

SEA ICE EXTENT FROM 1978 to 2023

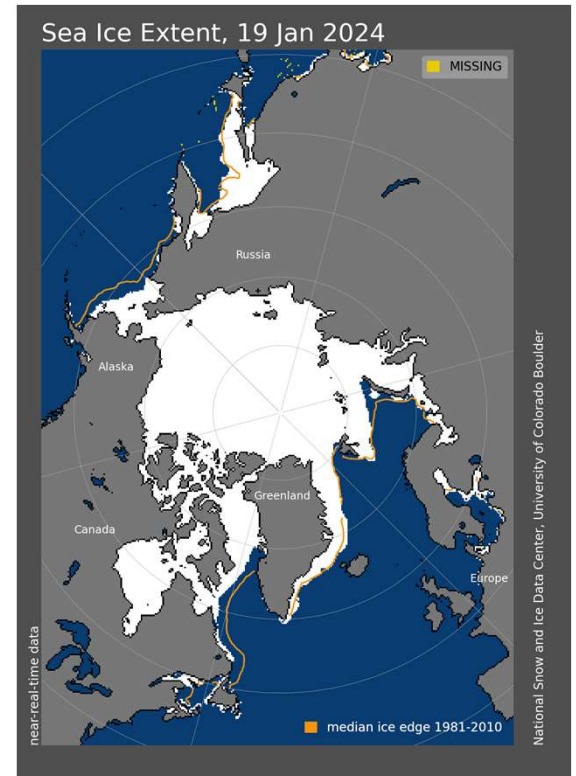
Visualizing Sea Ice Extent in the Arctic
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-- Sea Ice --

Arctic Sea Ice plays an important role in the climate system of Earth, as a higher surface albedo reflects more sunlight, and therefore aids in cooling the whole planet (Budikova, 2009)

-- Data --

The data depicted on this poster is found in the **Sea Ice Index, Version 3** (Fetterer, 2017). It contains daily sea ice extent, measured in millions of m^2 , corresponding to each day of the year, from 1978 until 2023



Sea Ice Index From 1978 to 2022

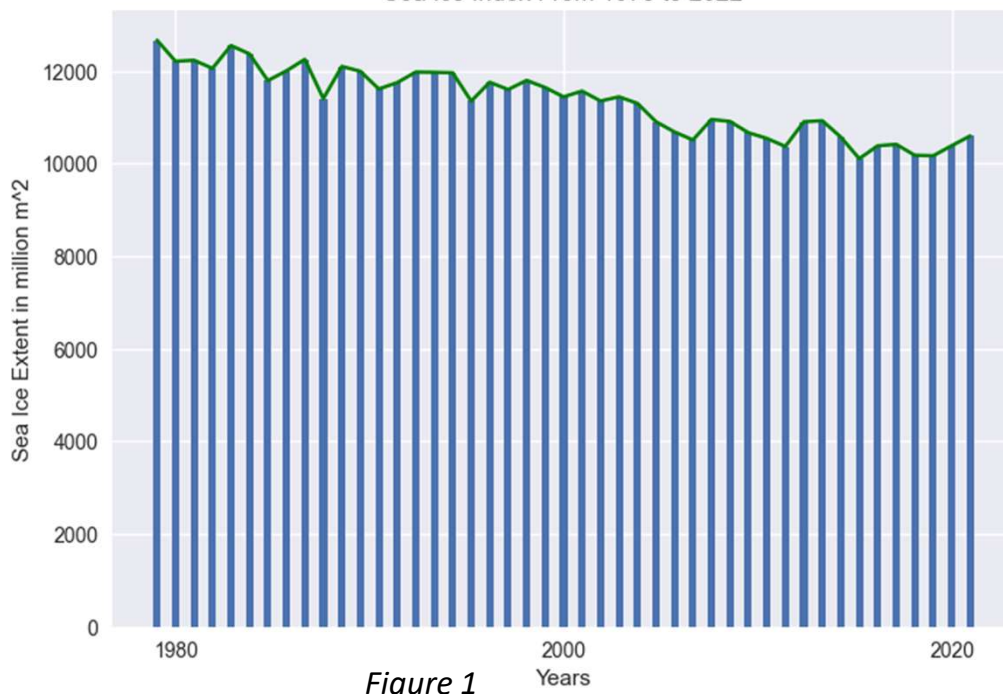


Figure 1

-- Figure 1 --

Bar Chart and Line graph showing amount of sea ice per year. The mean Sea Ice Extent (in million m^2) for each year from 1978 until 2022 is shown

-- Figure 2 --

Line Graph depicting sea ice extent through the months of the year. This is plotted using daily sea ice extent for each day throughout two years: 2002 and 2022.

