

**Wind Hazard:** Extreme wind that may be associated with any weather systems like thunderstorms, cyclones etc is one of the major hazards to the society as the extreme wind can damage any structure, including the building of various types, electrical infrastructure, telecom industry, agriculture, and forest as well as transport and other sectors.

We have initially used hourly wind data from 39 IMD autographic stations with 15 years or more data to compute extreme wind. This hourly data also report the daily maximum gusty wind speed. Since the number of autographic data stations is very small, we have also considered daily synoptic hour data of 490 stations with 15 years or more data. From these 490 stations data, we have prepared month-wise annual maximum wind series data for computation of 50 years return period extreme values. Since these 490 synoptic stations are not reporting gusty wind speed, 50 years of extreme return values were first extracted to represent extreme gusty wind speed. Then the relation between hourly extreme values and maximum gust wind speed for 39 autographic stations were obtained and average over all the 39 stations to establish the relationship between maximum wind and gusty wind over India. We have then multiplied this factor to 50 years return period extreme values obtained from annual maximum series to obtain 50 years return period extreme values of maximum gusty wind speed of 490 stations. Using QGIS raster statistics, finally, monthly wind hazard maps are prepared for 12 months and for annual. In addition, the Normalized Vulnerability Index is being calculated for each district as per the formula mentioned in equation 1.