

(/sipn)

# July Call for Sea Ice Outlook Contributions

#### July Report

Submission deadline (firm): Wednesday, 9 July 2014.

Send Outlooks to: Kristina Creek at ARCUS (creek@arcus.org (mailto:creek@arcus.org))

The Sea Ice Prediction Network (SIPN) announces the call for contributions for the Sea Ice Outlook July report.

The Sea Ice Outlook provides an open process for those interested in arctic sea ice to share ideas about the September minimum sea ice extent. The monthly reports contain a variety of perspectives–from advanced numerical models to qualitative perspectives from citizen scientists. A post-season report will provide an in-depth analysis of factors driving sea ice extent this summer as well as explore the scientific methods for predicting seasonal ice extent.

For the July Outlook report, both pan-Arctic and regional outlooks will be accepted; we particularly encourage spatial forecasts and maps. All contributors should read this month's call for contributions carefully, as it has been revised from last month's call.

We also welcome any field-based updates on ice conditions in the different regions that may help shed light on the seasonal evolution over the course of the summer and contribute to an evaluation of model performance at the end of summer.

Next month's report (August report) will focus more on regional Outlooks and local-scale information in forecast maps.

# All Outlook submissions should be sent directly to Kristina Creek at ARCUS (creek@arcus.org (mailto:creek@arcus.org)) with the following subject lines, as relevant:

PAN-ARCTIC OUTLOOK - [YOUR LAST NAME/GROUP NAME] REGIONAL OUTLOOK - [YOUR LAST NAME/GROUP NAME] OUTLOOK FOR BOTH REGIONAL AND PAN-ARCTIC - [YOUR LAST NAME/GROUP NAME]

An MS Word document is preferred for ease of formatting to PDF files and extracting images for the website--we will not edit your individual submission and will not post your Word documents.

This month's submission guidelines has the following sections:

- Core Requirements for Pan-Arctic Outlook Contributions
- Additional (Optional) Items for Pan-Arctic Outlook Contributions
- Information on Regional Outlook submission
- Submitting figures and data (optional)

# **Submission Guidelines**

## **Core Requirements for Pan-Arctic Outlook Contributions**

The following items are required.

You may also download a template in MS Word: SIO Panarctic Template July (DOCX - 116 KB) (/files/page/documents/21162/sio\_panarctic\_template\_july.docx)

1. Contributor Name(s)/Group

2. Type of Outlook projection

Numerical (time-stepping) Model\_\_\_ Statistical\_\_\_ Heuristic\_\_\_

If you use a numerical model, please specify:

Model Name

Components of the model (please check): Atmosphere\_\_\_ Ocean\_\_\_ Ice\_\_\_ Land\_\_\_ For a model that lacks an atmosphere and/or ocean component, please specify forcing

sources

Are you initializing your method with data from May (or earlier)\_\_\_\_\_ or June\_\_\_\_\_

Were there any data assimilated in your initialization process? If so, which field(s) was/were ?

- 3. September monthly average projection (in million square kilometers)
- 4. Short explanation of Outlook method (1-3 sentences)

If this is a model contribution, please include method of initialization and variable used. In addition, we encourage you to submit a more detailed Outlook, including discussions of uncertainties/probabilities and any relevant figures, imagery, and references.

5. Projection uncertainty/probability estimate (but only required if available with the method you are using)

- 6. Short explanation/assessment of basis for the uncertainty estimate in #5 (1-2 sentences; only required if available with the method you are using)
- "Executive summary" about your Outlook contribution
  1-3 sentences, to be used in Outlook summary: say in a few sentences what your Outlook contribution is and why. To the extent possible, use non-technical language.

# Additional (Optional) Items for Pan-Arctic Outlook Contributions

These are optional but strongly encouraged, as the additional information will allow the SIPN team to better synthesize the Outlook contributions.

- 1. Submit a map and/or data field of your predicted September sea ice extent/concentration. See below for further information and guidelines on formats.
- 2. Hindcast validation statistics for a set period. If your method has been tested in a hindcast mode, please provide summary statistics for whatever period used.
- 3. Estimate for the week that the minimum daily extent will occur (expressed in date format using Sunday to denote the week: e.g., week of 14 September).

### Submitting A Regional Outlook

If your method does not include the whole Arctic, or you have a specialized method for a subregion, read on. Regional Outlook contributions should include:

- 1. Region of Interest
- Please describe the region your Outlook covers; a location map showing your Outlook region is preferred. 2. Sea Ice Parameter

Provide a regional pattern or a single value estimate of phenological stages (i.e., melt onset, freeze onset, break-up and freeze-up dates, length of open water season) or monthly ice concentration, ice area, and ice extent. Please indicate whether you expect ice conditions to be similar, lighter (i.e., lower ice concentrations, earlier melt onset, earlier break-up, later freeze-up), or heavier (i.e., greater ice concentrations, later melt onset, later break-up, earlier freeze-up) than those of summer 2013.

