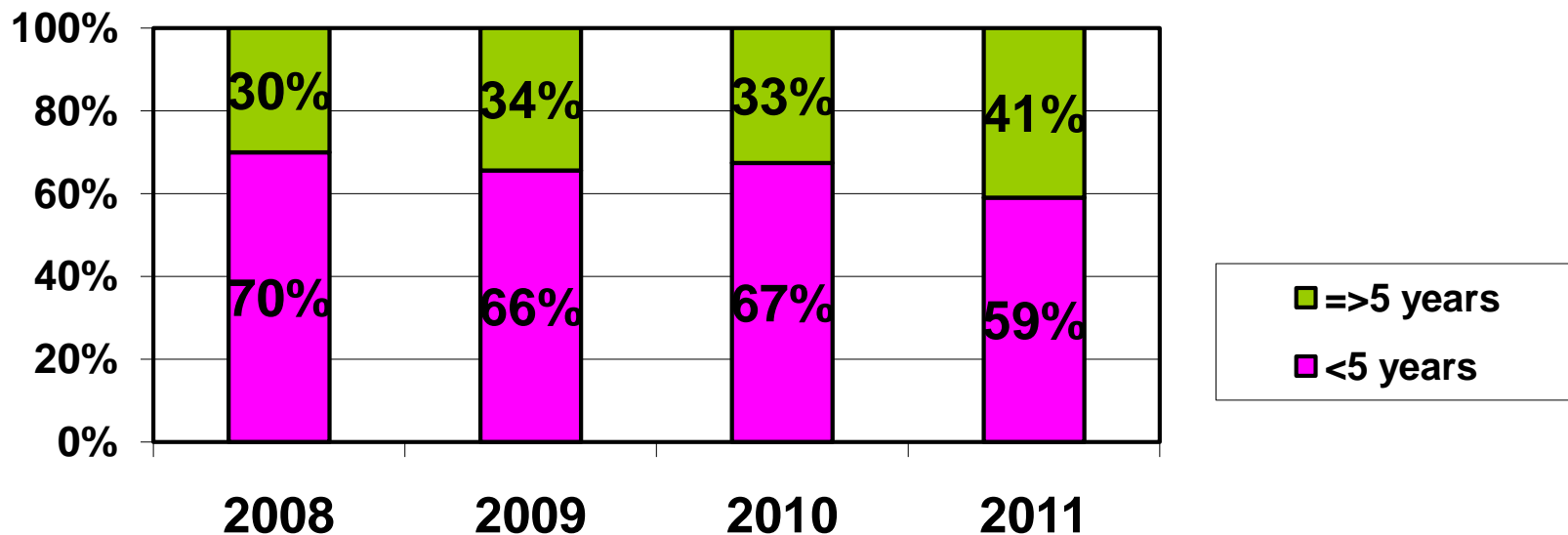


**\* Up to 17/4/2011**

**Fig. 3: Total AFP cases by classification, North Sudan, 2010**

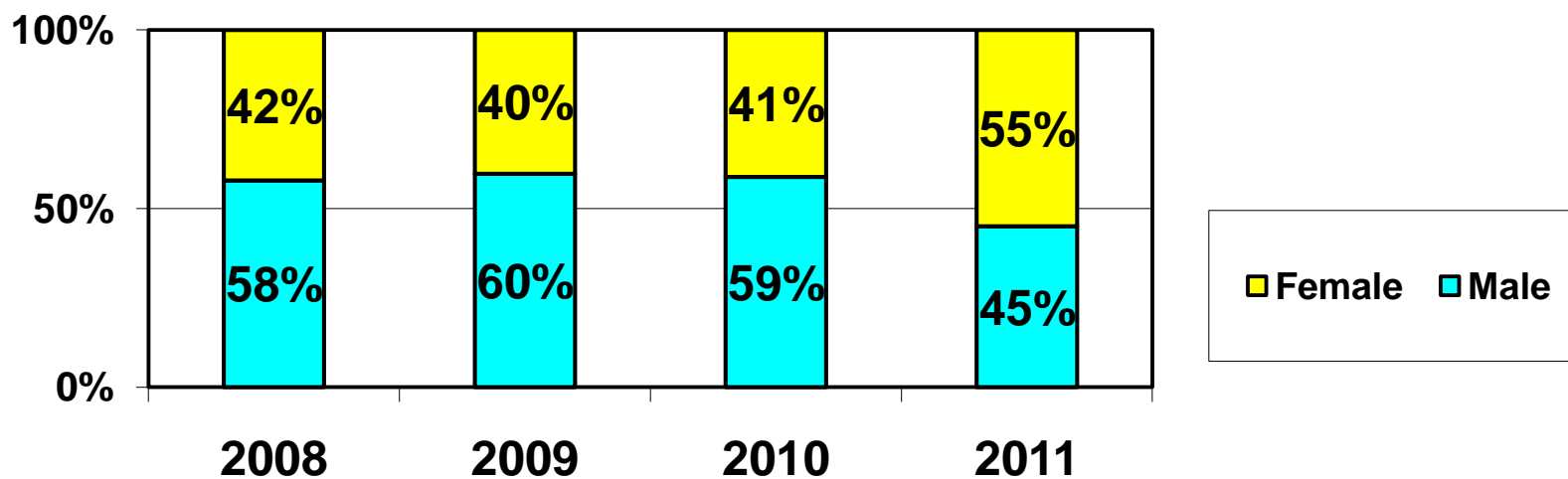


**Fig. 4: North SUDAN AFP cases by age group, 2008 – 2011\***

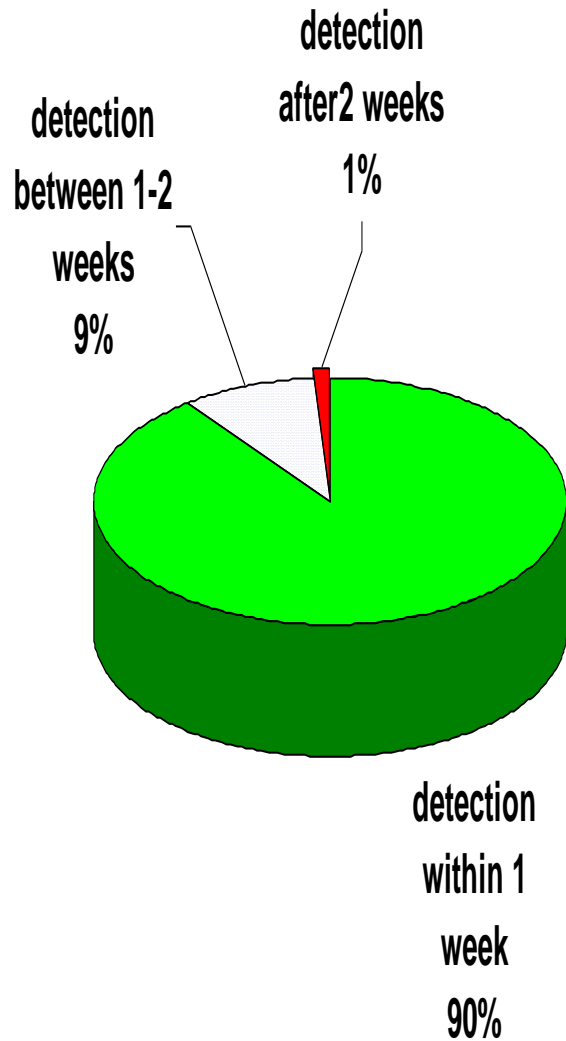


**\* Up to 17/4/2011**

**Fig. 5: North SUDAN AFP cases by sex 2008 – 2011\***

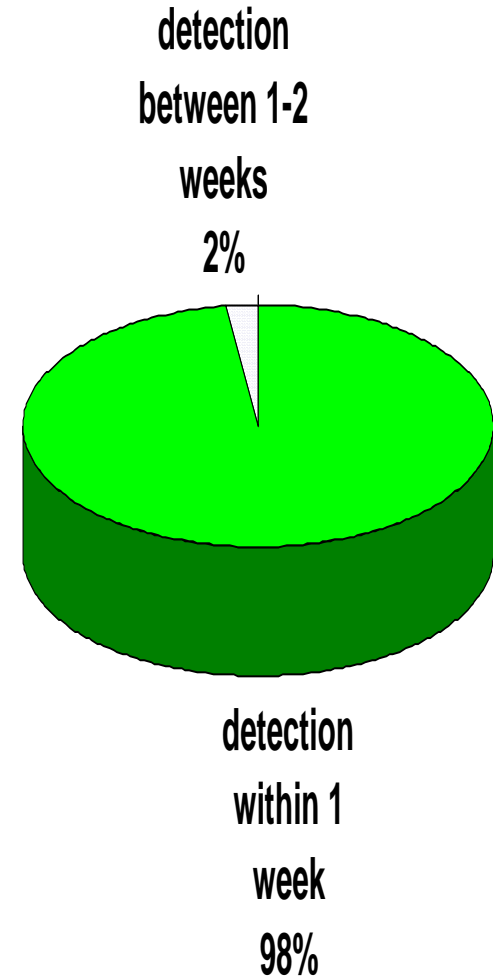


**Fig. 6: Percent distribution of AFP cases by time of detection, North Sudan, 2010**



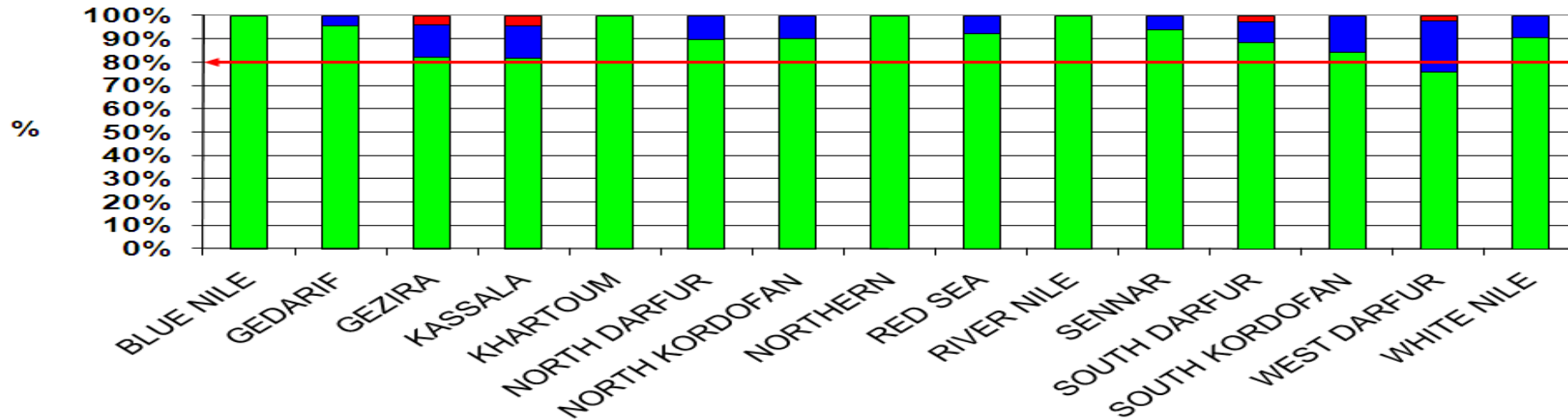
