

Chapter 4

MINIMUM INCIDENCE RATES OF CANCER [ALL SITES] IN DISTRICTS

The rationale on which minimum incidence rates have been used as a surrogate measure of calculation of incidence has been spelt out in the earlier chapter on 'Overall Plan and Methods' (Chapter 2). The reason for using the district as a unit for such calculation has also been addressed. The vast majority of the 593 districts in the country depict the rural population.

Under the NCRP, the population based cancer registry at Barshi is the only registry as of now, that has given incidence rates representative of the rural population in the country. The most recent incidence rates available for Barshi cancer registry is that of the years 1997-99. The average annual minimum age adjusted incidence rate (MAAR) for Barshi (all sites) for the period 1997-99, is 36.21 and 45.02 per 100,000 for males and females respectively. Thus the MAAR of 36.2 has been used as the cut off level to select districts for observing and comparing cancer patterns.

In all there were 82 districts that had a higher MAAR than 36.2 for at least one of the two years (2001 or 2002) and in either sex. If looked separately for males and females there were 70 and 69 districts above the cut off level in males and females respectively.

Since the incidence rates calculated are the minimum – based on microscopic verification of cancers, the higher of the MAAR between the years 2001 and 2002 has been used in depicting the bar charts and maps in the following pages. For the six PBCRs under the NCRP the latest data available is of the period 1997-99. Therefore the average annual MAAR for this period (1997-99) has been used to calculate the AAR and MAAR for these PBCRs.

Figure 4.1 shows the bar charts of MAAR in districts with MAAR above 36.2/100,000 for all sites of cancer in males and females. The bars of the six PBCRs under the NCRP are also given. The MAAR is shown against each bar.

Males: Among males, in the PBCRs under NCRP, Delhi had the highest MAAR of 103.0/100,000. There were ten districts under the project that had a MAAR higher than that of Delhi, PBCR. Among the urban PBCRs, Bangalore had the lowest MAAR of 75.1 per 100,000. There were eight districts that were above this MAAR but below that of Delhi PBCR. The remaining fifty-one districts listed had MAAR lower than the urban PBCRs but above that of the rural PBCR at Barshi. The highest AAR in males among the urban PBCRs for the period was also in Delhi (126.1/100,000). There were three districts that had MAAR above this. The lowest AAR among the urban PBCRs was 92.1/100,000 in Bangalore PBCR.

Females: Among females, Delhi PBCR had the highest MAAR of 113.9/100,000. There were four districts that had MAAR higher than this. Bhopal PBCR had the lowest MAAR of 94.0 among the urban PBCRs. There were three districts that had a higher MAAR than that of Bhopal. There were forty-four districts that had a MAAR above that of Barshi PBCR, which in females was 45.0/100,000. The highest AAR in females among the urban PBCRs for the period was in Delhi (142.0/100,000). There were three districts that had MAAR above this. The lowest AAR among the urban PBCRs was 107.8/100,000 in Bhopal, PBCR. At least three districts had MAAR above the AAR of Bhopal.

Figure 4.2 shows the district-wise map of India highlighting these districts where the MAAR is above 36.2 per 100,000 in males and 45.0 per 100,000 for females. Districts with rates less than that indicated are given lighter shades. Based on the stated analogy, this map essentially gives a picture of the breadth of coverage, of information on cancer cases under this project.

FIGURE 4.1(a) : Districtwise Comparisons of MAAR with that of PBCRs under NCRP
All Sites (ICD-10:C00-C96) - Males