3. Outline of Methods/Techniques

Provide the type of estimate (heuristic, statistical, ice-ocean model, traditional knowledge, etc.) with a brief description of the methodology and a short paragraph describing the physical rationale for the estimate.

4. Estimate of Forecast Skill

If possible, please include any estimates of past forecast skill and probability/uncertainty associated with your prediction.

### Submitting figures and data (optional)

Email Edward Blanchard-Wrigglesworth at ed@atmos.uw.edu (mailto:ed@atmos.uw.edu) to arrange to submit your figures and/or data or for inquiries.

These are optional but strongly encouraged for all participants whose methods provide information at the local scale. We will ask for these items henceforth. If you cannot contribute now, please read on anyway so you can take steps to provide the information in the future.

Provide a spatial forecast map for September mean ice extent (e.g., jpg, tiff, pdf). If your method predicts sea ice extent (SIE) directly, average it in time and across ensemble members, if you have them, for September (giving values between 0 and 100% inclusive). If your method predicts sea ice concentration (SIC) directly, please average it in time to make a monthly mean SIC, then convert it to SIE (grid cells with SIC<15% are assigned SIE=0% and SIC>=15% are assigned SIE=100%). Finally average across ensemble members, if you have them. We refer to this field as a sea ice probability (SIP).

Sample of SIP (i.e., ensemble mean SIE) in percent for a random year from CESM1.1.

Sample of SIP (i.e., ensemble mean SIE) in percent for a random year from CESM1.1.

2. Provide a spatial map of the first ice-free date (Julian Day when SIC<15% or SIE=0%) in 2014. Also provide a map of one standard deviation across ensemble members, if you have them. Ideally the date is derived from daily frequency output of SIC. For IFD, identify ocean (SIC<15% upon initialization) with the Julian day of the start date (July 1 is day 182) and ice points that always have SIC>15% with the end date (Sep 31 is day 273). We refer to this field as ice-free date (IFD).

Sample of IFD (first ice free date as Julian Day) ensemble mean (left) and std dev (right) for a random year from CESM1.1. Sample of IFD (first ice free date as Julian Day) ensemble mean (left) and std dev (right) for a random year from CESM1.1.

Use the following naming convention for filenames (for example if your sir name is Smith) and you are forecasting September 2014 using June initial data:

Smith\_Sep2014\_Junedata\_SIP.jpg Smith\_Sep2014\_Junedata\_IFD.jpg Smith\_Sep2014\_Junedata\_stdIFD.jpg Smith\_Sep2014\_Junedata\_README.txt

- (http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_README.txt) (explaining how you computed SIP and IFD, follow link for an example)
- 3. Provide your data for SIP and IFD (maps in #1 and #2 above) in a format with geographic information included or in NetCDF, if possible. We will work with the format provided as long as all relevant grid/projection/data format information is provided. Provide the data on your native grid and, if possible, on a common 1 degree grid.

Include latitude (lat) and longitude (lon) grid information in degrees, and for your native grid, include gridcell area (areacello) in square meters. For SIP and IFD, Identify land points in your data field with the identifier -999. Include the std. dev. of IFD (stdIFD) in the same file with IFD.

If you must submit text, please use a column format in the order: lat, lon, areacello (for the file that is on your native grid), and finally the data field. Separate columns with spaces (preferred), commas, or tabs. Do not include any information such as variables names at the beginning. Provide that information in a separate metadata file with all the information needed to understand the file.

For the common grid, please include latitudes 60N, 61N, 62N ... 89N and longitudes 180W, 179W, ... 179E (or 0 to 360E). No need to include areacello for the common grid.

If you provide NetCDF files use the following naming convention (or as necessary for an equivalent set of GeoTIFF files):

Smith\_Sep2014\_Junedata\_SIP\_native.nc

(http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_SIP\_native.nc) (follow links for an example of each) Smith\_Sep2014\_Junedata\_IFD\_native.nc

(http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_IFD\_native.nc) Smith\_Sep2014\_Junedata\_SIP\_common.nc (/files/page/documents/21162/smith\_sep2014\_junedata\_sip\_common.nc) Smith\_Sep2014\_Junedata\_IFD\_common.nc (/files/page/documents/21162/smith\_sep2014\_junedata\_ifd\_common.nc)

Or if you must use text, please provide all of the following files:

