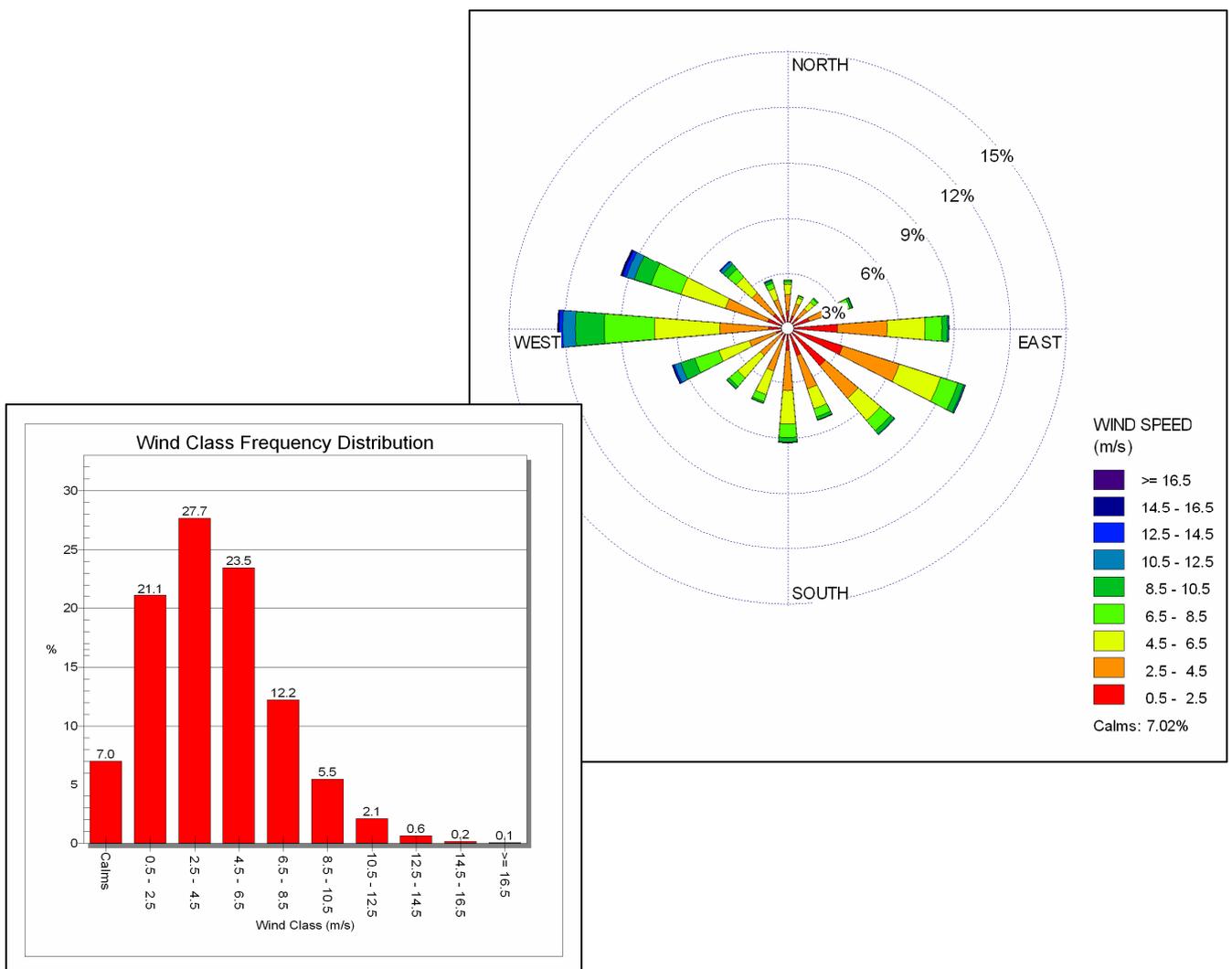


Wind rose

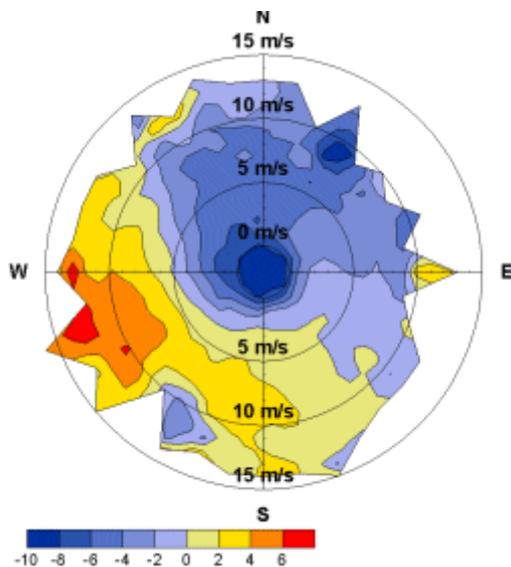
The wind rose in the right-hand figure shows the wind direction conditions at a height of 10 m, in this case distributed over 16 wind directions and 9 wind speed classes including calm (0-0.4 m/s). Data for the wind rose in the example is gathered from observations every hour at a Swedish weather station over a period of 10 years.

The wind direction indicates the direction the wind is coming from. The number of wind directions and wind speed classes can change as required. The wind speed classes are explained in the figure. Rings for 3, 6, 9, 12 and 15% of the time are also indicated. From the figure, we can see that the most common wind direction is West. From this direction, the wind comes approximately 12% of the time. From the figure, we can also see that it is *calm* for 7.02% of the time.

The lower figure shows the wind speed distribution irrespective of wind direction for the same station. We see that the wind speeds between 2.5 and 4.5 m/s are the most common, at 27.7% of the time. Wind speeds greater than 16.5 m/s occur less than 0.1% of the time.



Temperature wind rose



Wind and temperature conditions in an area are an important factor with regard to the outdoor environment. With the help of a so-called temperature wind rose (see figure) and the duration of different winds, we can plan an external environment to achieve the best possible comfort.

The figure shows the average temperature for different wind directions and wind speeds over a period of 40 winter months at a Swedish weather station.

The figure also tells us that heavy winds from the South West produces temperatures on average of 6-8°C, while northerly winds produce a temperature of down to -10°C, i.e. the temperature difference is 18°C on average, depending on wind speed and wind direction.

For more information, contact:
Sofia Malmsten, product responsible
011-495 8125, klimatdata@smhi.se

Sven Kindell, meteorologist
011-495 8201, klimatdata@smhi.se