Nomination of

Aasivissuit – Nipisat

Inuit Hunting Ground between Ice and Sea

for inclusion on the World Heritage List

Jens Fog Jensen, Claus Andreasen, Paninnguaq Fleischer-Lyberth,
Laust Løgstrup, Hans Holt Poulsen, Ólafur Rafnar Ólafson,
Anne-Christine Løventoft-Jessen, Susan Barr and Morten Meldgaard

Aasivissuit – Nipisat

Inuit Hunting Ground between Ice and Sea

Foreword

The Aasivissuit – Nipisat area is a unique cultural landscape in an artic setting. It lies at the heart of the largest ice-free area in Greenland which, in combination with the transitional coastal zone between the 'open-water area' and the high-arctic area of land-fast winter ice, has made it exceptional as a hunting ground for people through millennia. This long history is visible in the landscape in the form of the numerous ruins and traces left by the Arctic people. These include winter settlements with ruins of turf houses along the coast, inussuit (cairns) and trails from the coast to the caribou hunting camps and the remarkable caribou drive systems in the interior.

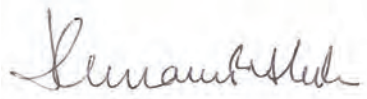
The area provides the most complete and best-preserved record of arctic hunting traditions from 2500 BC onwards, demonstrating sustainable land use based on seasonal migrations between coast and interior. Colonial ruins at the coast reflect the arrival of Europeans in the 18th century and their interaction with Inuit.

Today, hunters with their families continue these seasonal travels, staying and hunting in the same places as their predecessors and thereby creating a link between past and present.

The nomination document is the result of consultations with local, national and international contacts and extensive discussions. Work on the document has gathered momentum over the last six years and we are proud to commend this nomination to the World Heritage Committee of UNESCO.

We fully endorse the nomination of Aasivissuit – Nipisat. Inuit Hunting Ground between Ice and Sea for World Heritage status.

Doris Jakobsen
Minister of Education, Culture,
Research and Church



Hermann Berthelsen
Mayor
Qeqqata Municipality

January 2017

NAALAKKERSUISUT
GOVERNMENT OF GREENLAND

Qeqqata Kommunia

Photo: Destination Arctic Circle.

Preface

In 1996, the Nordic Council of Ministers published the report 'Verdensarv i Nord' – World Heritage in the Nordic Countries, proposing new Nordic properties, which the nation states were recommended to nominate to UNESCO. The report contained three proposals for Greenlandic World Heritage properties, one of which encompassed Aasivissuit – Arnangarnup Qoorua, Inuit Hunting Grounds in the former Maniitsoq and Sisimiut Municipalities, now Qeqqata Municipality.

In 2002, Greenland called on the Danish Government to be party to nominating these three areas for inscription on UNESCO's Tentative List.

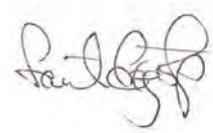
As part of the Danish and Greenlandic implementation of the UNESCO World Heritage Convention, the Government of Greenland decided to nominate Aasivissuit – Arnangarnup Qoorua for inclusion on the World Heritage List as a cultural property. In 2003, Aasivissuit – Arnangarnup Qoorua, Inuit Hunting Grounds came on the Tentative List.

In 2010, Qeqqata Municipality began comprehensive physical and economic planning of the future for the region, its people and its assets. This involved new discussions with the Greenland Government about the shape and size of Aasivissuit – Arnangarnup Qoorua. Prior to the final decision, Qeqqata Municipality conducted a number of meetings and workshops with citizens, local politicians etc. on many issues, with the nomination for World Heritage status being one of the major subjects. A new report was drafted on the cultural history of the area, with suggestions as to the boundaries of the new area (Andreasen 2013). It was also decided to include part of the inland ice sheet and of the open sea, and to change the title to: Aasivissuit – Nipisat. Inuit Hunting Ground between Ice and Sea.

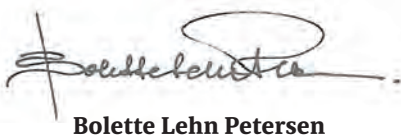
Within this huge area of 417,800 ha, Inuit have left traces of a life based on marine animals, supplemented to varying degrees by hunting of terrestrial animals in the extensive hinterland. The same area also has visible evidence from early colonial times in the 18th century, through colonisation to the present. In spite of all changes, the old way of living is still understood and appreciated today; the same resources are used and hunted as in the past and the use of the landscape has not changed radically.

Since 2010, Qeqqata Municipality has worked on several aspects of the nomination. This has been an ongoing project, led by and embedded within the administration of Qeqqata Municipality. Formal and informal meetings, workshops and discussions with local residents have demonstrated unanimous support for the application. The Greenland Government has likewise given the project its full support.

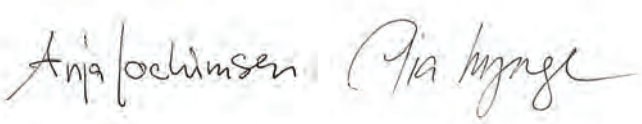
The World Heritage Steering Committee of Aasivissuit – Nipisat. Inuit Hunting Ground between Ice and Sea.



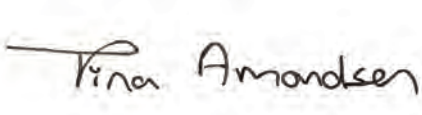
Laust Løgstrup
Chairman of Steering Committee
Qeqqata Municipality



Bolette Lehn Petersen
Ministry of Culture (Denmark),
Agency for Culture and Palaces



Anja Jochimsen and Pia Lynge
Ministry of Education,
Culture, Research and the Church (Greenland)



Tina Amondsen
Ministry of Industry, Labour,
Trade and Energy (Greenland)

Anne-Christine Løventoft-Jessen
Sisimiut and Kangerlussuaq Museum

Associated members:

Deputy CEO **Bo Albrechtsen, MA**
Greenland National Museum and Archives

Senior geologist, special advisor **Annette Juul-Nielsen**
Ministry of Mineral Resources (Greenland)

Qeqqata Kommunia

MINISTERIET
AGENCY FOR CULTURE AND PALACES

Nunatta Katersugaasivia Allagaateqarfialu
Greenland National Museum & Archives

NAALAKKERSUISUT
GOVERNMENT OF GREENLAND

January 2017

Photo: Kristian Kreutzmann.

