

Population mobility

The long border that is shared by Yunnan on the one hand and Lao PDR, Myanmar and Viet Nam on the other (Figure 3) provides the stimulus to consider human population movements across the international borders in the region in relation to disease flow.

Stern and Crissman (1998) have presented in a monograph the compilation of available semi-quantitative information on population mobility across each of the inter-country borders in the Greater Mekong Subregion, by making use of a wide variety of formal and informal sources. It uses the same MapInfo regional map developed by ACASIAN for the current project and inserts the mapped positions of official crossing points. We have transposed the relevant crossing point map positions to the map given in Figure 23 to provide a representation in Figure 24 of the Yunnan Myanmar-Lao PDR-Viet Nam border continuum.

We have also transposed from a thesis by Hu Hong (Hu, 1998) data collected by the Yunnan provincial government of entry of foreign nationals into Yunnan yearly from 1990 through 1996 also shown in Figure 24 as a bar graph depicting the numbers of people entering the province from Myanmar, Lao PDR and Viet Nam through the official crossing points. The total for the 3 countries in 1996 was ~ 10 million crossings. About the same number of Chinese nationals also crossed to travel to the 3 other countries in the same time period (Hu, 1998; Hu *et al*, 1998). This suggests that on the order of 20 million person crossings occur per year through these official crossing points. No doubt a great number of additional people cross via unofficial trans-border points.

Whatever the true numbers of mobile populations across these borders, they are very large. It is interesting to note that Myanmar-Yunnan crossings predominate. Viet Nam also shares a border with Guangxi Zhuang Autonomous Region and although the data are not given here, undoubtedly these crossings have increased of recent times with changing economic circumstances.

Although exact numbers of crossings occurring annually via other inter-country borders are not so readily available they are undoubtedly substantial in number. The region as a whole is home to many subgroups representing a wide range of cultures that have been established here for very long periods of history, often close relatives live on both sides of a given international border. This factor alone constitutes a major reason for cross-border population flow, as also do trade and commerce. International

tourism contributes a small but significant factor in the overall flow of people: important since many tourists have no immunity to infectious diseases that are prevalent in the region.

This latter point highlights a major reason for examining cross-border population movement in the context of malaria in the region. Malaria is greatly affected by population flow patterns, both across international borders and across internal boundaries inside each country. In this context a policy directive of the Thai malaria program is instructive. Thailand offers free treatment of malaria regardless of country of origin, partly because it is considered a public good and partly because all patients with malaria are potential sources for disease transmission. However, the country of origin is recorded, so providing a basis for dissection of the source of infection. This provides another source of data concerning the influence of cross border movement on the pattern of disease within the one country.

Figure 25 maps the malaria cases in Thailand by Thai and foreign origin for the 3-year period 1996-98 according to the province where microscopic diagnosis was made. In some areas cases among foreign nationals exceed those among Thai. The relative numbers of Thai and foreign national cases annually over the period 1991 - 1998 is given in the accompanying graph: there has been an increasing proportion of malaria cases among foreign nationals in recent times. It is a substantial proportion of the total, underscoring the contribution of migrant populations to the overall geographical distribution of malaria in the region. Again, these data pertain only to the public sector: analysis of the patients in the private sector might show different patterns.

Data sources: Border crossing point data were kindly contributed by Aaron Stern. Trans-border population movement data were kindly made available by Hu Hong (references cited).

