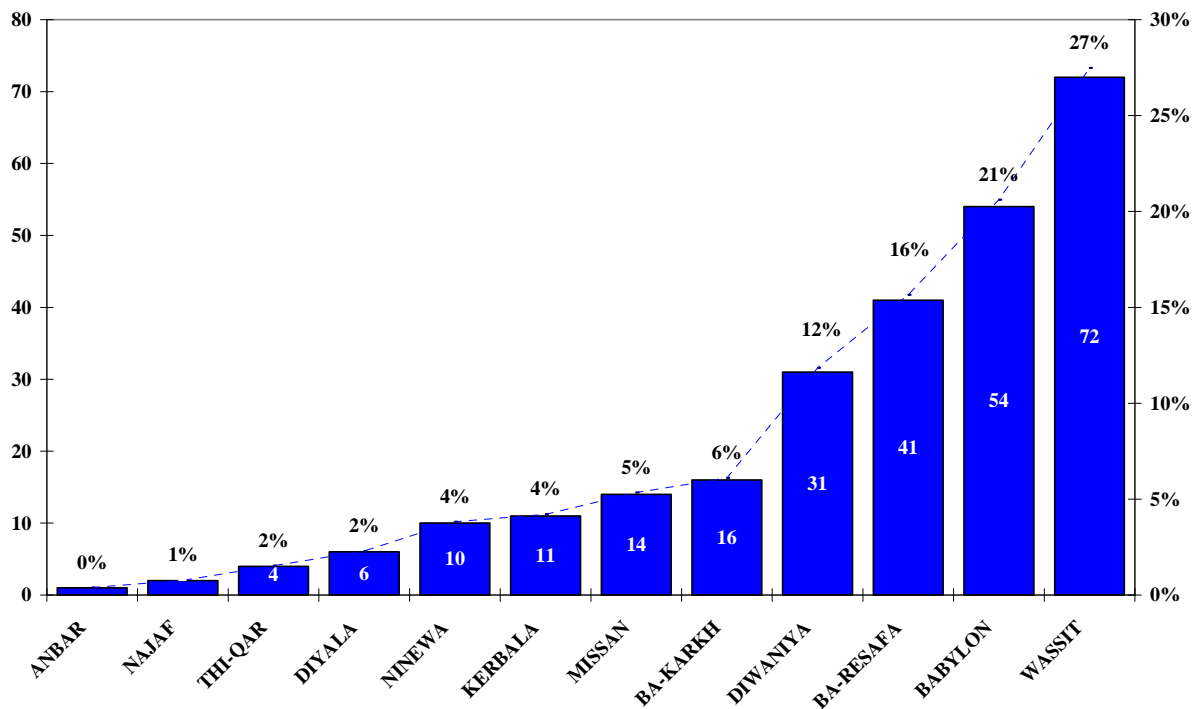


**Weekly feed back on measles in Iraq**  
**Report no. 39 international week one 2009 ending 04/01/2009**

**1. Confirmed Measles cases by province:**

During the first week of 2009, out of 262 suspect measles cases reported in Iraq, one(0%) was from Anbar, 2 (1%) cases from Najaf, 4 (2%) from Thi-Qar, 6 (2%) from Diala; 10 (4%) from Ninewa, 11 (4%) from Kerbala, 14 (5%) from Missan; 16(6%) in Baghdad-Kerkh; 31 (12%)in Diwaniya, 41(16%) in Baghdad Resafa; 54(21%) in Babil and 72 (27%) in wasit It is quite clear that the outbreak was controlled in DoHs where measles Mop Up operations were implemented and the bulk of the new cases were reported from remaining DoHs.