**Fig. 7: Percent distribution of AFP cases by time of detection, North Sudan, 2011\***

**N = 91 AFP cases**

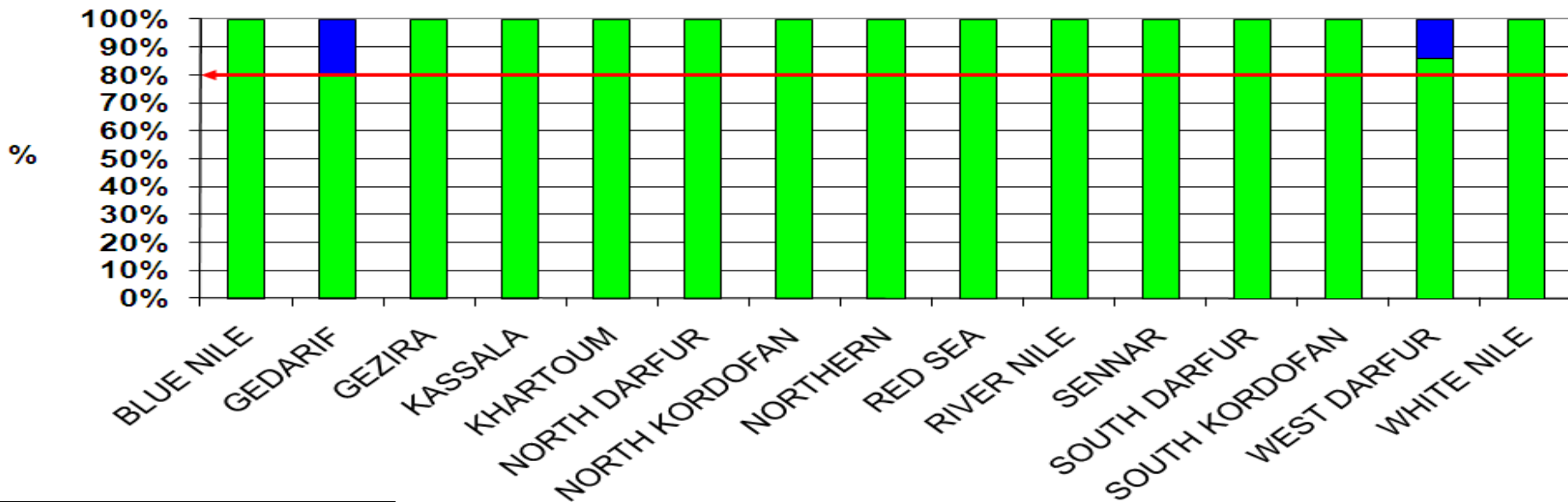


**\* Up to 17/4/2011**

**Fig. 8: Percent distribution of AFP cases according to the timeliness of detection by states, Northern states, 2010**



**Fig. 9: Percent distribution of AFP cases according to the timeliness of detection by states, Northern states, 2011\***



