

▷ᑭᓕ▷ᑎᓂ: +447809626107, ᐱᔪᐳᑦ:

▷ΔΔΛΔ◁: L'Expédition B.I.G. (Before It's Gone / Avant qu'il ne soit trop tard) C'est une expédition à ski de cinq femmes qui partira de l'île Borden jusqu'à Isachsen sur l'île Ellef Ringnes en traversant la mer du Prince-Gustave-Adolf. L'expédition campera sur la banquise et collectera des échantillons, en petite quantité, de neige superficielle, de glace en surface et d'eau, ainsi que des données pour deux études de science citoyenne. Le parcours de l'expédition est d'environ 150 km et devrait prendre 10 jours de voyage à ski. Tout en reconnaissant l'impact de notre présence, la conception de l'expédition vise à minimiser autant que possible les impacts négatifs sur l'environnement, la faune et les personnes. Date de l'expédition : 10 avril – 22 avril 2024 Travaux sur le terrain à réaliser : • Échantillonnage À cinq endroits le long du parcours de l'expédition à travers la mer du Prince-Gustave-Adolf, l'expédition collectera de la neige superficielle, de la glace en surface et (si possible) des échantillons d'eau dans des récipients de 500 ml. Aucun outil motorisé ou électrique n'est utilisé pour collecter les échantillons, seulement une pelle, une pioche à glace et une tarière manuelle. Les conditions météorologiques et de neige seront enregistrées à chaque emplacement d'échantillonnage. • Collecte de données pour des études de science citoyenne À intervalles réguliers tout au long de l'expédition, les caractéristiques de la neige seront enregistrées et contribueront à la plateforme Snow Scope, une base de données de science citoyenne en accès libre. Des données seront également recueillies pour la plateforme Globe Observer, une base de données en accès libre, enregistrant la couverture nuageuse arctique. Analyse : • Les échantillons de neige, de glace et d'eau collectés par l'équipe de l'expédition seront analysés à l'Université du Colorado aux États-Unis et au Centre National d'Océanographie au Royaume-Uni. Les échantillons seront analysés pour déterminer la présence de carbone noir, de microplastiques et de métaux lourds afin d'explorer leur distribution dans l'atmosphère à travers la région arctique, provenant de l'Europe du Nord et de l'Amérique du Nord. Des projets d'expédition similaires ont été menés au Svalbard, au Groenland et en Islande. Résultats attendus : • Le Dr

- Felicity Aston analysera les échantillons pour déterminer la présence de microplastiques et de métaux lourds dans le cadre de ses études de doctorat à l'Université de Southampton. Son projet de doctorat vise à répondre à deux questions : a) Quelles sont les régions sources de microplastiques et de contaminants de plomb déposés via l'atmosphère dans l'Arctique et quelles sont les routes de transport possibles depuis l'Amérique du Nord et l'Europe du Nord ? et b) Que peut-on découvrir sur le cycle et l'incorporation des dépôts atmosphériques dans la glace de mer ? Les résultats seront publiés dans le cadre de sa thèse et des publications associées. Les résultats seront librement accessibles en ligne et des efforts sont déployés pour identifier des moyens de partager efficacement ces résultats et ces données au Nunavut spécifiquement.

Inuinnaqtun: N/A

Operations Phase: from 2024-04-10 to 2024-04-22

Closure Phase: from 2024-04-10 to 2024-04-22

Post-Closure Phase: from 2024-04-10 to 2024-04-22

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Ideal site of first sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m2	Sampling sites	Marine	Sea Ice - history not known	None	Approx. 500km
Ideal site of second sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m2	Sampling sites	Marine	Sea Ice - history not known	None	Approx. 500km
Ideal site of third sampling location. Low-volume surface snow and surface ice	Sampling sites	Marine	Sea Ice - history not known	None	Approx. 500km

samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m2					
Ideal site of fourth sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m2	Sampling sites	Marine	Sea Ice - history not known	None	Approx. 500km
Ideal site of fifth sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m2	Sampling sites	Marine	Sea Ice - history not known	None	Approx. 500km
Pick up by Twin Otter from the airstrip at Isachsen.	Airstrip use or construction	Crown	Former mine - abandoned	None	Approx. 500km

