Field report from the journey to North-East Greenland 2024



Midnight sun at Hvalrosodden.

Hvalrosodden is the northernmost er den old trapping station at the Greenland's northeast coast. The house was built in 1919 and is still in a good condition, thanks to Nanok's restoring. It was one of those stations and hut, which Nanok visited in the summer of 2024. Read more about this and much more in this report.

Introduction

This year Nordøstgrønlandsk Kompagni Nanok has completed its 34th field season as planned.

Two Nanok-teams have been to North-East Greenland. One Nanok-team, the South team, has completed tasks from Nanok Station Ella Ø. The other team, the North team, with base in Danmarkshavn has carried out surveillance and renewed the photo documentation of cabins in the Dove Bugt and Hochstetter-regions. The team of researchers from Arctic Research Centre, Aarhus University, has continued and expanded its work utilizing Nanok's station Ella Ø as base.

Throughout the field period the weather was more unstable than usual with storms and rain. The ice conditions were generally fine with ice-free fiords and passable drift ice along the outer coast.

This year we had the great joy to welcome the board of directors from our long-standing sponsor, Aage V. Jensens Fonde, (AVJF) to North-East Greenland. One cannot overestimate the huge importance which AVJF has had on Greenland. Without the support from AVJF, the research in Greenland would not have become what it is today. As soon as in the 1980's and against all odds the visionary management of AVJF to support home taking and securing the research in Greenland; primarily by support to a vast number of Greenlandic research projects. In the 1990's AVJF financed the establishment of the Greenland Institute of Natural Resources (GN) in Nuuk. This financial support has continued into the new millennium, and today GN is an institution with ultramodern facilities, housing close to 100 researchers and other employees, including laboratory-, educationalaccommodation facilities, as well as a field station the nearby Kobbefjord. Furthermore, a considerable number of research vessels and a boat house at the harbour in Nuuk. Beyond this, AVJF has supported a vast number of books and other publications concerning Greenland. This impressive support, however, is not just limited to West-Greenland and the Nuuk area.

It is also AVJF who, since the middle of the 1990's, has financed establishment of buildings and infrastructure at the research centre Zackenberg-Daneborg in North-East Greenland as well as the extensions and renewals that have taken place at both locations. Parallel to this, at the end of the 1990's, AVJF became sponsor for Nanok. A sponsorship, which has been absolutely essential to the continuing existence of Nanok. When we – a small group of co-spirited North-East-Greenland-enthusiasts, who on a private and non-profit initiative – began to restore some of the old, historic huts up there, it was done mostly by our own means and a very tight economy. It therefore made a world

of difference, when suddenly AVJF offered to sponsor Nanok. This occurred in 2000, after the management of AVJF, during a visit in Zackenberg, from the researchers had learnt of the importance the restoring and maintenance of the huts to the researchers in the field, and as a means to seek refuge when needed.

Thanks to AVJF Nanok has since then been able to restore and maintain more than 60 huts, large and small. Huts that not only researchers can enjoy, but which have become a regular – and still free – attraction for the numerous cruise ships and tourists, who each year visit the National Park.

In short: without the support of Aage V. Jensens Fonde, Nanok would probably not have existed today and as such the old, historic huts in North-East Greenland would undoubtedly have vanished into oblivion and decayed as prey to nature's relentless forces. But fortunately, this was not to be.



First and foremost, Nanok owes an immense thanks to our sponsor, Aage V. Jensens Fonde, for neverfailing trust and support. Without such continuous support, Nanok would not be able to carry out its work, which oftentimes is costly, logistically challenging, and demands years of preparation.

We also owe a special thanks to a wide range of the Danish Defence's units and individuals for outstanding collaboration and hospitality as well as help in solving various logistical challenges.

A particular thanks also to Tusass and the staff at Vejrstation Danmarkshavn for huge helpfulness and hospitality. Additionally, a special thanks to logistics and researchers at Ella Ø, Daneborg and Zackenberg research stations for good neighbourliness.

Furthermore, a great thank you for the support that family and friends show our dispatched Nanok'ers, who spend an entire summer holiday working for Nanok. Such support and understanding from home mean the world to the individual Nanok'er.

Moreover, many thanks to the large circle of individuals who continue to show positive interest in our work and support this.

Finally, a warm thank you to all other good collaborators as well as the many private and public authorities who in different ways have contributed to making our work possible.

On behalf of Nanok

Peter Schmidt Mikkelsen

This field report is also available in English and Danish at: www.xsirius.dk/nanok.html

Field report of the Nanok North team 2024

Tasks

The North team had the following tasks:

- a) inspect huts and stations in Dove Bugt and Hochstetter-regions. En route, take photos/make research for the upcoming books on the National Park
- b) Inspect, count, and maintain Nanok material at Daneborg/Danmarkshavn
- c) Receive goods for Nanok at Daneborg
- d) Prepare for the Nanok expedition Daneborg 2025.

The North team

Peter Schmidt Mikkelsen (Sirius '77), Claus "Tavse" Birkbøll (Sirius '73), Erik Jochumsen (Sirius '00).

Introduction

The three participants from Nanok's North team 2024 met on 7th August in Kastrup Airport. From here we continued as planned with Icelandair FI205 to Keflavik, where we landed late afternoon. As soon as we had got our luggage, we took a taxi to Hotel Cabin in Reykjavik, where Norlandair had booked rooms for us. Hungry after a long travel day, we hurried out to enjoy a good dinner at the local Hereford Beefstouw. Closed the day with a cup of coffee at the hotel. Thus, encouraged we were indeed ready travel on to Constable Pynt the next day – but this was not to be!

Weather-bound on Iceland

"When it rains on the priest, it will drip upon the servant", as an old Danish saying goes. From our present situation we instead could "translate" the saying to: "when it rains in Constable Pynt, the runway there is unusable!". This certainly was the fact which we had to take into consideration for the next three days. So, the 8th, 9th, and the 10th of August we got no further that staying on three different Icelandic hotels, which Norlandair kindly booked for us. We spent the wait with sightseeing in Reykjavik and neighbourhood, while our calculated spare days in North-East Greenland slowly but surely were erased from the calendar.

Finally in North-East Greenland

Sunday 11th August was Erik's birthday and finally dry weather in Constable Pynt. The muddy runway there was now sufficiently dry so we could make the planned flight. After a few hours wait in Constable Pynt, Twin Otter TF-NLC from



Our travel route from Danmarkshavn to Daneborg. In total 1.171 km.

Akureyri with five passengers arrived at Zackenberg. We three Nanok'ers got on board, and in beautifully clear and sunny weather we set course for Zackenberg and then straight on to Daneborg. Here we were warmly welcomed by the head of Sirius (Jacob, Sirius '19) and all the other Sirius-fups, new and old. The Zackenberglogistics Kristian (Sirius '95) and Kent (Sirius '83) were also present and immediately invited us to dinner in the MarinBasis house. We quickly settled in Sandodden (425-1), unpacked the most important (rifles, ATV and breakfast), and ended the day with a cup of good coffee together with Sirius. The day had been long, but fine, and now we could finally get started on this season.

