

## Greenland Icecap Crossing – Complete Preparation Guide (2025 Edition)



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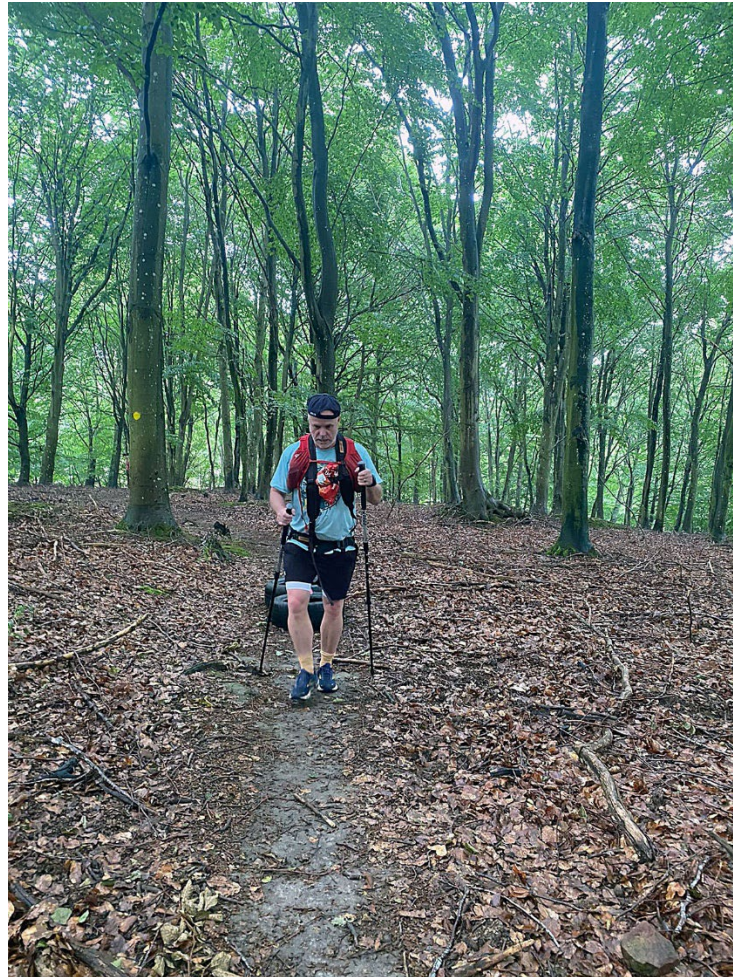
### 1. Overview

- **Route Options:**

- Classic traverse, **Kangerlussuaq → Isortoq/Tasiilaq** (west-east, c. 550–600 km) – also skied in **late-summer/early-autumn (Aug–Sep)** in the opposite direction (east-west).
- **Historic Nansen Route (Isortoq/Umivik → Nuuk, Aug – Sep):** ~600 km east-to-west. Begins with the **Isortoq icefall**, arcs past the abandoned **DYE III** radar station, reaches ‘Summit’ at 2 500 m, then echoes Nansen’s 1888 line down the western icefall and a 50 km trek through **Austmannadalen** to the fjord, finishing by boat to **Nuuk**. Plan on **30 – 35 days** on the ice, advanced crevasse & crampon skills, and €3 000- 4 000 higher logistics costs than the classic route.

- **Season:** Late-April – early-June (spring) **or** mid-August – late-September (autumn) offer the best balance of daylight, temperatures and wind for the respective west-east and east-west traverses.

- **On-Ice Duration:** 24 – 30 days of skiing, plus 3 – 5 weather/contingency days.
- **Typical Team Size:** 2 – 6 (larger groups reduce per-person costs but move slower).
- **Style:** Ski-pulling pulk sleds (70 – 80 kg start weight) & fully self-supported.



## 2. Physical & Technical Training

A successful crossing is 80 % preparation. Start **12 months out** and periodise training:

Phase	Months	Focus
Foundation	–12 → –9	Aerobic base: hiking/running 4–6 hrs wk, core & mobility
Strength	–9 → –6	Sled-dragging/tire-pulling 2× wk, loaded hill rucks, full-body lifts
Endurance	–6 → –3	6–8 hr weekend skis/hikes, back-to-back days, VO <sub>2</sub> max intervals



Expedition-Specific –3 → –1      Multi-day mini-expeditions in cold, crevasse-rescue, white-out nav

### Key skills to master

- Nordic-style skiing with skins & fixed-heel bindings
- Rigging and hauling a pulk sled (towing harness, downhill braking)
- Cold-injury prevention & field first-aid
- Glacier travel: rope-team practice, crevasse rescue systems
- White-out navigation with compass/GPS bearings every 1 km
- Emergency shelter building (snow mound or trench)

*Mental edge:* Simulate monotony and sleep-debt—e.g., 8-hour tire-drags after a workday.

