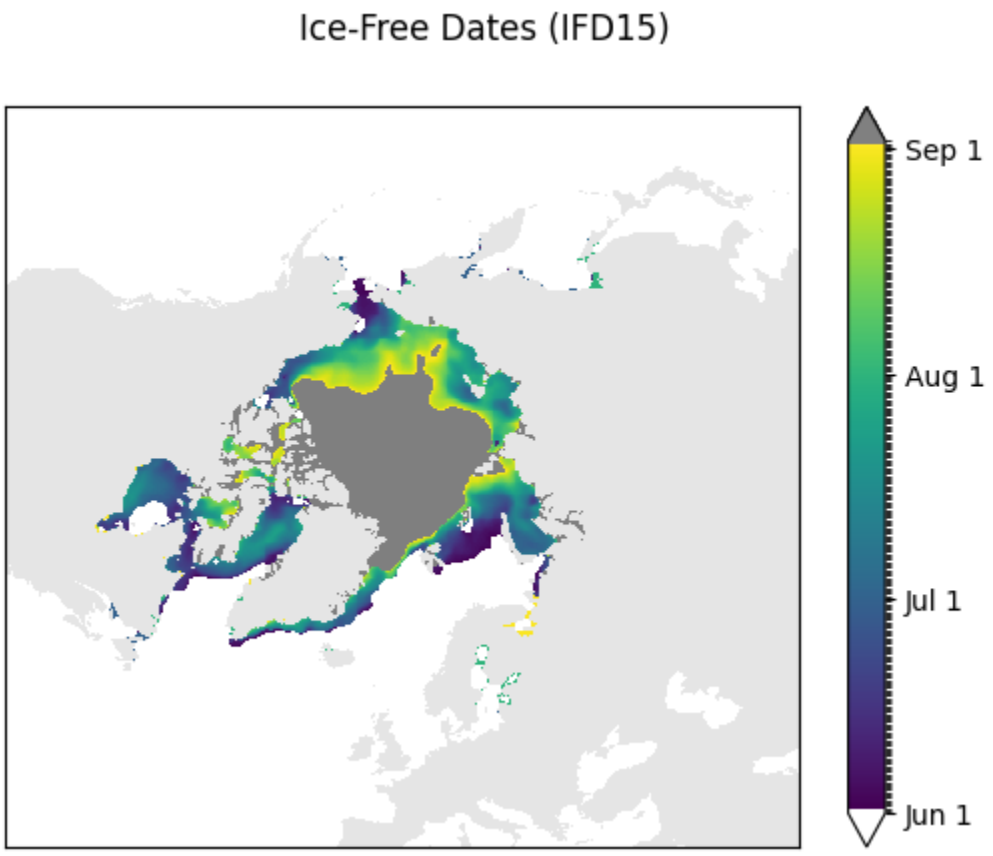
IceNet

British Antarctic Survey

IceNet is a probabilistic, deep learning sea ice forecasting system. It utilises ensemble modelling of U-Net networks to generate daily forecasts of sea ice condition, trained on climate reanalysis and sea ice observational data. Forecasts from the original IceNet research model submitted in a previous contribution call with the identifier of “IceNet1”. At the time, it was based on code developed for publication in Nature Communications which trained on climate simulations and observational data to forecast the next 6 months of monthly-averaged sea ice concentration maps. The latest operational IceNet library generates daily forecasts for a 93-day lead time which is being used for outlook generation, hence, it does not fully cover the months of June-Sept.

For the June contribution, full Sea Ice Concentration fields have been submitted for the pan-Arctic and Antarctic regions (forecasting for 1st of June 2024 to 1st of September 2024), and the computation of Ice-Free Dates up to the available forecast lead time.



June 2024 Contribution