From Daneborg to Danmarkshavn

Wasting no time, we made the final preparations of the following morning, 12th August. At 10 am the Twin Otter was ready for take-off and so were we. In fine weather the journey now continued 300 km northwards to Danmarkshavn, where our RIB (rubber boat) and equipment had wintered in a container and from where our actual journey should begin. En route we were happy to see that Dove Bugt almost was free of ice and that it would practically be possible to sail all the way from Danmarkshavn to Daneborg. We were hospitably welcomed by the six crew members on Danmarkshavn, who more or less were the same as in the summer of 2023. We were invited for lunch and immediately thereafter we began to prepare the first trip. Both the RIB and the





Making our RIB (rubber boat) in Danmarkshavn ready. We had assistance from the helpful crew at Danmarkshavn for the launch.

equipment were in fine condition, having been stored in the container, so before supper we were almost ready, except for the RIB, which needed some padding here and there and to dry. Altogether a good day indeed, and with fine weather.

The boat trips begin

Our first sailing day was perfect, and we covered 113 km. We visited and took pictures of the first six huts: Kap Bismarck (623), Kap Quist (624) Herringhus (626), 17km-næsset (630), Pashytten (618), and Dagmar Havn (620). The ice conditions were also fine. Lots of open sea, but also a single point, at the south tip of Lille Koldewey, where we actually had to break the ice with the RIB in order to not be blocked in. Encouraged, we continued the next morning, 14th August with filled tanks and carefully calculated necessities to our next base: Hvalrosodden (639-1). Before departing Danmarkshavn, we said goodbye our hospitable hosts Danmarkshavn, who were to be exchanged with a new crew later in the afternoon. It turned out to be an extremely beautiful trip in dazzling sunshine and calm weather along Germania Land. On the way we visited the huts: Kradshytten (627), Stormbugt (631), Store Snenæs (632), and Lille

Snenæs (637). In the horizon the fog lay as a veil over Dove Bugt, but along the coast it was bright and cloudless. Around 2 pm we arrived Hvalrosodden, where all was well. A great hut!

Weather-bound again – this time at Hvalrosodden

Just as we thought that we were to continue the following day, the night brought a sudden shift in the weather, with heavy wind from the west (from Mørkefjord and Sælsø), clouds and rain. Due to the weather both sail- and photo conditions were so bad, that it made no sense to go on. Instead, we spent most of the day indoors, keeping busy with recharging batteries etc. The next day, 16th, the weather had not improved so with our three weather-bound days in Iceland, we now got our fifth unscheduled break. We had to realize, that the journey we had planned from home, was under time constraints.

On Saturday 17th August the weather and visibility had finally improved, so we decided to sail into Mørkefjord and then, if possible, continue southwards. As the day progressed, it turned into a somewhat (actually extremely) bumpy ride in increasing wind and sea.





Setting out on the journey through Dove Bugt for inspection and photos of the huts.





[533] Haystackhytten





[535-3] Hundehuset







[537-1] Mundingshytten





[537-2] Kaphytten





[601-2] Bessel Fjord





[604] Påskehytten





[607] Strømsbukta





[608] Hasseriishytten





[610] Majhytten





[613] Aalborghus





[616] Den ny hytte





[619] Bergfjordhytten









[621] Kap Stop hytten





[622] Weaselhytten





[623] Kap Bismarck hytten





[624] Kap Quist hytten





[625] Kap Helgoland hytten





[627] Kradshytten





[628] Villaen





[629] Port Arthur hytten





[631] Stormbugthytten





[632] Ny Store Snenæs hytte





[635] Vædderhytten





[637] Lille Snenæs hytten





[639] Hvalrosodden – restored by Nanok in 2019





[641] Mørkefjord



[531] Ottostrand in 2004.

Eventually with whirlwinds and sprays of saltwater hitting in the face – in particular on the stretch between Port Arthur and Hellefjord. On this trip we visited Mørkefjord Station (641), Mørkefjordhytten (642), Pustervig (640), Vædderhytten (635), and Port Arthur hytten (629). We had left at around 7 am and returned at approx. 4 pm, rather wet and with salty taste in the mouth. So, while the clothes were drying all over the hut, the rough weather challenged the walls.

Back to Danmarkshavn and trip to Berg Fjord

After a night with heavy storm in the fine hut at Hvalrosodden, the wind calmed so much, that we on the following day, 18th, around noon decided to return to Danmarkshavn to fill the tanks for the next lap. The trip was no particularly uplifting experience due to rain and poor visibility. Dismal and grey weather. We arrived at Danmarkshavn at 2 pm and immediately began to dry our clothes and prepare. During our trip to Hvalrosodden, Danmarkshavn had been manned with a new crew, who turned out to be just as hospitable as their predecessors.

On 19th, the following day, we finally got a nice travel-day again with sunshine and calm weather, so we made a daytrip, beginning with a visit to



Ottostrand i 2024 – restored by Nanok in 2009.

Kap Helgoland on the north tip of Store Koldewey. Here we stopped at Kap Helgoland hytten (625) and took some photos. A beautiful spot, by the way. Then the trip went on to the mouth of Berg Fjord, were we photographed Bergfjordhytten (619). When we got there, we saw a mother bear with two cubs running up the mountain. From here the trip went straight back to Danmarkshavn to prepare for the next long distance, which was to begin the next day. But once again we had another think coming, for the morning of 20th August opened up with storm, rain and poor visibility. Yet another weatherbound – no 6. One good thing though, was that we were to spend it in Danmarkshavn.

Across Dove Bugt to Aalborghus

We anticipated our next trip with some suspense, for we had to go straight across Dove Bugt to Aalborghus (613-2) in the southwestern part of Dove Bugt, with a heavy load and with the risk of cross wind from northwest. The day, however, turned out much better than we had feared, even if we at first were hindered by compact drift ice at Vestre Havnenæs and had to return to the station and wait for the ice to slack. We waited for a couple of hours until mid-afternoon and then tried again. The ice had slacked a bit, but not enough



Erik Jochumsen.



Claus "Tavse" Birkbøll.





Erik fastens the memorial plaque for J.P. Koch on the sledge at Slædeøen. Peter standing at the sledge.

for us to get right into open waters. But after yet another hour, we were on our way.

First stop on the trip was Weasel \emptyset and the huts (622-1/2) there. We then continued across Dove Bugt. Quite unexpectedly, the sea had almost changed into a mirror, and we enjoyed a very beautiful and peaceful trip to "Den ny hytte" (616) near Licht \emptyset . After this we quickly sailed the last 25 km to Aalborghus, where we landed shortly before midnight. The hut at the old Aalborghus trapper station was in fine condition and we were well accommodated here in our next base station.