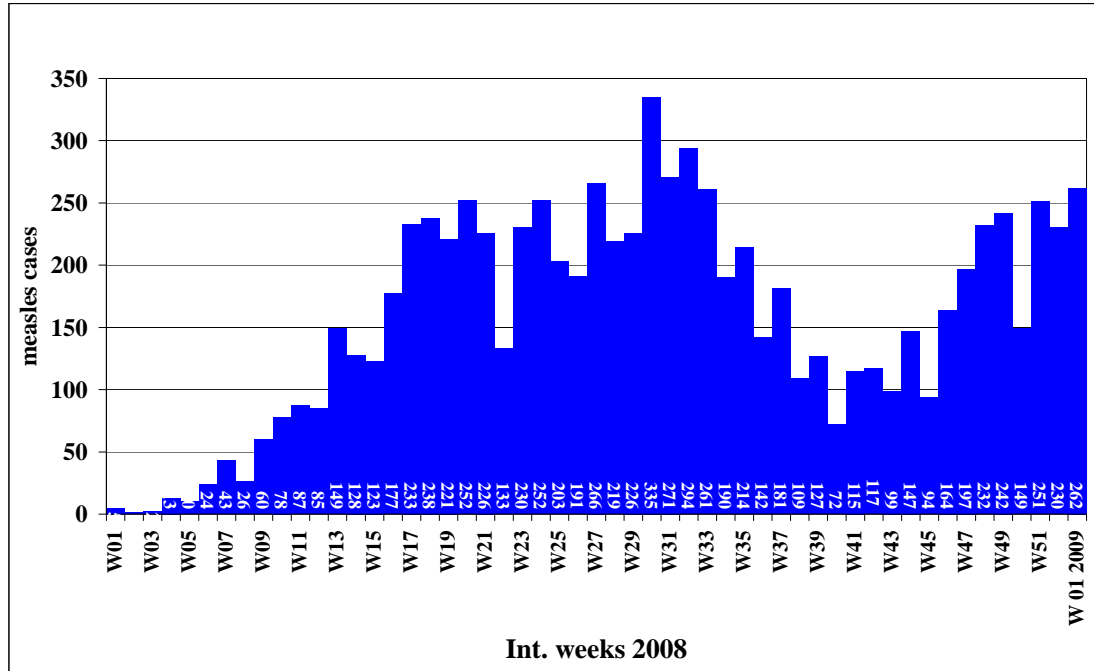
**Fig (1) Notified measles by DoH, Iraq, first week of 2009**



**2. Notified Measles cases by international week:**

Fig. 2A, illustrates notified measles cases in Iraq by week of onset, during 2008 and the first week of 2009, it is apparent that suspect measles cases were notified at an average of 5 cases per week during the first 4 weeks of 2008. As of week 5 notified measles cases started to build up to reach the peak of 252 cases in week 20. The cases went down to reach 133 cases in week 23. Another wave of cases seems to have occurred during weeks 24 to 32, reaching a second peak of 335 cases in week 30 then started another gradual decrease in weeks 33-40. As of week 41 a third wave seems to have started and still increasing.

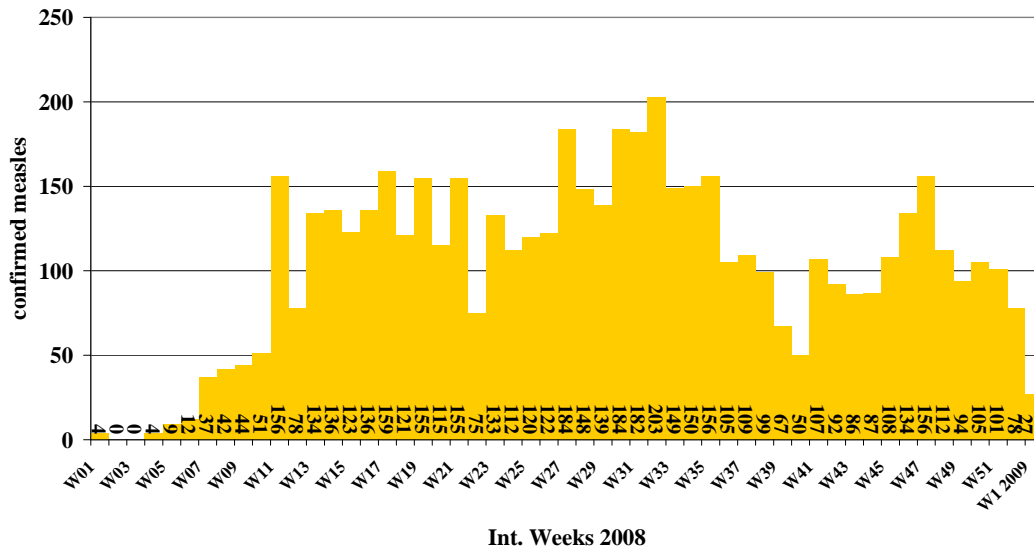
**Fig. (2A) Notified measles cases by IW, 2008 & first week of 2009**



**3. Confirmed Measles cases by international week:**

Figs. 2A and 2B illustrate that the measles outbreak in Iraq built up slowly, peaked in week 11 then plateaued over weeks 13 to 22, however a second wave seems to have occurred as of week 23 to peak in week 32. During weeks 40-52 a third wave started and is still going up.

