

2010 Regional Sea Ice Outlook for Greenland Sea and Barents Sea August Contribution

Sebastian Gerland¹, Harvey Goodwin¹, and Nick Hughes²

1: Norwegian Polar Institute, 9296 Tromsø, Norway (E-mail: gerland@npolar.no;
goodwin@npolar.no)

2: Norwegian Ice Service, Norwegian Meteorological Institute, 9293 Tromsø (E-mail:
nick.hughes@met.no)

The monthly mean sea ice extent for June 2010 based on Norwegian ice charts produced primarily from passive microwave satellite data, supplemented with high resolution SAR imagery from 2007, is compared with the corresponding monthly mean for July for the previous years 2007-09 (Fig. 1), and with 30, 20, and 10 year averages for monthly means for the periods 79-08, 80-99 and 99-08 (Fig. 2).

For more details on the regions, see the corresponding report from the previous months (May and June data) and references given in there.

Apart from a few exceptions, the ice extent for July 2010 follows for the regions discussed in this update pretty much the ice extent for July 2007, when comparing 2010 with the years 2007-2009 (Fig. 1). The exception is the area near the Greenlandic coast in the southern Greenland Sea, and areas around Franz Josef Land. For both cases the ice extent was less in July 2010 compared with 2007. In July 2010, the area near Franz Josef Land appears basically ice free in Fig. 1. This development can be seen in context with the data presented in the previous update, where a large area south of Franz Josef Land was ice free (which was not ice-free in the earlier years 2007-2009). In most parts of the Greenland Sea ice extent was quite similar in July the last four years. More interannual variability can be seen in the Barents Sea. This contrast was also visible in June data (see previous update).

The intercomparison of July 2010 data with decadal data (Fig. 2) reflects that the Barents Sea continues to be relatively little ice covered compared to the last decades. In the Greenland Sea, ice extent appears more typical, and the ice edges for both individual years and 1-3 decadal means are very close aligning.

Postscriptum:

The ice situation in the first half of August 2010 developed in a way that the ice extent in the Greenland Sea was substantially reduced. Large parts of the Greenland Sea that were ice covered in the July 2010 mean are now ice-free.



Fig. 1: Ice extent (monthly means, July) southern border of 30% ice concentration, in the Greenland Sea / Fram Strait and Barents Sea, based on passive microwave satellite data (red = July 2010, orange = July 2009, green = July 2008, blue = July 2007).

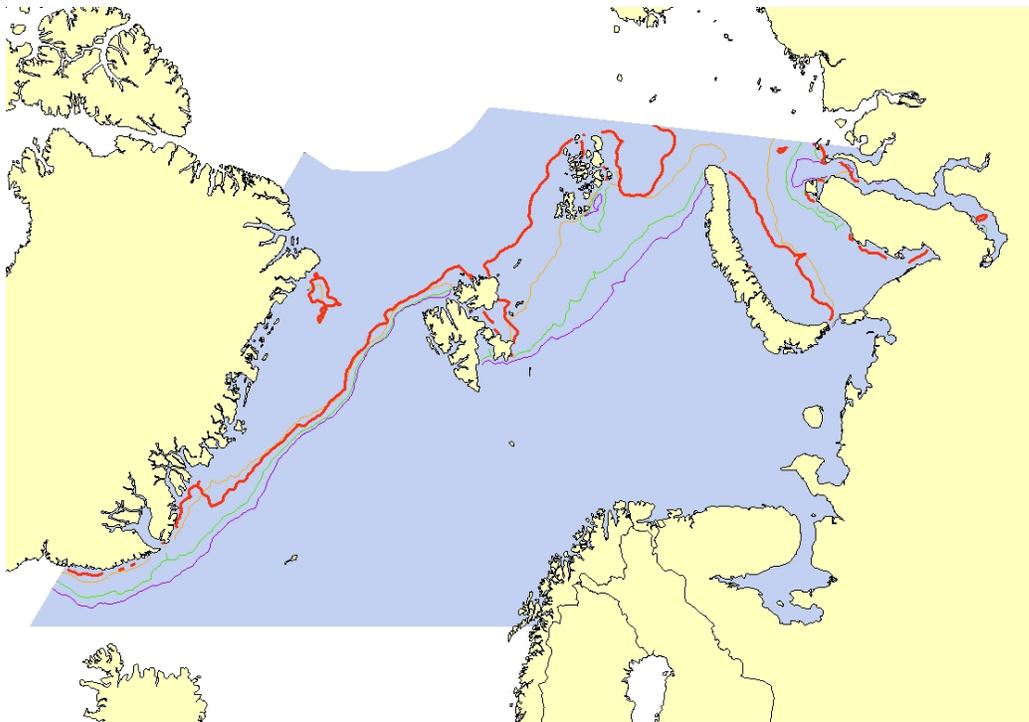


Fig. 2: Ice extent (monthly means, July) southern border of 30% ice concentration, in the Greenland Sea / Fram Strait and Barents Sea, based on passive microwave satellite data (red = July 2010, orange = mean July 1999-2008, green = mean July 1979-2008, purple = mean July 1980-1999).