Sea Ice Outlook
2019 June Report
Individual Outlook

Name of contributor or name of contributing organization:

METNO SPARSE (Wang et al.)

Is this contribution from a person or group not affiliated with a research organization?

Name and organization for all contributors. Indicate primary contact and total number of people who may have contributed to your Outlook, even if not included on the author list.

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Do you want your June contribution to automatically be included in subsequent reports? (If yes, you may still update your contribution via the submission form.)

This is a new submission.

What is the type of your Outlook projection?

Dynamic Model

Starting in 2017 we are accepting both pan-Arctic and pan-Antarctic sea ice extent (either one or both) of the September monthly mean. As in 2016, we are also collecting Alaskan regional sea ice extent. To be consistent with the validating sea ice extent index from NSIDC, if possible, please first compute the average sea ice concentration for the month and then compute the extent as the sum of cell areas > 15%.

a) Pan-Arctic September extent prediction in million square kilometers.

5.896

b) same as in (a) but for pan-Antarctic. If your method differs substantially from that for the Arctic, please enter it as a separate submission.

c) same as in (b) but for the Alaskan region. Please also tell us maximum possible extent if every ocean cell in your region were ice covered.

"Executive summary" of your Outlook contribution (using 300 words or less) describe how and why your contribution was formulated. To the extent possible, use non-technical language.

This contribution is part of the Norwegian Research Coucil's project SPARSE (Developing and advancing Seasonal Predictability of Arctic Sea ice). Here we use the regional coupled ocean-sea ice model to make the prediction. We initialize the model with remote sensing sea ice concentration and thickness, and with reanalysis ocean data from the EU Copernicus Marine Service. The seasonal forecast atmospheric fields of ECMWF (SEA5) is used to drive the model. The model started prediction from 15 May 2019, and run until 1 October 2019. We have saved the daily mean and monthly mean sea ice extent for this period. The September sea ice extent is calculated from the monthly mean sea ice extent.

Brief explanation of Outlook method (using 300 words or less).

The Outlook is a straightforward result of the dynamic model prediction.

Tell us the dataset used for your initial Sea Ice Concentration (SIC).

University of Bremen, AMSR2 sea ice concentration, https://seaice.uni-bremen.de/data/amsr2/

Tell us the dataset used for your initial Sea Ice Thickness (SIT) used. Include name and date.

UCL Centre for Polar Observation and Modeling, Latest 5km Grid of 28-day thickness, http://www.cpom.ucl.ac.uk/csopr/seaice.html

If you use a dynamic model, please specify the name of the model as a whole and each component including version numbers and how the component is initialized:

Ocean-sea ice

If available from your method.
a) Uncertainty/probability estimates:

Median

Ranges

Standard Deviations

b) Brief explanation/assessment of basis for the uncertainty estimate (1-2 sentences).

c) Brief description of any post processing you have done (1-2 sentences).