Nomination of

Aasivissuit – Nipisat

Inuit Hunting Ground between Ice and Sea

for inclusion on the World Heritage List

Jens Fog Jensen, Claus Andreasen, Paninnguaq Fleischer-Lyberth,
Laust Løgstrup, Hans Holt Poulsen, Ólafur Rafnar Ólafson,
Anne-Christine Løventoft-Jessen, Susan Barr and Morten Meldgaard

The project owner is Qeqqata Municipality and the Greenland Government has been actively involved in the development of the project since its initiation.

Professor Morten Meldgaard Ilisimatusarfik (University of Greenland) and the Natural History Museum of Denmark (Copenhagen) is responsible for scientific documentation and project coordination and the Greenland National Museum and Archives (Nuuk) has supported the nomination throughout the process with data, information, transport and accommodation. The project has been developed under the auspice of 'Greenland Perspective - activating research into society'.

The present project has received financial support from Qeqqata Municipality, the Greenland Government, and Aage V. Jensen Charity Foundation.

Qeqqata Kommunia

NAALAKKERSUISUT
GOVERNMENT OF GREENLAND

NATURAL HISTORY MUSEUM OF DENMARK
UNIVERSITY OF COPENHAGEN

AAGE V. JENSEN CHARITY FOUNDATION

Authors: Postdoc. Jens Fog Jensen, PhD[1], museum curator emeritus, Claus Andreasen, MA[1], communications officer Paninnguaq Fleischer-Lyberth, MA[2], Deputy CEO Laust Løgstrup, cand.oecon/MA[2], director of planning Hans Holt Poulsen, cand.arch[2], tourist coordinator Ólafur Rafnar Ólafson, MA[2], museum director Anne-Christine Løventoft-Jessen, MA[3], senior advisor Susan Barr, PhD, dr. and Professor Morten Meldgaard, PhD, dr. phil.[1/4].

[1] Natural History Museum of Denmark, Øster Voldgade 5-7, 1350 Copenhagen

[2] Qeqqata Municipality, Postboks 1014, Makkorsip Aqq. 2, 3911 Sisimiut

[3] Sisimiut and Kangerlussuaq Museum, Postboks 308, Jukkorsuup Aqq. 6, 3911 Sisimiut

[4] Ilisimatusarfik, University of Greenland, Manuutoq 1, 3905 Nuussuaq, Nuuk.

Informants and background: Bodil Olsen, Magdaline Lennert, Hans Peter Kreutzmann, Anna Karen Thomassen Hofmann (Kuka), Laasa Jonathansen, Henrik Wilhjelm, Robert Petersen, Niels H. Frandsen, Christine Cuyler (Greenland Institute of Natural Resources), Bjarne Grønnow, Ulla Odgaard (SILA/National Museum of Denmark), Tinna Møbjerg, Anne B. Gotfredsen. Henning Thing, Niels Aage Tvis Knudsen, David Boertmann, Ole Bennike and Minik Rosing.

Technical editor: Carsten E. Thuesen (GEUS)

Cover: Carsten E. Thuesen (GEUS)

Lay-out and DTP: Carsten E. Thuesen (GEUS)

Reprographic work: Benny Schark (GEUS)

Linguistic revision: Dr David Earle Robinson & cand.mag. Anne Bloch, HSLS | Heritage Science & Language Services

Drawings: Carsten E. Thuesen, Annabeth Andersen (GEUS)

Maps: Frants von Platen-Hallermund (GEUS)

Archaeological maps & drawings: Mikkel Myrup (Greenland National Museum and Archives)

Photos: Source is given next to individual photographs.

Print: Rosendahls

ISBN: 978-87-87519-86-1 © 2017

Photo: Jens Fog Jensen.

Contents

Executive Summary

Northern hemisphere

Greenland

Location of the property within the State Party.

State Party

Denmark

State, Province or Region

Greenland, Qeqqata Municipality

Name of Property

Aasivissuit – Nipisat. Inuit Hunting Ground between Ice and Sea

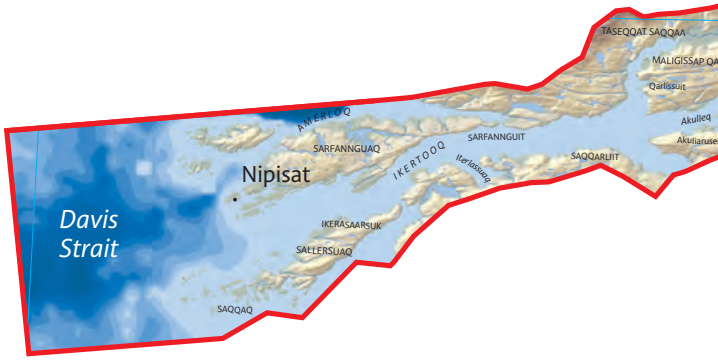
Geographical Coordinates to the Nearest Second