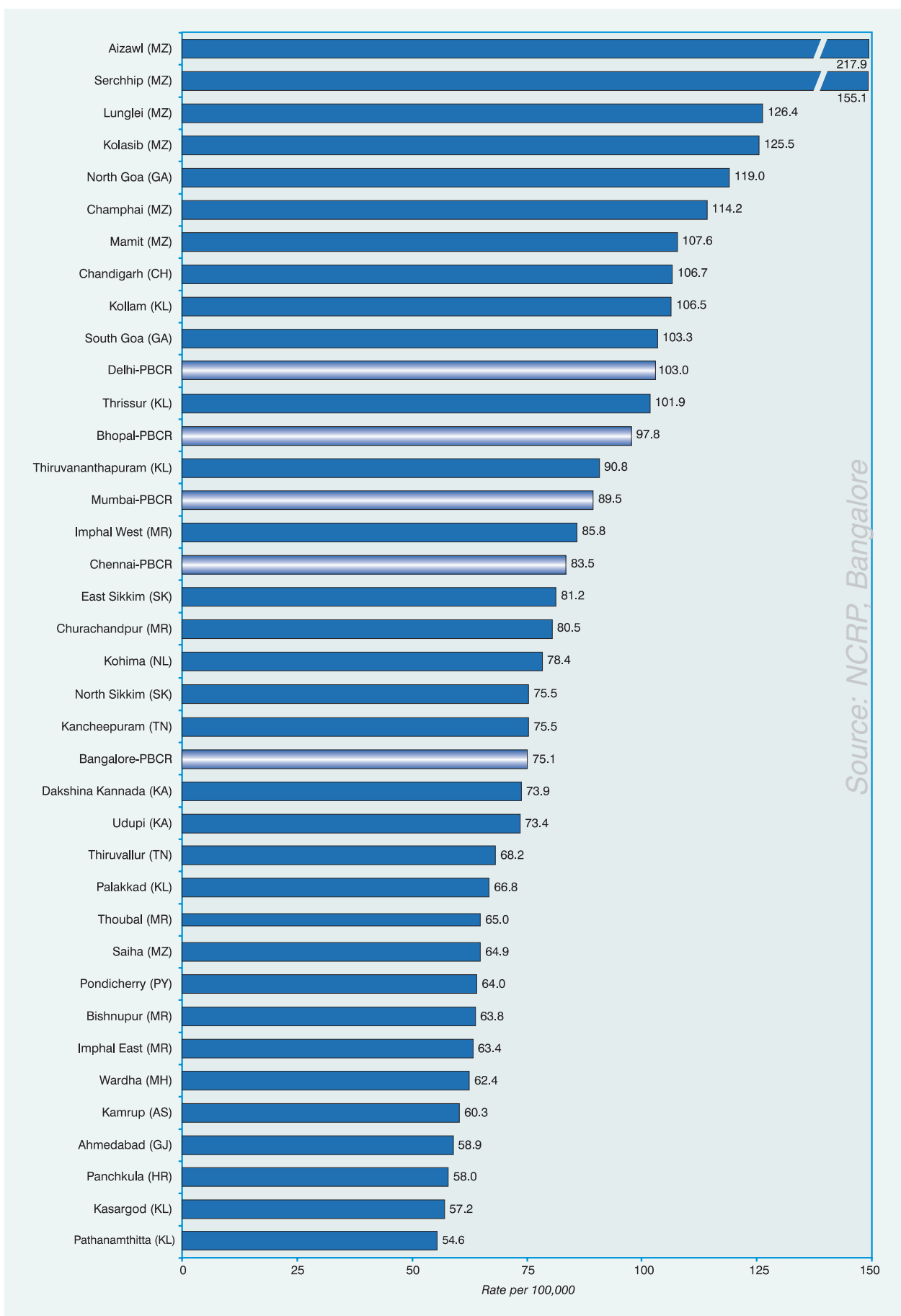


FIGURE 4.1(a) : Districtwise Comparisons of MAAR with that of PBCRs under NCRP
All Sites (ICD-10:C00-C96) - Males - (Contd...)