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### 3. Complete Equipment List



## Brand & Sponsorship Note

The bracketed makes/models below are the exact gear Mikael Strandberg used on his **Kensington Tours—sponsored 2024 expedition** (with generous support from Åsnes, Jemtlander, Brynje, Taiga, Alfa, Helsport, MSR, Stanley, Ledlenser, Boldr and others). Similar products from alternative manufacturers can work equally well—choose what fits your budget, fit and availability.

*(Weight targets in brackets per person unless noted)*

## Clothing (Carry two systems)

- Base layers, merino **2 sets** (0.6 kg)
- Underwear briefs / sports bra, synthetic or merino (0.15 kg)
- Mid-layer fleece or wool hoody (**Brynje Polar Fleece Vest + hoody**) (0.4 kg)
- Expedition down parka -40 °C (**Rusk/Fjällräven Polar Parka**) (1.0 kg)
- Wind jacket (0.25 kg)
- Shell jacket (**Brynje Expedition Jacket Pro**) & bib pants (**The North Face Summit GTX Pro**) (0.8 kg)
- Soft-shell ski pants (0.5 kg)
- Fleece pants or thick wool tights (0.4 kg)
- Lightweight down or Primaloft vest (0.3 kg)
- Balaclava + face mask + Buff (0.2 kg)
- Ski goggles (**Julbo Aerospace**) + category-4 sunglasses (**Julbo Explorer 2.0**) (0.18 kg)
- Mittens & gloves: *Taiga Grizzly* wind-proof mitts, *Taiga Point Hope* liner gloves, plus Mammut medium & polar gloves set (0.4 kg)
- Double ski boots (**Alfa Polar A.P.S.**) w/ insulated over-boots (2.4 kg)
- Intuition/thermoform spare liners (0.35 kg)
- Expedition gaiters compatible with ski boots (0.3 kg)
- Down booties for camp (**Exped Down Bivy Boots**) (0.25 kg)
- 4 × Expedition socks (0.3 kg)



### Ski & Sled Hardware

- Back-country skis (**Åsnes Amundsen BC + spare ski**) + Åsnes mohair long & short skins (3.2 kg)
- Carbon/Kevlar poles (**Åsnes Amundsen, spare pair**) w/ 10 cm baskets (0.5 kg)
- Pulk sled (**Jemtländer J17 + 2 × 100 L deck bags — sponsored**) (6 kg) (6 kg)
- Haul harness & poles (**Jemtländer Expedition harness**) + spare line (0.7 kg)
- Repair kit: drill-bit, pop-rivets, sewing, Tenacious Tape, cable-ties (0.5 kg)





## Camp & Sleep

- 4-season tunnel tent + snow flaps (share 2–3 pax) (4 kg pp)
- Down sleeping bag -40 °C (1.6 kg)
- VBL liner (0.25 kg)
- CCF pad + insulated inflatable (0.9 kg)
- Snow stakes (0.4 kg)
- Collapsible shovel (0.6 kg)