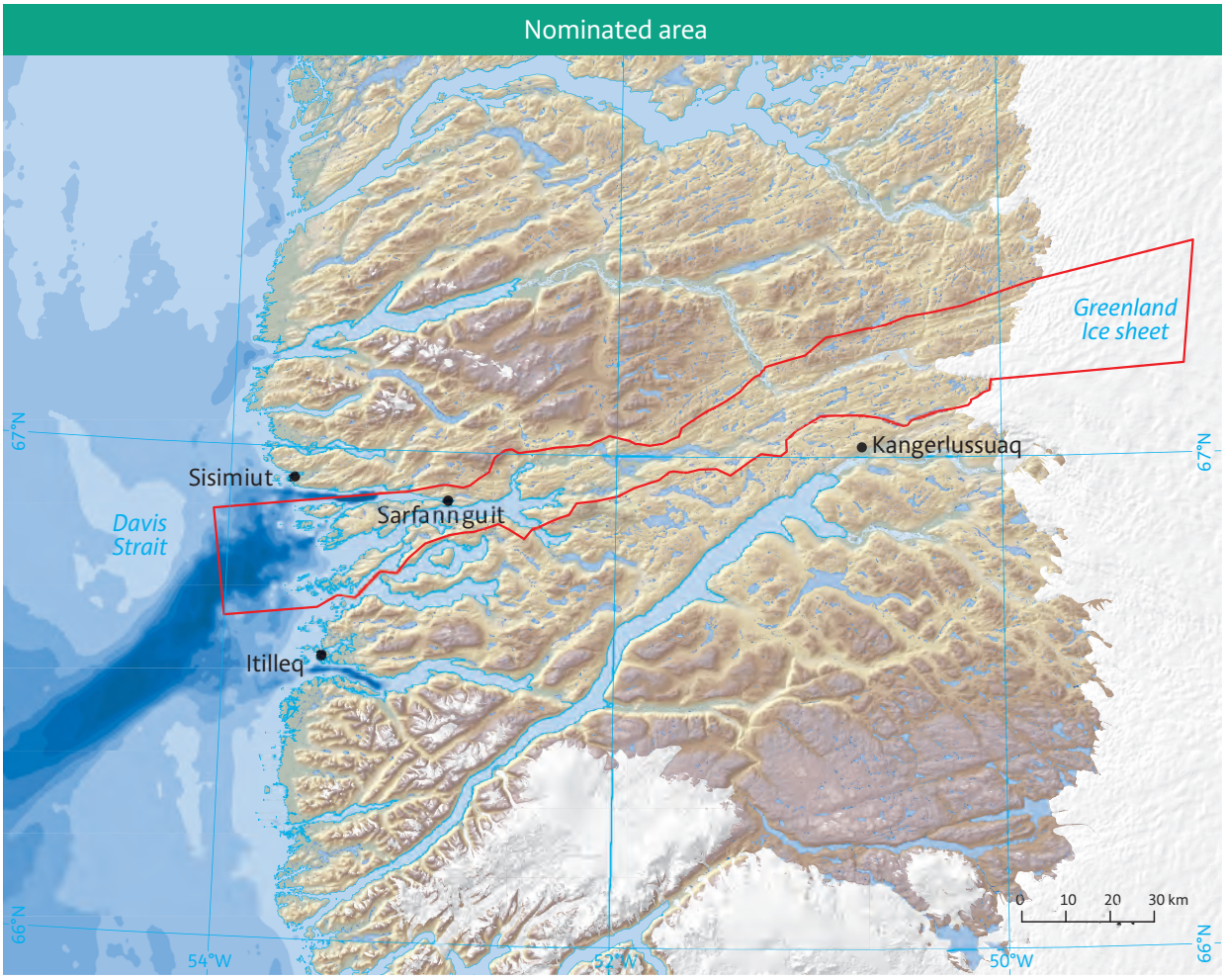
Coordinates of the central point:
N 67° 3' 50.15" W 51° 25' 59.54"

Textual description of the boundaries of the nominated property

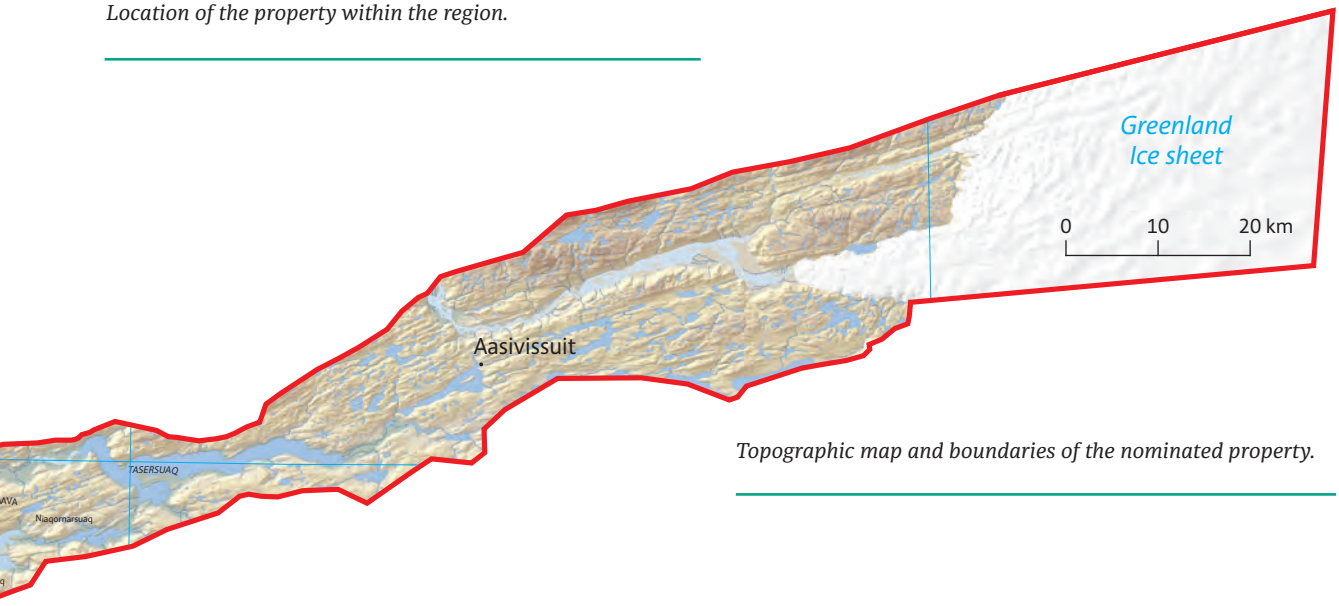
The nominated property covers 417,800 ha and is situated just north of the Arctic Circle in the central part of West Greenland. The c. 235 km long and up to 20 km wide area extends from the sea in the west to the dynamic ice sheet in the east.

For easy recognition, the borders of the nominated property follow the natural lines of the landscape,





Location of the property within the region.



Topographic map and boundaries of the nominated property.