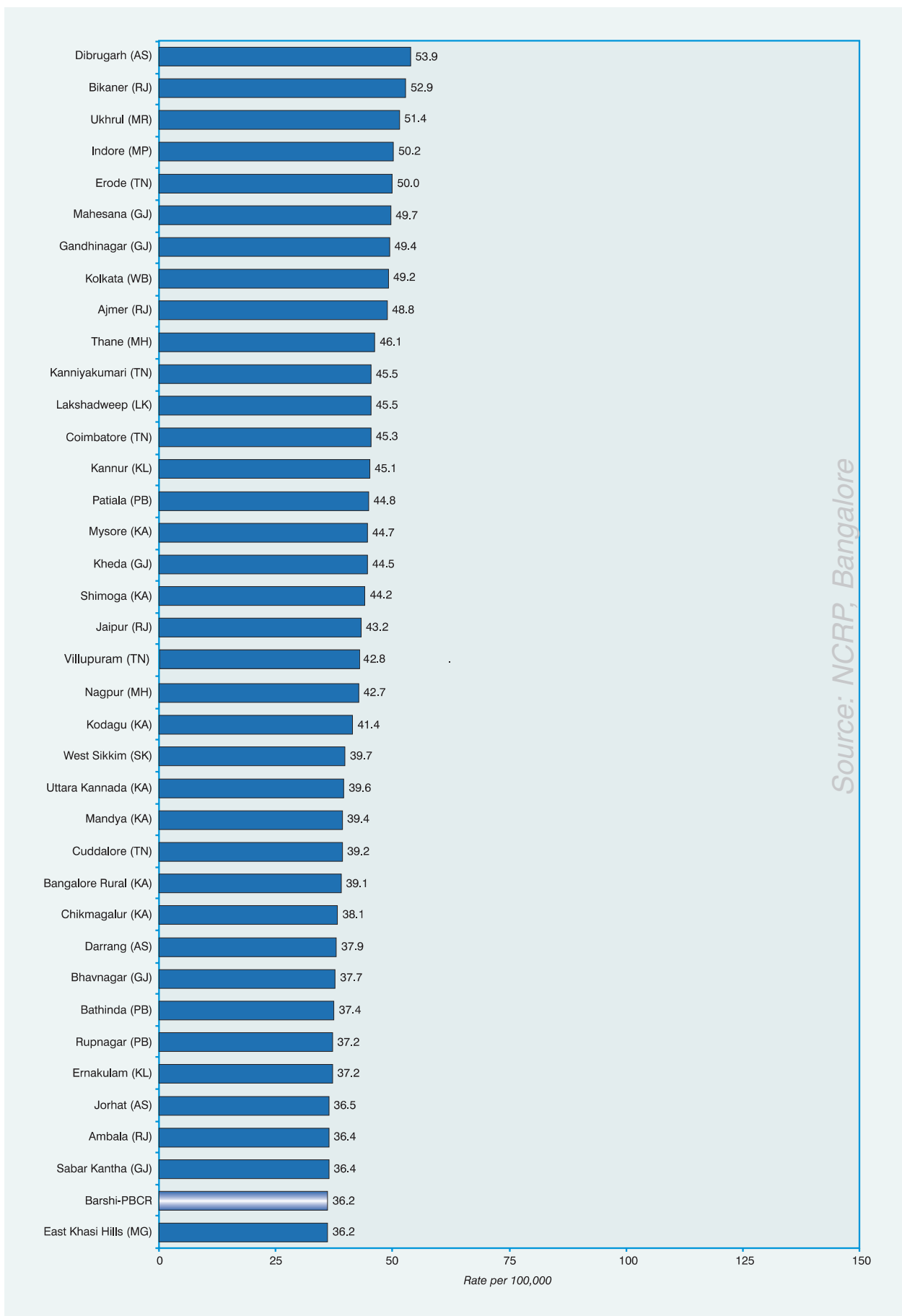


FIGURE 4.1(b) : Districtwise Comparisons of MAAR with that of PBCRs under NCRP
All Sites (ICD-10:C00-C96) - Females