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Project transportation types

Project accomodation types

Temporary Camp

[illegible][illegible][illegible]

$\Delta^{\leftarrow} \rightarrow \text{CL}^{\text{fb}} \rightarrow \Delta^{\text{fb}} \text{C} \Delta^{\text{fb}} \sigma \Delta^{\text{fb}} \rightarrow^{\text{fb}}$	$\text{fb}^{\text{fb}} \Delta^{\text{fb}} \text{C}^{\text{fb}} \text{C}^{\text{fb}} \sigma \Delta^{\text{fb}} \leftarrow^{\text{fb}}$	$\text{aP}^{\text{C}} \Delta^{\text{fb}} \text{C}^{\text{fb}} \text{C}^{\text{fb}} \sigma \Delta^{\text{fb}} \leftarrow^{\text{fb}}$
0	Melting snow to create water using small fluid-fuel camping stoves.	Collecting snow in immediate locality of each temporary camp location

$$\Delta^b C d \zeta \rho \Delta^c \sigma^{\zeta b}$$

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Camp	ᐃᐤᐃᑕ ᐸᑕᑕᑕᑕᓄᓴᑕᑕᑕ	6 Litres	Into snow and/or ice away from camp/areas of activity.	None
Camp	ᐸᑕᑕᑕ ᐃᑕᐸᑕᑕᑕᑕᑕᑕᑕᑕ	4 x 20-25 gallon trash bags	All food packaging and other refuse will be returned to Resolute for proper disposal.	Refuse items will be separated with recycling in mind.
Camp	ᑖᑕᑕᑕᑕᑕᑕ	36kg	All paper to be returned to Resolute Bay for proper disposal.	None

[illegible]

Please see Environmental Impact Assessment in documents section for full list of potential impacts and mitigation measures. :- Noise – Plane engine noise , Emissions – aviation fuel, Disturbance to snow cover – caused by plane on landing and taking off Number and duration of flights reduced to minimum possible. Pick up landing will take place on existing air strip in order to reduce disruption to pristine or fragile ground or vulnerable ground flora. Drop off landing to be on fast ice if possible to prevent any disruption to snow cover on land or any underlying flora. :- Disturbance to snow cover – caused by ski tracks, Disturbance to fauna – by smell, noise or physical presence of ski team Efforts will be made to avoid unnecessary noise while travelling and to reduce physical disturbance to ground cover by, for example, skiing in single file where possible. The route taken by the ski expedition will be restricted wherever possible to sea ice to avoid disturbance to snow cover on land. Extra care will be taken to minimise disturbance when travelling on snow on land – for example, by sticking to thick snow cover. :- Camp noise (particularly stoves and tent fabric) and people, Emissions – from fuel used in camping stoves, Waste Disposal Any unnecessary noise or disturbance to snow cover when camping will be avoided. Storage and preparation of food has been planned to reduce aroma as far as possible by, for example, using dehydrated meals prepared in sealed packaging. Food will not be discarded (deliberately or accidentally). Instead, waste will be sealed and carried with the expedition. Grey water will be reduced as much as possible and will be sufficiently buried if unavoidable. Human waste will be sufficiently buried. If camping on land care will be taken to minimise any impact to any flora by, for example, pitching tents on thick snow cover and finding appropriate locations for human waste.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

[illegible]

Pack ice in the Prince Gustav Adolf Sea is a mix of multiyear, second-year, and first-year ice types. Ice remains landfast for more than half the year, and summertime ice concentration is high (7–9 tenths). In a typical year, less than 20% of the old ice and 50% of the first-year ice melt. There are large interannual fluctuations in ice coverage and some suggestion of a decadal cycle. The average ice thickness in late winter is 3.4 m but subregional means reach 5.5 m. The pack is a mix of two populations, one consisting largely of multiyear ice imported from the zone of heavy ridging along the periphery of the Beaufort gyre and the other consisting of a mix of relatively undeformed first-year, second-year, and multiyear icetypes that grow and age within the sea. The drift of ice through the Prince Gustav Adolf Sea is controlled in the present climate by the formation of stable ice bridges across connecting channels. The drift is episodic.

