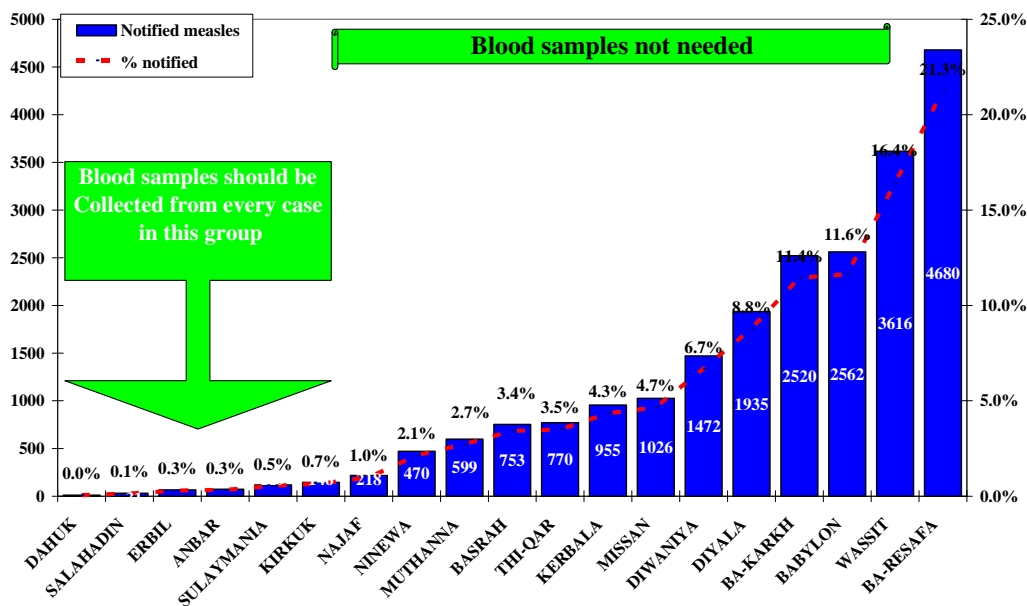


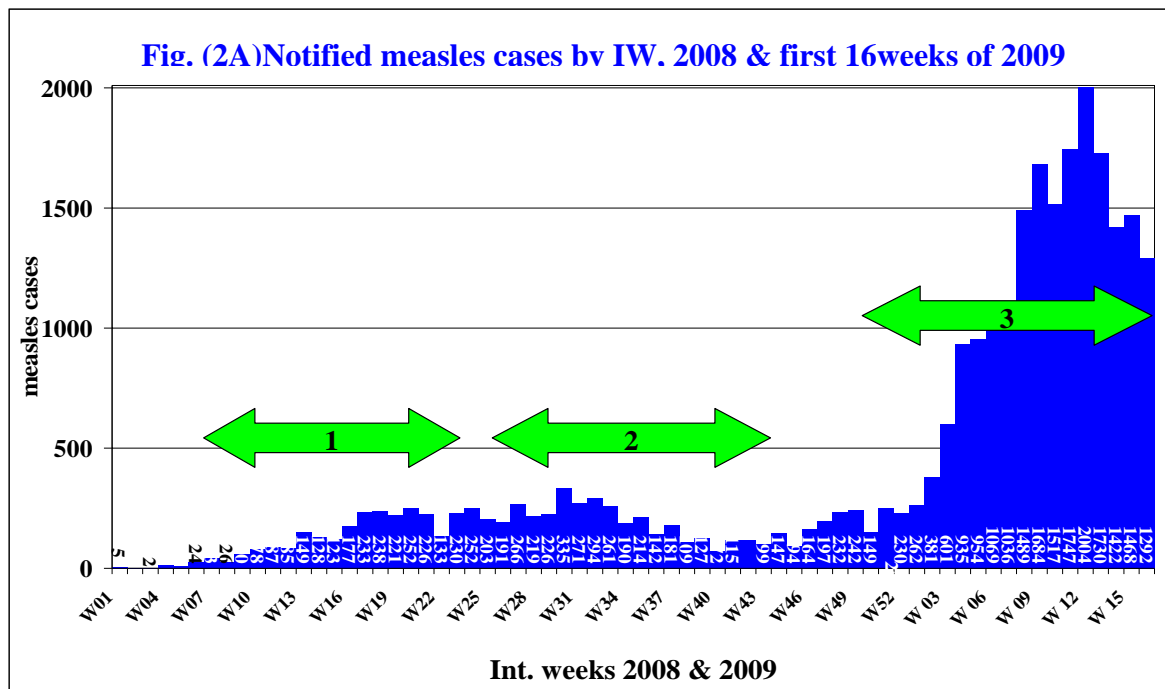
**Weekly Feedback on Measles in Iraq**  
**Report no. 50 International week 18 ending 03/05/2009**