In the southwestern Dove Bugt and better weather

So far the weather had been quite a challenge and until now we had had to spend six weather-bound days, so our scheduled spare days was tremendously decreased. But now another change in weather occurred – and this time for the better! Thursday 22nd August, we woke up to a clear day and after breakfast and preparing we sailed off to Aalborghus on a daytrip. We started out in a light breeze through Søndersund, passing many huge icebergs, to our first stop at Majhytten (610) in Syttendemajfjorden. Then on southwards through Fangersund towards Soranerbræen. Here both wind and sea calmed completely, so we had calm sea as well as a blue sky. Further across Inderbredningen to Kap Ullidtz and Sjelnan hytten (609). From here northwards along the coast to make a brief visit at Sirius' Soranerdepot and Rechnitzerhytten (612). Finally, directly homewards to Aalborghus. The typical so-called "fiord wind" was rising again, so we encountered a bit of crosswind from north on the trip home. We were back in Aalborghus late afternoon after a beautiful and fine day.

Friday 23rd August was yet another perfect day: calm with blue sky. From Aalborghus we sailed directly to Kap Niels hytten (614) and then north to Bræfjordhytten (615), and then to the mouth of Kavalerfjord on Lindhardt Ø, where we anchored and took a walk up to the watershed. From here we had an absolutely breath-taking view to the west across the large glaciers and the Ice Sheet to the mountains on Dronning Louise Land. The positive experiences of the day did not even stop here. From Kavalerfjord we sailed further north to Kap Stop, where we first went into the hut (612) and then onwards to see the horse skulls from the J.P. Koch expedition 1912-13 on the southside of the cape. Finally, as we returned to Aalborghus in totally calm weather, we passed countless huge icebergs and we simply had to stop the engine for a few minutes, so we could enjoy the silence and the surroundings. A phenomenal experience.

Southwards from Dove Bugt

The experiences from the previous three days had given the mood-indicator quite a boost, so we could now conclude our roundtrip in Dove Bugt in high spirits and headed southwards.

The first distance was on Saturday 24th August, when we – again in calm weather and blue sky – bid our farewell to Aalborghus and set course towards Jægersund.

After yet another wonderful day we reached the day's goal at Påskenæsset after a five-hour trip, where we first visited Hasseriishytten (608) in Jægersund, then the ruin of Strømsbukta hut (607), and finally Slædeøen. Here we also secured the memorial plaque for J.P. Koch. From Kap Peschel to Påskenæsset (604) we had light wind and waves, but fortunately from behind.



The board members of Aage V. Jensens Fonde visit Nanok at Kulhus. From left: Leif Skov, Mette Skov, Arly Petersen, Anders Skov, Bendt Egede Andersen, Guido Meier, Marten Geiger.

Sunday 25th August became yet another formidable travel day. First stop was Olestua (603), then Bessel Fjord station (601-2), Pollenhytten Kaphytten (536),(537-2),Mundingshytten (537-1), Astralhytten (535-2), Sønderely (535-1), Haystackhytten (533), and finally Mønstedhus or rather Ny Mønstedhus (532-4), where we arrived late in the evening. From Bessel Fjord and further south, we encountered quite a lot of drift ice. It did not bother us much, but we had to manoeuvre our way through it. So, all in all a rather long, but perfect day with many fine experiences.

Visit by Nanok's sponsor at Kulhus

In our joint travel plan two important dates were marked, namely the 29^{th of} August, on which date the board of Nanok's long-term sponsor, Aage V. Jensens Fonde (AVJF) would pay us a visit. The visit had been planned long in advance and was to take place at Kulhushytten (511) on Hochstetter Forland. The other important date was, of course, the 5^{th of} September, when we had to be at Daneborg and ready to go home.

Travelling in North-East Greenland is very much depending on the actual day's weather- and ice conditions, and - as apparent in the previous text – these conditions may vary both quickly and dramatically. We therefore wished to be at Kulhus on 28th August at the latest, in order to be sure to be present, when AVJF arrived. Due to the

recent period with fine weather, we reached Kulhus from Mønstedhus already on Monday 26th August. This was, however, only a positive "problem".

Kulhus looked the same as in the previous summer, when we completed the total renovation of the hut. A wonderful revisit. Between you and me and in all confidentiality, this is the best hut on "The Coast". We therefore made ourselves comfortable and with a chance of two "days off" before the AVJF-visit. The first day was spent on various practical things and the following day, the 28th, a calm and cloudless day, we made a trip into Peters Bugt, where we visited Koch Vig hytten (515),Peters Bugt hytten (522),Myrvoldhytten (523). Then to Jonsbu (521), where we had a short break before continuing to Hochstetter Station (510), still in beautiful weather. On Hochstetter Station, Erik got off as he wished to walk across land back to Kulhus from there. Tavse and Peter arrived Kulhus shortly before 2 am and Erik turned up 4 hours

Thursday 29th August brought the long-awaited visit of the AVJF-board, seven persons in all, led by Leif Skov and Mette Skov. In addition, the logistician "Philip" and the cook Jette from the Zackenberg-station and two Icelandic Twin Otter pilots. The guests arrived close to 11 am, bringing the lunch. It was a cosy visit which lasted about three hours. On the same occasion the new Twin



The North team on their way home after a good field season. From left: Erik, Tavse and Peter.

Otter landing strip, which we in 2023 spotted and marked near Kulhus was inaugurated.

Back to Daneborg – autumn is approaching

Most of our gear had been packed before the visit, so when the guests had left, we quickly made ready for departure. At 3 pm we were off and crossed the large Ardencaple Fjord in fine weather. After a brief stop at Sigurdsheim (468), we set out on the final distance. It was a trip in calm weather until Kap Berlin, but here the wind started to rise and the last kilometres to Germaniahavn (447-3) was, honestly speaking, quite tiresome with wind from various directions, mist and rather huge waves. But at 7 pm we reached Germaniahavn, unloaded quickly and anchored the RIB in the near-by lagoon. Great to reach the point of destination, heat up the stove and dry the wet gear. From Kap Bremen and all the way to Germaniahavn we had encountered a large part of drift ice, so at times we had to crisscross back and forth in order to pass.

Next morning was still misty and windy at Germaniahavn, so we decided to stay in the hut instead of tempting the anticipated Atlantic swells along Wollaston Forland. This resulted therefore in the seventh but also final weather-bound day of this journey. The climax of the day arose in the morning, when a polar bear woke us up by placing his huge paw on the hut's window. He speedily retreated, however, when he learned there was somebody home.

Fortunately, during the night to 31st August the weather cleared up and the wind calmed, so we started early to cover the final distance to Daneborg before the weather changed its mind. This turned out to be a good decision. We left at 8 and after a non-stop trip we reached Daneborg already by 10. On the way we encountered some huge Atlantic swells along Wollaston Forland,

but apart from that the trip was made without many obstacles or experiences.

Unpacking and closure

At the arrival to Daneborg on 31st August we once again were well received by the Sirius-fups and the men at MarinBasis.

Subsequently we learned that our timing had been perfect. The autumn was approaching with wind, rain and unstable weather. Weather, unsuitable for a trip in open sea in a small rubber boat.

