

Supplementary Figures

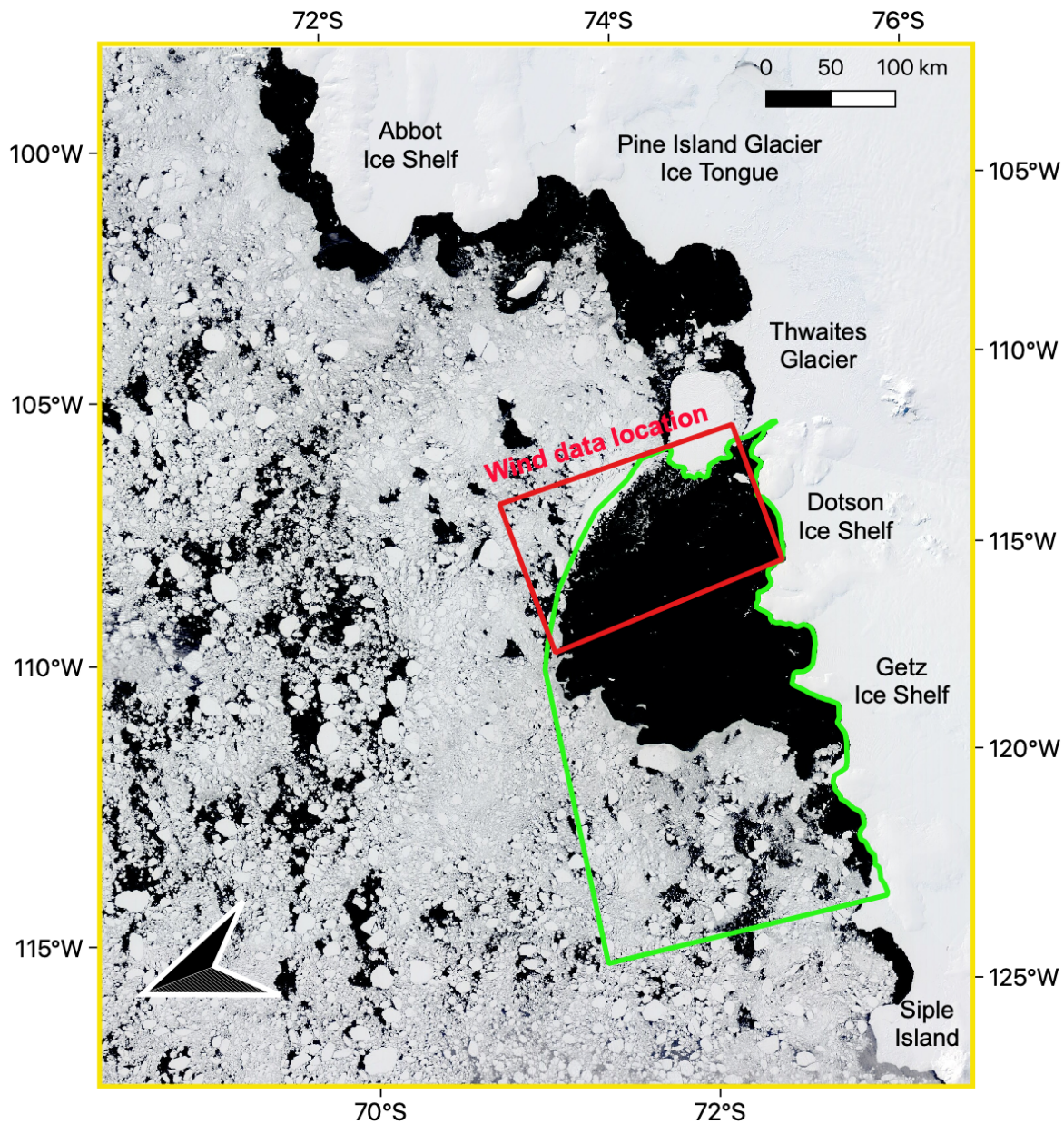


Fig. S1. The red box shows the region used to calculate daily wind speed at the ASP in relation to the ASP study area (green box). The figure covers background figure and area is the same as Fig 1b.