**Fig. (2B) Confirmed measles cases by International Weeks, 2008 and the first week of 2009**

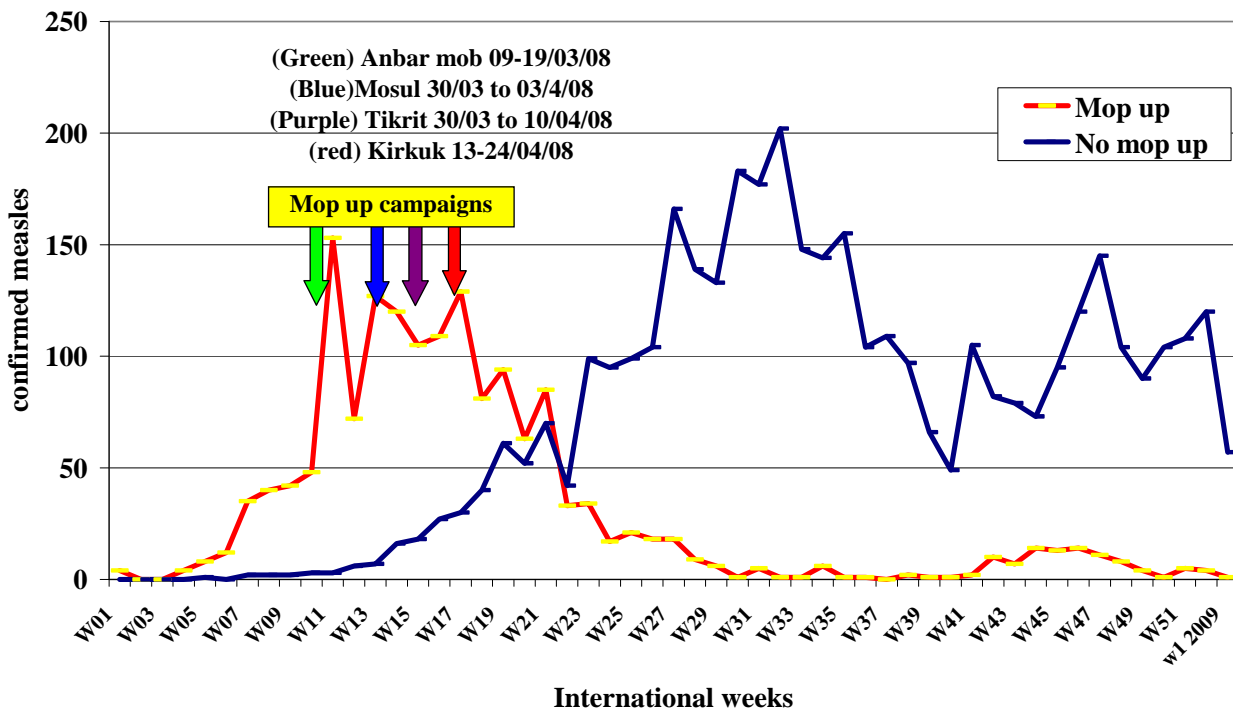


**4. Confirmed measles cases according to the implementation of Mop Up campaigns.**

The first measles outbreaks were reported from Anbar and Salah al-Din provinces, followed by districts plagued by lack of security in the Ninewa and Kirkuk provinces. Routine measles vaccination coverage in these areas was generally far below the average