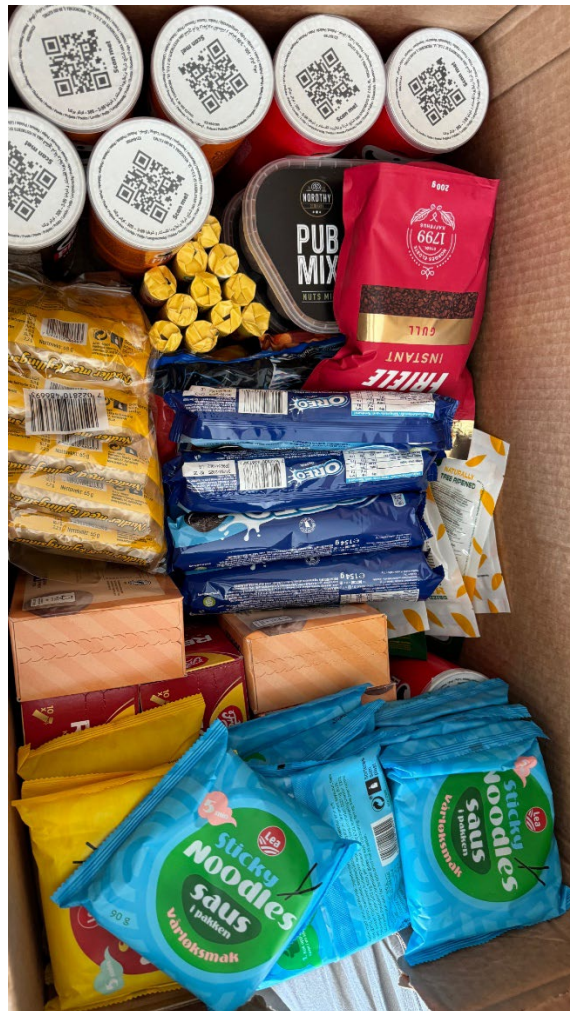
## Cooking & Water

- 2 × **MSR XGK-EX** liquid-fuel stoves per team + pump service kit (sponsored)
- Fuel: plan on ≈0.25 L pp day white-gas (35-day itinerary) stored in 1 L bottles
- 2 L wide-mouth thermos
- 2 × 1 L Nalgene wide-mouth bottles + insulated parkas for day-use
- 2-pot set w/ heat-exchanger + titanium spoon
- Fire-steel, waterproof matches, Bic lighters

## Navigation, Safety & Comms

- GPS + spare (smartphone in waterproof pouch)
- Silva Expedition 4 compass

- Satellite phone or Iridium GO + spare batteries
- Garmin inReach for tracking
- PLB (Personal Locator Beacon)
- Solar panel 28 W + 20 Ah power-bank
- LED headlamp + spare lithium batteries
- 30 m × 8 mm glacier rope (team)
- Harness, 2 × prusiks, 2 × ice screws, pulley, 3 locking 'biners
- Medical kit (acetazolamide, antibiotics, dressings, blister kit)
- Spare ski tip, binding screws, pole baskets, glue, voile straps (0.2 kg)
- 10-point aluminum crampons sized for ski boots (0.6 kg)



## Food & Fuel

- 5,500 – 6,000 kcal / day ▶ 1.2 – 1.4 kg dry weight

- 60 % fat / 30 % carbs / 10 % protein target
- Freeze-dried entrees, instant soups, oats, butter, cheese, nuts, chocolate, energy gels, electrolyte mix

### **Personal & Admin**

- Toothbrush & travel-size paste
- Wet wipes & hand-sanitiser gel
- Mini lotion/foot-powder blister-prevention kit
- Passport + copy of permit & insurance
- Credit card & 2 × debit cards
- Journal & pencil
- Cash
- Camera & spare battery
- Pee bottle & hygiene kit
- SPF 50 sun-cream & zinc oxide lip balm
- 2-layer dry bags (nylon + waterproof roll-top)





#### **Optional Comfort & Footcare Add-ons**

- Vapor barrier socks (plastic bags or dedicated VBL socks)
- Down skirt or shorts for thigh protection in extreme cold
- Windproof down pants (camp use)
- Spare goggle lenses (low-contrast / storm)
- Small stiff brush for de-icing tent and boots
- Ear plugs & eye shade for 24-hr daylight
- Pogies (handle-bar style over-mitt shells) for extreme wind exposure
- Warm running shoes or lightweight trekking boots for icefall approach
- Chemical hand/foot warmers (6 pairs)
- Wind skirt or light down shorts for rapid warmth
- Detachable fur ruff for hood (synthetic or real)
- She-pee funnel (female urination device)

*Total starting pulk weight: 70 – 80 kg (incl. 25 days food & 20 L fuel)*

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#### 4. Timeline & Logistics

When    Action

**T-12 m**    Commit, start base training, draft budget

**T-9 m**    Order bespoke gear (skis, sled), book polar skills courses

**T-6 m**    Submit Greenland Expedition Permit (≥12 wks before start)

**T-4 m**    Finalise flights (home → Copenhagen → Kangerlussuaq / return east coast), arrange cargo

**T-2 m**    Intensive pulk dragging weekends, emergency drills

**T-1 m**    Pack food, depot fuel in Kangerlussuaq, ship sleds

**T-7 d**    Arrive Greenland, food cache, re-package fuel, test-ski to ice edge

**T-0**    Enter ice via “Point 660” (west icefall)

**T + 25 d** Exit Isortoq ice edge, boat to Tasiilaq & heli to Kulusuk, fly home

Allow **+5 buffer days** on the east coast for storms or helicopter delays.