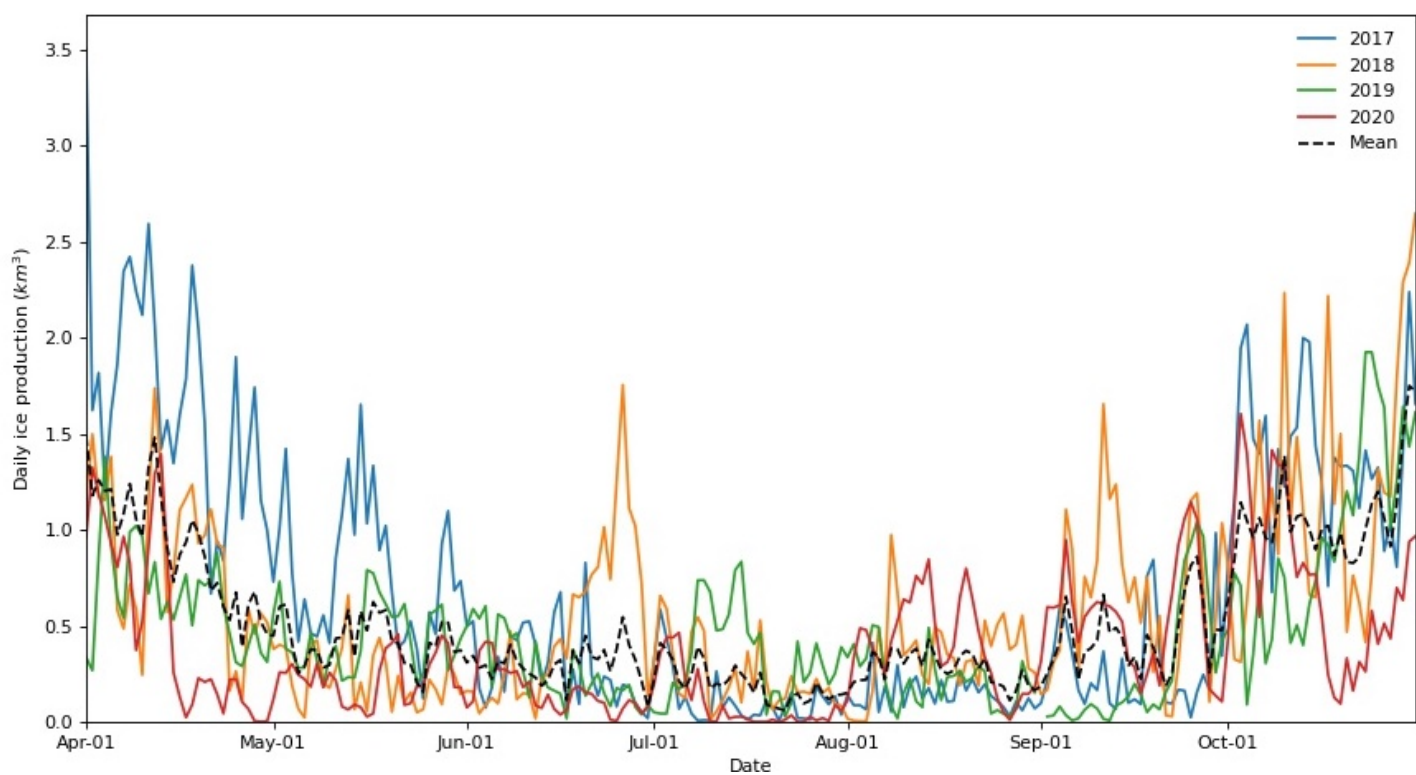
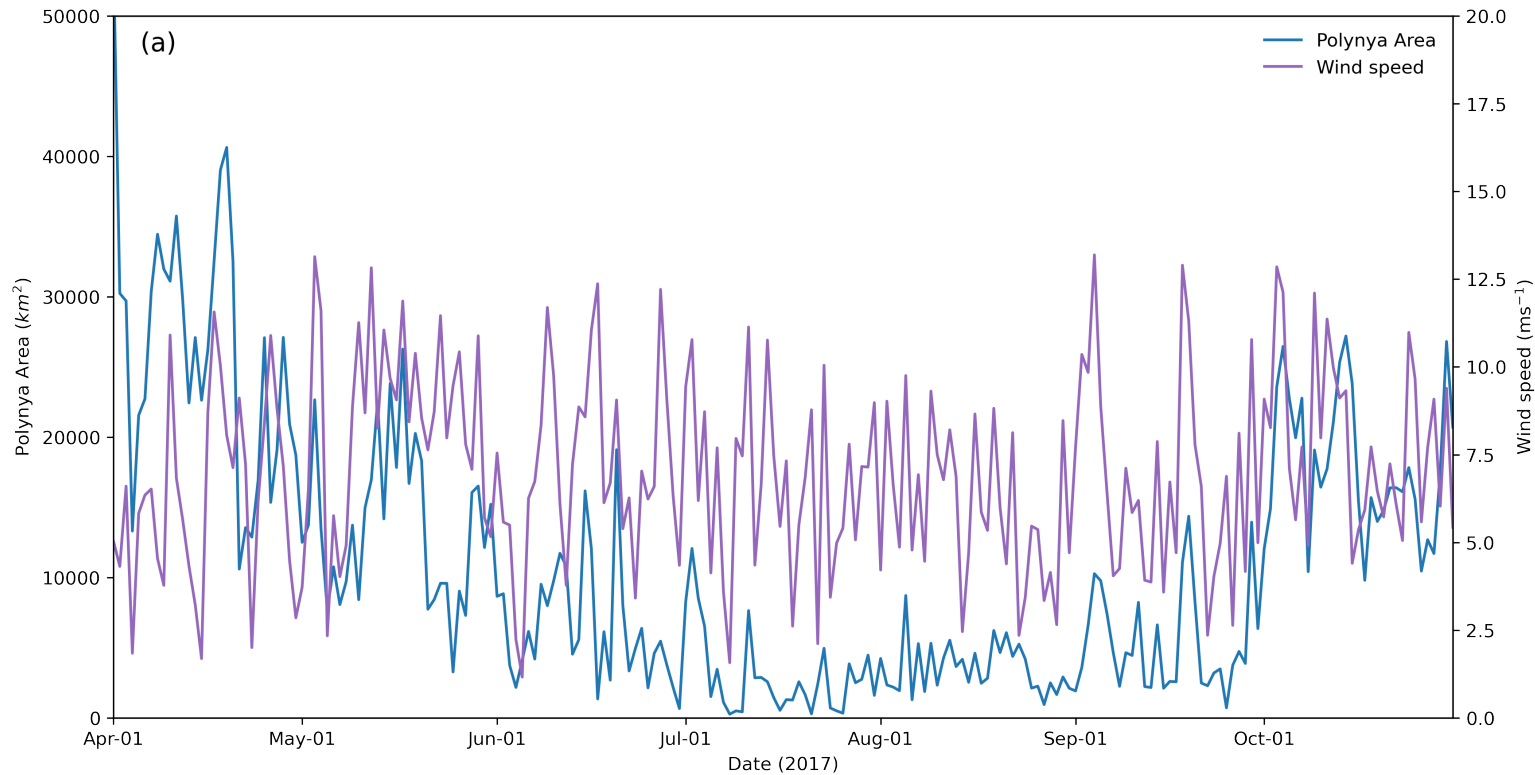