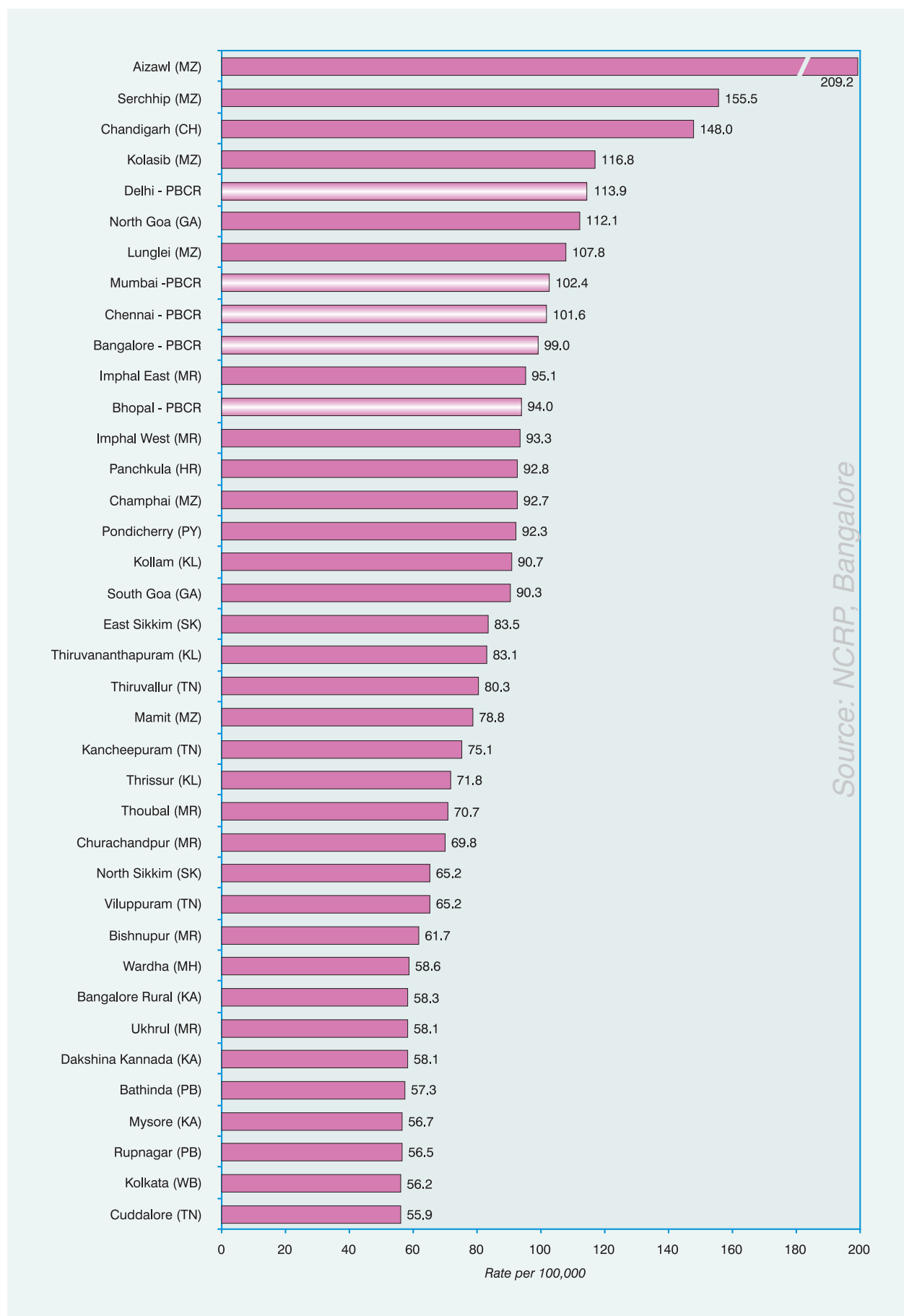


FIGURE 4.1(b) : Districtwise Comparisons of MAAR with that of PBCRs under NCRP
All Sites (ICD-10:C00-C96) - Females - (Contd...)