Besides, a few days of unpacking – i.e. cleaning our equipment and prepare the Nanok depot for the next summer – awaited us. The rest of the days at Daneborg were spent on this, while we lived comfortably and safe in our lovely little Sandodden.

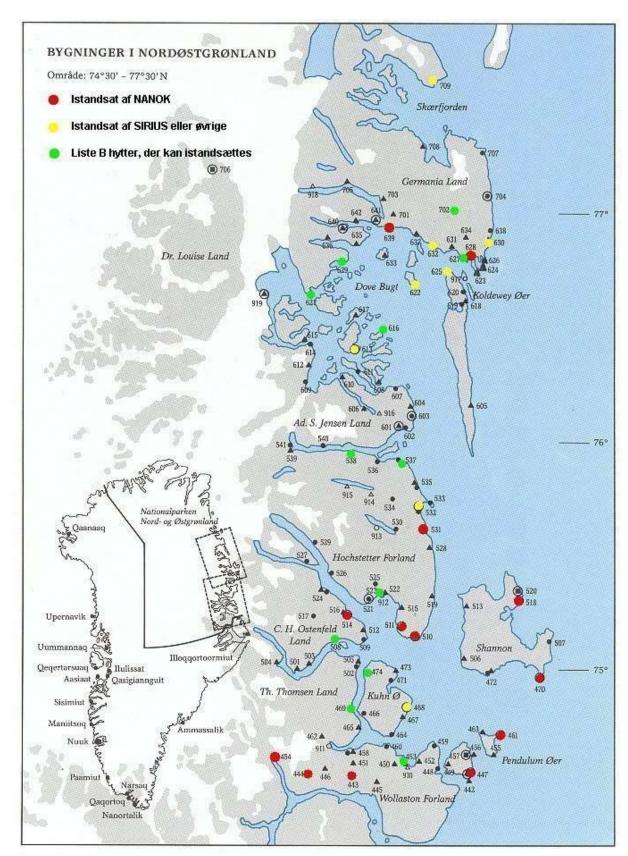
Facts from the journey:

- Visited and documented huts: 43
- Covered distance with RIB: 1,171 km
- Average fuel consumption: 2.3 km/litre gasoline

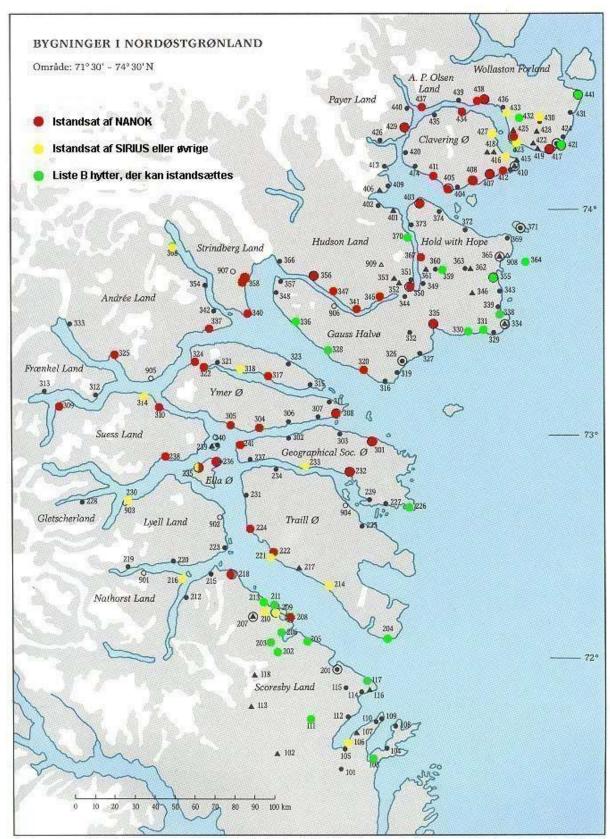
Thank you

Nanok North-team 2024 owes a huge thank you to the personnel of Slædepatruljen Sirius, Danmarkshavn Vejrstation, Stations- og Patruljetjenesten Grønland, Zackenberg Logistic, and Norlandair.

Tavse-Erik-Peter



The map shows the maintenance status for the old huts, houses, and stations in North-East Greenland. The sites marked red or yellow can be expected to be in reasonably usable condition. Other sites, however, cannot be expected to be usable. Sites marked green are other huts with the classification B, which Nanok may renovate and maintain in the coming years.



The map shows the maintenance status for the old huts, houses, and stations in North-East Greenland. The sites marked red or yellow can be expected to be in reasonably usable condition. Other sites, however, cannot be expected to be usable. Sites marked green are other huts with the classification B, which Nanok may renovate and maintain in the coming years.

Field report of the Nanok South team 2024

Tasks

The South team had the following tasks:

- a) Inspect and if necessary, repair damages on Nanok's equipment and station Ella Ø after the tsunami
- b) Make various installations on Nanok station Ella Ø
- Inspect, repair and resupply huts and stations in the southern part of the Ella Ø region according to a list prepared by Nanok
- d) Receive goods for Nanok on Ella Ø
- e) Prepare for Nanok expedition Ella Ø 2025
- f) Collaborate with Arctic Research Centre

South team

Jens Chr. "Goffi" W. Gotfredsen (Sirius '77), Asger Lakmann Nielsen (Sirius '77), René Lauritsen (Nanok '17)

Introduction

We arrive at Ella Ø on 25th July 2024 as planned. We travel via Reykjavik and Constable Pynt. Nanok's buildings on Ella Ø are intact and we

open the station. We commence preparing Nanok's ship "Agsut". We establish that the beach in front of the building have diminished and gotten lower than before the tsunami. The gravel below "Agsut" and around the winch has been washed away. The "Buster" dinghy stands across and the wheels are dug halfway down and torn to pieces. The researchers barge lays close to "Agsut" and the gravel shows clear trace of a spin on the spot. It has to be cleaned up but at first sight everything seems alright.

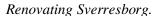
We recreate the ramp below "Agsut" to secure a stable launch. Borrow some slipways from Sirius to place upon the gravel. The hull on "Agsut" is checked. The motor and all the equipment are inspected. The rigging is mounted, and the ship is ready. Tools for repairing huts, material and food is loaded for our first trip so we don't have to row everything out in the rubber boat, when "Agsut" is launched. We carry out a clean-up at the station, so we know what we have and where everything is located in the depot. And now we are ready for launch and the Sverresborg trip.

The trip to Sverresborg

It is high tide. By low tide the trouble is that the water is so shallow that the cradle has to be drawn

























Renovating Sverresborg.

several boat-lenghts out from the shore, before the ship lifts off the cradle.

We are assisted by Sirius to get "Agsut" so far out, that she can float. We are ready to leave five hours prior to schedule.