1. **Confirmed Measles cases by province:** 22,023 suspected measles cases were reported in Iraq during the first 18 weeks of 2009. The 3 northern governorates and Najaf reported 414 cases (2%). The provinces of Anbar, Salahadin, Ninewa and Kirkuk, where containment operation were done in early 2008, reported 721 (3%) cases; the majority of cases in the containment group (470 or 65%) were reported from Mosul where only selective SIAs have been implemented. The 4 Southern provinces of Basra, Missan, Thi qar and Muthana reported 3,148 (14%) of the total cases. The remaining 8 provinces in central Iraq reported the remaining (17,740) 81% of cases. It is clear that the outbreak is mainly concentrated in the central part of Iraq and is starting to spread to the South and North. The DoH where the outbreak has been well established and many cases were confirmed by NML, there is no need to collect blood samples. However, the case investigation form should be completed carefully for every case. It is also important to collect serum and other specimens from cases reported in children below the age of 6 months.

**Fig (1) Notified measles by DoH, Iraq, first 18 weeks of 2009**

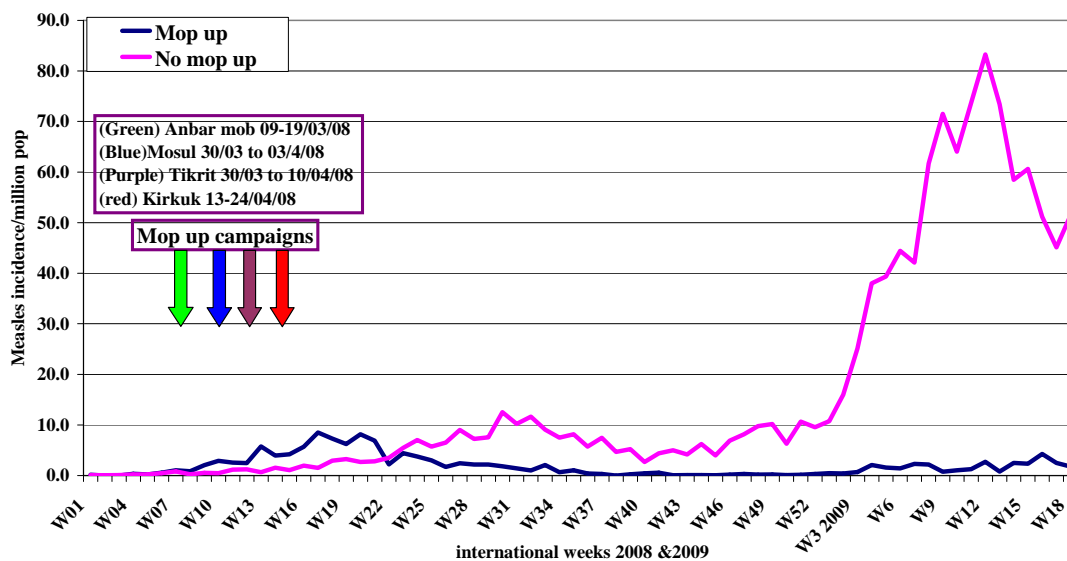


2. **Notified Measles cases by international week:** Fig. 2A illustrates the number of notified measles cases in Iraq by week of onset in the first 18 weeks of 2009. In 2008, 8,134 measles cases were reported in comparison to 22,023 in just the first 18 weeks of 2009. It is clear that the outbreak is on the down trend during the last 4 weeks. During this year almost 1,200 measles cases are reported every week compared to less than 50 cases per week during the same period in 2008. It is apparent that the measles outbreak occurred in 3 waves; each wave took about 18 weeks and was concentrated in a particular group of DoHs. The current outbreak seems to be the most severe and is now on its down trend. A fourth and last wave is expected in the upcoming weeks in the 3 NGs. An emergency campaign is necessary to minimize the number of cases..