#### Nansen Route Variant (Aug – Sep)

When    Action

**T-14 m**    Initiate visa checks, coastal trekking insurance, reserve Nuuk accommodation

**T-9 m**    Pay boat charter deposit (Tasiilaq → Isortoq drop) & DYE III overflight clearance

**T-3 m**    Ship food/fuel to Tasiilaq, confirm Nuuk pickup boat

**T-7 d**    Team assembles in Tasiilaq, pack sleds, final crevasse-rescue practice

**T-0**    Boat to Isortoq ice edge; ascend Isortoq icefall

**T + 25 d** Pass DYE III (~2 079 m) and cross ‘Summit’ ridge

**T + 30 d** Descend western icefall; cache sleds, switch to backpacks

**T + 33 d** Trek 50 km down Austmannadalen, fishing & bivouacs

**T + 34 d** Boat pickup to Nuuk; allow 3 spare weather days before flights

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## 5. Permits & Bureaucracy (2025)

### 1. Greenland Remote-Area Expedition Permit

- Apply on <https://expeditionsgreenland.gl>—non-refundable fee **4 000 DKK** per expedition.
- Submit: route, evac plan, daily check-in schedule, waste-management plan, insurance docs.

### 2. Mandatory Insurance & Guarantees

- Evacuation coverage south of 78° N: **US \$39 000 per person** minimum.
- Bank guarantee/bond: **US \$30 000 per expedition** (refundable).

### 3. Comms Requirements

- Sat-phone or inReach; twice-daily contact during white-out periods.

### 4. Firearms (for polar bear protection) not required on this latitude range.

### 5. Visas: Schengen rules apply; no separate Greenland visa for EU/US/UK citizens.

**Apply at least 90 days before departure**—permits can take 6 – 10 weeks to approve.

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## 6. Budget Snapshot (self-guided, 2025 €)

Item	Cost	Notes
Flights & baggage	€2 500	Europe → Greenland RT + 2 × 40 kg sled cargo
Permit fee	€540	4 000 DKK
SAR insurance premium	€900 pp	Third-party underwriter (per ExplorersWeb data)
Bank guarantee	€0 (deposit)	US \$30 k held, refunded
Food & fuel	€800	25 days @ €32 d
Sat-phone rental + airtime	€300	
Gear depreciation/rental	€4 000	If buying high-end polar kit
Contingency (hotels, heli delay)	€500	



**TOTAL self-guided**

**≈ €9 000 pp**

**Guided option** (Ousland Explorers / PolarExplorers): €14 000 – €18 000 pp including group kit, guide, permits, internal flights.

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## 7. Risk & Emergency Plan

- **Weather:** –15 °C to –35 °C (wind-chill –45 °C); katabatic winds 20–40 kt.
  - **Terrain:** Crevasse zones 660–800 m and east exit icefall; navigate via flagged GPS route.
  - **Medical:** Frostbite, hypothermia, snow-blindness; carry a pulse-oximeter & full trauma kit.
  - **Decision points:** Ability to self-evacuate back to point of entry until day 8; thereafter east-coast evac only.
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## 8. Further Resources

- Greenland Government expedition portal (<https://expeditionsgreenland.gl>)
- PolarExplorers “Shakedown” training camp (<https://polarexplorers.com/training/expedition-shakedown/>)
- American Alpine Institute – How to Rig an Expedition Pulk (<https://www.alpineinstitute.com/articles/how-to-rig-an-expedition-pulk/>)

- ExplorersWeb – Insurance & Rescue Cost Updates (<https://explorersweb.com/tag/insurance/>)
  - Fridtjof Nansen – “The First Crossing of Greenland” eBook (<https://www.gutenberg.org/ebooks/42716>)
  - DYE III Cold-War Radar Station archive (<https://coldwar-sites.com/dye-iii-greenland>)
  - Børge Ousland: “Crossing Greenland” blog series (<https://www.ousland.no/blogs/news/tagged/greenland>)
  - Mikael Strandberg – Greenland crossing article series (<https://www.mikaelstrandberg.com/?s=greenland>)
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*Document compiled 13 May 2025. Figures & fees should be re-checked with official sources prior to booking.*