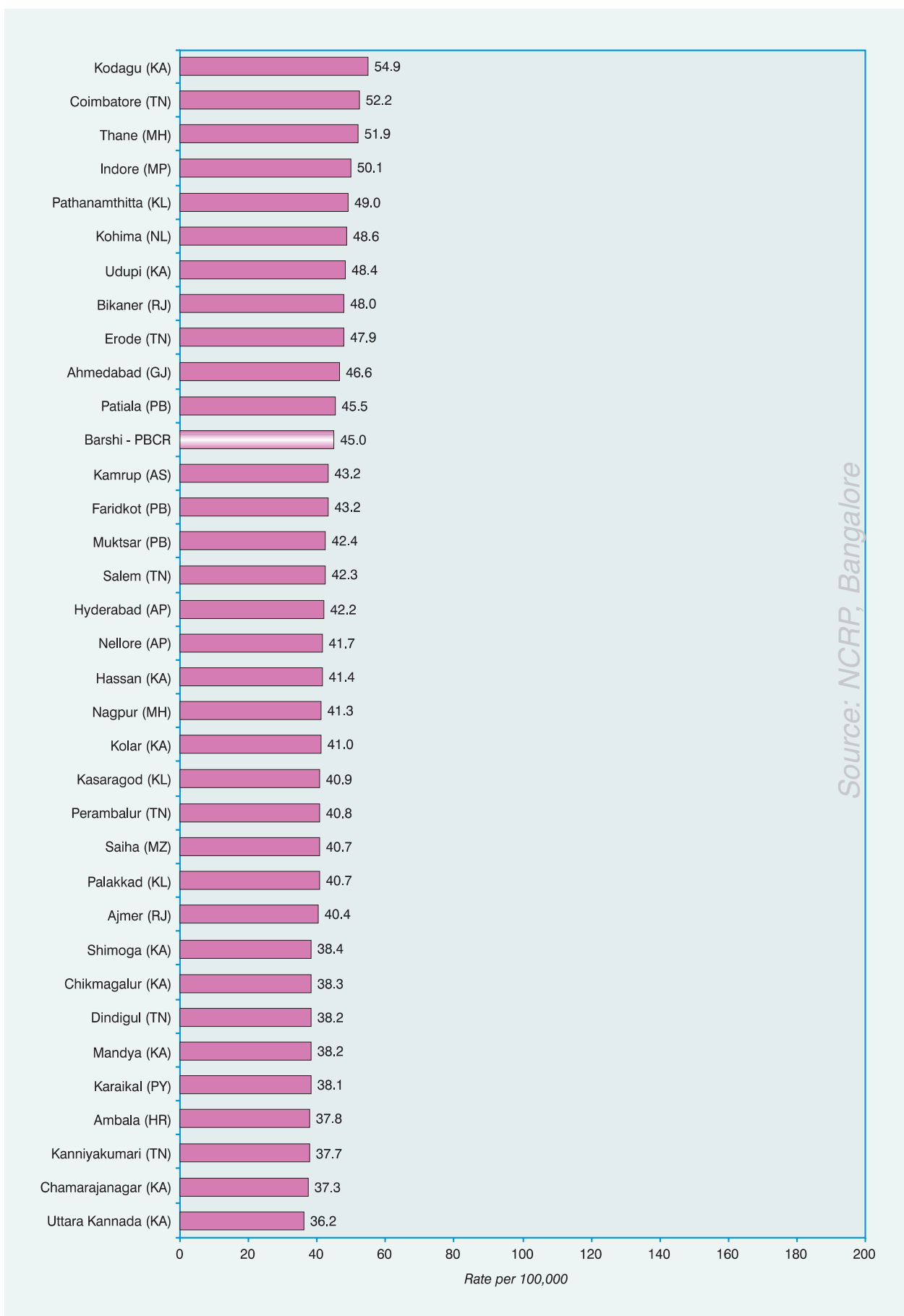