**3. Measles cases according to the implementation of Mop Up campaigns.** The first measles outbreaks were reported from the Anbar and Salah al-Din provinces followed by districts plagued by a lack of security such as the Ninewa and Kirkuk provinces. Routine measles vaccination coverage in these areas is generally far below the average for the country. WHO and UNICEF supported MoH's efforts in conducting house to house 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 13, other outbreaks started in some areas where similar campaigns were not conducted such as Baghdad, Diwanya, Babil, Karbala and Diala.

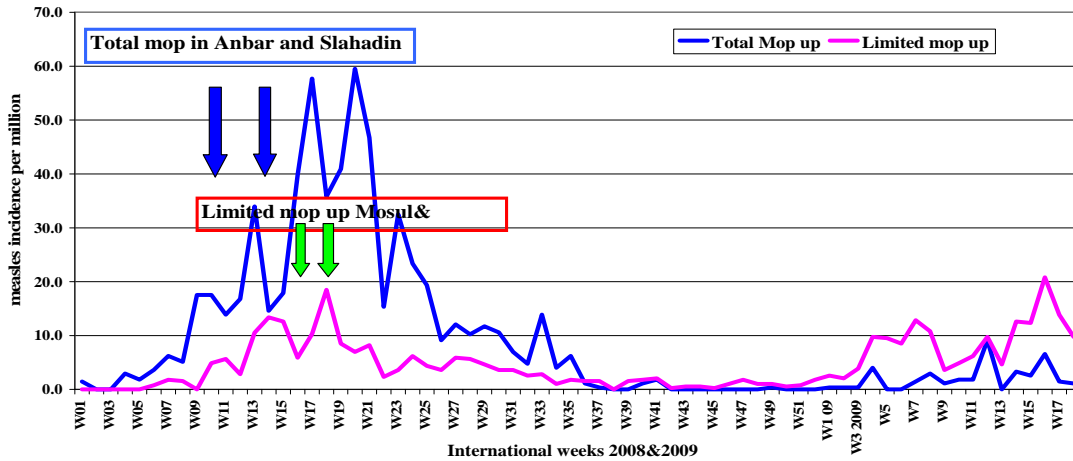
**Fig (2B) Measles Incidence/million population by international weeks in provinces where Mop Up operations were conducted and not conducted, Iraq, 2008 and first 18 weeks of 2009**



The chart above (2B) show that Mop Up campaigns can succeed in controlling measles outbreaks in areas affected by a lack of security and where less than 70% of infants are vaccinated by MCV. Even if containment measures are conducted late (7-18 weeks following the confirmation of the outbreak) and in limited areas. To be successful, the target age group and districts need to be well guided by the measles immunity profile and a good epidemiological description of the first few laboratory confirmed

cases. It is clear that this huge outbreak (30,157 reported cases in 2008 & first 18 weeks of 2009) could have been avoided if a nationwide campaign had been implemented instead of fragmented SIAs

**Fig (2C) Measles incidence/million population by total or selective mop up, using MCV for 1-5 year old children, according to week of onset, 2008 and first 14 weeks, 2009**



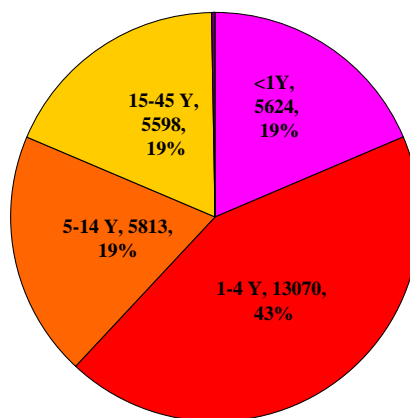
**4. Measles cases according to the size of Mop Up campaigns.**

Fig. 2C show that both total and limited Mop Up campaigns succeeded in the control of the measles outbreaks. As expected total Mop Up gave better results in terms of number of cases and more swift and sustained control. Another wave of measles cases is seen in provinces where limited MoP up was done mainly in Mosul.