\* Up to 17/4/2011

■ Early detection ■ Moderate detection ■ Late detection

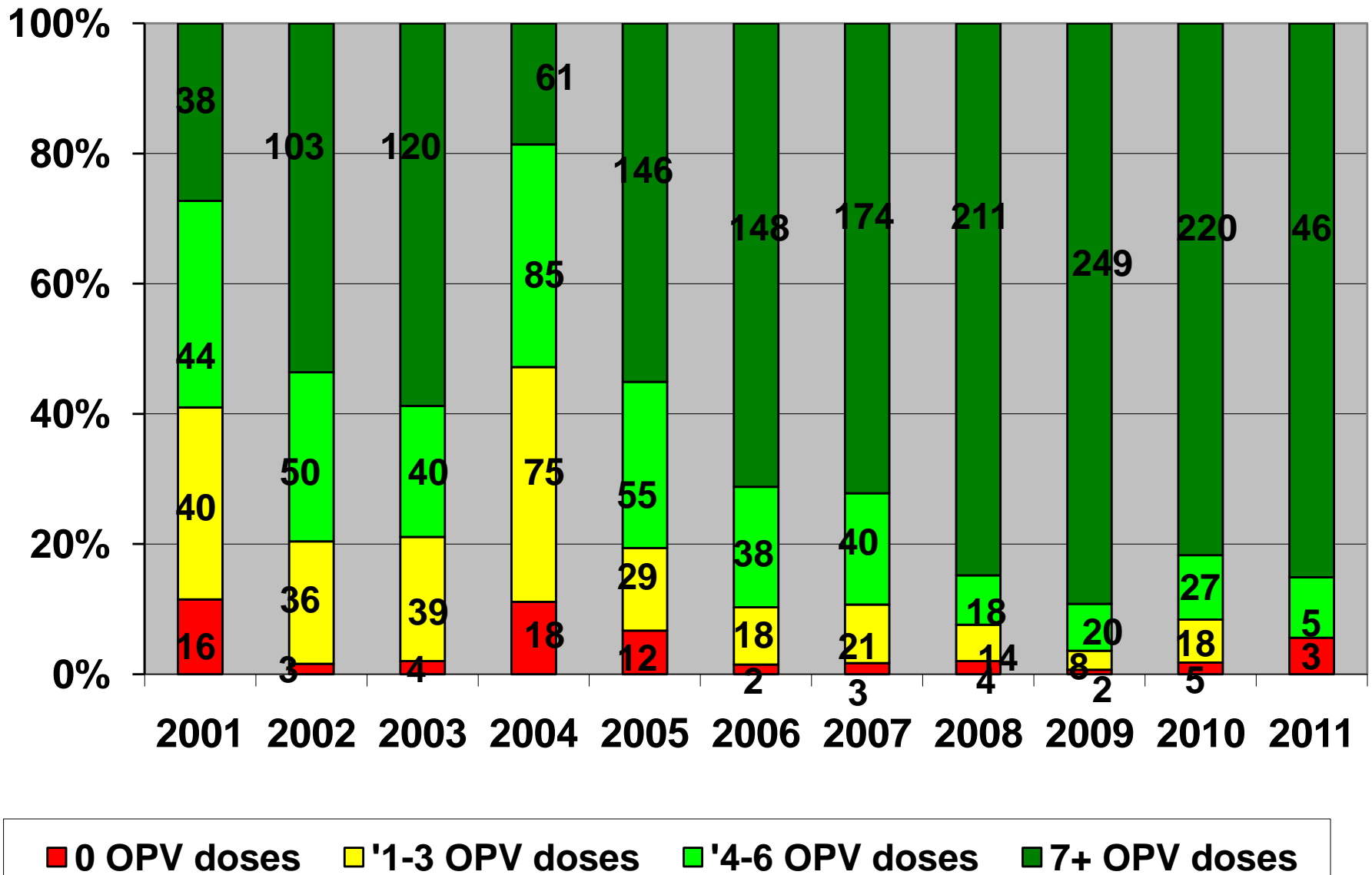
# Table 1. Major AFP surveillance performance indicators, Northern States, 2010

| 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      | 355,219             | 20                       | 19                  | 1                      | 0           | 0                | 100%              | 5.6                 | 5%         |
| Gedarif      | 833,767             | 22                       | 22                  | 0                      | 0           | 0                | 95%               | 2.6                 | 14%        |
| Gezira       | 1,868,934           | 50                       | 50                  | 0                      | 0           | 0                | 96%               | 2.7                 | 20%        |
| Kasala       | 815,721             | 22                       | 22                  | 0                      | 0           | 0                | 95%               | 2.7                 | 5%         |
| Khartom      | 2,316,035           | 49                       | 48                  | 1                      | 0           | 0                | 100%              | 2.1                 | 10%        |
| N.Darf       | 836,608             | 29                       | 28                  | 1                      | 0           | 0                | 100%              | 3.5                 | 18%        |
| N.Kord       | 1,243,363           | 40                       | 39                  | 1                      | 0           | 0                | 98%               | 3.2                 | 15%        |
| Northern     | 263,099             | 7                        | 7                   | 0                      | 0           | 0                | 100%              | 2.7                 | 14%        |
| Red Sea      | 329,031             | 13                       | 13                  | 0                      | 0           | 0                | 92%               | 4.0                 | 8%         |
| River Nile   | 453,525             | 18                       | 18                  | 0                      | 0           | 0                | 94%               | 4.0                 | 6%         |
| Sennar       | 699,734             | 16                       | 16                  | 0                      | 0           | 0                | 88%               | 2.3                 | 25%        |
| S.Darfur     | 1,689,498           | 35                       | 34                  | 1                      | 0           | 0                | 97%               | 2.1                 | 24%        |
| S. Kord      | 947,711             | 25                       | 25                  | 0                      | 0           | 0                | 100%              | 2.6                 | 28%        |
| W.Darfur     | 927,169             | 41                       | 40                  | 1                      | 0           | 0                | 98%               | 4.4                 | 15%        |
| W. Nile      | 814,450             | 21                       | 21                  | 0                      | 0           | 0                | 100%              | 2.6                 | 14%        |
| <b>Total</b> | <b>14,393,864</b>   | <b>408</b>               | <b>402</b>          | <b>6</b>               | <b>0</b>    | <b>0</b>         | <b>97%</b>        | <b>2.8</b>          | <b>15%</b> |

