Malaria incidence rate: total reported cases

Just as mapping population density (Figure 6) gives different interpretation to mapping population numbers (Figure 5), mapping malaria incidence in terms of reported cases per 1,000 population (Figure 15a-f) gives different interpretation of disease patterns to mapping total case numbers alone (Figure 11a-f). The addition of 3 more years' data (1999-2001) to that depicted in the first Mekong Malaria monograph provides perspective over a substantial 6 years' time period.

Each method has useful implications for planning, executing and assessing malaria control at local, national and regional levels. The malaria incidence pattern does not bear any clear reference to population density, indeed some unit areas with low population density have high incidence of disease. This is perhaps to be expected since malaria transmission is confounded by many variables such as the extent and nature of forest cover, characteristics of the watershed, employment mobility patterns, vector abundance and species, etc. Naturally maximal clustering of population tends to be in urban areas where conditions favoring malaria transmission tend to be less evident.

The distribution of differing foci of high or low malaria incidence has important connotations for the dynamics of disease transmission and of case management. This is particularly true where there is great disparity between population size or density and malaria incidence, such that there are often inadequate facilities for disease management where need is greatest. Many such areas are apparent throughout the region.

What the regionally-based mapping does do is provide a perspective that reaches beyond internal and national boundaries from an epidemiological viewpoint, so to begin to bring disease management more into environmentally appropriate context. It is important to emphasize that these data give minimal cognizance to private health sector activity, which tends to cluster around or near urban centers.

