

SEA ICE OUTLOOK

2024 August Report

By ASIC, NIPR

Contributor

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Contributors

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Executive summary

Monthly mean ice extent in September will be about 4.768 million square kilometers. Our prediction is based on a statistical way using satellite microwave sensor data. We used the sea ice concentration from July 16 to July 26. Predicted ice concentration map from August 1 to September 20 is available on our website:
https://www.nipr.ac.jp/sea_ice/e/forecast/2024-7-31-1/

Type of Outlook method:

Statistical

Dataset

Ice concentration: 10km grid data distributed by Arctic Data Archive System (<https://ads.nipr.ac.jp>), between July 16 2003 and July 26 2024 except for between September 28 2011 and July 2 2012 for AMSR-E/AMSR2 and Ice concentration from WINDSAT, between September 28 2011 and July 2 2012.

Prediction of September pan-Arctic extent as monthly average in million square kilometers.
4.768 million square kilometers

Short explanation of Outlook method.

We predicted the Arctic sea-ice cover from coming August 1 to September 20, using the satellite microwave sensors data, AMSR-E (2002/03-2010/11), AMSR2 (2012/13-2022/23), and WINDSAT (2011/12). We identify the pair of positions with the highest correlation between the annual variation of sea ice concentration at a given location in July and the annual variation of sea ice concentration at a given location on the forecast date. We then calculate the regression equation. The sea ice concentration for August and beyond is determined using this regression equation and the sea ice concentration from the most recent July.

Pan-Arctic sea ice extent anomaly million square km.
0.458 (4.768-4.310)

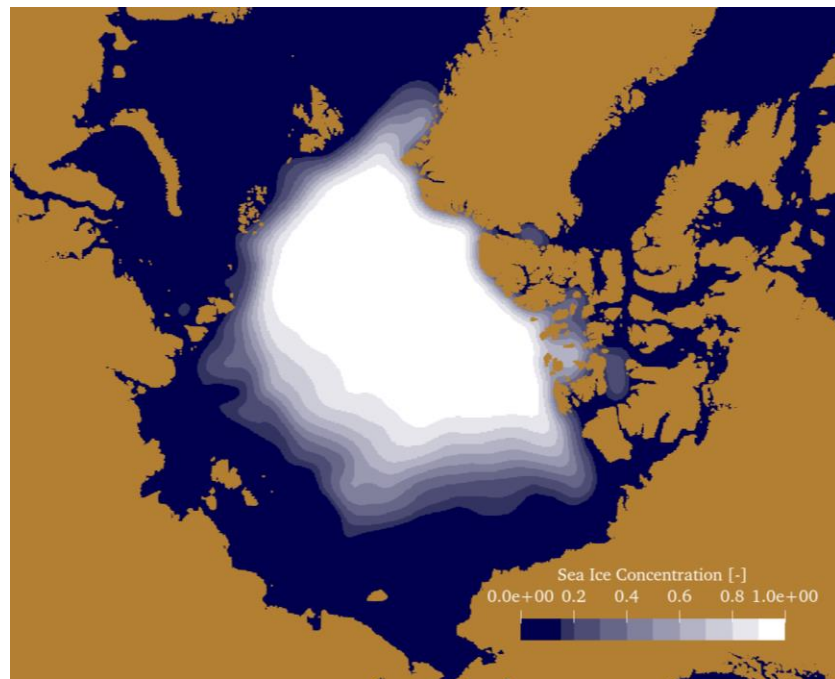


Fig: Predicted monthly-mean ice concentration in September 2024.