Smith\_Sep2014\_Junedata\_SIP\_native.txt (http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_SIP\_native.txt) Smith\_Sep2014\_Junedata\_SIP\_native\_meta.txt (http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_SIP\_native\_meta.txt) Smith\_Sep2014\_Junedata\_IFD\_native.txt (http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_IFD\_native.txt) Smith\_Sep2014\_Junedata\_IFD\_native\_meta.txt (http://www.atmos.washington.edu/~bitz/SIPN/Smith\_Sep2014\_Junedata\_IFD\_native\_meta.txt) Smith\_Sep2014\_Junedata\_IFD\_native\_meta.txt Smith\_Sep2014\_Junedata\_SIP\_common\_txt Smith\_Sep2014\_Junedata\_IFD\_common.txt Smith\_Sep2014\_Junedata\_IFD\_common\_txt

## SIPN

2023: September Report (/sipn/sea-ice-outlook/2023/september)

#### 2023: August Report (/sipn/sea-ice-outlook/2023/august)

- 2023: August Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2023/august/call)
- 2023: July Report (/sipn/sea-ice-outlook/2023/july)
- 2023: July Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2023/july/call)
- 2023: June Report (/sipn/sea-ice-outlook/2023/june)
- 2023: June Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2023/june/call)
- 2022: Post-Season Report (/sipn/sea-ice-outlook/2022/interim-post-season)
- 2022: September Report (/sipn/sea-ice-outlook/2022/september)
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- 2022: June Report (/sipn/sea-ice-outlook/2022/june)
- 2022: June Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2022/june/call)
- 2021: Post-Season Report (/sipn/sea-ice-outlook/2021/post-season)
- 2021: September Report (/sipn/sea-ice-outlook/2021/september)
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- 2021: June Report (/sipn/sea-ice-outlook/2021/june)
- 2021: June Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2021/june/call)
- 2020: Post-Season Report (/sipn/sea-ice-outlook/2020/post-season)
- 2020: Interim Post-Season Report (/sipn/sea-ice-outlook/2020/interim-post-season)
- 2020: August Report (/sipn/sea-ice-outlook/2020/august)
- 2020: August Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2020/august/call)
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- 2020: June Call for Sea Ice Outlook (/sipn/sea-ice-outlook/2020/june/call)
- 2019: Post-Season Report (/sipn/sea-ice-outlook/2020/post-season-0)
- 2019: Interim Post-Season Report (/sipn/sea-ice-outlook/2019/interim-post-season)
- 2019: August Report (/sipn/sea-ice-outlook/2019/august)

#### 2019: July Report (/sipn/sea-ice-outlook/2019/july)

- 2019: June Report (/sipn/sea-ice-outlook/2019/june)
- 2018: Post-Season Report (/sipn/sea-ice-outlook/2018/post-season)
- 2018: Interim Post-Season Report (/sipn/sea-ice-outlook/2018/interim-post-season)
- 2018: August Report (/sipn/sea-ice-outlook/2018/august)
- 2018: July Report (/sipn/sea-ice-outlook/2018/july)
- 2018: June Report (/sipn/sea-ice-outlook/2018/june)
- 2017: Post-Season Report (/sipn/sea-ice-outlook/2017/post-season)
- 2017: August Report (/sipn/sea-ice-outlook/2017/august)
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- 2017: June Report (/sipn/sea-ice-outlook/2017/june)
- 2016: Post-Season Report (/sipn/sea-ice-outlook/2016/post-season)
- 2016: August Report (/sipn/sea-ice-outlook/2016/august)
- 2016: July Report (/sipn/sea-ice-outlook/2016/july)
- 2016: June Report (/sipn/sea-ice-outlook/2016/june)
- 2015: Post-Season Report (/sipn/sea-ice-outlook/2015/post-season)
- 2015: DRAFT Post-Season Report (/sipn/sea-ice-outlook/2015/summary-draft)
- 2015: August Report (/sipn/sea-ice-outlook/2015/august)
- 2015: July Report (/sipn/sea-ice-outlook/2015/july)
- 2015: June Report (/sipn/sea-ice-outlook/2015/june)
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- 2010: July Report (/sipn/sea-ice-outlook/2010/july)
- 2010: June Report (/sipn/sea-ice-outlook/2010/june)
- 2009: Summary Report (/sipn/sea-ice-outlook/2009/post-season)
- 2009: Early September Update (/sipn/sea-ice-outlook/2009/september)
- 2009: August Report (/sipn/sea-ice-outlook/2009/august)
- 2009: July Report (/sipn/sea-ice-outlook/2009/july)
- 2009: June Report (/sipn/sea-ice-outlook/2009/june)
- 2008: Summary Report (/sipn/sea-ice-outlook/2008/post-season)
- 2008: July Report (/sipn/sea-ice-outlook/2008/july)
- 2008: June Report (/sipn/sea-ice-outlook/2008/june)
- 2008: May Report (/sipn/sea-ice-outlook/2008/may)

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(https://nerc.ukri.org)



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