Table 0.1 - Geographical coordinates defining the boundary

Punkt	long	lat
UNESCO001	54° 4' 53.351" W	66° 52' 6.648" N
UNESCO002	53° 10' 35.613" W	66° 54' 47.268" N
UNESCO003	53° 4' 54.064" W	66° 55' 3.389" N
UNESCO004	52° 53' 59.642" W	66° 55' 58.266" N
UNESCO005	52° 52' 32.550" W	66° 56' 1.054" N
UNESCO006	52° 47' 41.976" W	66° 55' 44.892" N
UNESCO007	52° 45' 33.124" W	66° 56' 2.667" N
UNESCO008	52° 42' 42.486" W	66° 56' 55.195" N
UNESCO009	52° 39' 42.681" W	66° 57' 42.267" N
UNESCO010	52° 38' 4.713" W	66° 59' 27.948" N
UNESCO011	52° 34' 48.124" W	67° 0' 26.680" N
UNESCO012	52° 32' 49.177" W	67° 0' 34.345" N
UNESCO013	52° 30' 38.724" W	67° 0' 6.866" N
UNESCO014	52° 28' 28.033" W	67° 0' 18.168" N
UNESCO015	52° 25' 17.828" W	67° 0' 24.397" N
UNESCO016	52° 20' 45.887" W	67° 0' 45.409" N
UNESCO017	52° 18' 58.591" W	67° 0' 54.368" N
UNESCO018	52° 13' 52.885" W	67° 1' 3.024" N
UNESCO019	52° 11' 11.958" W	67° 1' 13.436" N
UNESCO020	52° 8' 52.257" W	67° 1' 15.050" N
UNESCO021	52° 8' 21.635" W	67° 1' 17.400" N
UNESCO022	52° 7' 50.035" W	67° 1' 23.528" N
UNESCO023	52° 7' 16.538" W	67° 1' 35.514" N
UNESCO024	52° 6' 14.344" W	67° 1' 43.584" N
UNESCO025	52° 5' 28.436" W	67° 1' 52.513" N
UNESCO026	52° 3' 57.492" W	67° 2' 8.887" N
UNESCO027	52° 2' 21.074" W	67° 2' 24.022" N
UNESCO028	51° 56' 7.494" W	67° 1' 52.773" N
UNESCO029	51° 54' 20.235" W	67° 1' 31.610" N
UNESCO030	51° 53' 9.563" W	67° 1' 30.084" N
UNESCO031	51° 49' 49.093" W	67° 1' 19.457" N
UNESCO032	51° 47' 14.951" W	67° 1' 28.731" N
UNESCO033	51° 45' 40.413" W	67° 1' 35.757" N
UNESCO034	51° 44' 24.037" W	67° 1' 48.451" N
UNESCO035	51° 42' 43.504" W	67° 2' 9.946" N
UNESCO036	51° 40' 44.115" W	67° 2' 27.812" N
UNESCO037	51° 39' 51.165" W	67° 3' 30.296" N
UNESCO038	51° 37' 32.787" W	67° 4' 9.224" N
UNESCO039	51° 32' 9.811" W	67° 5' 34.178" N
UNESCO040	51° 28' 49.066" W	67° 6' 15.344" N
UNESCO041	51° 26' 0.713" W	67° 6' 51.990" N
UNESCO042	51° 21' 46.269" W	67° 7' 57.256" N
UNESCO043	51° 19' 33.544" W	67° 9' 0.819" N
UNESCO044	51° 17' 5.823" W	67° 9' 48.976" N
UNESCO045	51° 15' 42.450" W	67° 10' 4.238" N
UNESCO046	51° 13' 45.942" W	67° 11' 1.293" N
UNESCO047	51° 11' 32.133" W	67° 11' 18.298" N
UNESCO048	51° 5' 26.134" W	67° 12' 0.321" N
UNESCO049	51° 1' 21.416" W	67° 12' 27.633" N
UNESCO050	50° 54' 48.234" W	67° 14' 39.693" N
UNESCO051	50° 50' 17.324" W	67° 14' 56.494" N
UNESCO052	50° 45' 28.089" W	67° 15' 27.133" N
UNESCO053	50° 35' 55.240" W	67° 16' 9.329" N
UNESCO054	50° 29' 40.478" W	67° 17' 7.215" N
UNESCO055	50° 20' 58.384" W	67° 17' 41.512" N
UNESCO056	50° 11' 53.521" W	67° 18' 26.910" N
UNESCO057	49° 59' 26.951" W	67° 20' 6.859" N
UNESCO058	49° 49' 6.975" W	67° 21' 23.106" N
UNESCO059	48° 58' 4.414" W	67° 25' 49.165" N
UNESCO060	49° 2' 14.871" W	67° 10' 57.352" N
UNESCO061	50° 2' 58.124" W	67° 9' 23.425" N
UNESCO062	50° 3' 18.708" W	67° 8' 32.454" N
UNESCO063	50° 3' 31.983" W	67° 8' 6.564" N
UNESCO064	50° 5' 29.800" W	67° 7' 50.308" N
UNESCO065	50° 7' 20.509" W	67° 7' 15.126" N
UNESCO066	50° 9' 20.499" W	67° 6' 55.696" N
UNESCO067	50° 9' 18.077" W	67° 6' 40.453" N
UNESCO068	50° 10' 11.501" W	67° 6' 17.124" N
UNESCO069	50° 12' 50.689" W	67° 6' 1.787" N
UNESCO070	50° 16' 33.294" W	67° 5' 47.321" N
UNESCO071	50° 19' 27.194" W	67° 5' 37.866" N
UNESCO072	50° 27' 48.343" W	67° 4' 35.492" N
UNESCO073	50° 29' 11.310" W	67° 3' 56.133" N
UNESCO074	50° 30' 23.356" W	67° 3' 47.385" N
UNESCO075	50° 36' 39.433" W	67° 4' 44.446" N
UNESCO076	50° 43' 38.022" W	67° 5' 7.753" N
UNESCO077	50° 56' 7.363" W	67° 5' 5.027" N
UNESCO078	51° 4' 0.830" W	67° 3' 15.381" N
UNESCO079	51° 7' 8.379" W	67° 2' 9.542" N
UNESCO080	51° 7' 4.843" W	67° 0' 45.662" N
UNESCO081	51° 8' 56.785" W	67° 0' 8.255" N
UNESCO082	51° 14' 59.406" W	67° 0' 23.699" N
UNESCO083	51° 18' 6.563" W	66° 59' 35.117" N
UNESCO084	51° 24' 31.900" W	66° 57' 46.296" N
UNESCO085	51° 28' 57.518" W	66° 58' 34.043" N
UNESCO086	51° 34' 11.730" W	66° 58' 27.818" N
UNESCO087	51° 37' 55.585" W	66° 58' 6.341" N
UNESCO088	51° 40' 26.051" W	66° 58' 7.774" N
UNESCO089	51° 42' 15.465" W	66° 58' 14.923" N
UNESCO090	51° 43' 36.354" W	66° 58' 6.848" N
UNESCO091	51° 46' 44.036" W	66° 57' 7.632" N
UNESCO092	51° 54' 23.403" W	66° 56' 6.983" N
UNESCO093	51° 59' 21.527" W	66° 55' 6.971" N
UNESCO094	52° 6' 20.621" W	66° 54' 28.126" N
UNESCO095	52° 12' 20.205" W	66° 54' 7.716" N
UNESCO096	52° 14' 35.191" W	66° 52' 44.418" N
UNESCO097	52° 17' 22.617" W	66° 52' 19.823" N
UNESCO098	52° 20' 21.846" W	66° 51' 50.720" N
UNESCO099	52° 23' 54.915" W	66° 51' 9.909" N
UNESCO100	52° 25' 38.547" W	66° 50' 57.807" N
UNESCO101	52° 28' 15.817" W	66° 49' 39.397" N
UNESCO102	52° 33' 12.824" W	66° 50' 48.720" N
UNESCO103	52° 36' 28.624" W	66° 51' 23.679" N
UNESCO104	52° 38' 43.934" W	66° 51' 4.975" N
UNESCO105	52° 44' 7.290" W	66° 50' 21.159" N
UNESCO106	52° 46' 43.116" W	66° 50' 16.428" N
UNESCO107	52° 51' 26.225" W	66° 49' 53.677" N
UNESCO108	52° 55' 47.361" W	66° 49' 15.166" N
UNESCO109	52° 58' 55.656" W	66° 48' 48.460" N
UNESCO110	53° 3' 51.744" W	66° 46' 57.910" N
UNESCO111	53° 7' 17.184" W	66° 45' 10.257" N
UNESCO112	53° 12' 17.494" W	66° 45' 19.413" N
UNESCO113	53° 19' 54.577" W	66° 41' 57.822" N
UNESCO114	53° 25' 11.729" W	66° 42' 10.383" N
UNESCO115	53° 31' 34.118" W	66° 40' 34.495" N

