

SEA ICE PREDICTION NETWORK (SIPN)
Template for Pan-Arctic Sea Ice Outlook Core Contributions
July 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.) Blanchard-W et al, NCAR/CESM

2. * Individuals submitting "public" contributions should self-identify here:
_____ Yes, this is a "public" contribution.

3. *"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.

Our July Outlook for September 2015 is 4.99 million sq km. We have used the NCAR CESM global fully coupled model to make this prediction. Our uncertainty is 0.47 million sq km.

4. *Type of Outlook projection
___dynamic model X___statistical ___heuristic ___mixed or other: (specify)

If you use a model, please specify:

Model Name _____NCAR CESM1_____

Components of the model: Atmosphere_CAM4_, Ocean_POP_, Ice_CICE_, Land_CLM_,

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

5. *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%.)
4.99+/- 0.47

6. *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.

The model is initialized on May 1 with ocean and sea ice components taken from the CORE-forced ice-ocean model ran at NCAR (S Yeager personal communication), and considered to be an estimate of observations. Given the ice-ocean model biases in the Arctic, we have replaced sea ice thickness with May 1 PIOMAS ice thickness. We run two ensembles with 9 runs each: one with climatological (2005-2014) May 1 sea ice thickness, and another with 2015 May 1 sea ice thickness. We take the difference in extent between the two (+0.25 million sq km), and apply this to the linear forecast of Sept 2015 (4.74 million sq km).

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

0.47 million sq km.

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

This is the September extent standard deviation of the runs in the ensembles

9. Please indicate if this contribution should be used for both the July 2015 and the August 2015 SIO reports:

Yes, use this contribution for both July and August.

No, a separate contribution will be submitted for the August report.