upon the hypothesis of increased moisture inflow to the storm" (WMO-No. 332). The maximized storm rainfall is the rainfall that would have occurred if maximum moisture inflow for a particular location at a particular time of year had been available to the storm.

The technique of moisture maximization requires knowledge of two quantities:

(a) The maximum or extreme moisture that could possibly occur at a particular location and time of year, indicated by the extreme 24-hour persisting dewpoint temperature;
(b) The moisture available to the storm as indicated by the storm dewpoint temperature and derived in section 5.5.2.6.

The extreme 24-hour persisting dewpoint temperatures are obtained using long-term climatological data and an updated set of monthly values for Australia has been in use since 2001.

Storm and extreme persisting dewpoint temperatures can be related to precipitable water values with the use of look-up tables (for example, WMO-No. 332). The moisture maximization factor is defined as the ratio of the extreme precipitable water corresponding to the extreme dewpoint temperature to the storm precipitable water corresponding to the storm dewpoint temperature. Thus,

$$MF = \frac{EPW}{SPW}$$

where MF is the moisture maximization factor; EPW is the extreme precipitable water corresponding to the extreme dewpoint temperature; SPW is the storm precipitable water corresponding to the storm dewpoint temperature.

The highest extreme dewpoint temperature for the same location as the storm dewpoint temperature within ±28 days of the date of the storm commencement was chosen. Storm convergence precipitation was maximized by multiplying by the maximization factors.

The concept of moisture maximization assumes that the relationship between increased moisture and increased precipitation is linear, at least with relatively small increases in moisture. The extent to which storm efficiency could be altered by changes in moisture is not known, however it is reasonable to assume that small changes in moisture inflow would have a minimal impact on storm efficiency while large changes in moisture inflow may well affect storm efficiency significantly. Excessively large moisture maximization factors are therefore to be avoided as they may alter the storm dynamics. It is common practice to set a limit on the maximization factor. In the past, this limit has ranged from 1.5 to 2.0. For the GSAM, the limit imposed was 1.8. For the GTSMR storms, five storms had ratios in excess of 1.8; one of which was 1.96, determined for a well-documented storm. Hence, the GTSMR maximization factor limit was set at 2.0.

To remove the site-specific feature of moisture content requires moisture standardization: storm

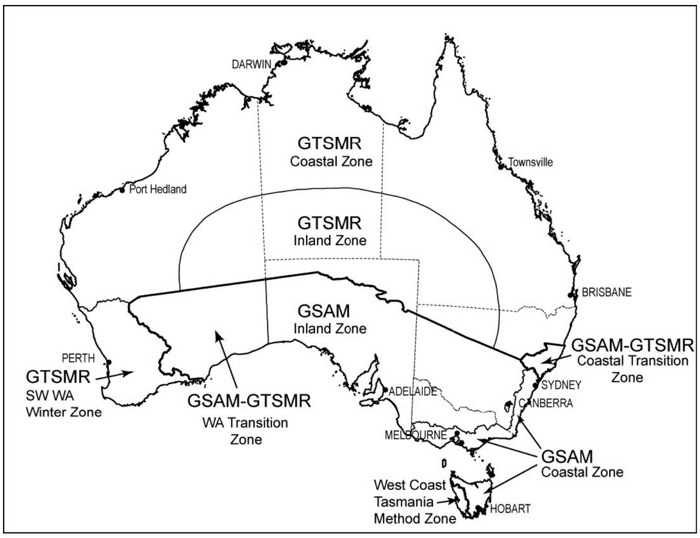

Figure 5.73. Convergence component of 72-hour 50-year rainfall intensities over central NSW coast. Isopleths are in mm/hour.