such as fjords, lakes, hilltops, waterways or watersheds. In fjords, lakes, sounds and sea passages, the boundary is set midway between the nearest land on either side, and towards the open sea it lies at the territorial baseline. To the east, the boundary is on the ice sheet, at a distance of c. 40 km from the present ice edge. This corresponds to the approximate position of the ice edge when the first people arrived in the area. The exact location of the boundary is defined by a list of coordinates connected by straight lines (Table 0.1).

The 417,800 ha property is of adequate size to ensure the complete representation of the features and processes that convey its significance, and it does not

Photo: Jens Fog Jensen.

The western part of the nominated area comprises a fjord and archipelago environment with numerous ancient settlements along the shores.

suffer from the adverse effects of development or neglect. Together with the fact that there is just one landowner (Government of Greenland), these factors have been crucial to nominating the property without a buffer zone. The borders are, furthermore, defined such that a strong visual impression of the cultural landscape is ensured.

Criteria under which the property is nominated

(iii) Archaeological traces of the traditional, nomadic Inuit hunting culture are visible throughout the arctic landscape of Aasivissuit – Nipisat, between the coast of the Davis Strait and the ice sheet. The property contains a complete suite of ruin sites, representing all epochs and all principal seasonal activities, from the 4200-year-old site of Nipisat, to hundreds of visible ruins from the Thule culture (AD 1250-1700), with Aasivissuit and its impressive caribou drives, and the historical period (AD 1700-1900). At the settlement of Sarfannguit, the active fishing and hunting culture links present land use to the old, traditional, sustainable hunting cultures. Aasivissuit – Nipisat is a 'continuing landscape' with significant material evidence of its evolution over time.

(v) The traditional seasonal migrations and variation in hunting practices since the first people arrived c. 2400 BC have left ancient camp sites in all parts of the landscape. The route from the winter settlements to the summer camps can be followed as a time-worn trail from the west to the east. Along this ancient trail, summer camps with dwelling ruins, inussuit (cairns), graves and caches tell a story of resource abundance. Ruins of all major prehistoric features are present in Aasivissuit – Nipisat, and all of these ancient monuments remain in their original locations, making them a first-class record of the history of hunter-gatherer resilience in an arctic environment.

Draft Statement of Outstanding Universal Value

Brief synthesis

The nominated cultural landscape lies at the heart of the largest ice-free area in Greenland which, in combination with the transitional coastal zone between the 'open water area' and the high-arctic area of land-fast winter ice, has made it exceptional as a hunting ground for people through millennia. This long history is visible in the landscape in the form of the many ruins and traces left by the Arctic people, including winter settlements with ruins of turf houses along the coast, inussuk (cairns) and trails leading from the coast to the caribou hunting camps and remarkable caribou drive systems in the interior. The area provides the most complete and best-preserved testimony of arctic hunting traditions from 2500 BC onwards, providing evidence of sustainable land use, based on seasonal migrations between coast and interior. Colonial ruins on the coast reflect the arrival of Europeans in the 18th century and their interaction with Inuit.

Today, hunters with families continue their seasonal travels, staying and hunting in the same places as their predecessors and thereby forging creating a link between past and present.

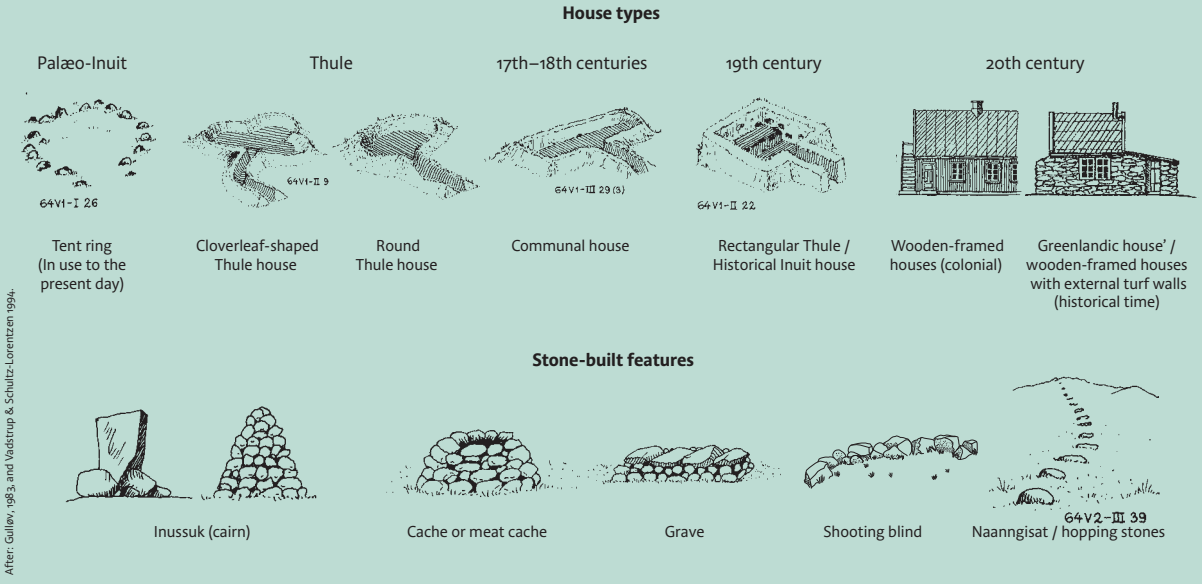
Justification for Criteria

Criterion (iii): To bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared.