The trip to Sverresborg is unproblematic and "Agsut" manoeuvres perfectly. We anchor west of the river by the hut and as such avoid the treacherous rocks in the water. By first glance Sverresborg (232) looks fine, apart from the fact that the big window in the house end is broken; otherwise, the hut is intact. There is no doubt that the hut is settling more and more. The outer door cannot be opened until we remove some grass and soil. The carpenters immediately go ahead with the tasks, while Asger carry up the materials. With plastic from some packaging, we make a

temporary repair on a window, to stop the mosquitos from pouring in. The floor is very crooked. We straighten it into level, but it is still not completely horizontal, because then it would "eat" too much of the height in the room. We work outside with securing felt, window, shutters, and door. The entrance area gets a new floor of rocks and a minor landing of wood. We find an old window bar and cut out and fasten some Perspex. We create a new frame and make a closed double-window as it originally was. It cannot open, though, and the glass needs putty. It is only nailed, with small beadings pressed into place, but it is tight. We also construct a small table which can be lifted off the wall, so you can make room for more sleepers. The constant rain makes our work difficult, so we drag everything



Kap Peterséns.

inside and onto the new floor. The kitchen floor and the door in the porch are finished and also a much-needed clean-up in the porch. Rain and wind on our return to Ella Ø through Vega Sund.

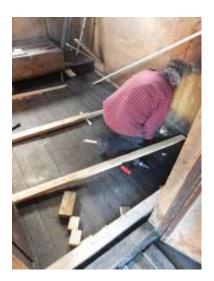
The trip to Kap Peterséns

The rain continues throughout the night on Ella Ø and only slackens just before noon. We clean up all places and prepare for our next trip to Kap Peterséns (218). The anchored "Agsut" is loaded. We inspect the Kap Elisabeth hut "Maristua" (236), which proves to be intact. We move on to



Kongeborgen (234), also intact, although a polar bear is lurking about in the mountains right behind. Further on to Holmbugthytten (222) which is also ok. Some researchers who had been here a few days ago, were hastily evacuated due to a polar bear attack. We had heard about it, but did not know where it had happened. The bear lays dead (shot) and untouched approx. 40 m from the hut.

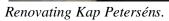
We had some difficulty in finding Kap Peterséns, as the southern island hid the hut in our sailing direction, but we arrived safely. We anchor approx. 50 m from a huge rock just outside the

























Renovating Kap Mæchel hytten.

hut. The rock is visible at low tide, at which time also several other rocks appear. It would be a good idea to stay 100 m offshore and navigate around the island, until you have seen the area at low tide.

We empty the hut completely for all contents and start working with the floors. There is more than 10 cm lop-sidedness in the living room, and we do our best to even this out. We decide to keep the door and leave the kitchen cupboards untouched. In the porch there's a hole in the floor, which is fixed by using some old planks. Adjusting the door by 1 cm, as the new planks are thicker than the old floor. The chimney has been pulled down. The parts have been squeezed together by two pipe dimensions that did not fit together, so we

need to do some magic. The shutters are renovated, and a new one made. We cover the floor in the porch with flat rocks on which the coals are placed together with the kindling etc. We wake up to increasing wind and rain from the east and Atlantic swells along the coast. We tidy up inside and outside and size up the weather. Weighed anchor after noon at which time the wind drops.

Work at Ella Ø

We decide to go to Ella Ø, as there is poor visibility in Alpefjord and limited hope of dry weather. In Kong Oscar Fjord we are overtaken by one of Sirius' fast patrol vessels. We still have

four hours to go compared to Sirius with only 45 min. left. Back on Ella Ø we inspect the trailer for the Buster dinghy. All 4 tires are ruined by the renovated so the trailer in the least can be used.

tsunami or by polar bears. Two of the wheels are The Buster dinghy's outboard motor, cables and steering wheel are checked. The hydraulic steering is stuck. The battery attachments have been covered with water since the tsunami. Test sail of the Buster dinghy. Launching and flanging with the trailer goes smoothly with a Weidemann miniloader to help you. We renovate the "machine shed", where door and window were broken by the bear. There is also time for a walk around the area. We make furrows for cables between the containers and the buildings. We draw pipes and cables, and cover everything neatly again. Dismount cladding panels on the Tolymandsbarakken in order to mount the cables concealed and protected from curious polar bears. We receive some fresh food supplies from a cruise ship as a gesture for our presentation of Nanok, when they arrive on the coast.

The trip to Alpefjord and Kap Mæchel

Close to midday the ship is ready again and we weigh anchor. Navigate through Narhvalsund in fine weather and waters all the way. The cruise ship "Hanseatic Inspiration" is anchored at Raudberget in Segelsällskapets Fjord with some people ashore. We notice another outbound cruise ship in Alpefjord. Alpehytten (212) is in complete decay, but it is looking immensely beautiful in the evening sun.

Arrive at Kap Mæchel hytten (212) rather late and anchor at high tide a little south of the hut. There is a polar bear further inland, but he takes off immediately. We therefore set up anchor- and polar bear guard, so one of us in turn watch an hour at a time, while the other two sleep.

At 5 am it starts to drizzle so we agree to begin the renovation of the hut. We therefore bring everything we need ashore. The tide differs with 3 m so many big rocks appear to the surface. The hut has been accommodation for a bear who has made a hole by the pipe and ruined it to use the hole as entrance. The small window in the gable seems to have functioned as lookout. Everything is smashed and laying in a pile on the floor, damp











Work on the electrical system at Ella \emptyset . Leading 230 V into the houses.

with moist. We shovel out all the dirt in order to organize the hut. The stove has been destroyed by rust and we put it outside to make more room inside. The hole in the roof is patted and felt is properly fixed. Perspex in window and new shutter. The door is fixed, and soil removed in front of the door.

Back on Ella Ø

At midday we weigh anchor, arrive Maristua (236) and leave a lamp glass which is lacking there. We arrive at Ella Ø in the evening and see a polar bear on the beach heading for the Nanok station. However, he is frightened by "Agsut" and runs away. When we get ashore we are met by a terrible, rotten smell and we find a body washed ashore (dead bearded seal), that has been dragged up there by the polar bear – this must have taken place while we were away. The polar bear returns across land some hours later and the Sirius men chases him off. We arrange for them to sail the seal far away, so that the bear has no need to return again. With fire we try to eliminate the stench of rotten seal from the beach, as it poisons the entire area. It helps a bit.

The water heater, tubes and mixer tap in the shower (Niagara) are replaced, as it all has been frosting damaged. Afterwards we take turns for a much-needed shower.

Two rubber boats with six persons arrive from Ymer Ø. It is a French expedition, "ECO Polaris" by Olivier Gilg. They move into Ørnereden and stay all day, as the rain is persistent.

We continue the work on the electric system. Cables are drawn and 230V sockets mounted in the Tolvmandsbarakken and Fjøset. Henceforward, the sockets can be supplied from either the solar system or from a 230V generator. We gather the coal pile, which has been spread by the polar bear, into coal sacks.