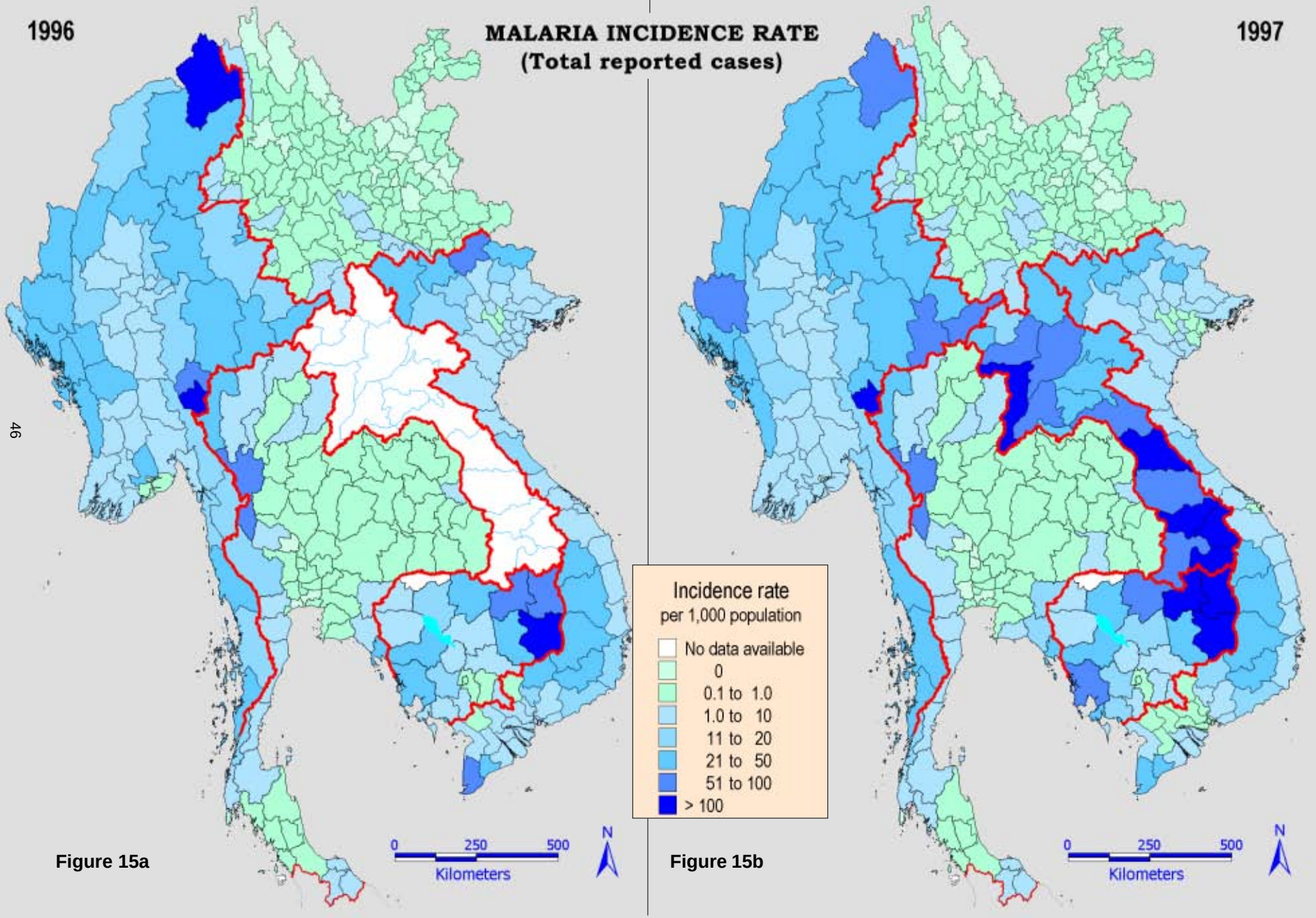

Figure 15a

Figure 15b

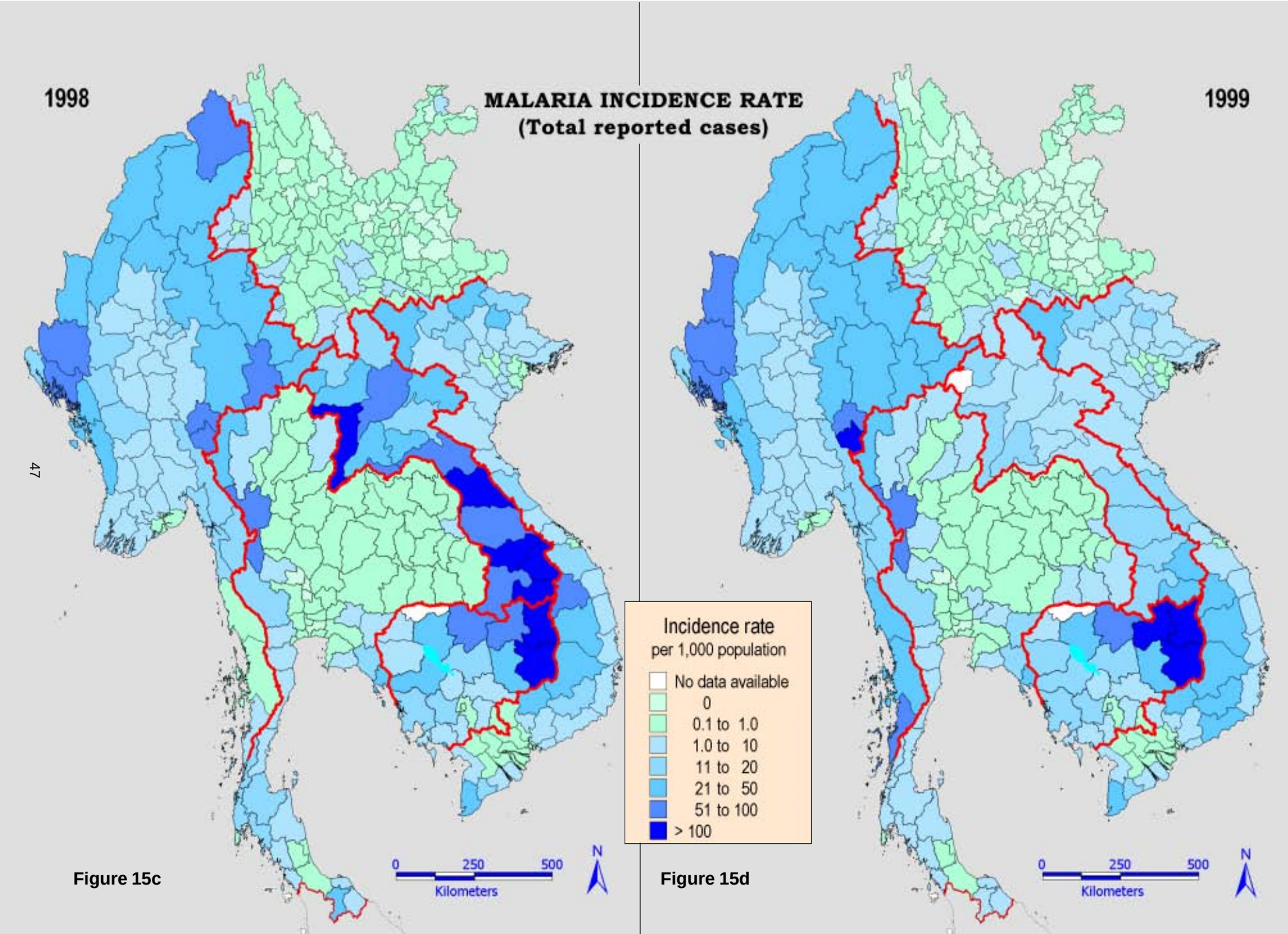