For millennia, peoples in Aasivissuit – Nipisat have exploited the locally available resources and have adapted their lifestyles and homes to the seasonal rhythm. Due to is geography and climatic conditions this specific area offers several options for 'the good life'. Today, the area remains virtually unchanged. The long tradition of locally sustainable land use can be read more easily in landscape and culture than in many other places. The landscape, the camp sites and archaeological remains therefore have outstanding universal value.

The area has the well-documented Paleo-Inuit site of Nipisat and hundreds of visible ruins from the Thule culture (c. AD 1250-1700) and the historical period (c. AD 1700-1900). Seven of the best preserved and most accessible of these localities have been selected as key sites

Box 1 - Common stone- and turf-built archaeological features and house types in Aasivissuit – Nipisat



for interpretation of the traditional housing and life in West Greenland. The settlement of Sarfannguit is an active community, where the fishing and hunting culture links the present sea and land use to the traditional sustainable nomadic hunting societies of the Thule, Dorset and Saqqaq cultures. Aasivissuit – Nipisat is therefore a 'continuing landscape' with significant material evidence of its evolution over time (Mitchell 2009).

The seven sites are focal points for humans living off the land and the sea. The landscape settings, in combination with impressive archaeological remains, testify to the traditional land use in time and space throughout the nominated area, between the inland ice sheet and the open sea.

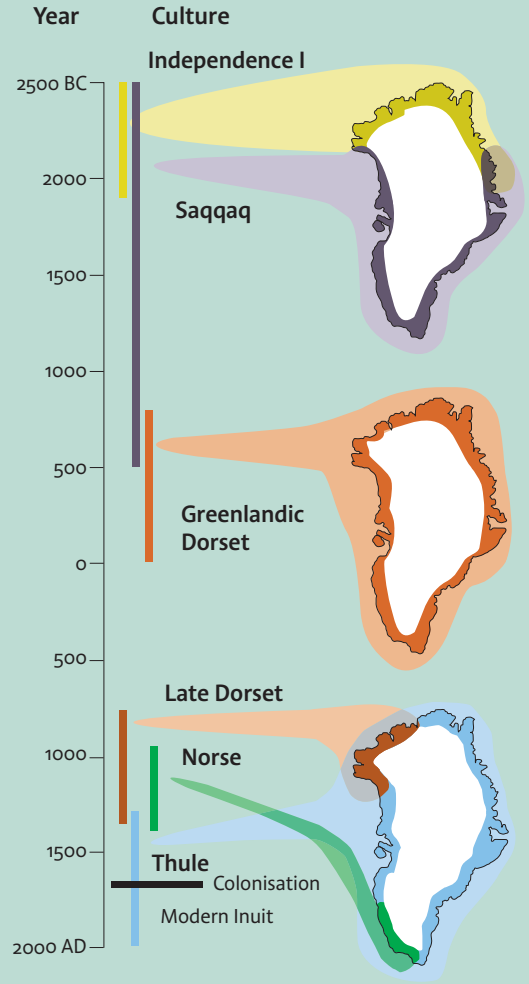
Criterion (v): To be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.

Ruins of dwellings, graves and hunting features are preserved in their original settings, where they testify to the traditional seasonal migrations and variation in hunting practices throughout the year, as has been the case since the arrival of the first people in c. 2500 BC. Winter settlements focusing on the hunting of seals are situated on the outer coast, spring settlements with fishing for capelin and char are situated in the fjords, and summer camps where migrating caribou could be intercepted in extensive drive systems are situated in the interior. The route from the winter settlements to the summer camps can be followed as an old well-trodden trail running eastwards from the head of Maligiaq Fjord. Along this ancient trail are summer camps with dwelling ruins as well as numerous inussuit (waymarker cairns), graves and caches conveying the story of abundance. Ruins of all the different house types are present in Aasivissuit – Nipisat, and the situation of these ancient monuments in their original settings makes them first class scenes for conveying the history of hunter gatherer resilience in an arctic environment.

Statement of Integrity

The property contains all the elements necessary to express the outstanding universal value of the Inuit hunting landscape, including an exceptionally large number of ruin sites in the form of winter dwellings, graves, caches and the great summer camp of Aasivissuit, which in addition to dwelling structures hosts the largest communal hunting system known from Greenland, as well as temporary dwellings, hunting

Box 2 - Principal cultural sequences in the prehistory of Greenland



Principal cultural sequences in the prehistory of Greenland
Independence I c. 2400-1900 BC
Saqqaq culture c. 2400-500 BC
Greenlandic Dorset c. 800 BC-1 AD
Thule culture c. AD 1250-1700

systems and inussuit. All the principal epochs, from the Saqqaq culture of 2400 BC, to Greenlandic Dorset, Thule, historical Inuit and colonial settlers are represented within the nominated area.

The property has an area of 417,800 ha and is therefore of an adequate size to ensure the complete representation of the features and processes that testify to its significance, and it does not suffer from the adverse effects of development or neglect. Together with the fact that there is just one landowner (Government of Greenland) and that any future industrial development in the area has been explicitly rejected, these factors have been crucial to nominating the property without a buffer zone.

Statement of Authenticity

Aasivissuit – Nipisat is situated in the part of Greenland where the post-glacial rebound is greatest (as explained in chapter 2.a.i). Consequently, more ruin sites here than anywhere else in Greenland and in many other parts of the Arctic can be anticipated to have avoided destruction by coastal erosion. This positive effect of the post-glacial rebound is particularly relevant for the earliest sites, dating from the Saqqaq (2400-500 BC) and Dorset (800 BC - AD 1) cultures, since these ancient camp sites have often become eroded or submerged in other parts of Greenland where coastal lands have been subject to a process of depression during the last 2000 years.

Since the prey species have remained the same for thousands of years, so have the locations of the settlements. There may have been local changes with respect to which part of an island was preferred for settlement, but in general there has been reuse of good locations through millennia. Reuse is part of life in the Arctic and this is also evident on sites that span hundreds of years: Suitable stones from one structure may have been removed from their contexts to be reused in later structures at the same locality.

