Sea Ice Outlook

2023 July Report Individual Outlook

Name of contributor or name of contributing organization:

NCEP-EMC (Wu et al.)

Is this contribution from a person or group not affiliated with a research organization?

Name and organization for all contributors. Indicate primary contact and total number of people who may have contributed to your Outlook, even if not included on the author list.

NCEP-EMC (Wu et al.)

Do you want your June contribution to automatically be included in subsequent reports? (If yes, you may still update your contribution via the submission form.)

[Do you want your contribution for this month to automatically be included in subsequent reports?]

What is the type of your Outlook projection?

Dynamic Model

Starting in 2017 we are accepting both pan-Arctic and pan-Antarctic sea ice extent (either one or both) of the September monthly mean. As in 2016, we are also collecting Alaskan regional sea ice extent. To be consistent with the validating sea ice extent index from NSIDC, if possible, please first compute the average sea ice concentration for the month and then compute the extent as the sum of cell areas > 15%.

a) Pan-Arctic September extent prediction in million square kilometers.

b) same as in (a) but for pan-Antarctic. If your method differs substantially from that for the Arctic, please enter it as a separate submission.

19.26

c) same as in (b) but for the Alaskan region. Please also tell us maximum possible extent if every ocean cell in your region were ice covered.

"Executive summary" of your Outlook contribution (using 300 words or less) describe how and why your contribution was formulated. To the extent possible, use non-technical language.

The projected Arctic minimum sea ice extent from the NCEP CFSv2 model May-June initial conditions (ICs) using 244-member ensemble forecast (4 cycles each day May 1 to June 30) is 4.00 million square kilometers with a standard deviation of 0.32 million square kilometers. The corresponding number for the Antarctic (maximum) is 19.26 million square kilometers with a standard deviation of 0.84 million square kilometers.

Brief explanation of Outlook method (using 300 words or less).

We used the NCEP CFSv2 model with 244-case of May-June 2023 initial conditions (4 cycles each day May 1 – June 30).

Tell us the dataset used for your initial Sea Ice Concentration (SIC).

NCEP Sea Ice Concentration Analysis for the CFSv2 (May 1-June 30, 2023)

Tell us the dataset used for your initial Sea Ice Thickness (SIT) used. Include name and date.

NCEP CFSv2 model guess (May 1-June 30, 2023)

If you use a dynamic model, please specify the name of the model as a whole and each component including version numbers and how the component is initialized:

a) Model Name: NCEP CFSv2

b) Component Name Initialization

O	Ocean	GFDL MOM4	NCEP GODAS	
IC	CE	Modified GFDL SIS	SIC nudging	
c)	244 ensemble me	mbers (May 1-June 30 20	23, each day from all 4 cycles)	
If availah	le from vour meth	nod		
If available from your method. a) Uncertainty/probability estimates:				
., 01100100				
Median				
Lower error bound				
Lower error bound				
Standard 1	Deviation			
0.32				
0.32				
b) Brief explanation/assessment of basis for the uncertainty estimate (1-2 sentences).				
	-		•	
a) Rri of do	ecarintian of any	oost-processing you have	dono (1.2 contangos)	
c) brief de	scription of any p	ost-processing you have	uone (1-2 sentences).	

NCEP GFS

NCEP CDAS

Atmosphere