**5. Age distribution:**

Fig 3 shows that 61% of measles cases reported in 2008 and first 18 weeks of 2009 were among children <5years of age, a clear indication of serious problems in routine coverage in the last 4 years. Due to lack of funding WHO could not support the requested support to conduct SIAs.

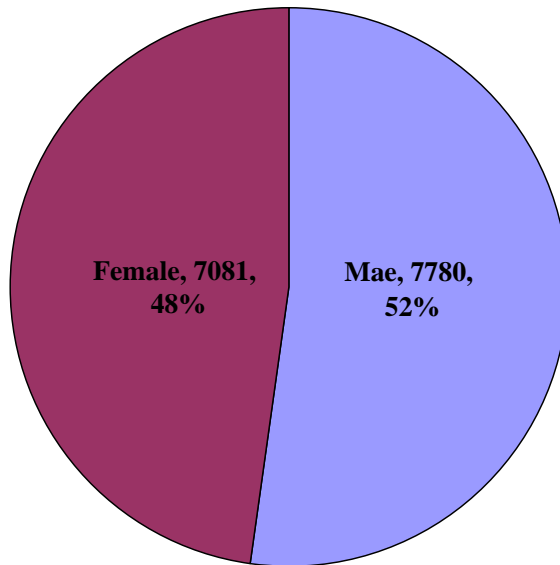
**Fig. 3 notified measles cases by age group, Iraq, first 18 weeks of 2009**



**6. Sex distribution:**

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

**Fig. 4 Confirmed measles by sex, Iraq 2008 & first 18 weeks of 2009**



7. 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

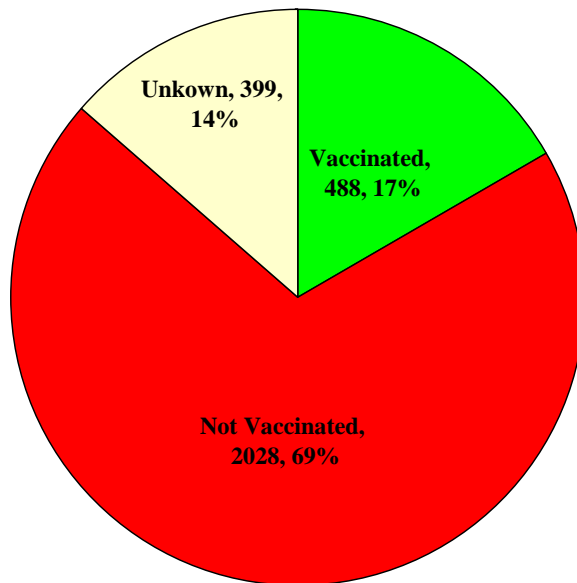


Figure 6 - Measles Bulletin, WHO Iraq, Cumulative measles results for 2008 and the first 18 weeks of 2009

Province	Total pop	No. of cases				Incidence per million population	
		First 16 Ws 09	2008	total	% of cases	first 17 Ws 09	2008
DAHUK	942268	11	28	39	0%	12	30
SALAHADIN	1254303	31	637	668	2%	25	508
ERBIL	1482958	66	7	73	0%	45	5
ANBAR	1483280	74	1056	1130	4%	50	712
SULAYMANIA	1547072	119	30	149	0%	77	19
KIRKUK	1027800	146	344	490	2%	142	335
NINEWA	2864705	470	364	834	3%	164	127
NAJAF	1206264	218	68	286	1%	181	56
BASRAH	2426607	753	113	866	3%	310	47
THI-QAR	1640193	770	482	1252	4%	469	294
BA-KARKH	2937300	2520	789	3309	11%	858	269
KERBALA	930509	955	711	1666	6%	1026	764
MUTHANNA	583511	599	402	1001	3%	1027	689
MISSAN	834977	1026	173	1199	4%	1229	207
BA-RESAFA	3650383	4680	663	5343	18%	1282	182
DIYALA	1486547	1935	80	2015	7%	1302	54
DIWANIYA	1025253	1472	1076	2548	8%	1436	1049
BABYLON	1625434	2562	843	3405	11%	1576	519
WASSIT	995296	3616	268	3884	13%	3633	269
Iraq	29944660	22023	8134	30157	100%	735	272