Requirements for protection and management

The nominated area is owned by Naalakkersuisut (Government of Greenland) and administered by Qeqqata Municipality. The nominated area, and all surrounding landscapes, are consequently administered by the same authorities. Currently an area in the easternmost part of the nominated area is protected as the southern part of the larger Ramsar area no. 386, Eqalummiut Nunaat and Nassuttuup Nunaa, extending northwards along the margin of the ice sheet beyond the area nominated as the Aasivissuit – Nipisat World Heritage Site.

The Greenland National Museum and Archives is the administrative authority for protected monuments, and the Ministry of Mineral Resources – which issues raw material licences – has agreed not to issue prospecting licences within the nominated World Heritage Site. Local stewardship for monitoring key localities and general status will be encouraged in the settlements of Sarfannguit and Kangerlussuaq.

The legislative basis and organisation of the site management will ensure that developmental or economic challenges will not affect the property in any significant manner.

Specific long-term expectations

Natural, long-term threats to the archaeological sites are very limited. The impact of increased tourism may, on the other hand, have an effect if visitor numbers increase significantly. Increased traffic may result in degradation of vegetation and thereby erosion. Monitoring and infrastructure measures, such as repeat photography, visual inspection, marked paths and no-go-zones, described in the management plan, will ensure that such processes remain under the full control of the authorities.

The continuing use of the land has the potential to degrade ruins and sites on a local scale, but monitoring and management will be implemented to reduce damage to historical resources in the vicinity of the camps used today. On a larger geographic scale, sustainable continuing land use by the citizens of Sarfannguit, Sisimiut and Kangerlussuaq keeps local knowledge alive and underpins the protection of the site against conflicting development.

Name and contact information of official local institution/agency

Qeqqata Municipality
P.O.Box 1014
Makkorsip Aqq. 2
DK-3911 Sisimiut, Greenland
Tel: (+299) 702100
Fax: (+299) 702177
Mail: qeqqata@qeqqata.gl

Photo: Visit Greenland.

Cutter entering Ikertooq Fjord from the narrows by the settlement of Sarfannguit.

View to the west over the lake district in the easternmost inland region of Aasivissuit–Nipisat. Photo: Visit Greenland.

Photo: Mads Pihl, Visit Greenland.

1. Identification of Property

Northern hemisphere

1.a Country

Denmark

1.b State, Province or Region

Greenland, Qeqqata Municipality

1.c Name of Property

Aasivissuit – Nipisat. Inuit Hunting Ground between Ice and Sea

1.d Geographical coordinates to the nearest second

Coordinates of the central point:
N 67° 3' 50.15" W 51° 25' 59.54"

1.e Maps and plans, showing the boundaries of the nominated property

See Annex 1, map of the entire nominated property with boundaries at the largest available scale.

1.e.i Map of Greenland in the scale of 1:100,000 (ANNEX 1)

1.e.ii Map of the nominated area in the scale of 1:830,000

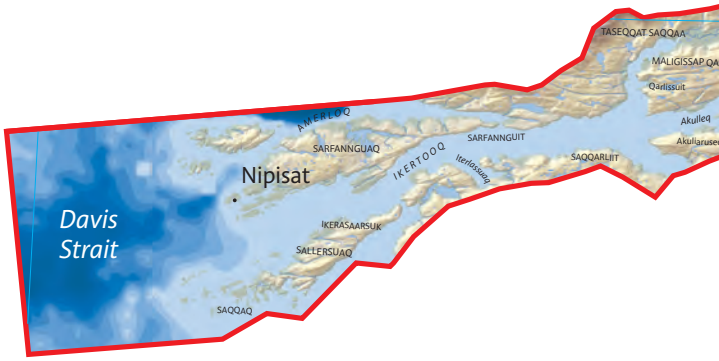
See map no. 1.3 and 1.4.