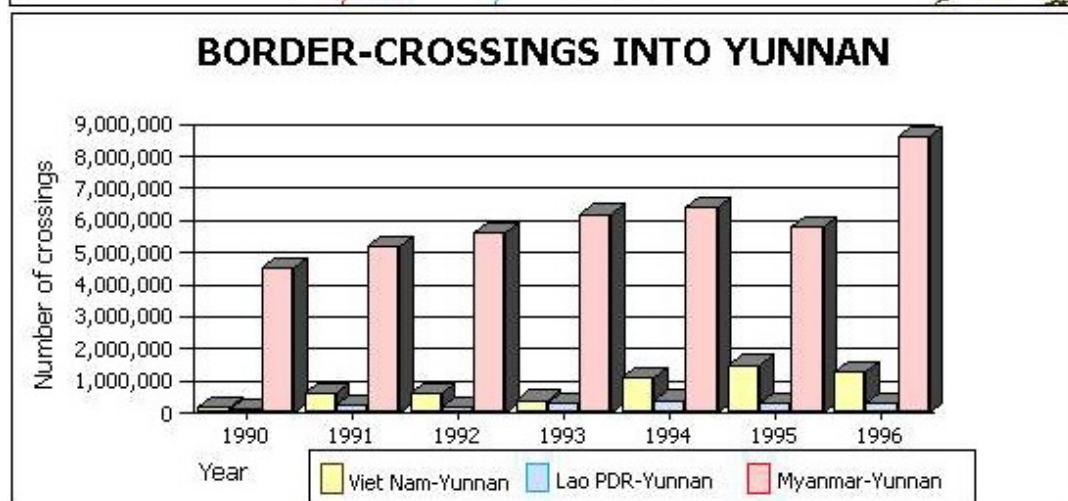
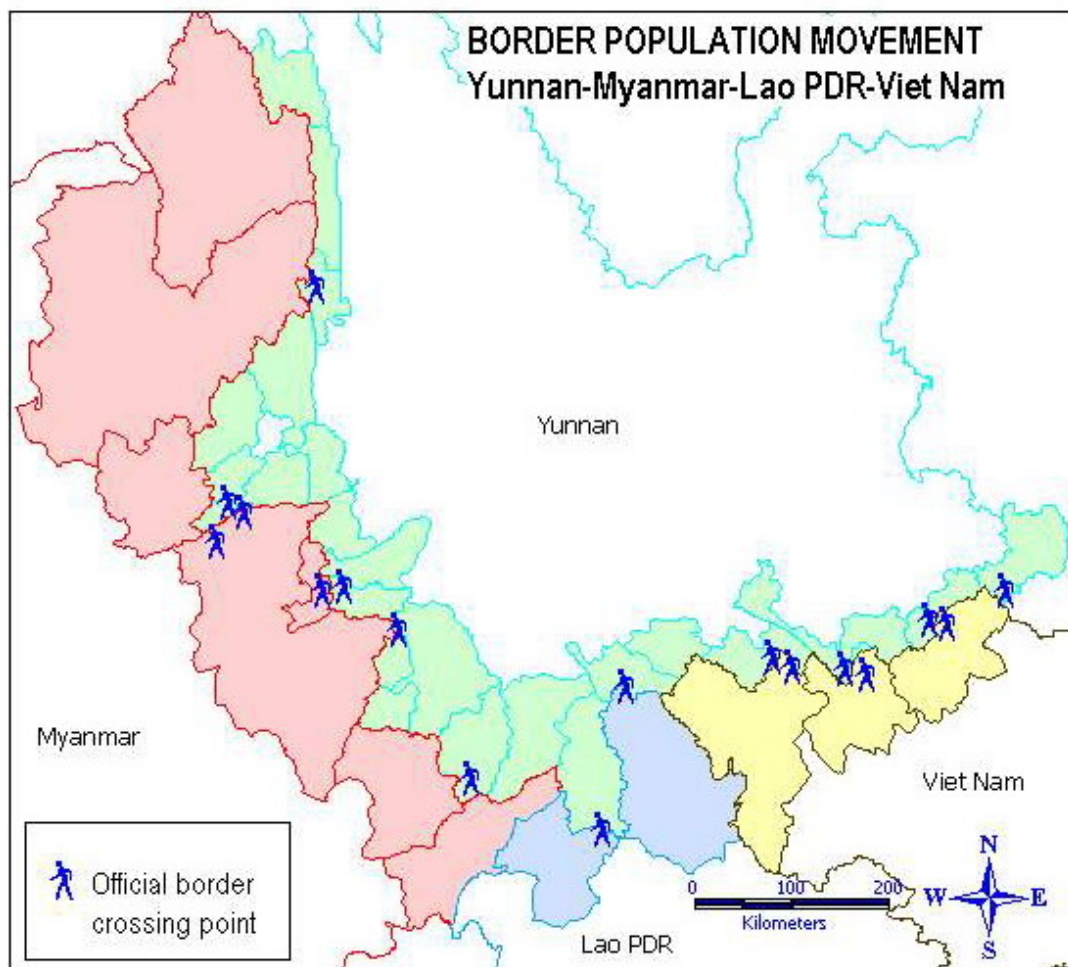


FIGURE 24.