The trip to Kap Hedlund

We leave for Kap Hedlund carrying 2 x 200 L fuel which the researchers will need in the spring. There are clear traces from the tsunami far inland, all the way to Kap Hedlund hytten (230), which has been washed over. The remains of the hut are scattered all over the area. The vegetation is dead where the salt water has washed up. A cruise ship appears in the middle of the morning when we set off aboard "Agsut" in beautiful weather, but go









Various work at Ella Ø.

straight into wind forces of 20 knots, coming out from the Rhedins, Röhss and Dickson fiord system. However, we go forward between Ørkendalen and Lumskebugten. We can see the sea bashing heavily against land, which leaves us no option to get ashore there, as planned, so we turn around. A cruise ship contacts us, and a guide approaches. It turns out to be the daughter of Wally Herbert, whom Goffi met in the spring 1978 while travelling dog sledge from Mønstedhus to Daneborg.

Final work at Ella Ø

Mounting of washout and fat excreter outside Tolvmandsbarakken. Then a Twin Otter from Mestersvig arrives with the research team: Søren Rysgaard, Egon Frandsen, Wieter Boone and Roeland Develter.

Flanging of "Agsut" has been planned and we begin by rolling the cradle into the water. We have some trouble steering the front wheels as they are inclined to turn individually when meeting obstacles on the seabed. We are unable to bring the cradle so far out that there will be water enough to navigate the boat onto it. Next morning at high tide we use "Agsut" to pull the cradle further out, and afterwards it is easy to haul "Agsut" on land by use of the winch. Asger prepares for the winter all engine parts, pipes, tubes, filters and tank. He also cleans the bottom of the engine room, which has not been done for many years. We wrap "Agsut" in tarpaulins. Foehn clouds build up later on and we are met with yet another low pressure, again coming from the north with wind and rain.

We continue our tasks, e.g. to secure the door handle in Fjøset with another bearproofing that Søren brought. We set off onboard the Buster dinghy late in the morning in fine, calm weather and find Namdalshytten (305) that is well located, sheltered by a cape from the present wind, coming in by Sofia Sund. The hut is intact. We see Inuit winter houses and a kitchen midden. We also pass the old Maria Ø station (239). No sign of a tsunami anywhere. The rest of the time is spent on counting and clearing. The Twin Otter from Zackenberg arrives on 22nd August at 10 am and fetch us for Constable Pynt, where the clouds are gathering and the wind rising. We leave as scheduled and report to the authorities, that the expedition is completed.

Closure

We inspected 16 huts in the area and renovated Sverresborg, Kap Peterséns, and Kap Mæchel. This summer we have sailed 517 km with "Agsut" and 53 km with the Buster dinghy. "Agsut" has sailed approx. 2.5 km/litre diesel, and the dinghy approx. 2.9 km/litre gasoline.

Thank you to Sirius Ella Ø for assistance and good collaboration.

Thanks to Arctic Research Centre at Aarhus University for good collaboration.

Asger – René – Jens Chr.



Nanok team and Research team from Arctic Research Centre. From left: Egon Frandsen, Wieter Boone, Jens Chr. Gotfredsen, Søren Rysgaard, René Lauritzen, Roeland Develter and Asger Lakmann Nielsen.

Field report Ella Ø 2024 Research Team

Assignments / contents

- travel and set up GIOS container systems
- service and deploy GIOS-lite system
- retract and relaunch measuring instruments at sea
- test new camera for measuring ice crystals
- inspect cameras on land (Ella Ø, Sverresborg, and Dickson Fjord)
- prepare GIOS land/lake container system
- presentation of facilities to AVJF
- packing and good company with Nanok and Sirius

The Ella Ø team

- Wieter Boone
- Roeland Develter
- Egon Frandsen
- Søren Rysgaard

Travel, setting up and service of GIOS-container systems

This report include work in Tasiilaq, Ella Ø region, and at Daneborg during the summer 2024. In June we travelled to Tasiilaq to establish yet another GIOS-station. We found a good location close to Tasiilaq town, where the sea ice covers the inner part of the bay. The instruments are here protected from drifting icebergs from winter to spring when the sea ice breaks. With assistance from Rasmus (a local resident), the conditions on land, sea, and seabed were examined, just as oceanographic measurements were undertaken with CTD in order to find the optimal spot to place GIOS-container. We had the container flown out in the field by helicopter with three slings and established solar panels and windmills on the system. Furthermore, the system is ready for connection to an atmosphere mast and oceanic instruments in September 2024.

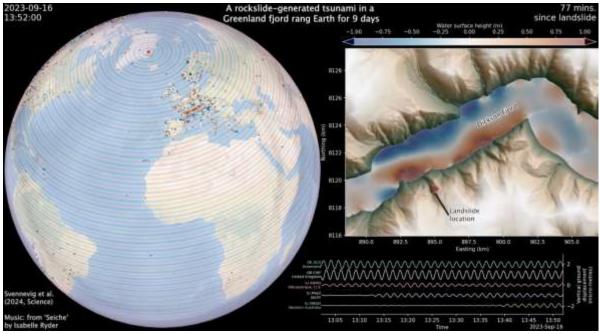








Helicopter sling in Tasiiilaq with "GIOS-container system," "GIOS-lite marin", and "GIOS-lite lake". All systems are now in place. We also established a fine collaboration with the local residents in Tasiilaq, who will carry out CTD-measurements through-out the year.



Landslide in Dickson Fjord releases 25 million m3 rocks down from a height of 1,2 km and creates a 200 m high tsunami and a standing wave in Dickson Fjord. This causes a seismic signal around the globe for nine days. Thanks to our instruments in Dickson Fjord and the GIOS-systems in the fiords around the Ella Ø-area, the signal is registered together with seismic data and photo documentation from automatic camera, photos and film from Sirius and Arctic Command. Is published in the Science magazine.

In the beginning of August, we travelled to Ella Ø in North-East Greenland by the usual route via Iceland. Here we also performed service on the GIOS-container system. On 16th September 2023, a big tsunami had damaged one of the submarine cables for our instruments 500 m out in the bay. Fortunately, the equipment had continued to transmit data. This was secured, a.o., by a visit of Sirius, who re-started the computer system – a big thank you for that. It turned out to be reasonably easy to repair and we mounted a new waterproof sea cable. In order to gather more high-definition data from the tsunami incident, the instruments were also retracted and then redeployed in order to continue the gathering of data and transmit in real time. Since last year, in collaboration with a number of international researchers, we have worked on an article for the magazine Science about the tsunami incident and are happy to announce, that it will be published on September 13 this year.

We also visited the GIOS-container at Daneborg. It was time for a check-up after two years data transmission. Likewise, we retracted the submarine instruments and deployed new ones, which are planned to transmit data in real time during the next two years. We have discovered that the batteries in this first GIOS-version seem not to be durable for two winters. Many of the batteries are cracked and we are trying to find a reason for this. This is also a problem for the GIOS-container system at Zackenberg. So far it



Roeland repairing the GIOS-lite system in Dickson Fjord after it was destroyed by the tsunami.



Roeland inspecting cameras and data. The station area at Ella \emptyset in the background.

appears not to be a problem for the newest version of batteries which are mounted in the later GIOSsystems.

