

Sea Ice Outlook
2022 July Report
Individual Outlook

Name of contributor or name of contributing organization:

NMEFC of China (Li and Li)

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

No

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.

NMEFC of China (Li and Li)

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.)

[Do you want your contribution for this month to automatically be included in subsequent reports?]

What is the type of your Outlook projection?

Statistical/ML

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.

4.76

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.

We predict the September monthly average sea ice extent of Arctic by statistic method and based on daily sea ice concentration and monthly extent from National Snow and Ice Data Center.

The predicted monthly average ice extent of September 2022 is 4.76 million square kilometers .

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

A simple statistical model is used to predict September average Arctic sea ice extent. The sea ice extent of September is well related with the sea ice extent of Jun in the same year. Combined the regression method and optimal climate normal method, the predicted September sea ice extent in 2022 is 4.76 million square kilometers.

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

Sea Ice Index - Daily sea ice concentration(NSIDC NASA Team) and monthly sea ice extent from NSIDC.

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

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:

If available from your method.

a) Uncertainty/probability estimates:

Median

Lower error bound

Lower error bound

Standard Deviation

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).