

Explanation of illustration - Næstved

Three water level lines are drawn on the map: "Average tide level in 100 years", "Current 50-year event" and "50-year event in 100 years". The map assumes that in 100 years the ocean will have risen a half meter.

Average tide level in 100 years

The line shows where the high tide will be twice daily in 100 years. The line is 0.64 meter over the Danish Vertical Reference (DVR). This figure is calculated by the Danish Meteorological Institute and the Administration of Navigation and Hydrography, and based on the current average tide level, to which we have added a half meter.

Be aware that this is an average, and the tide also depends upon astronomical conditions. Variations in the high water level are also influenced by changes in wind and weather. The high tide will therefore occasionally rise higher than the line shows.

Current 50-year event

The line shows the high tide level that statistically can be expected at 50-year intervals – upon extreme high tides that are assumed to occur at least once in a 50-year period. The line is 1.40 meter over the DVR. This figure comes from the Danish Coastal Authority, which regularly makes risk assessments based on local water level measurements throughout the country.

50-year event in 100 years

The line lies 1.90 meter over the DVR. This figure is based on the current 50-year event, to which we have added a half meter.

Be aware that these figures include a number of uncertainties!

Even though the tide line is drawn on the map by means of the most precise height measurements that the National Survey can provide, the measurements can be imprecise and local persons can probably reveal some inaccuracies. Likewise the level of the landscape will change over the next 100 years. In some places, deposits of materials will cause the surface to rise, while erosion elsewhere will lower the surface.

Wind and precipitation also strongly affect the water level and as storms and rain are expected to increase in strength and concentration, the frequency of extremely high water will probably increase. The Academy of Technical Sciences predicts in the report "Effects of Climatic Changes" that high tides in 100 years will reach the level of the current 50-year event (the blue line) about once a year.

High tide varies so much that the line for "Average tide level in 100 years" is almost the same as the current, biological limit for salty tidal meadows. In 100 years this limit – if everything else remains the same – will be at the level of the "Current 50-year event". In some meadows, however, the level will not rise so much because material deposits will cause the terrain to grow higher.

The map suggests how the coast might look in 100 years.

The map has been prepared by the Danish Hydraulic Institute (DHI) with data provided by the National Survey.