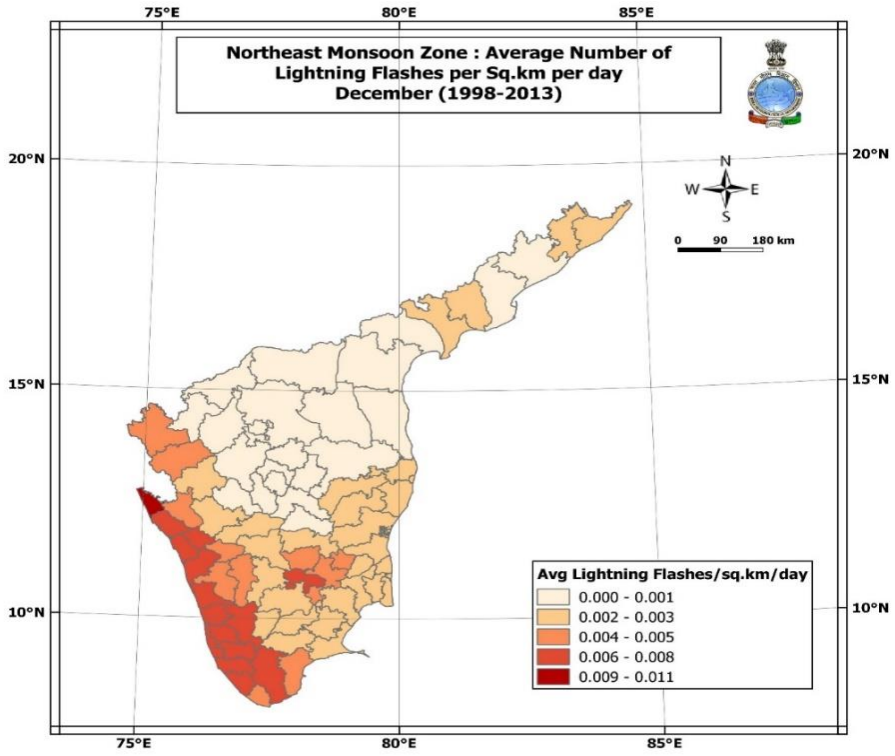

Fig. 2.15 c. Same as Fig 2.15 a, but for December.

2.9. **Extreme Wind Speed**

For providing wind speed forecasts for specific purposes to users, it is important to know the climatology of extreme wind speed during the NE Monsoon season. Fig. 2.16 a, b and c shows the spatial distribution of Extreme surface wind speed (in m/sec) in October, November and December respectively. The surface wind speed is normally measured at a height of 10.0 m. These maps are also derived from the IMD Climate Hazards and Vulnerability Atlas of India, 2022.

During October, extreme surface wind speeds exceeding 18 m/sec are observed over the north coastal Andhra Pradesh and interior parts of Tamil Nadu. Over other parts of the south Peninsula, extreme surface wind speed varies between 12 and 18 m/sec. During November, east coast of Tamil Nadu and coastal Andhra Pradesh has maximum risks due to extreme surface wind speeds. This region experiences tropical weather systems like depressions and cyclonic storms every year. Over this region,

extreme surface wind speed varies between 22 and 57 m/sec. Thus, this region is very prone to extreme surface wind speed.

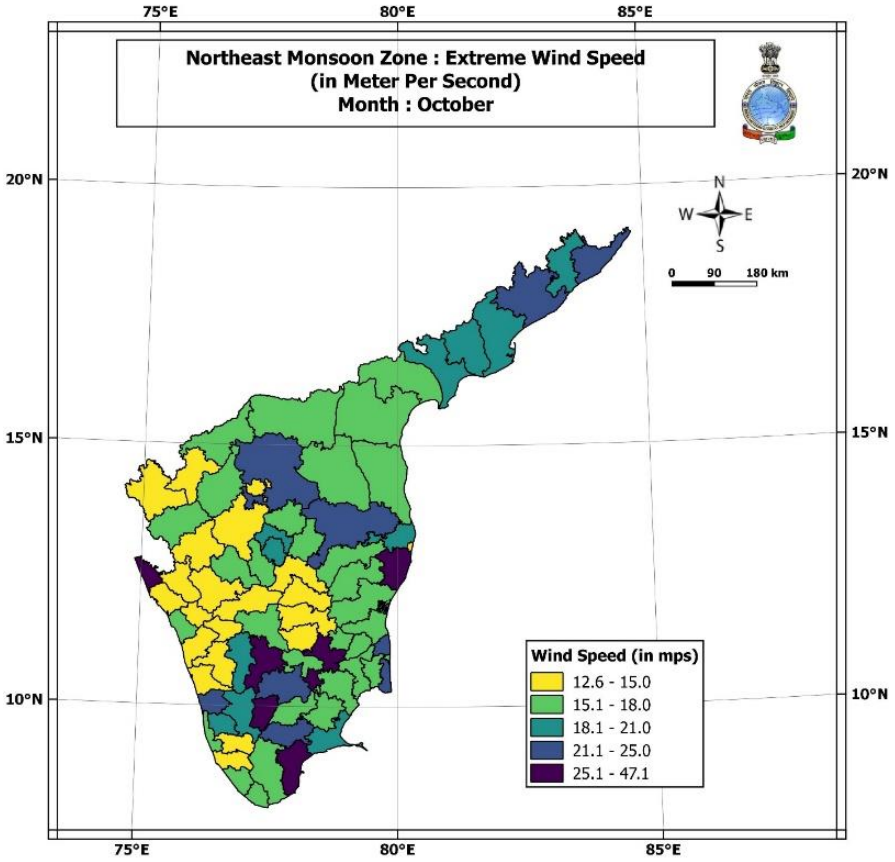

Fig. 2.16 a. Extreme Wind Speed (m/sec) during October (Source: IMD Climate Hazards and Vulnerability Atlas of India, 2022).