Figure 7 - Measles by province in Iraq during the first 18 weeks of 2009

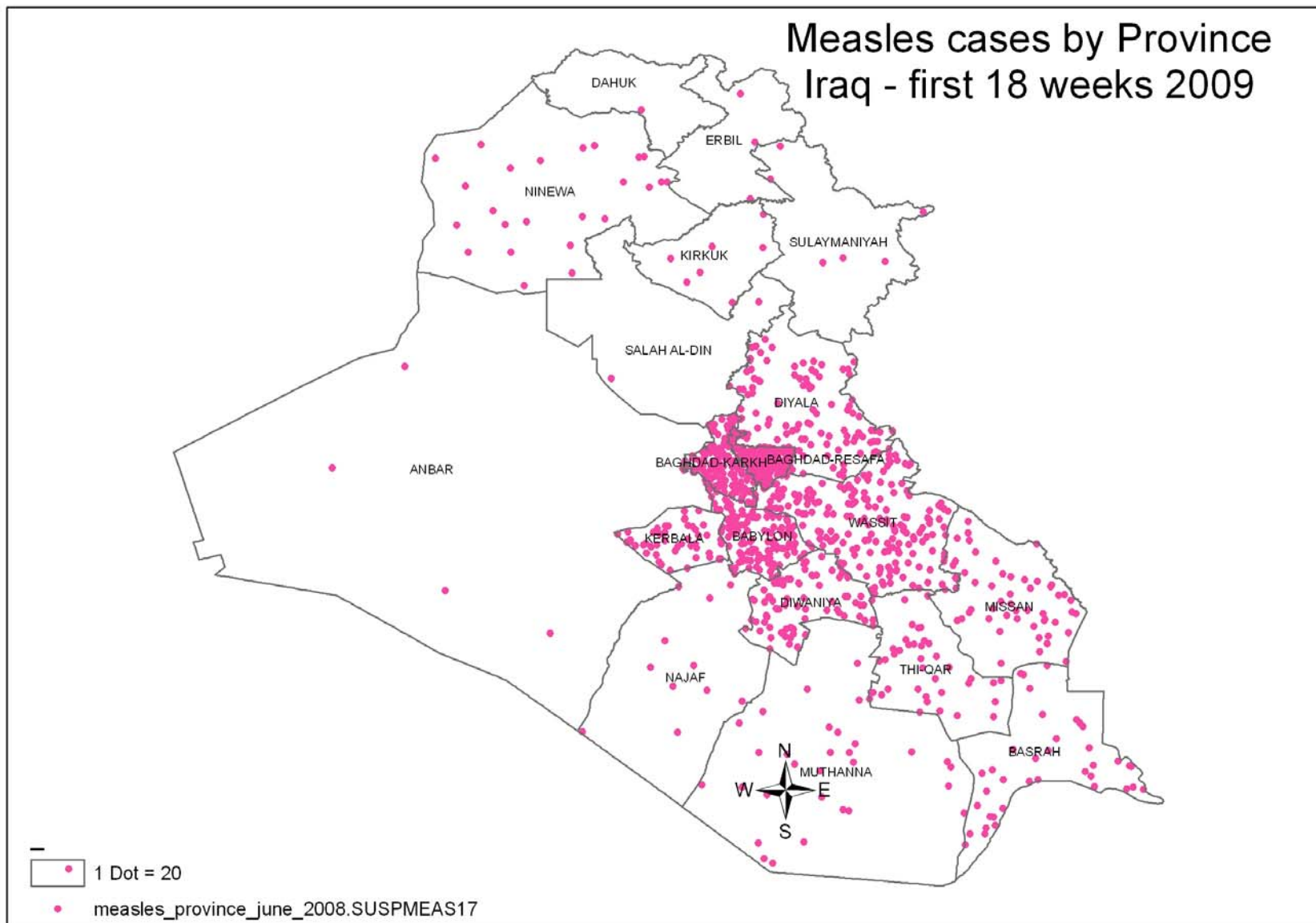


Figure 8 - Measles incidence by province in Iraq during the first 17 weeks of 2009