Service and deployment of GIOS-lite system

We also set up GIOS-lite systems in Tasiilaq. The idea with the cheaper GIOS-lite is, that it gathers the same basic parameters as the more expensive GIOS-system. We set up three systems in Tasiilaq; an atmospheric station close to the GIOS-container, a lake station, and a marine station. Before deploying the quite expensive GIOS submarine system we want to test if the set-up of the GIOS-lite instruments are safe from drifting icebergs. If they transmit data all year round, we will establish the more advanced marine underwater equipment connected to the GIOS-container system. This will probably take place in 2025.



We had a problem with the batteries for our solar panel plant. The system apparently has to be completely cut off during the winter period, when not in use. But with a bit of ingenuity, we got the plant going again and enjoyed the silence (with no generator sound) at the station.

The GIOS-lite systems at Ella Ø have functioned well under the circumstances. The equipment in Dickson Fjord transmitted data, even when completely flooded by tsunami waves. The cables were bent, but the equipment transmitted data until the sea ice broke. We assume, that an iceberg or the sea ice have caught the bent cables. A new GIOS-lite system was installed again at the location. On Maria Ø the data transmission ceased briefly after the tsunami wave. It turned out, that the GPS-antenna was broken. Fortunately, the instruments had gathered data throughout the year, even if they were not transmitted. Data were saved and a new antenna mounted. The GIOS-lite systems at Sverresborg had also functioned throughout the year, stored and transmitted data as scheduled. The height of tsunami wave had here decreased considerably, and it was estimated to about 50 cm above normal.





Unfortunately, again this year the bears have destroyed the camera systems on land. We will now move the systems away from the coast and into the hinterland, where the bears teasing hopefully is less.



AVJF on a guided tour on Ella \emptyset .

At Daneborg as well a GIOS-system was established close to the GIOS-container by the research house. Besides, it is planned to establish a new GIOS-lite system at the head of Tyrolerfjord. In that way the climate gradient from the inner part of Young Sund to Zackenberg and to Daneborg will be covered, just as in the Ella Ø area.

Retracting and redeployment of measuring instruments in the sea

We quickly found the water sampler off Ella Ø. It had been sitting there since last year and gathered all the planned water samples, even though the tsunami has passed by the island. Furthermore, we saved a CTD-underwater buoy at Sverresborg, but unfortunately could not find the buoy in Dickson Fjord, which was placed close to Hisinger glacier. The tsunami or an iceberg must have taken it away. Sad, really, as it contains high-definition data of the tsunami incident throughout the year in this innermost part of the fiord. We redeployed new buoys. A short trip to Röhss Fjord to search for a disappeared underwater buoy, which was put out some years ago. Even if we had bought high-definition sonar and "site-scan" systems, we did not succeed. The buoy is supposed to be lost. This confirms that real time transmission of data is the way forward, because then you obtain the data even if the instrument is lost. All the same, it is still a nuisance to lose equipment, as these instruments don't come cheap.

Test of new camera for measuring of ice crystals

Earlier measurements in Dickson Fjord have shown some "peculiar" oxygen and hydrogen isotope measurements and salinity and temperature profiles. The best explanation of the measurements (described in a submitted article



AVJF visits the old trapping station at Zackenberg.

and specially studied subject) is that some of the fresh water, released from the glacier to the sea, freeze into ice. The water in Dickson Fjord is close to the freezing point of sea water, which is -2 degrees C between 20 and 200 m depth. Freshwater released in this layer, most likely freezes into ice. Last year we tried to film this process with a purpose-made underwater robot. Unfortunately, we lost the robot, as the entire glacier front calved and crashed right on top of the robot that died instantly, while we cut the wire and got into safety in our small Mopa boats. We have now constructed a camera, that via polarized light can film ice crystals in the sea water. This prototype was tested 200 m in front of the glacier from a Mopa boat and show that ice crystals certainly are found here. Further out in the fiord they melt. In years to come we will make further developments on the camera, so it can be mounted onto a drone and flown close to the glacier to film. If it turns out that these ice crystals normally are found close to glaciers, it may change our understanding of how the sea and glaciers interact. We have just received funds from Aage V. Jensens Fonde (AVJF) for a new PhD project, to investigate this more closely.

Inspect cameras on land in Ella \emptyset and Dickson Fjord areas

Once again, this year the polar bears have enjoyed themselves with chewing in our cameras on land. Even with a new design, the bears manage to gnaw almost all visible cables apart. It looks like a number of cameras cease to function in April-May. Our "wildlife camera" on Tolvmandsbarakken reveals that the reason is playful bears in this specific period, when also the water hose to the freshwater lake is dug up and chewed upon. The Nanok team had to shorten the hose to tighten it so we could get water to the house and the shower. We have taken down all



AVJF baptizes the new boat in Daneborg.

old camera systems on Ella Ø, as the bears here as well have given them a hard time. We did, however, save and bring home SD data cards on all cameras. The new cameras have transmitted lots of photos to the GIOS-server and these have been copied and brought to Denmark. We were also in Röhss Fjord and collected here the last survey camera. This camera had photos of the tsunami incident. A large fragment of the coast has disappeared, and the old wooden boat and the hut are torn asunder. The 180-degree camera system for surveying the glaciers in Dickson Fjord had taken photos every two hours yearround and "caught" the tsunami in there. Ahead of us now lies a major work in analysing these photos. Wieter also performed drone measurements of areas, where Jeff Kerby previously has made recordings, as well as on a few extra localities. We have drone measured terrain model at the head of Dickson Fjord, Röhss Fjord, Kap Hedlund, Ella Ø, and Sverresborg. In addition to this, we have taken lots of photos and measurements from the fiord to be able to document the coastal erosion caused by the tsunami.

Prepare GIOS land/lake container system

Egon and Søren were in the hinterland at Ella Ø to find a new location to place GIOS-container systems for land- and lake monitoring. It will

practically be easier to service these systems in the future at Ella Ø, where also the atmospheric and marine long-term measurements are made. Apart from this, we hope to reduce the number of cases with polar bears destroying the equipment. Various possible locations have photographed and measured. On this basis, the Defence later, in September, by helicopter has transported the system's container and equipment to the chosen location. We have also been given the possibility to have two men onboard one of the Defence's vessels, to gather oceanographic data, water isotopes, and eDNA data in the northern part of East Greenland. These measurements will supplement our local measurements in and around Ella Ø and measurements taken in 2021 all the way from Nuuk to Kejser Franz Joseph Fjord.