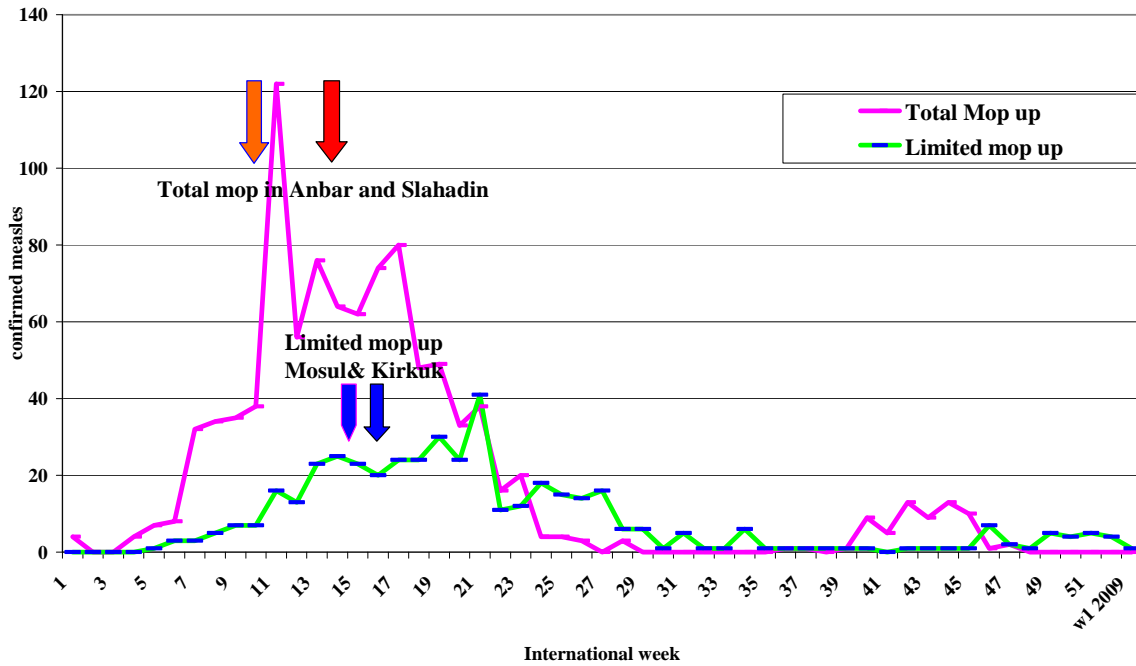
for the country. WHO and UNICEF supported MoH in conducting house to Mop Up campaigns targeting all children (1-5 years of age) in the Anbar and Salah al-Din provinces and in selected districts and sub-districts in Ninewa and Kirkuk. The graph below shows that the Mop Up campaigns succeeded in controlling the outbreak, however, as of week 12, other outbreaks started in some areas where similar campaigns were not conducted, such as Baghdad, Diwanyia, Babil, Karbala and Diala.

**Fig (2C) confirmed measles cases by international weeks in provinces where Mop up operations were conducted and not conducted, Iraq first week 2009**



The chart above (2C) shows that Mop Up campaigns can succeed in controlling measles outbreaks in areas affected by lack of security and where less than 70% of infants are vaccinated by MCV, even if containment measures were conducted late (7-9 weeks following the confirmation of the outbreak), and in limited areas if the target age group and districts are well guided by the measles immunity profile and there is a good epidemiological description of the first few laboratory confirmed cases. It is clear that this huge outbreak (8134 reported cases) could have been avoided if a nationwide campaign had been implemented instead of fragmented SIAs. If the surveillance system was able to capture 25% of all measles cases, then the cost of prevention of one case of measles will be less than USD 1.

**Fig (2D) Notified measles by total or selective mop up, using MCV for 1-5 year old children, according to week of onset, first 52 weeks, 2009**



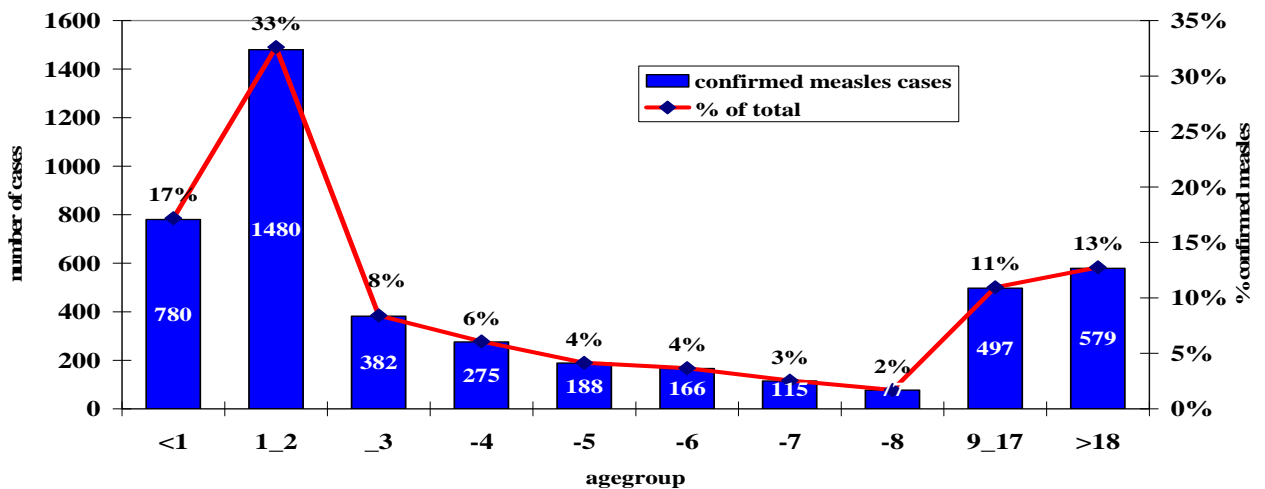
**5. Confirmed measles cases according to the size of Mop Up campaigns.**

Fig. 2D, shows that both total and limited Mop Up campaigns succeeded in the control of the measles outbreaks, however, as expected total Mop Up gave better results in terms of number of cases, and more swift and sustained control.