Extreme surface wind speed decreases sharply towards interior parts of south Peninsula. By December, northern parts of Tamil Nadu and adjoining parts of Rayalaseema experience the highest extreme wind speed. Over this region extreme surface wind speed varies between 41 and 59 m/sec. Over the southeast parts of Tamil Nadu, extreme surface wind speed varies between 31.0 and 41.0 m/sec. Over other parts of south Peninsula, extreme surface wind speed varies between 12.6 and 31.5 m/sec.

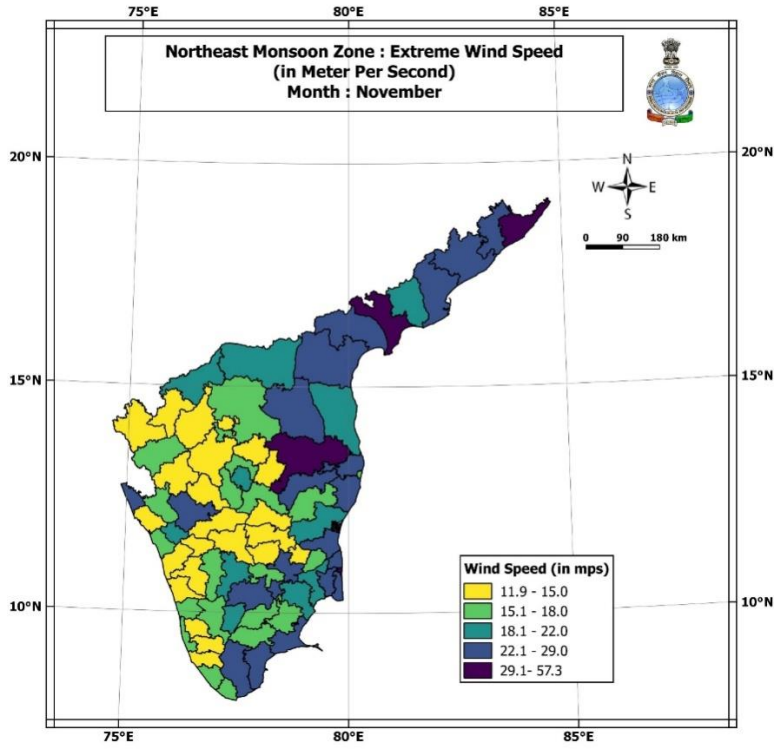

Fig. 2.16 b. Same as Fig 2.16 a, but for November.

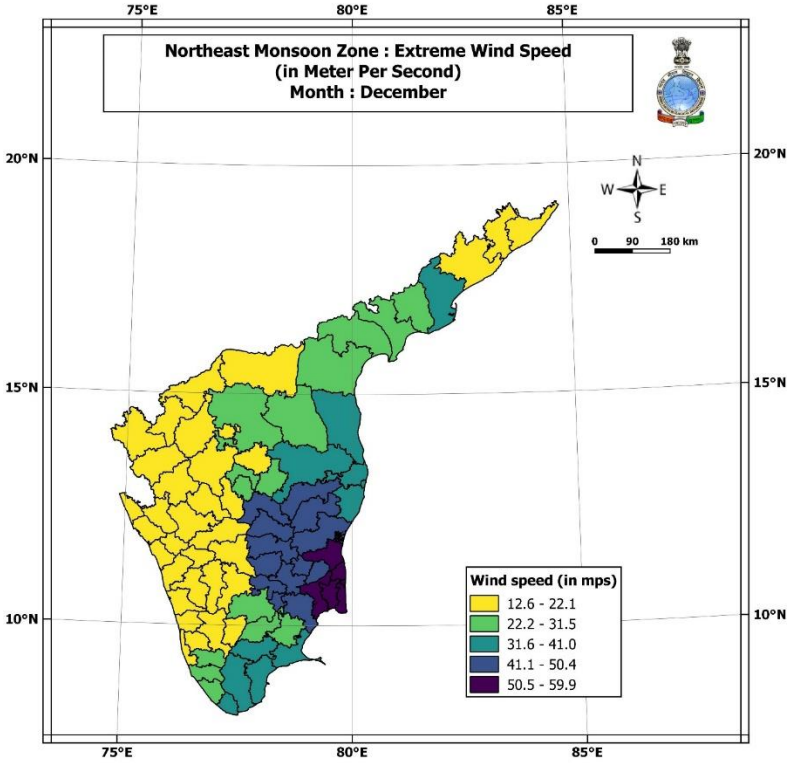

Fig. 2.16 c. Same as Fig 2.16 a, but for December.

Extreme surface wind speed observed over the eastern parts of south peninsula could be attributed to tropical cyclones making landfall over this region during the season. A detailed description of tropical cyclones including their tracks during the NE monsoon season is included in Chapter-4.