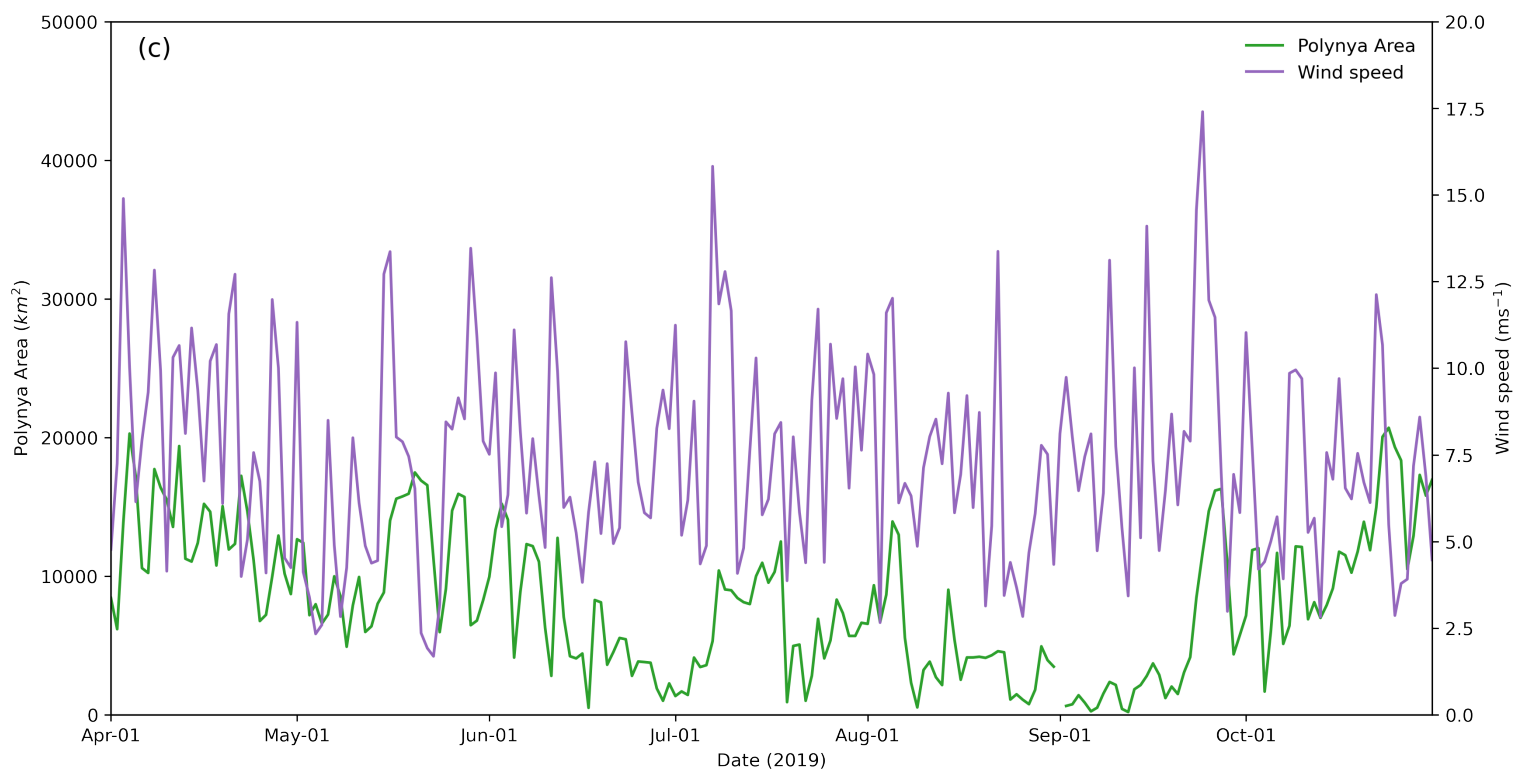
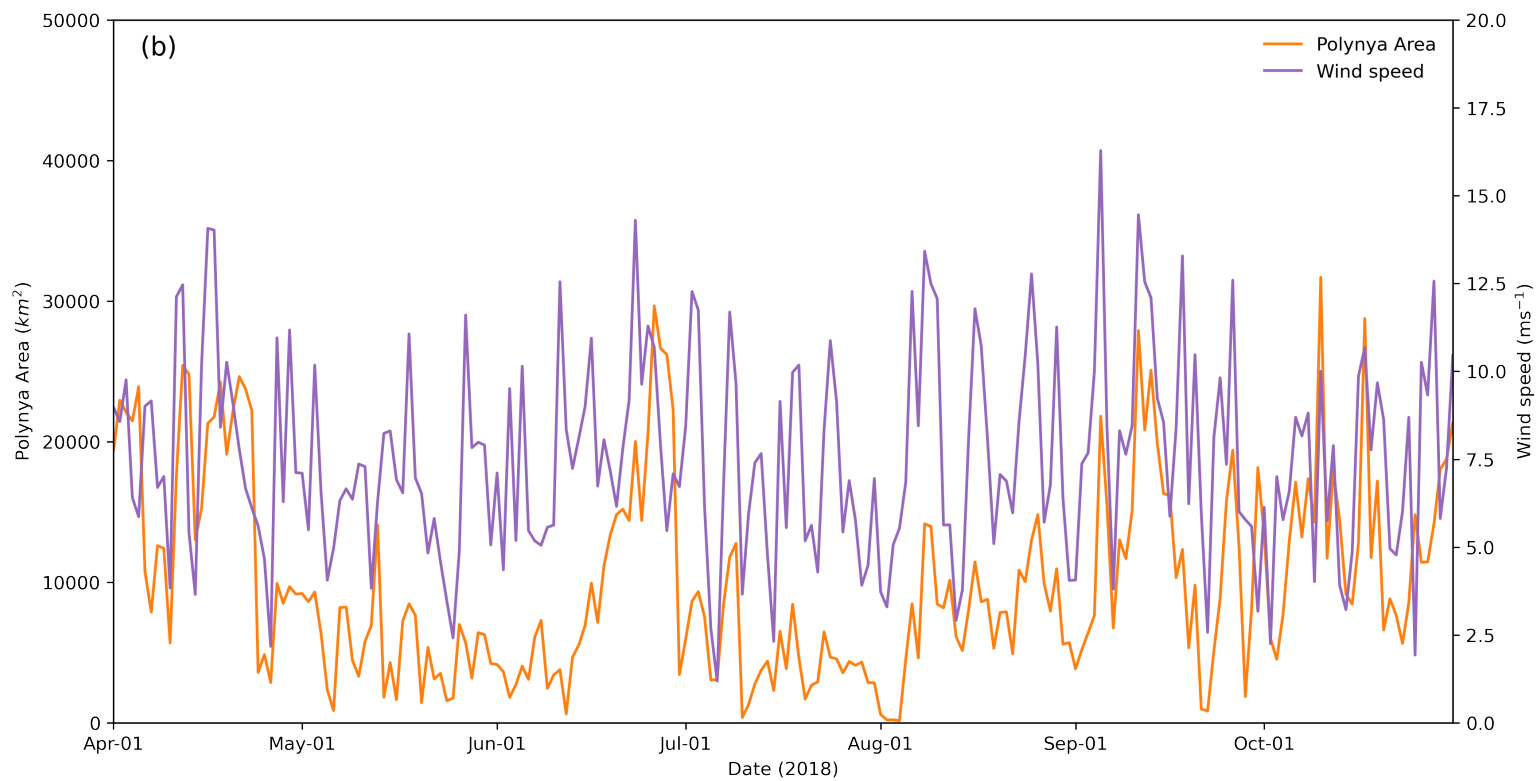


Fig. S2. Daily winter (April-October) ice production for each winter 2017-2020, and the daily mean for the whole period, as measured using heat-flux modelling of ERA-5 data and AMSR-2 SIC data.





