

SEA ICE OUTLOOK

2024 June Report

By ArCS II Kids

Contributor

Label: ArCS II Kids

Contributors

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Executive summary

The Arctic ice extent in this September is expected to be 4.48 million square kilometers. The prediction was made by 17 elementary school students.

The students were given a sea ice distribution map for September. They estimated the sea ice extent for each year based on the map and made a graph of the interannual changes for 1993-2023. By looking at the graph, each individual made a prediction of the sea ice extent for September 2024. Finally, the ice extent of the prediction was calculated by averaging the determined values by the 17 individuals.

Six of the students predicted an increase in area over last year, nine predicted a decrease, and one predicted no change. The maximum and minimum predicted values were 5.44 and 3.89, respectively.

Type of Outlook method:

Heuristic

Dataset

Ice concentration: 25km grid data from SSM/I, and 10km grid data from AMSR-E and AMSR2, distributed by Arctic Data Archive System (<https://ads.nipr.ac.jp>)

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

4.48 million square kilometer

Short explanation of Outlook method.

The prediction was made by 17 elementary school students in Tachikawa, Tokyo. The students were given a sea ice distribution map for September. Based on this, they estimated the sea ice extent for each year and made a graph of the interannual changes for 1993-2023. By looking at the graph, each individual

made a prediction of the sea ice extent for September 2024. Finally, the ice extent of the prediction was calculated by averaging the determined values by the 17 individuals.

Pan-Arctic sea ice extent anomaly

+0.35 (4.48-4.13) million square kilometers

Predicted value of each (million square kilometers)

Sumitaka Simoji	3.89
Shiho Sekiguchi	4.18
Masahide Kawai	5.44
Momoka Hosoya	4.18
Misuzu Uehara	5.34
Rintaro Hagiwara	4.28
Syouta Sudou	4.14
Kaho Watase	4.28
Yuika Tsuchida	4.96
Kokorou Akiyama	3.99
Haruma Osaki	5.15
Himari Akiba	4.47
Kotarou Morita	4.09
Haru Hitaka	4.20
Yukinao Ueda	4.67
Rin Furuki	4.28
Yuuto Motizuki	4.67

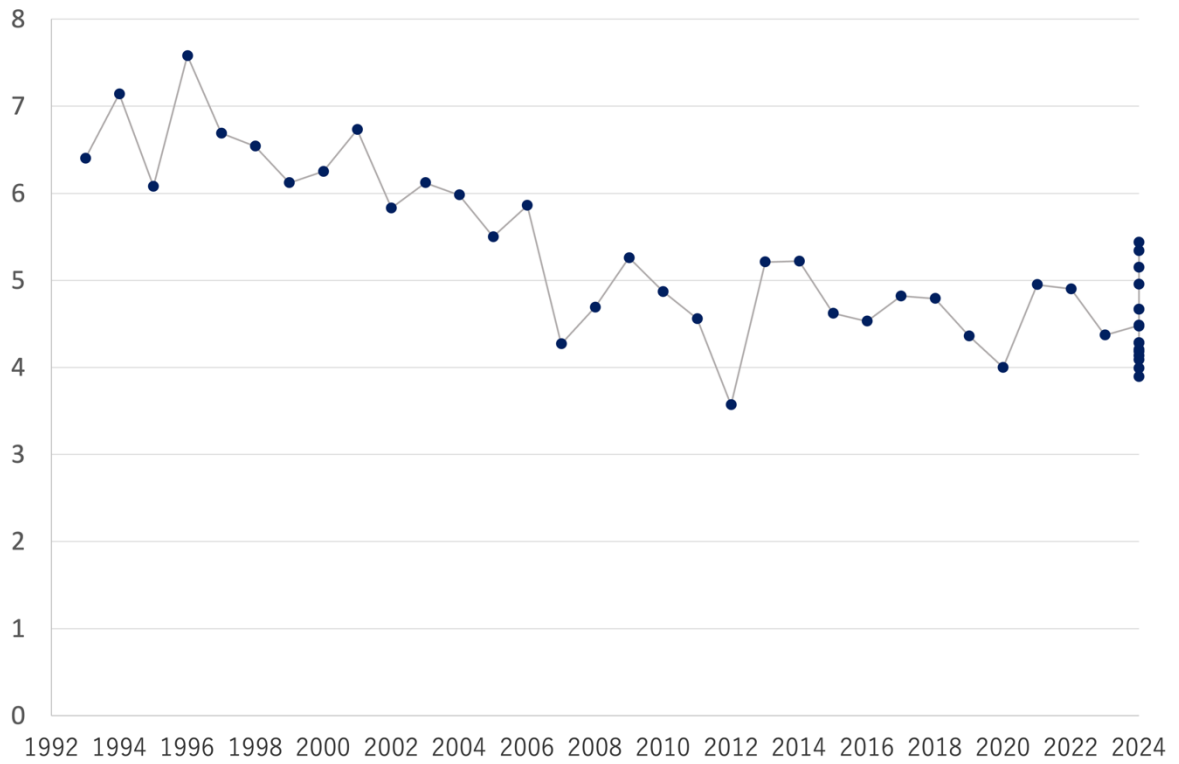


Fig: Interannual change in sea ice extent in September since 1993. Dots in 2024 are predicted values