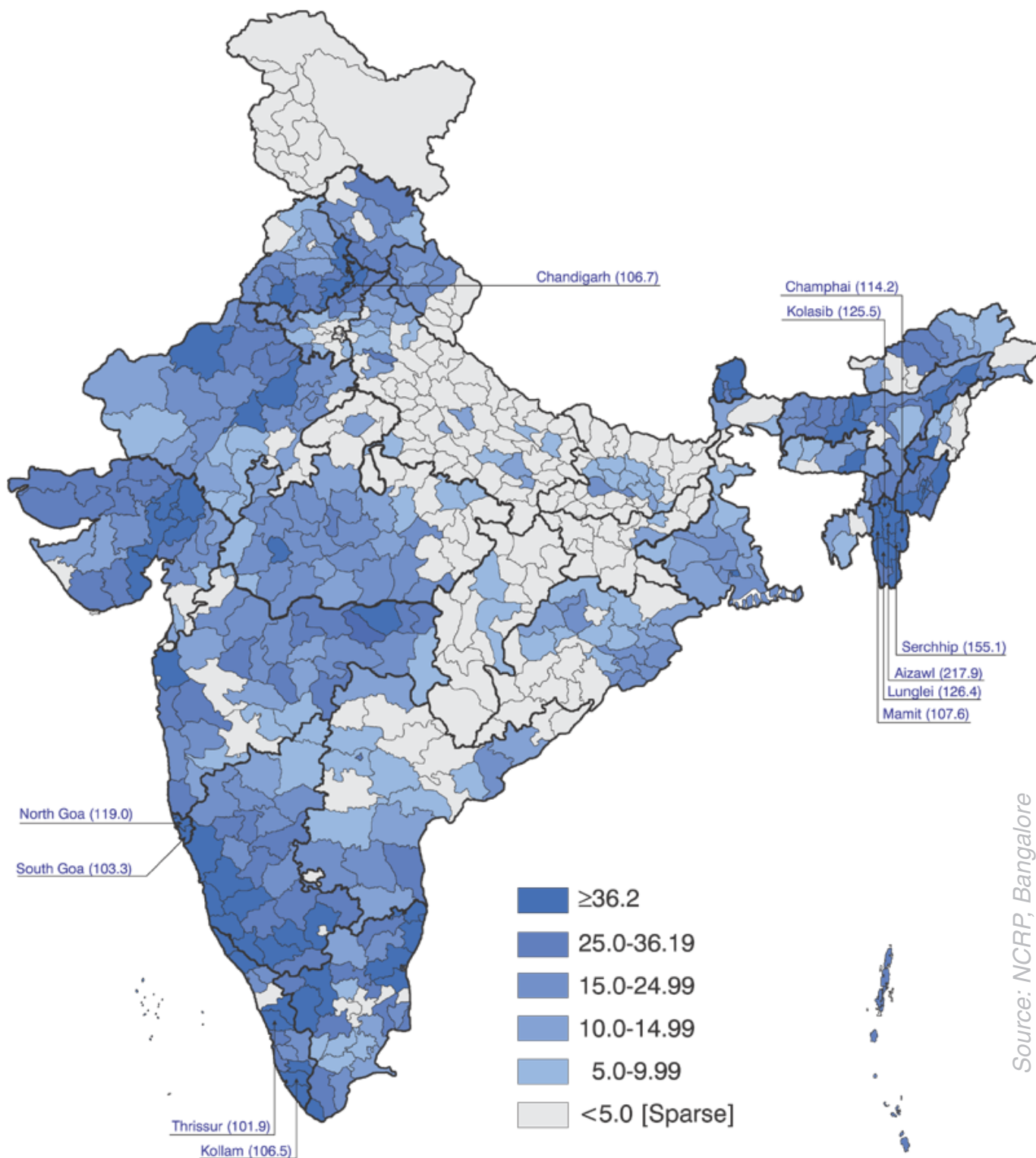