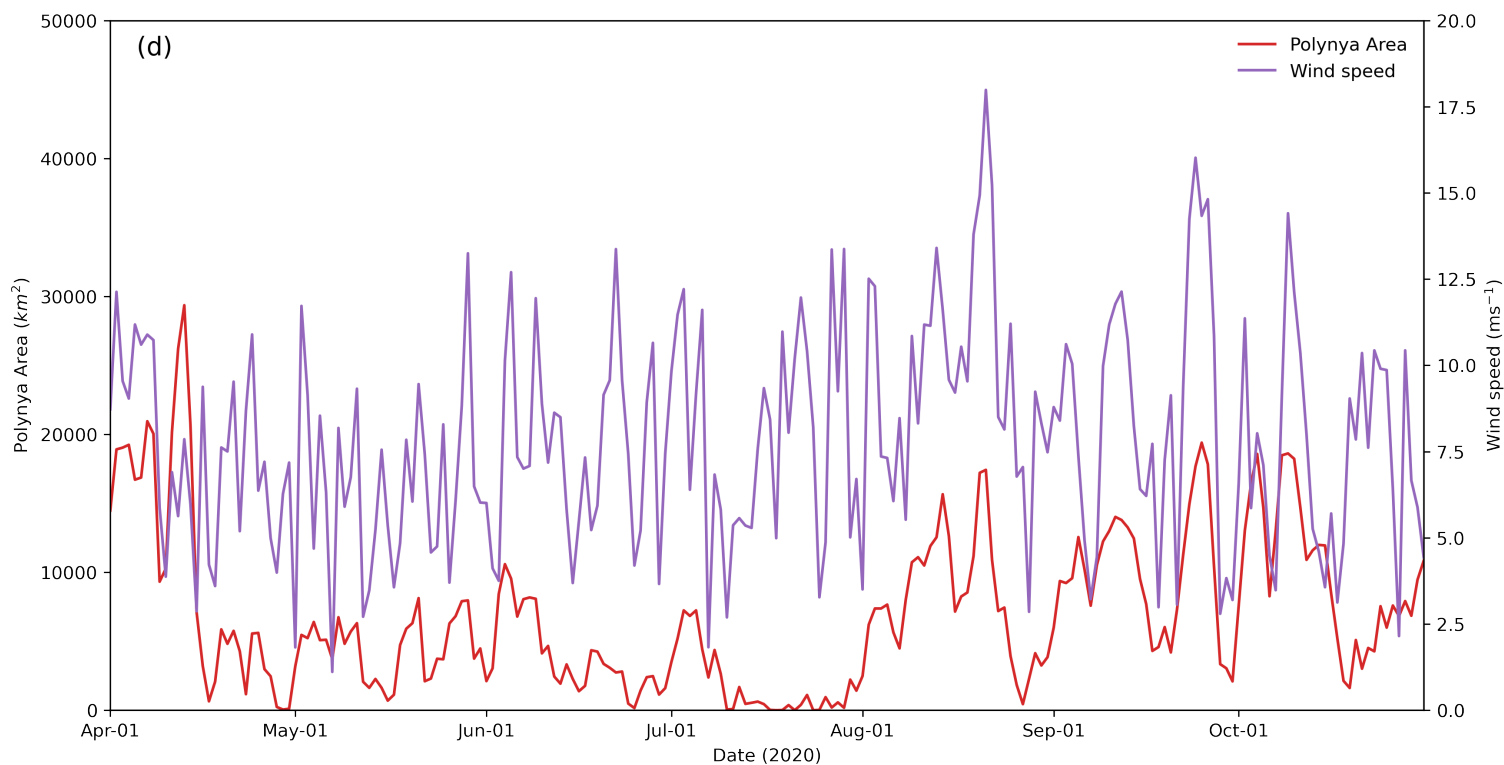


Fig. S3. Daily wind speed and polynya area during the winters (April-October) of (a) 2017, (b) 2018, (c) 2019 and (d) 2020.