**6. Age distribution:**

Fig. 3, shows that **50%** of the IgM positive measles cases in Iraq were reported among children below 2 years of age, a clear indication of serious problems in routine coverage in the last 3 years. Due to lack of funding WHO could not support the requested support to conduct SIAs.

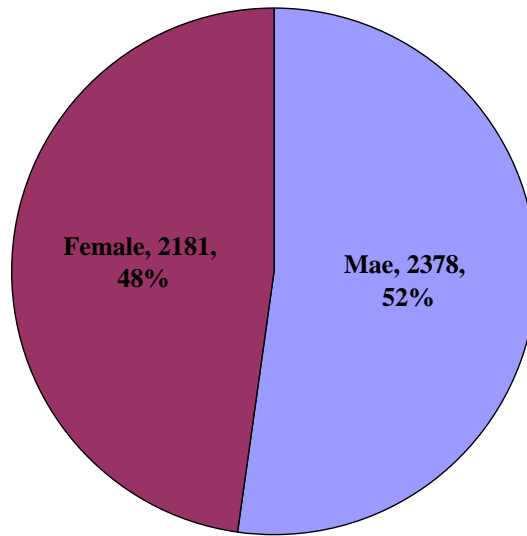
**Fig. 3 Number and percentage of IgM Positive measles cases by age group, Iraq, 2008 and first week of 2009**



**7. Sex distribution:**

Confirmed measles cases are distributed almost evenly between males and females.

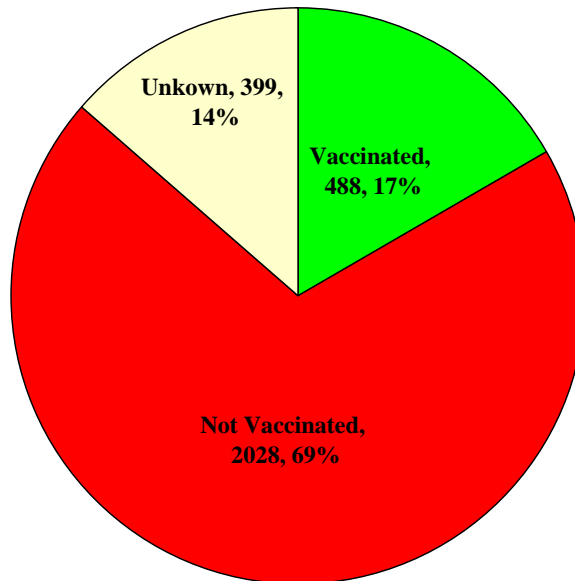
**Fig. 4 Confirmed measles by sex, Iraq 2009 first 52 weeks,**



**8. Immunization status of notified measles cases in Iraq:**

19% immunized, 66% not immunized and 15% unknown vaccination status.