FIGURE 4.2(a) : Districtwise Distribution of MAAR

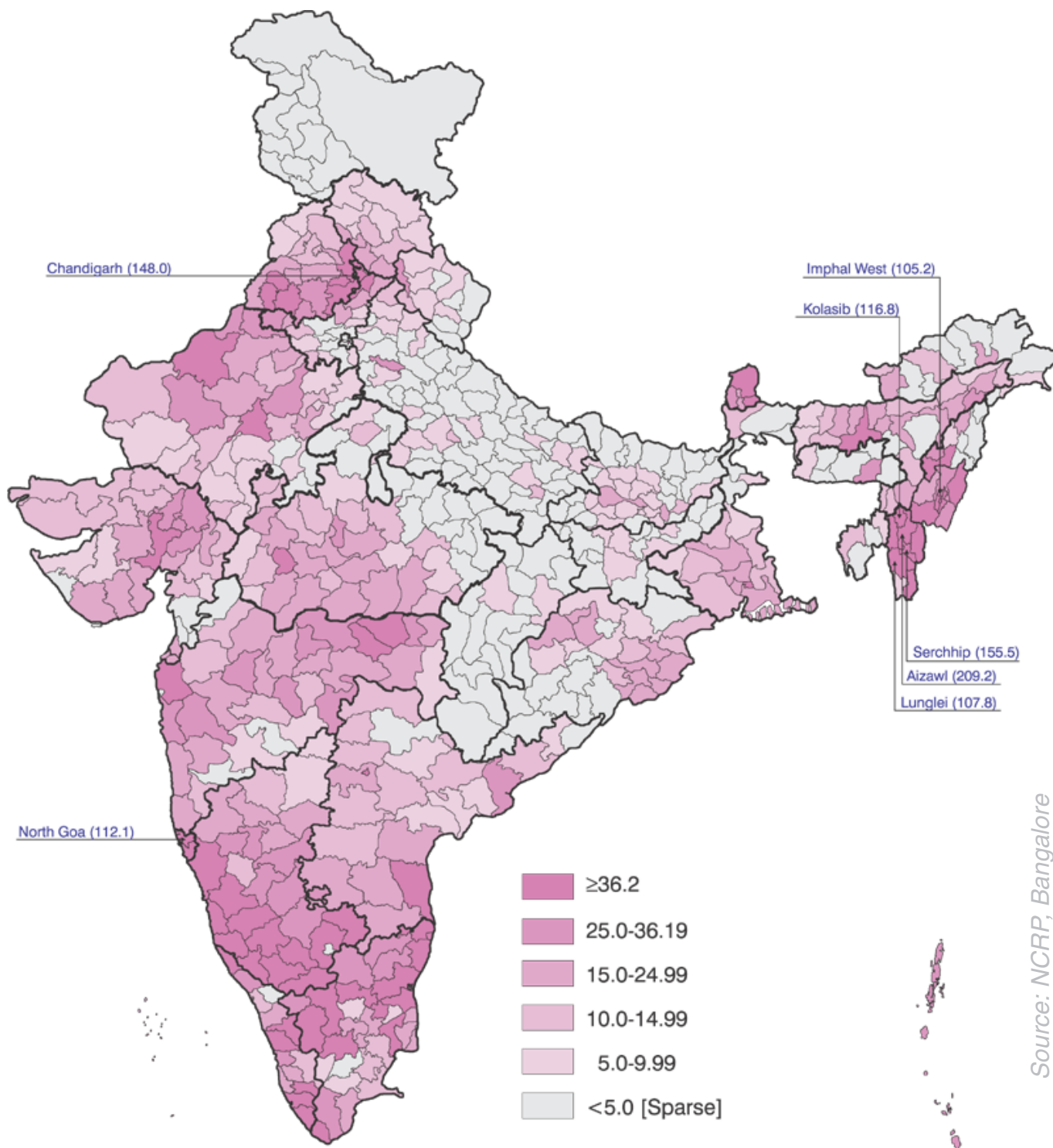
All Sites (ICD-10:C00-C96) - Males



Source: NCRP, Bangalore

FIGURE 4.2(b) : Districtwise Distribution of MAAR

All Sites (ICD-10:C00-C96) - Females



Source: NCRP, Bangalore