

SEA ICE PREDICTION NETWORK (SIPN)
Template for Pan-Arctic Sea Ice Outlook Core Contributions
June 2015 Report

*REQUIRED

1. *Contributor Name(s)/Group – how you would like your contribution to be labeled in the report (e.g., Wiggins et al.)

Wanqiu Wang

2. *"Executive summary" about your Outlook contribution (max 300 words)
Say in a few sentences what your Outlook contribution is and why. To the extent possible, use non-technical language.

A projected September Arctic sea ice extent of 5.7×10^6 km² is based on a NCEP ensemble mean CFSv2 forecast initialized from the NCEP Climate Forecast System Reanalysis (CFSR) that assimilates observed sea ice concentrations and other atmospheric and oceanic observations. Raw forecast output is bias-corrected based on the systematic of the forecast for recent years. The uncertainty is estimated as the root mean square (rms) error of the ensemble mean based on CFSv2 hindcasts (1982-2010) and forecasts (2011-2014). Estimated error is $\pm 0.47 \times 10^6$ km².

3. *Type of Outlook projection

dynamic model statistical heuristic mixed or other: (specify)

If you use a model, please specify:

Model Name CFSv2

Components of the model: Atmosphere , Ocean , Ice , Land ,

For models lacking an atmosphere or ocean, please describe the forcing: _____

4. *September monthly average projection (extent in million square kilometers. To be consistent with the validating sea ice extent index from NSIDC, if possible please first compute the average concentration for the month and then compute the extent as the sum of area of all cells > 15%.)

Ensemble mean September extent is 5.7×10^6 km²

5. *Short explanation of Outlook method (max 300 words)

In addition, we encourage you to submit a more detailed Outlook, including discussions of uncertainties/probabilities, including any relevant figures, imagery, and references.

If this is a model contribution, please include method of method of initialization and variable used.

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6. Projection uncertainty/probability estimate for September extent (only required if available with the method you are using)

Estimated error is $\pm 0.47 \times 10^6 \text{ km}^2$

7. Short explanation/assessment of basis for the uncertainty estimate in #6 (1-2 sentences)

The uncertainty is estimated as root mean square (rms) error of the ensemble mean based on CFSv2 hindcasts (1982-2010) and forecasts (2011-2014).