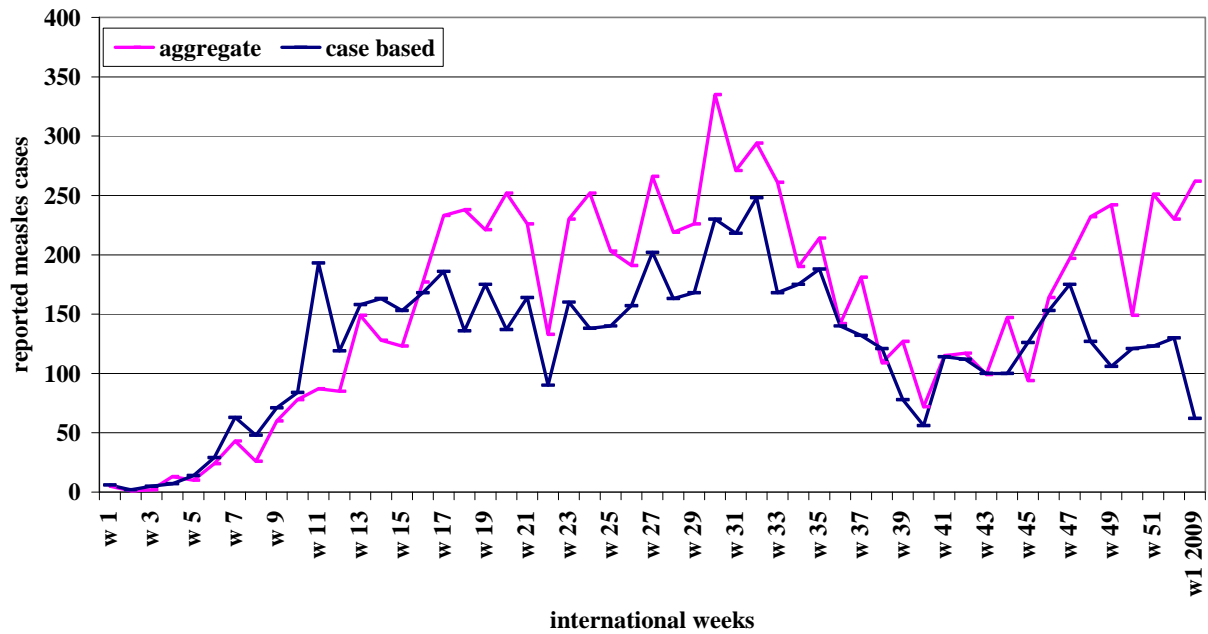
**Fig. 5 confirmed measles cases among children 1-5 years of age by vaccination status, Iraq, 2008**



**9. Discrepancy between cases based surveillance and aggregate data:**

Fig. 6, below shows that case based surveillance worked better than aggregate data when the number of weekly reported suspect cases was less than 200 cases per week once this limit was surpassed and the outbreak status was confirmed the aggregate reporting system worked better. By the end of 2008 cases base surveillance data was far below the aggregate data.

**Fig 6 Reported measles cases according to case base and aggregate surveillance data by international weeks, Iraq, 2008 & Week one 2009**



Measles Bulletin, WHO Iraq, Cumulative measles and rubella results for the period 29/12/2008 - 04/01/2009

Province	Measles case finding report							Rubella case finding report					Confirmed measles /1000,000	Suspect measles 100,000	Indicator: target ≥ 80				
	Total measles	Measles confirmed	Measles lab confirmed	Measles EPI linked	Critical measles	Measles discarded case	No. tested for rubella IgM	Rubella lab confirmed	Rubella EPI linked	Discarded as rubella	Suspect tested for measles	Investigation			Case with complete	Specimens received at the within 7 days	Adequate specimens	Specimens reported to EPI within 7 days	
AL-BAGHDADI	1	0	0	0	0	0	0	0	0	1	NA	NA	0	0	0	0	0		
AL-BAYLON	54	2	2	0	0	2	0	2	0	54	NA	NA	17	0	100	100	100		
AL-KARKH	16	14	11	0	0	11	0	14	0	16	NA	NA	78	55	100	100	100		
AL-RESAFA	41	18	16	0	0	16	0	18	0	41	NA	NA	95	65	100	100	100		
AL-SRAH	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-HUK	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-WANIYA	31	0	0	0	0	0	0	0	0	31	NA	NA	0	0	0	0	0		
AL-YALA	6	1	1	0	0	1	0	1	0	6	NA	NA	100	100	100	100	100		
AL-RBIL	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-RBALA	11	25	24	0	0	24	0	25	0	11	NA	NA	93	0	100	100	100		
AL-RKUK	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-SSAN	14	0	0	0	0	0	0	0	0	14	NA	NA	0	0	0	0	0		
AL-JTHANNA	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-AJAF	2	2	2	0	0	2	0	2	0	2	NA	NA	100	0	100	100	100		
AL-NEWA	10	10	9	0	0	9	0	10	0	10	NA	NA	100	0	100	100	100		
AL-KRIT	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-ILMANIA	0	0	0	0	0	0	0	0	0	0	NA	NA	0	0	0	0	0		
AL-DI-QAR	4	0	0	0	0	0	0	0	0	4	NA	NA	0	0	0	0	0		
AL-ASSIT	72	0	0	0	0	0	0	0	0	72	NA	NA	0	0	0	0	0		
AL-AQ	262	72	65	0	0	65	0	72	0	262	NA	NA	81	600	100	100	100		