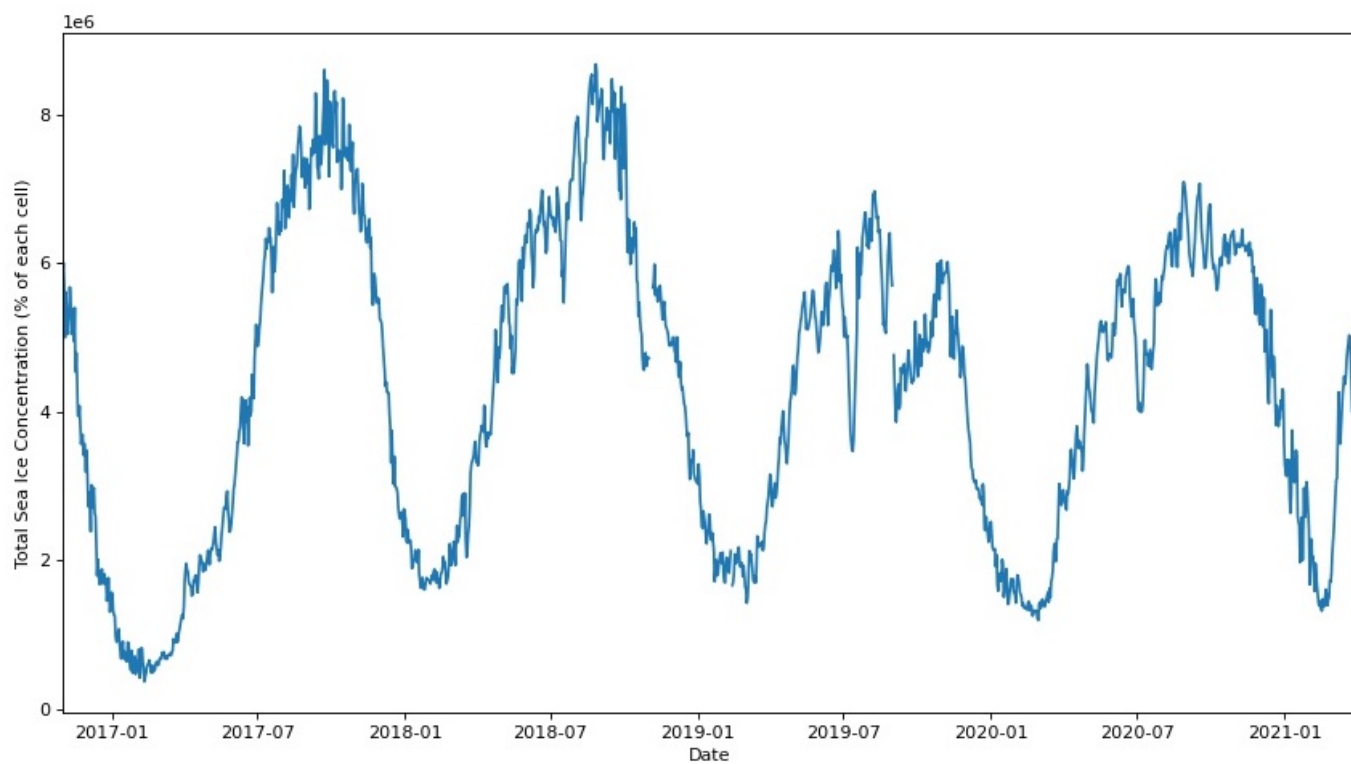


Fig. S4. Total daily SIC from 1 November 2016 to 31 March 2021 for the broader region defined by the red box in Fig. 1a.