Collection and Analysis Procedures

Sample Collection Method	
Name*	2017 Churchill River and Mobile Ice Survey Ice core sampling protocol
Link	http://hdl.handle.net/1993/35115
Summary	Ice cores were collected using the 9 cm Mark II Kovacs core barrel in conjunction with teams 1, 3, and 4 from 2 mobile ice floes. Cores were bagged in core bags, labeled in the field, and transferred to CNSC. Cores were cut with a metal Japanese saw into 5 cm portions outside of the CNSC main building (ambient temperature < -20 °C) in order to prevent thawing. All edges of each core section were then trimmed with ceramic knives to remove ice that came into contact with the core barrel or the metal saw. Trimmed sections were double bagged in new Ziploc bags and kept at room temperature in order to melt.
Name*	2017 Nelson Estuary Landfast Ice Survey Ice core sampling protocol
Link	http://hdl.handle.net/1993/35115
Summary	Ice samples were collected using a 9 cm Mark II Kovacs core barrel. The bottom 5 cm of 3- 5 cores were pooled together for each site and the bottom skeletal later (1-2 cm) of 3-5 cores were scraped into 500 mL of filtered seawater. A separate core was taken for analysis of bulk nutrients on the bottom 5 cm. A full core was also taken to measure temperature and salinity for 0-5 cm sections for a full ice profile. These values will be used to calculate percent brine volume.
Name*	2018 Hudson Bay Amundsen Ice sampling protocol
Link	http://hdl.handle.net/1993/35115
Summary	Ice samples were collected using a 9 cm Mark II _Kovacs core barrel. Full or partial ice cores were taken to measure the temperature and salinity throughout the sea ice. Holes were drilled to the center of the core at 10 cm intervals beginning 5 cm from the ice-air interface. A Traceable Digital Thermometer was then inserted into the drilled hole and temperature was recorded. Salinity ice cores were cut with a saw into 10 cm sections, put into buckets, melted overnight, and salinity

	measurements were taken with a Thermo Scientific Orion 3-star salinometer from pure melt the following day. These profiles provide information on the state of the sea ice to assess whether the ice is growing or melting. An ice core for temperature and salinity was taken. At every ice station for a total of 15 stations throughout Hudson Bay. Partial ice cores were taken only in southern Hudson Bay where the ice was much thicker with ice floes >3m thick.

Temperature Dataset Parameters

Variable Name*	Unit/ Format	Description	Result Value Type	Result Value Qualifier	Statistic Applied
station_id		Station where data was collected	Choose an item.		
project_name		Project name			
platform_name		Platform name			
campaign_name		Campaign name			
location_latitude_dd	Decimal degrees	Station latitude			
location_longitude_dd	Decimal degrees	Station longitude			
location_collection_method		Method used to collect station latitude and longitude			
location_coordinate_reference_system		Reference system used to collect latitude and longitude			
activity_date	yyyy-mm-dd	Date that data was collected			
activity_time	hh: mm: ss	Time that data was collected			
activity_time_zone	CST	Central Standard Time			
sample_media_type		The type of medium that the data was collected from			
ice_depth_top	cm	Top of ice core	Actual		None
ice_depth_bottom	cm	Bottom of the ice core	Actual		None
temperature	C	Temperature of the ice core	Actual	NC- Not Collected	None

sample_method_name		The name of the sampling method used			
analytical_method_name		The name of the analytical method used			
sample_method_equipment _name		The name of the sampling equipment used			

Salinity Dataset Parameters

Variable Name*	Unit/Format	Description	Result Value Type	Result Value Qualifier	Statistic Applied
station_id		Station where data was collected	Choose an item.		
project_name		Project name			
platform_name		Platform name			
campaign_name		Campaign name			
location_latitude_dd	Decimal degrees	Station latitude			
location_longitude_dd	Decimal degrees	Station longitude			
location_collection_method		Method used to collect station latitude and longitude			
location_coordinate_referen ce_system		Reference system used to collect latitude and longitude			
activity_date	yyyy-mm-dd	Date that data was collected			
activity_time	hh: mm: ss	Time that data was collected			
activity_time_zone	CST	Central Standard Time			
sample_media_type		The type of medium that the data was collected from			
ice_depth_top	cm	Top of ice core	Actual		None
ice_depth_bottom	cm	Bottom of the ice core	Actual		None
salinity	PSU	Salinity of the ice	Actual	NC- Not collected	None
conductivity	mS/cm	Conductivity of the ice	Actual	NC- Not collected	None

temperature	C	Temperature of the ice	Actual	NC - Not collected	None
sample_method_name		The name of the sampling method used			
analytical_method_name		The name of the analytical method used			
sample_method_equipment _name		The name of the sampling equipment used			

Station Measurements

Variable Name*	Unit/Format	Description	Result Value Type	Result Value Qualifier	Statistic Applied
station_id		Station where data was collected	Choose an item.		
project_name		Project name			
platform_name		Platform name			
campaign_name		Campaign name			
station_location_latitude_dd	Decimal degrees	Station latitude			
station_location_longitude_dd	Decimal degrees	Station longitude			
Location_collection_method		The method used to collect the station latitude and longitude			
Location_coordinate_reference _system		The coordinate reference system used to collect the station latitude and longitude			
activity_date	yyyy-mm-dd	The activity collection date			
activity_time	hh:mm:ss	The activity collection time			

Activity_time_zone	UTC	The time zone that the data was collected in			
sample_media_type		The type of medium that the data was collected from			
air_temperature	C	Air temperature		NC-Not Collected	
snow_depth	cm	The snow depth		NC-Not Collected	

ice_thickness	cm	Thickness of the ice		NC-Not Collected	
freeboard	cm	Freeboard		NC-Not Collected	
temperature_core	Y/N	Indicates if there is an associated temperature profile			
salinity_core	Y/N	Indicates if there is an associated salinity profile			