**Table 2. Major AFP surveillance performance indicators, Northern States, up to 17/4/2011**

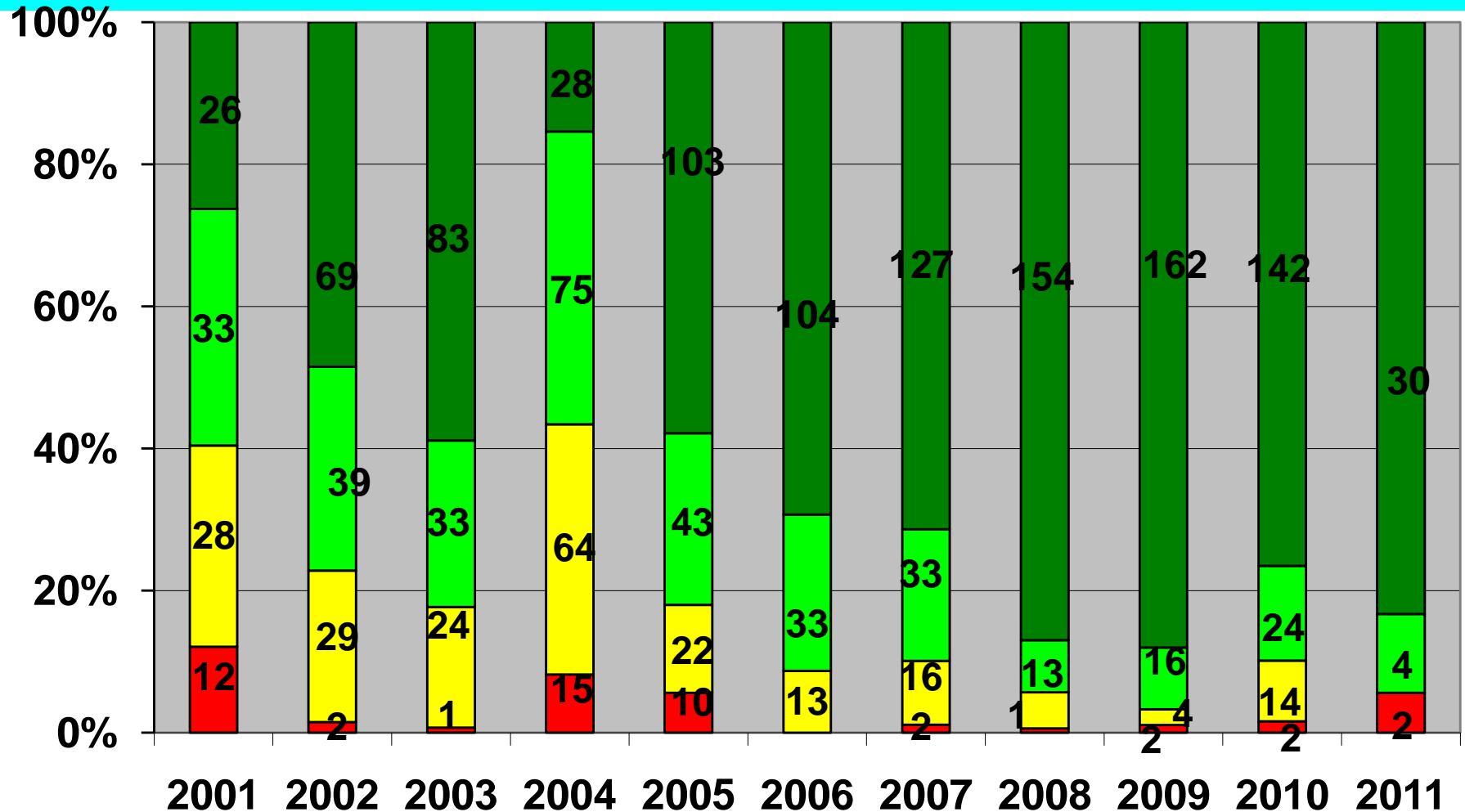
| State        | U 15 yrs population | Total reported AFP cases | Non-polio AFP cases | Pending classification | Polio cases | Compatible cases | % Adequate stools | Annualized AFP rate | % NPEV     |
|--------------|---------------------|--------------------------|---------------------|------------------------|-------------|------------------|-------------------|---------------------|------------|
| B. Nile      | 365,591             | 6                        | 6                   | 0                      | 0           | 0                | 100%              | 5.7                 | 0%         |
| Gedarif      | 860,364             | 5                        | 4                   | 1                      | 0           | 0                | 100%              | 2.0                 | 0%         |
| Gezira       | 1,921,077           | 7                        | 7                   | 0                      | 0           | 0                | 100%              | 1.3                 | 0%         |
| Kasala       | 836,195             | 5                        | 5                   | 0                      | 0           | 0                | 100%              | 2.1                 | 40%        |
| Khartom      | 2,401,033           | 14                       | 11                  | 3                      | 0           | 0                | 100%              | 2.0                 | 22%        |
| N.Darf       | 863,045             | 5                        | 5                   | 0                      | 0           | 0                | 100%              | 2.0                 | 0%         |
| N.Kord       | 1,262,262           | 6                        | 3                   | 3                      | 0           | 0                | 83%               | 1.6                 | 0%         |
| Northern     | 267,256             | 1                        | 1                   | 0                      | 0           | 0                | 100%              | 1.3                 | 100%       |
| Red Sea      | 330,018             | 6                        | 6                   | 0                      | 0           | 0                | 100%              | 6.3                 | 40%        |
| River Nile   | 461,734             | 4                        | 3                   | 1                      | 0           | 0                | 100%              | 3.0                 | 0%         |
| Sennar       | 717,437             | 4                        | 4                   | 0                      | 0           | 0                | 100%              | 1.9                 | 0%         |
| S.Darfur     | 1,747,110           | 8                        | 4                   | 4                      | 0           | 0                | 100%              | 1.6                 | 50%        |
| S. Kord      | 960,789             | 7                        | 6                   | 1                      | 0           | 0                | 100%              | 2.5                 | 0%         |
| W.Darfur     | 949,143             | 7                        | 5                   | 2                      | 0           | 0                | 100%              | 2.6                 | 0%         |
| W. Nile      | 834,567             | 6                        | 6                   | 0                      | 0           | 0                | 100%              | 2.5                 | 0%         |
| <b>Total</b> | <b>14,777,621</b>   | <b>91</b>                | <b>76</b>           | <b>15</b>              | <b>0</b>    | <b>0</b>         | <b>99%</b>        | <b>2.1</b>          | <b>14%</b> |