[illegible]

The Prince Gustav Adolf Sea is not proximate to any areas of special protection or designated environmental areas. It does not contain any habitats or migration routes that are protected or designated but wildlife and marine vegetation are present. The pack ice of the Prince Gustave Adolf Sea is both habitat and potential migration route so appropriate measures will be taken to minimise as much as possible any impact of our presence.

L'e d'edn^c f'm ΔC^c l'n p'st'u: Δm r'n s' j'u l'tc-Λ e' c'd t'r n s' j'u l'tc

The Prince Gustav Adolf Sea is a remote area that receives little human traffic and is approx 500km from the nearest communities. Aside for the airstrip that will be used for our extraction at Isachsen there is very little socioeconomic factors.

Miscellaneous Project Information

None added

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Please see the Environmental Impact document included within the documents section for full details of potential impacts and mitigation measures.

Cumulative Effects

The expedition is of such a small scale and scope that it should not significantly add to or instigate any cumulative environmental impacts.

Impacts

[illegible]

	P H Y S I C A L	D e s i g n a t e d e n v i r o n m e n t a l a r e a s	G r o u n d s t a b i l i t y	P e r m a f r o s t	H y d r o l o g y / L i m n o l o g y	W a t e r q u a l i t y	C l i m a t e c o n d i t i o n s	E s k e r s a n d o t h e r u n i q u e o r f r a g i l e l a n d s c a p e s	S u r f a c e a n d b e d r o c k g e o l o g y	S e d i m e n t a n d s o i l q u a l i t y	T i d a l p r o c e s s e s a n d b a t h y m e t r y	A i r q u a l i t y	N o i s e l e v e l s	B I O L O G I C A L	V e g e t a t i o n	W i l d l i f e , i n c l u d i n g h a b i t a t a n d m i g r a t i o n p a t t e r n s	B i r d s , i n c l u d i n g h a b i t a t a n d m i g r a t i o n p a t t e r n s	A q u a t i c s p e c i e s , i n c l . h a b i t a t a n d m i g r a t i o n / s p a w n i n g	W i l d l i f e p r o t e c t e d a r e a s	S O C I O - E C O N O M I C	A r c h a e o l o g i c a l a n d c u l t u r a l h i s t o r i c s i t e s	E m p l o y m e n t	C o m m u n i t y w e l l b e i n g	C o m m u n i t y i n f r a s t r u c t u r e	H u m a n h e a l t h
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($P = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$, $N = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$, $M = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$, $U = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$)

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|---|---------|---|
| 1 | polygon | Drop off by ski-fitted Twin Otter will be somewhere in this area. Exact location will be decided by pilot depending on conditions found on the day. |
| 2 | polygon | Area within which five sampling locations will be positioned. Exact location will be determined by sea ice conditions encountered, the progress of the ski team, and other logistical factors. |
| 3 | polygon | Route of the expedition moving by ski to its endpoint/pick-up location will be within this area. Exact route determined by conditions encountered and logistical factors. |
| 4 | point | Ideal site of first sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m ² |
| | | Ideal site of second sampling location. Low-volume surface snow and surface ice |

5 point	samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m ²
6 point	Ideal site of third sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m ²
7 point	Ideal site of fourth sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m ²
8 point	Ideal site of fifth sampling location. Low-volume surface snow and surface ice samples will be collected from sea ice at 5 randomly selected points across an area not more than 50m ²
9 point	Pick up by Twin Otter from the airstrip at Isachsen.