Presentation of facilities to Aage V. Jensens Fonde (AVJF)

Three years ago, the board of Aage V. Jensens Fonde (AVJF) tried to visit Ella Ø, Daneborg, and Zackenberg. Unfortunately, the weather then was miserable, so the visit did not take place. We could hear the Twin Otter circling around Ella Ø somewhere in the fog, but it was too dangerous to land. Fortunately, during the board's visit this year, the weather was on its best behaviour. AVJF arrived Ella Ø in bright sunshine, calm weather



Members of the board of AVJF in front of Ørnereden at Ella Ø. From left: Maerten Geiger, Arly Petersen, Anders Skov, Bendt Egede Andersen, Mette Skov, Leif Skov, Guido Meier.

and blue sky. After a quick lunch, the guests were shown around the station. Nanok's buildings and the researcher's equipment were presented to them, and all got a boat trip in the bay. There were lots of eager questions from AVJF, and the researchers were keen to talk about their ideas, measuring programs and technical inventions to collect measurements all year round. The visit was concluded with a tour in Ørnereden and a photo of the AVJF board. The trip then went on to Zackenberg, Daneborg, and Kulhus. Søren went along with AVJF while Egon, Roeland and Wieter stayed on and worked at Ella Ø, before closing down the station and travel on to Daneborg to inspect the GIOS systems there.

Great company with Nanok and Sirius

Once again, a huge THANK YOU for great company with Nanok and Sirius. Thank you for

cosy hours after a long day's work. It was wonderful to get home from the fiord late at night to learn, that thanks to thoughtful Nanok'ers, dinner was ready. Also, a great thank you to Sirius for their large interest in research and the assistance with carrying fuel to Kap Hedlund. You never get tired of listening to Nanok'ers and Sirius discussing dogs, and which route is the best in the wilderness. It is really encouraging to watch these young ones with drive and enthusiasm throw themselves into solving problems instead of just sitting around talking about, who ought to do this or that. There is still hope for the future. Not all is misery. Being a part of the "East Coast" makes one happy and proud.

Wieter, Roeland, Egon, Søren



AVJF visits Zackenberg.



Joint supper with the researchers, Nanok'ers and Sirius men in Tolymandsbarakken.

About Nanok

Nordøstgrønlandsk Kompagni Nanok is a private, non-profit organisation founded in 1992 upon the former Østgrønlandsk Fangstkompagni Nanok A/S, founded in 1929.

Nanok's mission is to contribute to disseminate knowledge of North-East Greenland and its cultural history and to contribute to securing the cultural monuments and buildings in the area, a.o.

Nanok consists of a private band of six persons, the Board. These are Peter Schmidt Mikkelsen (managing director), Jesper Mølbæk Stentoft, Tommy Pedersen, Søren Rysgaard, Hasse Staunstrup, and Torben E. Jeppesen. In addition to the abovementioned, a number of private individuals actively participate in Nanok's work. All work in Nanok is voluntary and unpaid.

Each summer Nanok dispatches a field team of typically 6-10 participants divided into 2-3 teams who work in North-East Greenland for 3-5 weeks. The results of this work are documented and published in a field report. The expedition participants are chosen by the Board. In the years 1991-2024, a total of 220 Nanok'ers — or more than 75 private individuals — have been dispatched to North-East Greenland.

To perform its tasks Nanok controls a considerable amount of expedition assets. However, Nanok possesses no property in Greenland.

Nanok's work is financially supported by the Aage V. Jensens Fonde.

Among Nanok's many good collaboration partners and supporters are: Norlandair, Arctic Research Centre, Arctic Science Partnership, Greenland Self Government, The Greenland National Museum & Archive, Greenland Institute of Natural Resources, Joint Arctic Command, Sirius Sledge Patrol, Defence Guard Mestersvig, Station and Patrol Service Greenland, Royal Arctic Line, and Tusass A/S.

Since 1991 Nanok has renovated and maintained more than 60 culture historical buildings. For this work Nanok has gained considerable recognition and support from the Greenland Self Government, a.o. Since 2010 Nanok has had a formal cooperative agreement with The Greenland National Museum & Archive in Nuuk.

In the years 2003-2007, encouraged by the Greenland Self Government at the time, Nanok developed a new, unique structural survey of all culture historical huts and stations in North-East Greenland. Extensive data from these surveys, incl. photos and GPS positions, is published in: Mikkelsen PS (2019). Nordøstgrønland 1908-60. Fangstmandsperioden – og dens spor i dag".

You can experience a range of the old North-East Greenlandic huts in Google Street View via a link from http://www.xsirius.dk/



List of North-East Greenlandic stations and huts renovated by Nanok 1991 - 2024:

Nr.	Name	Restored year	Nr.	Name	Restored year
201	Antarctichavn	2001 (knust 2002)	356	Hoelsbu	1999, 2000, 2021, 2023
208-2	Hamna	2020	358-2	Nordfjordhuset	2019
209-2	Nyhavn	2007	358-3	Strindberghuset	2013
216	Kap Mæchel hytten	2024	367-2	Mellemhuset	2010
218	Kap Peterséns	1998, 2024	403	Krogness	2010
224-2	Kongeborgen	2001	405	Eskimonæs	1998
222	Holm Bugt hytten	2001	407	Elvsborg	2007-2008
232	Sverresborg	2014, 2024	408	Dødemandsbugten	2013-2014
235	Ørnereden, Ella Ø	2015-2019	411-2	Norma hytta	2010
235	Tolvmandsbarakken	2015-2019	412	Dahl Skær hytten	2010
235	Fjøset	2022	417	Kap Herschell	2002
236	Maristua	2008, 2023	425	Sandodden/Karina	1994, 2007, 2009, 2020
238	Mineralbukta	2010	429	Moskusheimen	1994
241	Svedenborg	2011, 2023	434	Leirvågen	2008
301	Laplace	2009, 2023	438-2	Zackenberg	1991-1992
304	Arentz hytten	2008, 2023	438-4	Fiskerhytten	2008
305	Namdalshytten	2010, 2023	437	Bjørnnesstua	2008
308	Kap Humboldt	1997, 2023	443	Blæsenborghytten	2017
309	Rendalshytten	2010	444	Anton sens hytte	2017
310	Bjørnheimen	2008, 2023	447	Germaniahavn	1999
317	Brøggers hytte	2012, 2023	454	Fjordbotten	2013
320	Smedal	2012, 2023	461	Bass Rock	2019
322	Noa Sø hytten	2008, 2023	470	Kap Philip Broke	2022
324	Varghytten	2002, 2007, 2023	510	Hochstetter	1996, 1998
325	Renbugthytten	2010, 2023	511	Kulhus	2022
335	Myggbukta	1999, 2002, 2011, 2023	514	Ny Jonsbu	1995
337	Ragnhilds-hytten	2008	518	Alabamahuset	2016
340	Kap Ovibos hytten	2000, 2007, 2012, 2023	531	Ottostrand	2009
341	Halle	2011, 2023	628-1	Villaen, Danmarkshavn	2017
345	Bråstad	2011, 2023	639-1	Hvalrosodden	2019
347	Petrahytten	2011	639-2	Alwin Pedersens hus	2019
350	Loch Fyne	1993, 2007		Kap Moltke /Brønlundhus	2001
Source of but numbers and names: Peter Schmidt Mikkelsen: Nordastaranland 1908-60, Fanastmandsperioden - og dens					

Source of hut numbers and names: Peter Schmidt Mikkelsen: $Nord \phi stgr \phi nland~1908-60$. Fangstmand sperioden~og~dens~spor~i~dag. Xsirius Books 2019.