# Fig. 10: Percent distribution of AFP cases < 60 months by number of OPV doses, North Sudan 2001-2011\*



\* Up to 17/4/2011

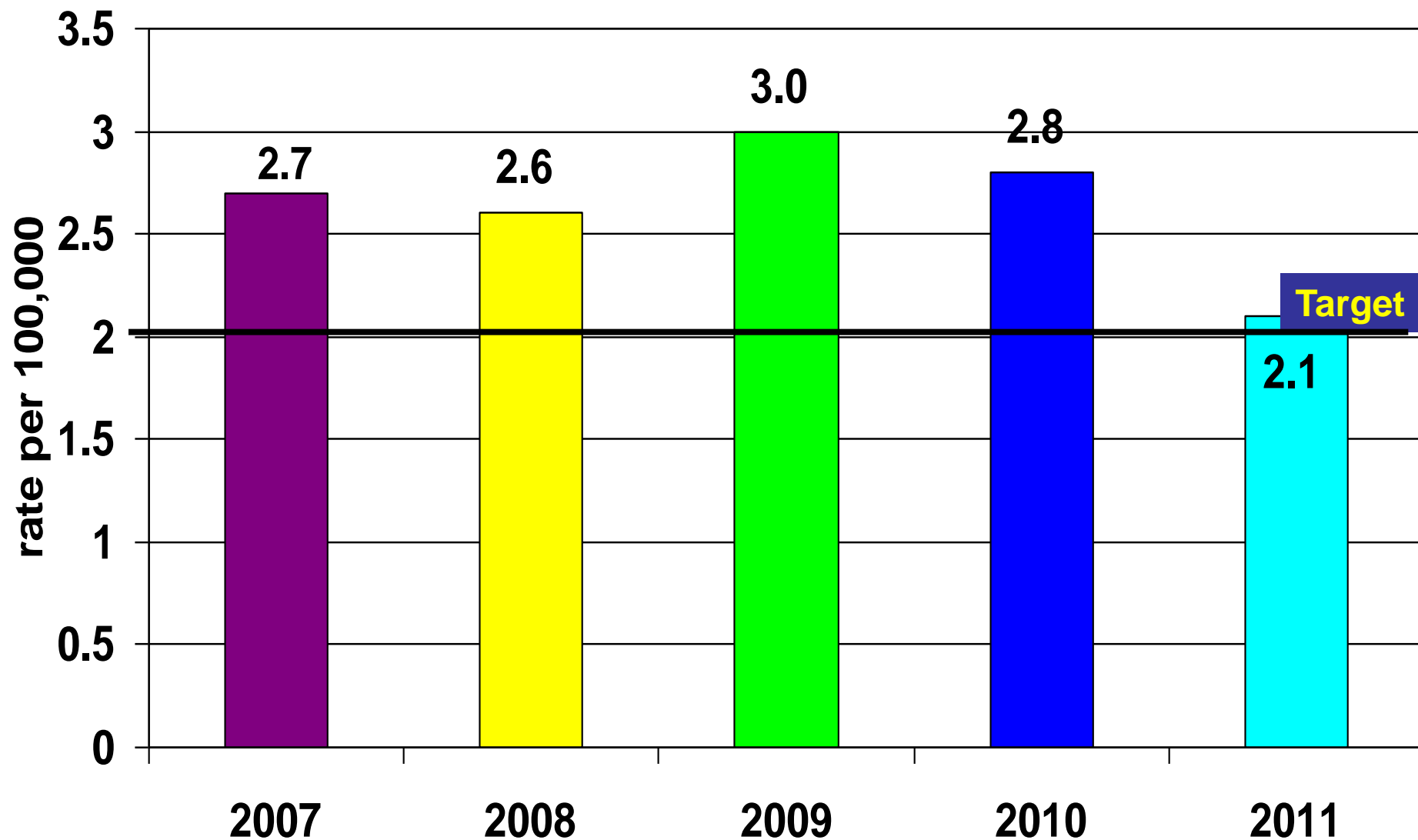
**Fig. 11: No. & percent distribution of AFP cases 6-36 months by number of OPV doses, North Sudan 2001-2011\***



■ 0 OPV doses   
 ■ '1-3 OPV doses   
 ■ '4-6 OPV doses   
 ■ 7+ OPV doses

\* Up to 17/4/2011

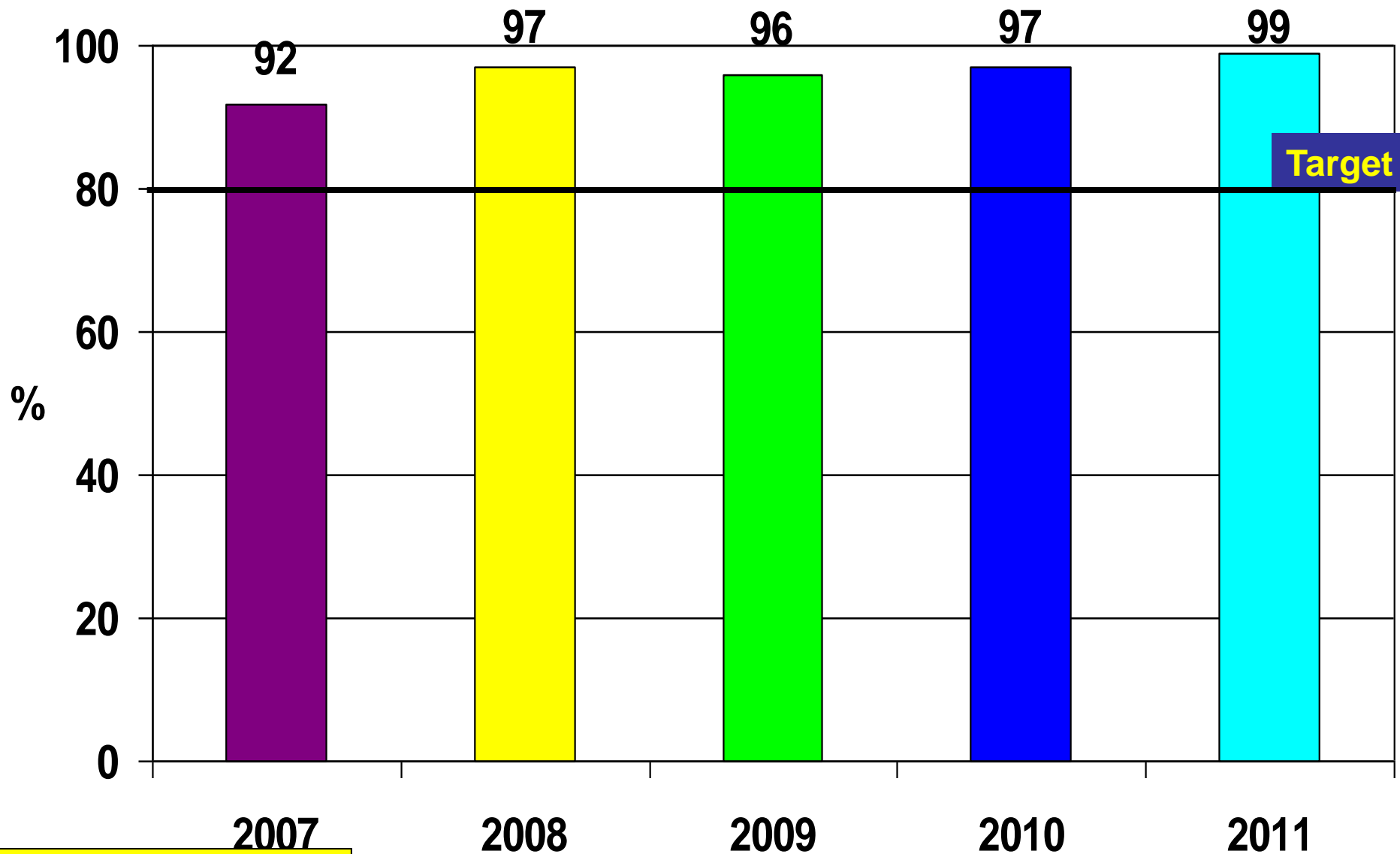
**Fig. 12: Non-Polio AFP rate per 100,000 children under 15 years of age, North Sudan, 2007 – 2011\***



