Metadata

Dataset Name	Sea-ice edge phytoplankton bloom
Dataset General Type	Phytoplankton bloom
Dataset Type	Dataset
Dataset Level	1.2
Program Website	<u>https://umanitoba.ca/earth-observation-science/research/hudson-bay-system-study-</u> <u>baysys</u>
Keyword Vocabulary	Polar Data Catalogue
Keyword Vocabulary URL	https://www.polardata.ca/pdcinput/public/keywordlibrary
Theme	
Dataset Status	Complete
Maintenance and Update Frequency	As needed
Dataset Last Revision Date	2021-02-04
Dataset DOI	10.34992/1e0k-4m16
Metadata Creation Date	2022
Publisher	CanWIN
Dataset Authors	
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Dataset Collection Start Date	1998-01-01
Dataset Collection End Date	2021-11-11
Sample Collection	
Activity Collection Type	
Preferred citation	
Analytical Instrument	
Analytical Instrument 1	
Analytical Instrument Name	
Standardized Analytical Instrument Name	
Analytical Instrument Identifier Id	
Analytical Instrument Title Type	Alternative Title
Analytical Instrument Identifier Type	
Analytical Method	
License Name	Creative Commons Attribution 4.0 International
Licence Type	Open
Embargo Date	

Licence URL	https://spdx.org/licenses
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Awards	
Related Resources	
Related Resources 1	
Related Resource Name	
Resource Code	
Identifier Type	
Relationship To This Dataset	
Resource Type	Online Resource
Туре	
Series Name	
Publications	
Publications 1	
Publication Name	
Identifier Code	

Identifier Type

Relationship to this dataset	
Resource Type	Online Resource
Publication Type	
Spatial regions	hudson-bay
Spatial extent West Bound Longitude	
Spatial extent East Bound Longitude	
Spatial extent South Bound Latitude	
Spatial extent North Bound Latitude	

Data and Resources

URL	https://canwin-datahub.ad.umanitoba.ca/data/dataset/49695e4c-2b6d-4144-8939- fe680eebf4c7/resource/203338b2-dbc3-4a8c-b04e- ea94d0131ebc/download/elementa_barbedo_etal2020chlaiez_tr_hudsonbay.mat
Name	Sea-ice edge phytoplankton bloom

Description	Satellite-derived sea-ice retreat timing (tR) and maximum chlorophyll-a concentration in the ice edge zone between 1998 and 2018. Sea ice concentration (SIC) was obtained from the National Snow and Ice Data Center. It is based on daily passive microwave radiometry processed using the Bootstrap algorithm (Comiso, 2000) at 25 km resolution. The Bootstrap technique clusters the multichannel passive microwave sensors: Scanning Multi-channel Microwave Radiometer on the Nimbus-7 satellite, Special Sensor Microwave Imager/Sounder from the Defense Meteorological Satellite Program's satellites, and the Advanced Microwave Scanning Radiometer (Comiso et al., 1997). SIC was interpolated onto the same Chla grid using the nearest neighborhood scheme implemented in Matlab. Multi-sensor merged clorophyll-a concentration (Chla) Level-3 (i.e., binned and mapped) 8-day composites from the Globcolour Project (http://www.globcolour.info/) were used as a proxy for phytoplankton biomass. Globcolour products have a spa- tial resolution of 4.63 km and cover the 1998–2018 period. The merged product was selected to improve the spatial-temporal coverage diminishing gaps due to cloud cover and sea-ice coverage (Maritorena et al., 2010). The binning methodology combines the normalized water-leaving radiances from different ocean color sensors whenever they are available, which includes SeaWiFS (1998–2010), MODIS-Aqua (2002–2018), Medium-Resolution Imaging Spectrometer (MERIS: 2002–2011), and Visible Infrared Imaging Radiometer Suite (VIIRS: 2012–2018). [Chla] was estimated from normalized water-leaving radiances from different coean color sensors whenever they are available, which includes SeaWiFS (1998–2010), MODIS-Aqua (2002–2018), Medium-Resolution Imaging Spectrometer (MERIS: 2002–2011), and Visible Infrared Imaging Radiometer Suite (VIIRS: 2012–2018). [Chla] was estimated from normalized water-leaving radiances merged using the Garver-Siegel-Maritorena (GSM) semi-analytical model (Garver and Siegel, 1997; Maritorena et al. (2011), whic
Format	mat
Resource Category	data
URL	https://canwin-datahub.ad.umanitoba.ca/data/dataset/49695e4c-2b6d-4144-8939- fe680eebf4c7/resource/423691a6-cf14-448e-8373- c409151b66ed/download/supplementary_info_barbedos.pdf
Name	Supplementary metadata
Description	Supplementary information related to the Sea-Ice Edge Phytoplankton Bloom Dataset
Format	PDF
Resource Category	documents