Figure 15c

Figure 15d

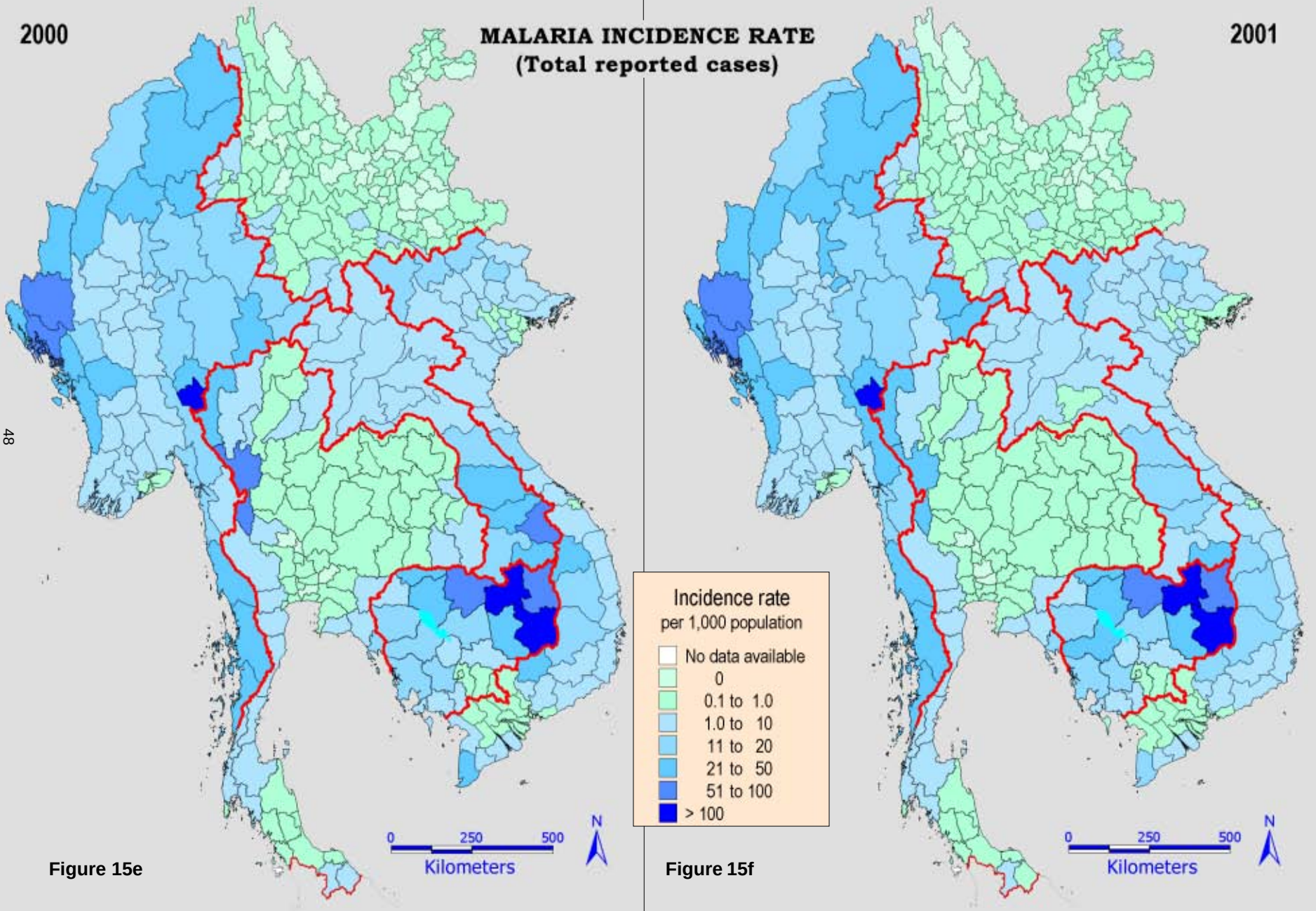

Figure 15e

Figure 15f