\* Up to 17/4/2011

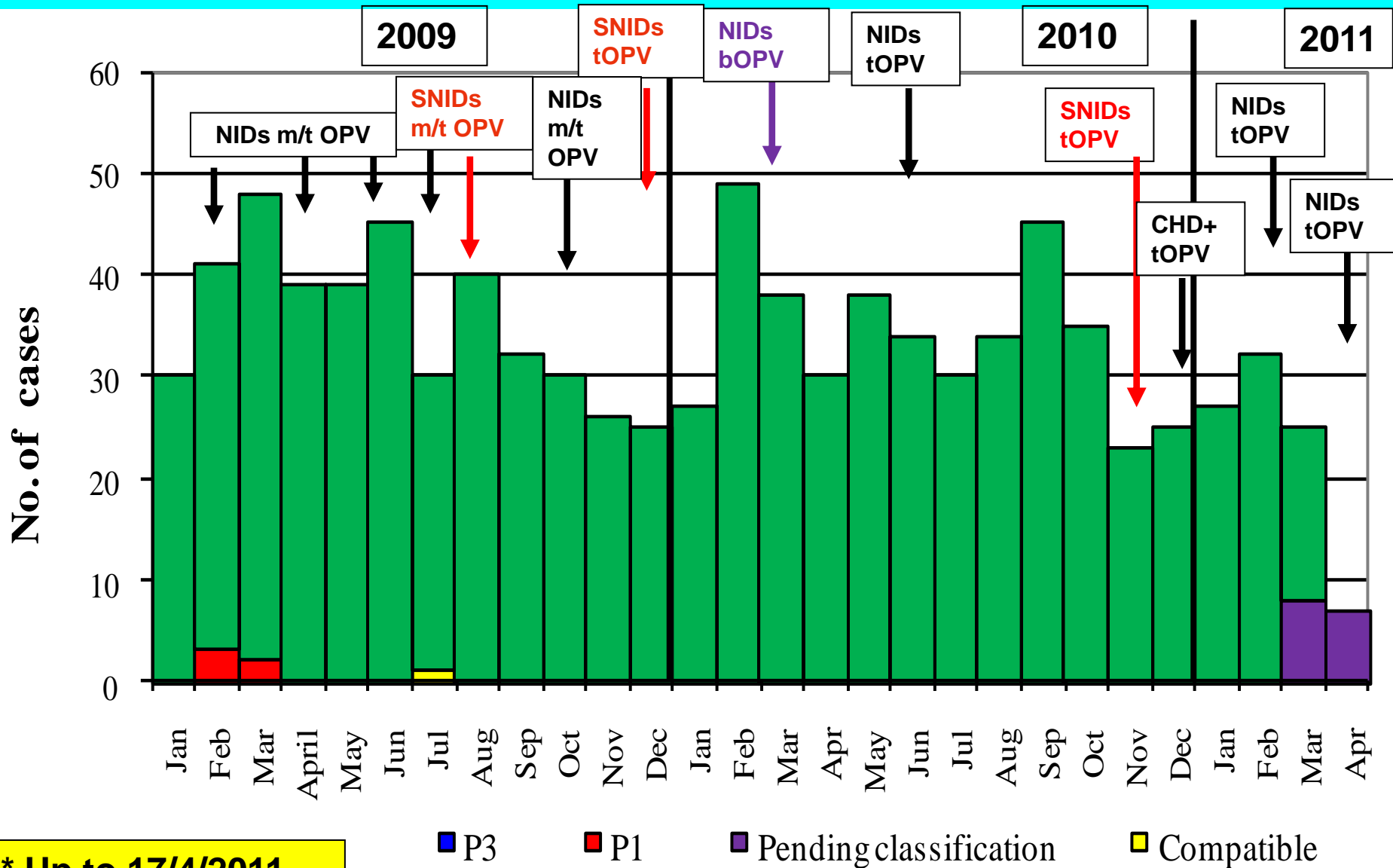
# Fig. 13: Adequate stool collection rate

## North Sudan, 2007 – 2011\*



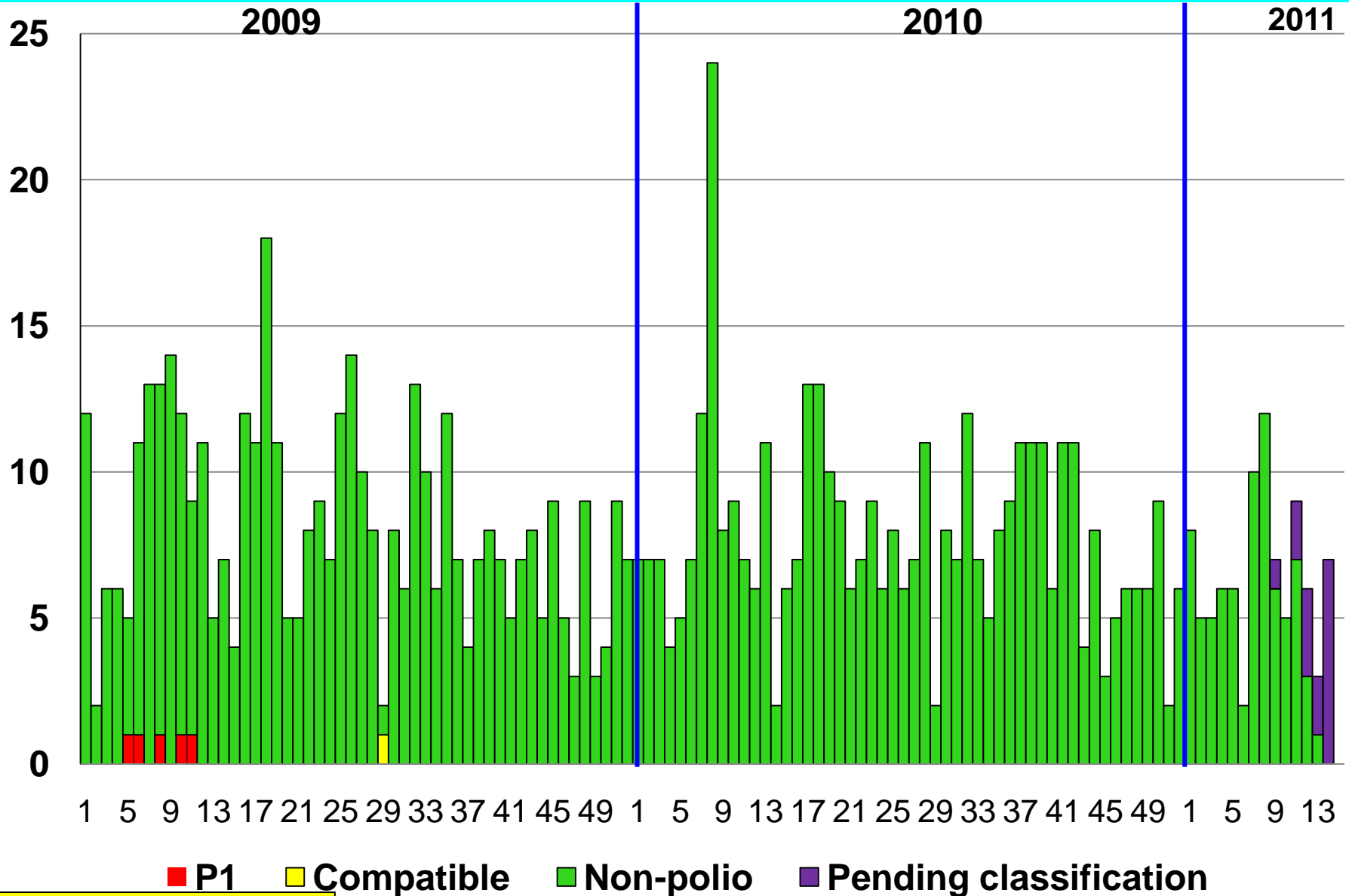
\* Up to 17/4/2011

**Fig. 14: Distribution of polio and non-polio AFP Cases by classification, month of onset & SIA response to the poliovirus importation in North Sudan 2008-2011\***