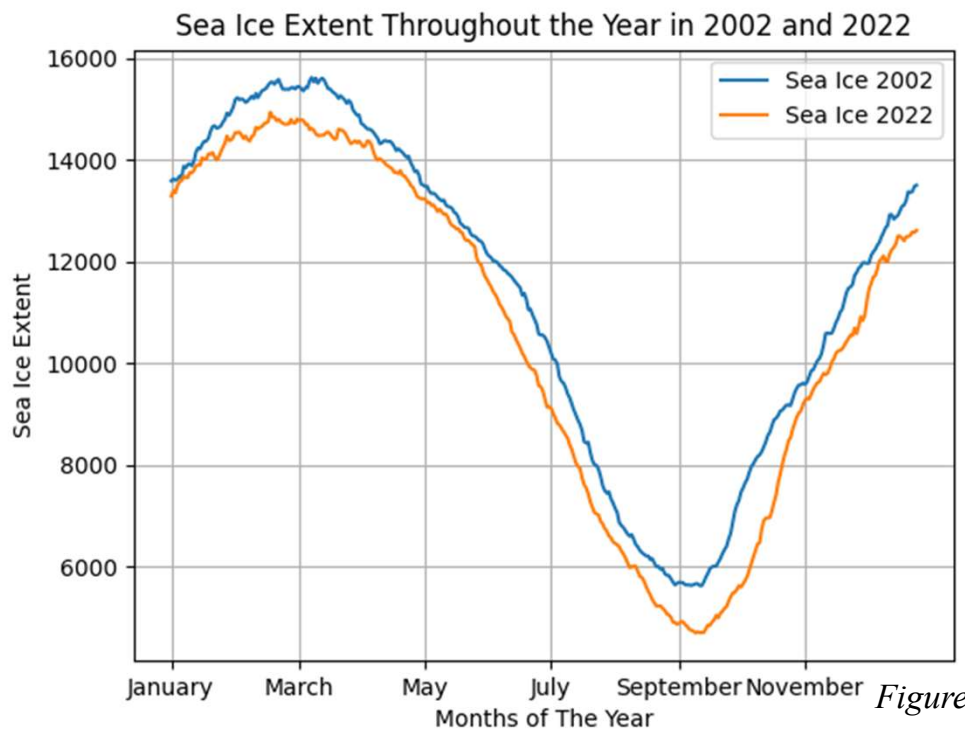


Figure 2:

-- Visualization using Python --

Figure 1:

Using matplotlib, the pyplot.bar and the pyplot.plot were used, using the style "seaborn". Using xticks, only the years "1980", "2000", and "2020" are shown on the x axis.

-- Visualization using Python --

Figure 2:

Using matplotlib, two line graphs are shown, using the xticks function to show the label for every second month of the year.

-- Conclusion --

These graphs visualize the amount of Arctic Sea Ice in the Northern Hemisphere. These visualizations seem to correspond with the research showing the decline of sea ice throughout the years. In Figure 1, one can see the steady overall decline of mean yearly sea ice extent. In Figure 2, the seasonal trend of sea ice extent is shown, as well as the overall amount between 2002 and 2022.

References:

Fetterer, F., K. Knowles, W. N. Meier, M. Savoie, and A. K. Windnagel. (2017). Sea Ice Index, Version 3 [Data Set]. Boulder, Colorado USA. National Snow and Ice Data Center. <https://doi.org/10.7265/N5K072F8>

Budikova, D. Role of Arctic sea ice in global atmospheric circulation: A review, Global and Planetary Change, Volume 68, Issue 3, 2009, Pages 149-163, ISSN 0921-8181, <https://doi.org/10.1016/j.gloplacha.2009.04.001>.