Population mobility

The tendency of malaria cases to be higher in number in or near to international borders in the region infers that at least one factor in this pattern is the mobility of the populations in these areas. Since cross-border people movement occurs at both official and unofficial crossing points, accurate numbers are difficult to identify. This issue was addressed in the first Mekong Malaria monograph (Kidson *et al*, 1999) using available data in the area of the borders of China/Yunnan with Myanmar, Lao PDR and Viet Nam (Hu, 1998; Hu *et al*, 1998). It was estimated that across the Yunnan border ~ 20 million person crossings occur each year at official crossing points and that a large number of additional persons cross at unofficial points.

Total person crossings annually via other inter-country borders are not so readily available but are undoubtedly substantial in number. The region as a whole is home to many cultures, established here for long periods of history, so close relatives may live on both sides of a given international border. This alone gives one reason for cross-border population flow, as do trade, commerce, and tourism.

A move towards further quantifying the population flow across borders in the Mekong region has been made more recently. Though not on the scale of population movement into and out of Yunnan, there is now a significant body of data covering people flow across the Thai-Myanmar border (Figure 20). In this map are given the named Myanmar townships and the Thai districts that abut the inter-country border, color-coded according to the total reported malaria cases for the year 2001. Superimposed bar graphs give, for 2002, the official number of registered migrant workers from Myanmar to Thailand, estimated numbers of non-registered workers and the registered border camp population. The real numbers of non-registered workers may be far in excess of the estimated numbers. Further superimposed are the exact figures for registered migrant workers coming from specific Myanmar border townships to specific Thai border districts. This picture undoubtedly represents part of the total pattern of population shift across this one inter-country border based in part at least on perceived differences in economic opportunity at this particular time. Other examples can be developed in relation to the other inter-country borders in the region, so as to eventually provide a database defining the relationship of the dynamics of population flow with respect to malaria incidence, transmission, and management.

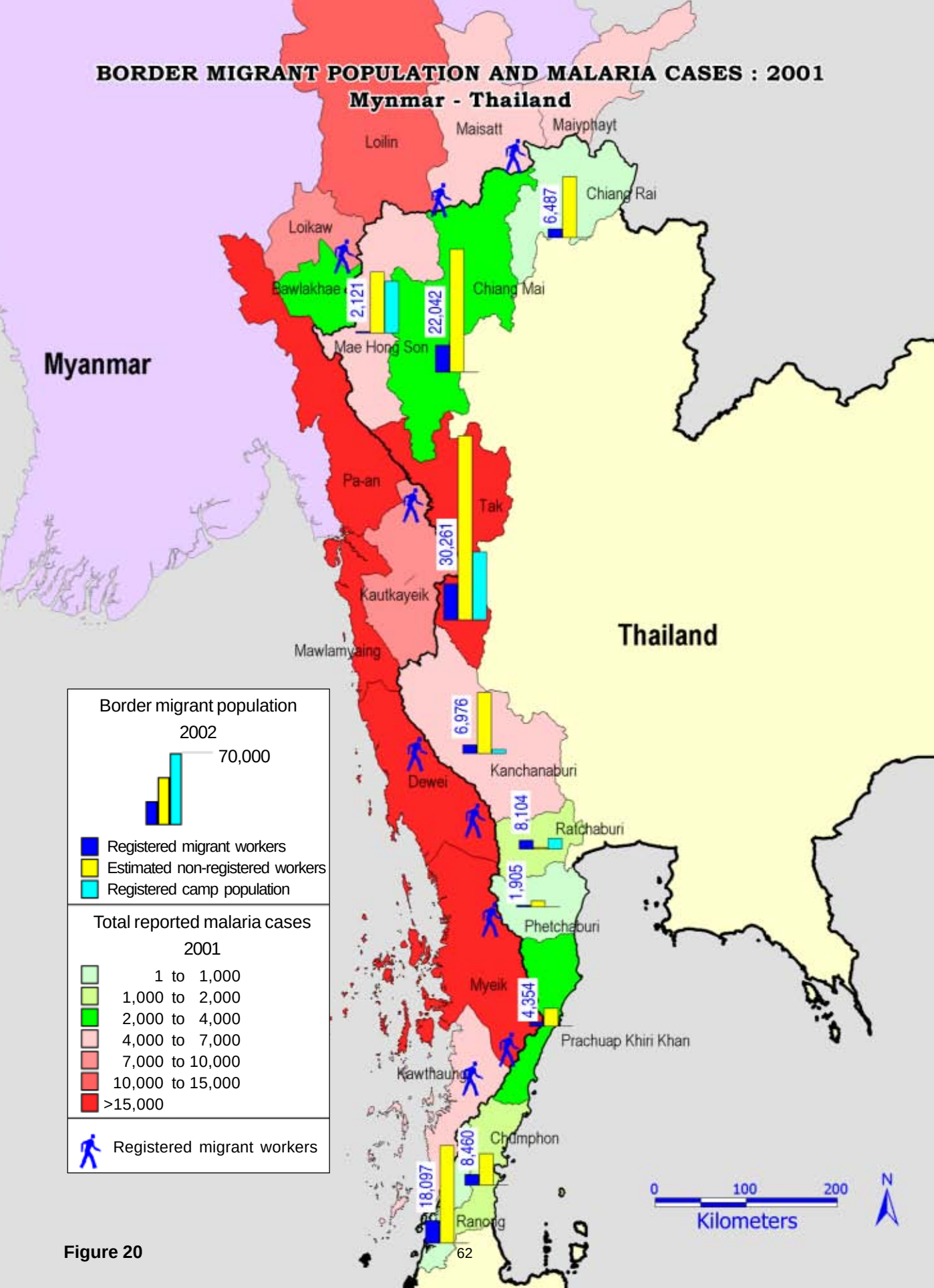
BORDER MIGRANT POPULATION AND MALARIA CASES : 2001
Mynmar - Thailand
Myanmar
Thailand
Loilin
Maisatt
Maiyphayt
Chiang Rai
6,487
Loikaw
Bawlakhae
2,121
22,042
Chiang Mai
Mae Hong Son
Pa-an
Tak
30,261
Kautkayeik
Mawlamyaing
6,976
Kanchanaburi
Dewei
8,104
Ratchaburi
1,905
Phetchaburi
Myeik
4,354
Prachuap Khiri Khan
Kawthaung
Chumphon
8,460
18,097
Ranong
Border migrant population
2002
70,000
Registered migrant workers
Estimated non-registered workers
Registered camp population
Total reported malaria cases
2001
1 to 1,000
1,000 to 2,000
2,000 to 4,000
4,000 to 7,000
7,000 to 10,000
10,000 to 15,000
>15,000
Registered migrant workers
0
100
200
Kilometers
N

Figure 20