Met Office

Arctic sea ice minimum

Arctic sea ice extent reached its seasonal minimum on 13 September 2017, with an extent of 4.64 million square km (Figure 1), according to data from the US National Snow and Ice Data Center (NSIDC). This is the eighth lowest minimum in the satellite record (Figure 2). It is 1.59 million sq km below the 1981-2010 average and 1.25 million square km above the record low extent of 3.39 million square km, which occurred in 2012.



▲ Figure 2: Arctic sea ice minima from 1979 to 2017 according to the NSIDC Sea Ice Index.



▲ Figure 1: Daily Arctic sea ice extent for 2017, compared with recent years, and the 1981-2010 average with +/- 1 and 2 standard deviation intervals indicated by the shaded areas. Data are from the National Snow and Ice Data Center (NSIDC)

Regional conditions

Ice extent at minimum was exceptionally low in the Beaufort and Chukchi Seas; according to NSIDC, some parts of the Beaufort Sea saw the ice edge retreat to its furthest north on record. However, ice extent was higher than many recent years in the seas north of Russia, though still below the 1981-2010 average (Figure 3). The patterns of ice melt largely reflect the Arctic summer weather, which was mostly rather cool and stormy, with only the Beaufort and Chukchi Sea regions seeing long periods of above-average temperatures.

Figure 3: Sea ice extent on 13 September 2017, with 1981-2010 average extent for this date indicated in orange. Underlying map and data courtesy of NSIDC.