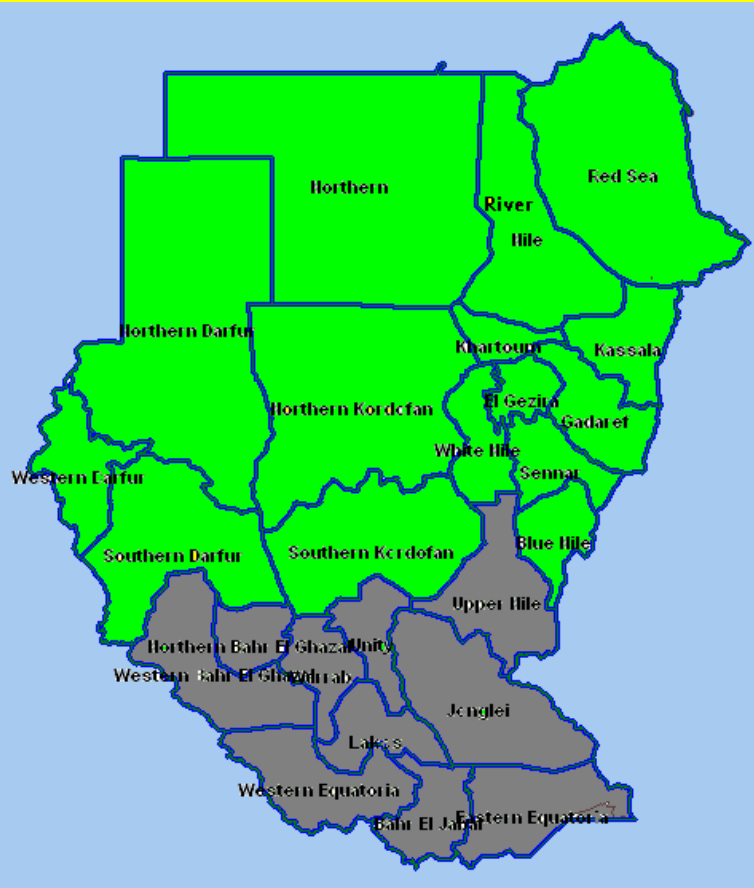
\* Up to 17/4/2011

# Fig. 15: Distribution of AFP cases by classification and week of onset, North Sudan 2008 – 2011\*

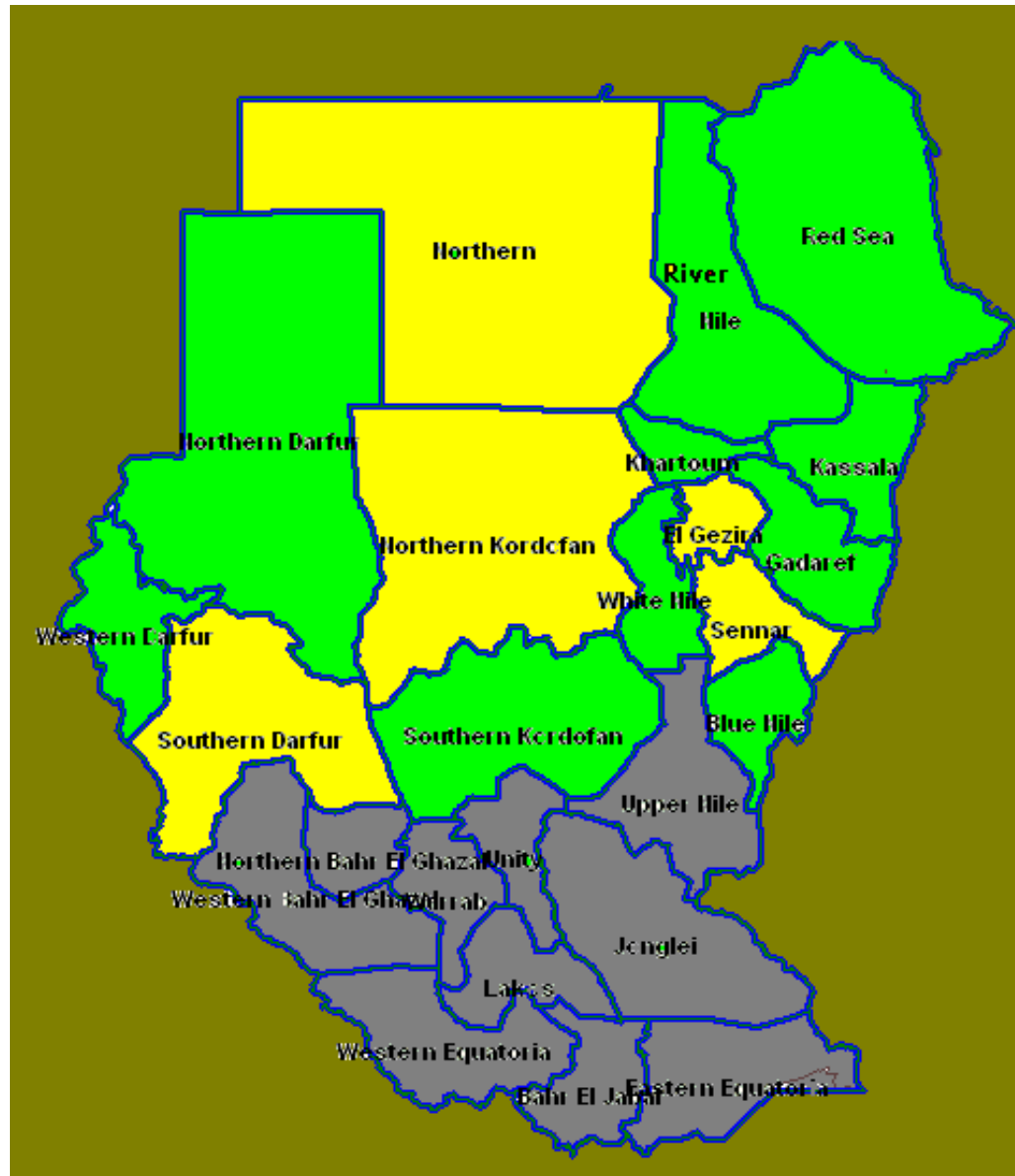


\* Up to 17/4/2011

**Map 3. Non-polio AFP rate by state, 2010**



**Map 4. Annualized Non-polio AFP rate by state 2011\***



**\* Up to 17/4/2011**



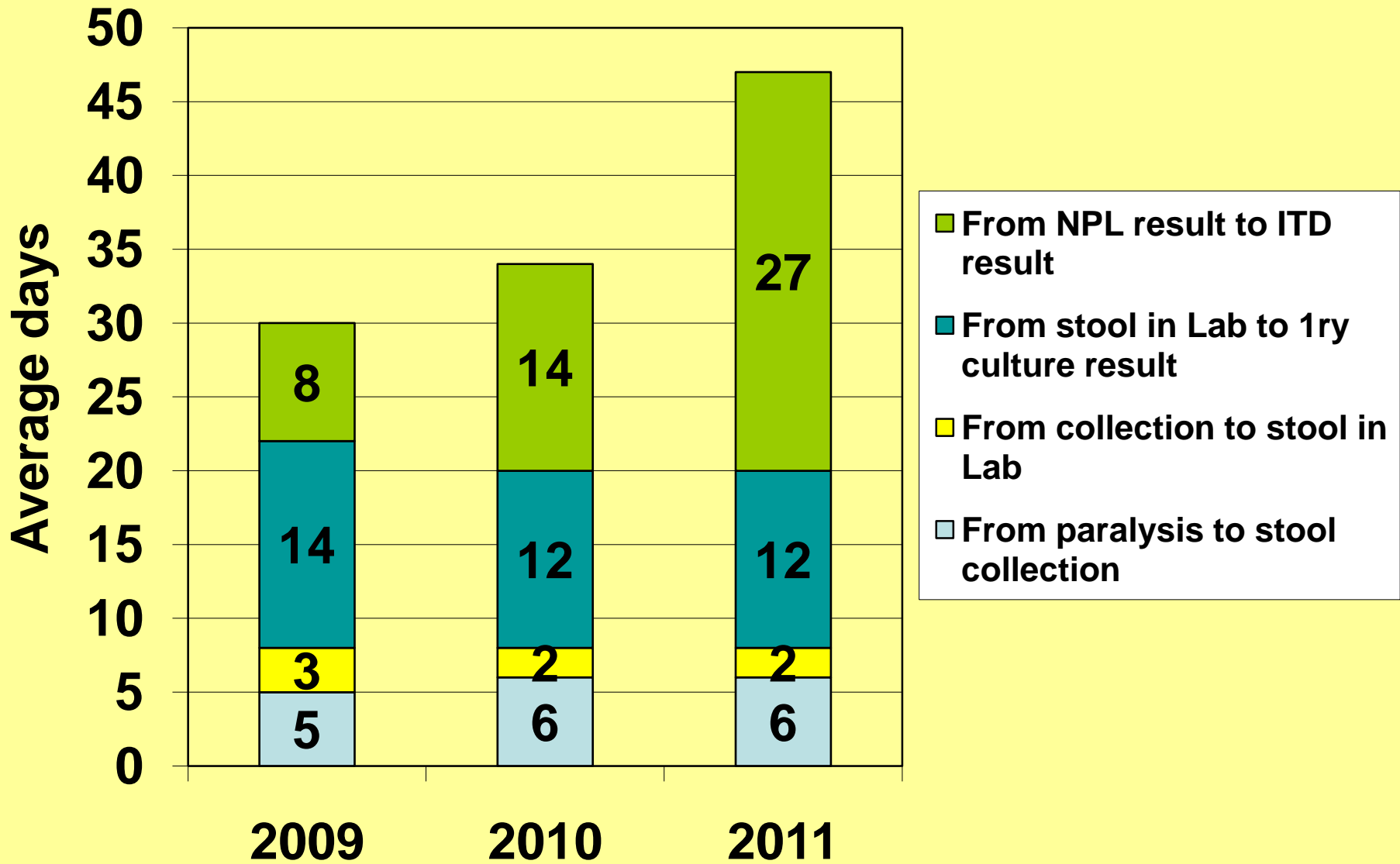
**Table 4. National polio lab performance indicators  
North Sudan, 2009-2011**

| <b>Indicator</b>   | <b>2009<br/>up to W15</b> | <b>2010<br/>up to W15</b> | <b>2011<br/>up to W15</b> |
|--|---------------------------|---------------------------|---------------------------|
| <b>AFP cases with samples tested in NPL</b>  | <b>115</b>                | <b>116</b>                | <b>91</b>                 |
| <b>Cases with wild poliovirus (imported P1)</b>  | <b>4</b>                  | <b>0</b>                  | <b>0</b>                  |
| <b>Cases with wild poliovirus (imported P3)</b>  | <b>0</b>                  | <b>0</b>                  | <b>0</b>                  |
| <b>Cases with non-polio enterovirus</b>  | <b>21%</b>                | <b>14%</b>                | <b>14%</b>                |
| <b>SL viruses No. &amp; (%) from AFP cases</b>   | <b>4(3.8)</b>             | <b>1(1%)</b>              | <b>1(2.8)</b>             |
| <b>Median days from the time of samples received in the lab to primary culture report or L20B result</b> | <b>13 days</b>            | <b>12 days</b>            | <b>14 days</b>            |
| <b>Number of samples from the AFP contacts tested in the NPL</b>   | <b>156</b>                | <b>29</b>                 | <b>63</b>                 |
| <b>Contacts with non-polio enterovirus</b>   | <b>7.4%</b>               | <b>7%</b>                 | <b>4%</b>                 |
