

Figure 6.10. Depth-area-duration curves of PMP on Viet Nam coast (United States Weather Bureau, 1970)

the usual barrier reduction. Figure 6.13 shows the adopted adjustment applicable to coastal rainfall values.

6.2.2.4.4 Adjustment for basin topography

Typhoon Tilda (section 6.2.2.2) produced increased rainfall along south-west facing slopes in the basin. This is consistent with the assumption that moisture from southerly or south-westerly directions, with relatively low intervening inflow barriers, must be considered in assessing regional variations in PMP. As an aid for evaluating topographic effects for these inflow directions, ratios of high- to low-elevation mean May-September precipitation were used as primary indices. A bias in the mean seasonal precipitation map (Figure 6.9), resulting from more frequent precipitation at high elevations, precluded direct use of variations in seasonal precipitation as an indication of variations in a 3-day storm. Comparison of rainy day station amounts suggested an increase with elevation of about 60 per cent of that indicated by mean seasonal values for application to typhoon PMP.

Another adjustment of monsoon season rainfall ratios involved consistency with the one-half effectiveness adopted for the eastern barrier adjustment. This implied that south-west slopes were effective for only one-half of the storm duration. The rainfall elevation relation thus becomes 30 per cent of that indicated on the map. A mean seasonal low-elevation rainfall value of 1 200 mm was used as a basic non-orographic value. Percentage increases for typhoon rainfall on windward slopes and decreases on lee regions as indicated by south-west monsoon season rainfall (Figure 6.9) are shown in Figure 6.14.

6.2.2.4.5 Combined adjustment

Combination of the above adjustments (Figures 6.11–6.14) produced the combined adjustment chart of Figure 6.15, which relates to coastal Viet Nam typhoon rainfall values equated to 100 per cent.