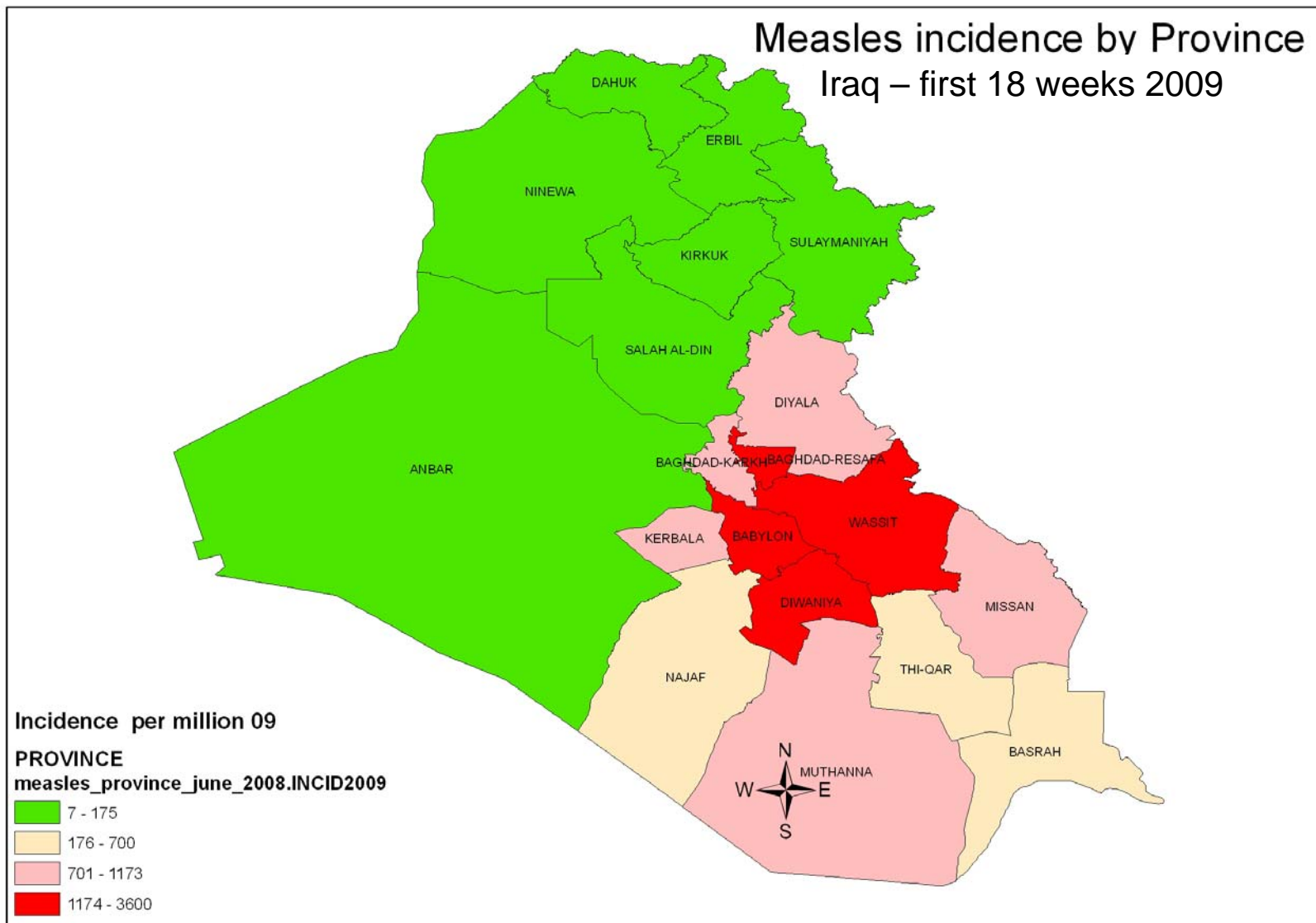


Figure 9 – Measles incidence by province, 2008

### Measles incidence by province, 2008