| <b>Sabin like viruses No. &amp; (%) from contacts</b>  | <b>1(1%)</b>              | <b>0</b>                  | <b>4(16%)</b>             |
| <b>NSL like viruses from contacts</b>  | <b>3</b>                  | <b>0</b>                  | <b>0</b>                  |

**Table 5. Polio lab performance  
North Sudan, 2009 and 2011**

| <b>Week of onset</b>  | <b>Total AFP Cases with samples</b> | <b>AFP Cases under processes</b> | <b>L20B +ve pending ITD</b> | <b>Negative cases</b> | <b>NPEV positive</b> | <b>% NPEV</b> | <b>Result reported within 14 days</b> | <b>Arrival within 3 days of being collected from the 2<sup>nd</sup> sample</b> | <b>Arrival within 3 days of being sent from the 2<sup>nd</sup> sample</b> |
|-----------------------|-------------------------------------|----------------------------------|-----------------------------|-----------------------|----------------------|---------------|---------------------------------------|--|---|
| <b>2009 up to W15</b> | <b>115</b>                          | <b>8</b>                         | <b>1</b>                    | <b>84</b>             | <b>22</b>            | <b>21%</b>    | <b>78%</b>                            | <b>70%</b>   | <b>99%</b>  |
| <b>2010 up to W15</b> | <b>116</b>                          | <b>5</b>                         | <b>0</b>                    | <b>96</b>             | <b>15</b>            | <b>14%</b>    | <b>98%</b>                            | <b>89%</b>   | <b>99%</b>  |
| <b>2011 up to W15</b> | <b>91</b>                           | <b>32</b>                        | <b>0</b>                    | <b>51</b>             | <b>8</b>             | <b>14%</b>    | <b>68%</b>                            | <b>85%</b>   | <b>100%</b>   |

# Fig. 16: AFP Specimens' timeliness, NPL 2009-2011\*



\* Up to 17/4/2011