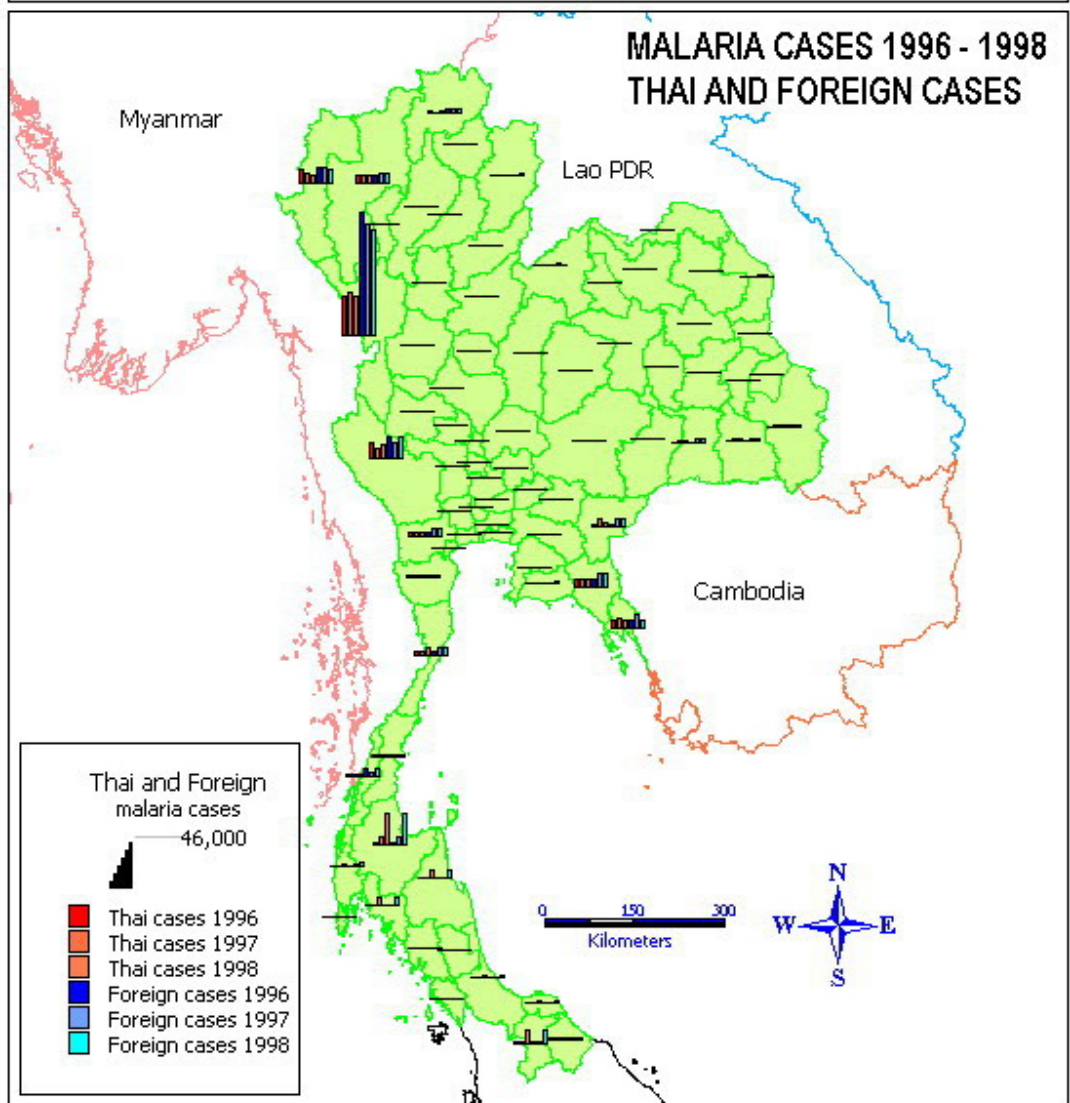
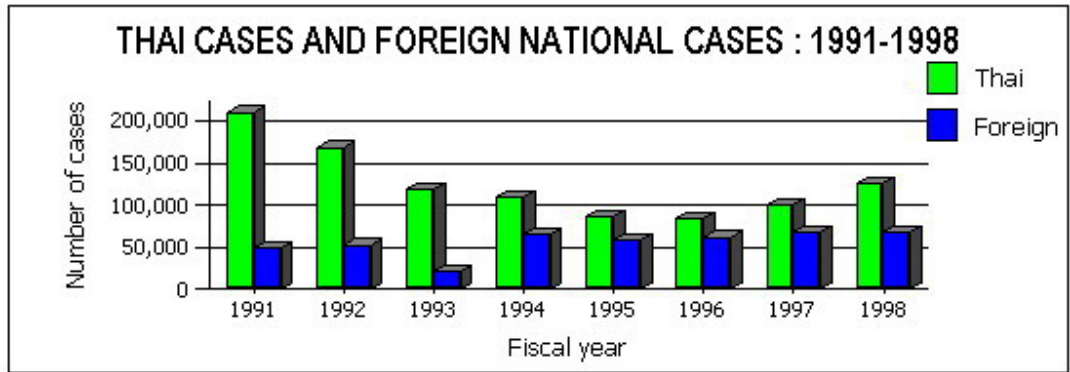


Figure 25.