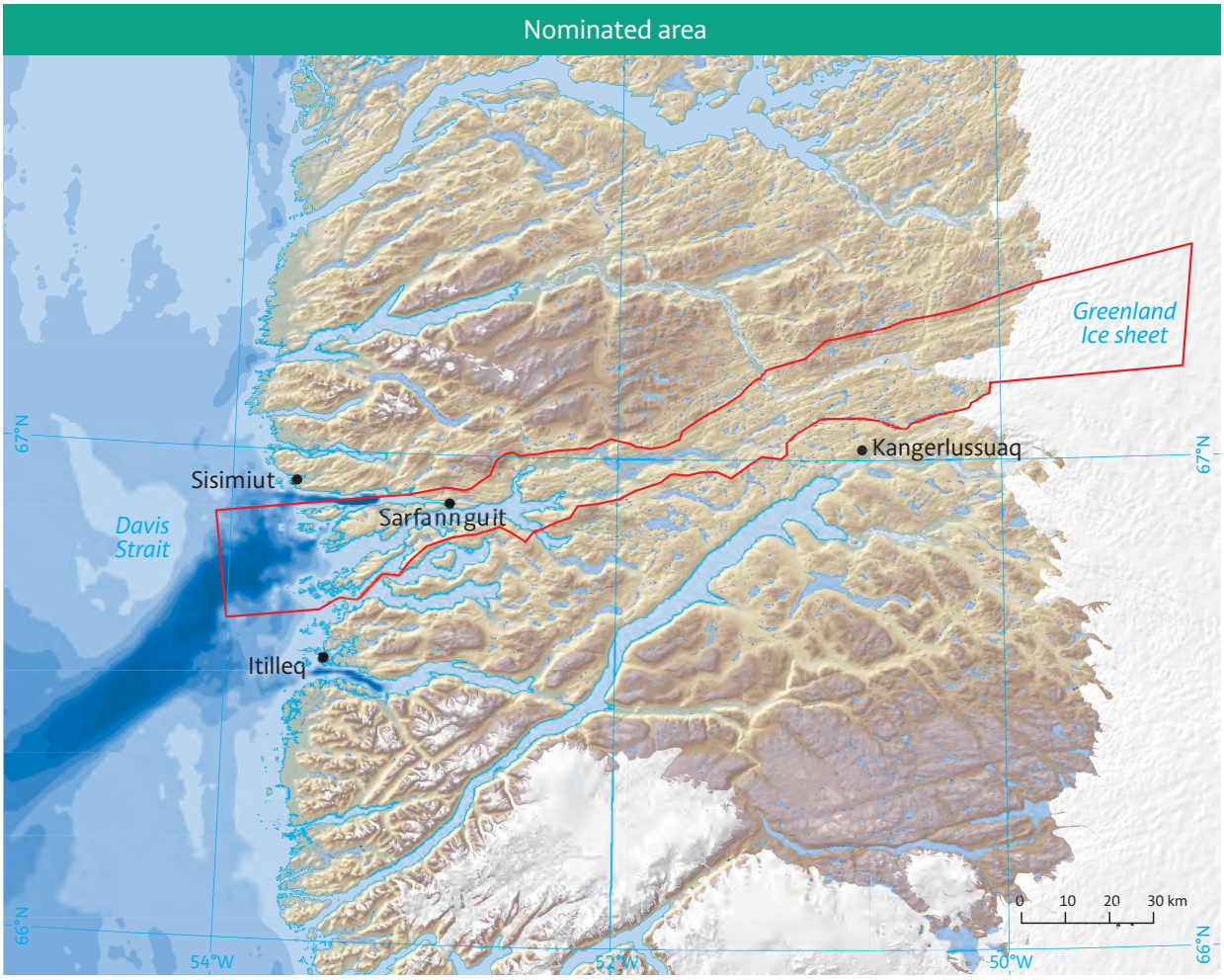
Greenland

Map no. 1.2. Location of the property within the State Party.

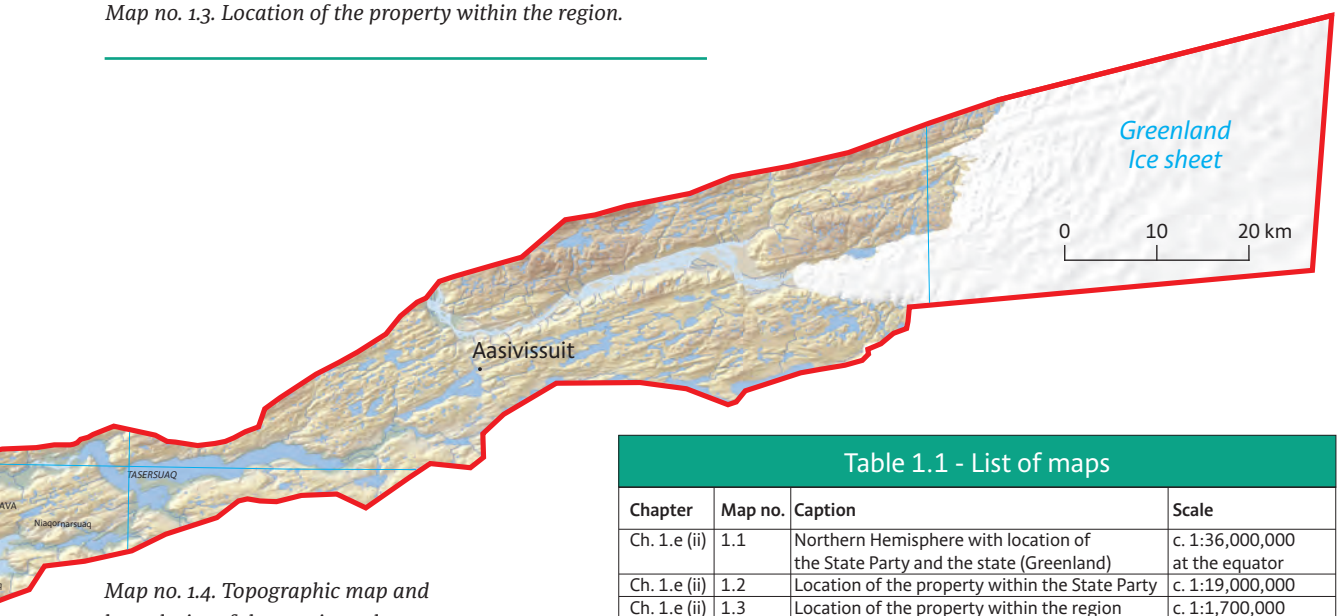
1.f Area of nominated property (ha) and proposed buffer zone (ha)

Area of nominated property	417,800 ha
Buffer zone	0
Total area	417,800 ha





Map no. 1.3. Location of the property within the region.



Map no. 1.4. Topographic map and boundaries of the nominated property.

Table 1.1 - List of maps

Chapter	Map no.	Caption	Scale
Ch. 1.e (ii)	1.1	Northern Hemisphere with location of the State Party and the state (Greenland)	c. 1:36,000,000 at the equator
Ch. 1.e (ii)	1.2	Location of the property within the State Party	c. 1:19,000,000
Ch. 1.e (ii)	1.3	Location of the property within the region	c. 1:1,700,000
	1.4	Topographic map and boundaries of the nominated property	c. 1: 830,000
Ch. 2.a	2.1	Nominated property with key sites	c. 1:43,000,000
ANNEX	Annex 1	Topographic map and boundaries of the nominated property Aasivissuit – Nipisat at the largest available scale.	1:100,000

Box 3 - Seasonal land use cycle of the nominated area

The arctic hunting landscape of Aasivissuit – Nipisat, between the coasts of the Davis Strait and the Greenland ice sheet, hosts a remarkably complete suite of archaeological sites and structures left in the landscape through millennia. The topography of the Ikertooq Fjord and the 30 km long lake of Tasersuaq provides easy access to the interior, and has for millennia enabled the inhabitants of the coastal regions to venture deep inland during summer and autumn and return to their coastal winter settlements with bulk supplies of dried caribou meat and smoked trout.

The land-use model shown on the map is a hypothetical pattern as it could have been mapped in 1855. At that time there were settlements in Saqqaq (1), Kaaffik (2), Ikerasaarsuk (3) and Sarfannguit (4). The caribou population had peaked a few years earlier and the use of Aasivissuit (5) for communal caribou hunts in late summer was probably in rapid decline. However, use of the site would have been in the living memory of most of the inhabitants, some of whom must have been the first to introduce firearms for caribou hunting in the early 19th century, when the artefacts shown in Figure 2.45 on page 66 were deposited in the midden at Aasivissuit.

Photo: Kristian Kreutzmann.

Hunters have left the dinghy and pull it upriver to lake Tasersuaq.

Photo: Kristian Kreutzmann.

Caribou hunters with boats moored in river in Itinneq. The river is too shallow, and the boat have to be pulled from this place to the westernmost part of lake Tasersuaq.

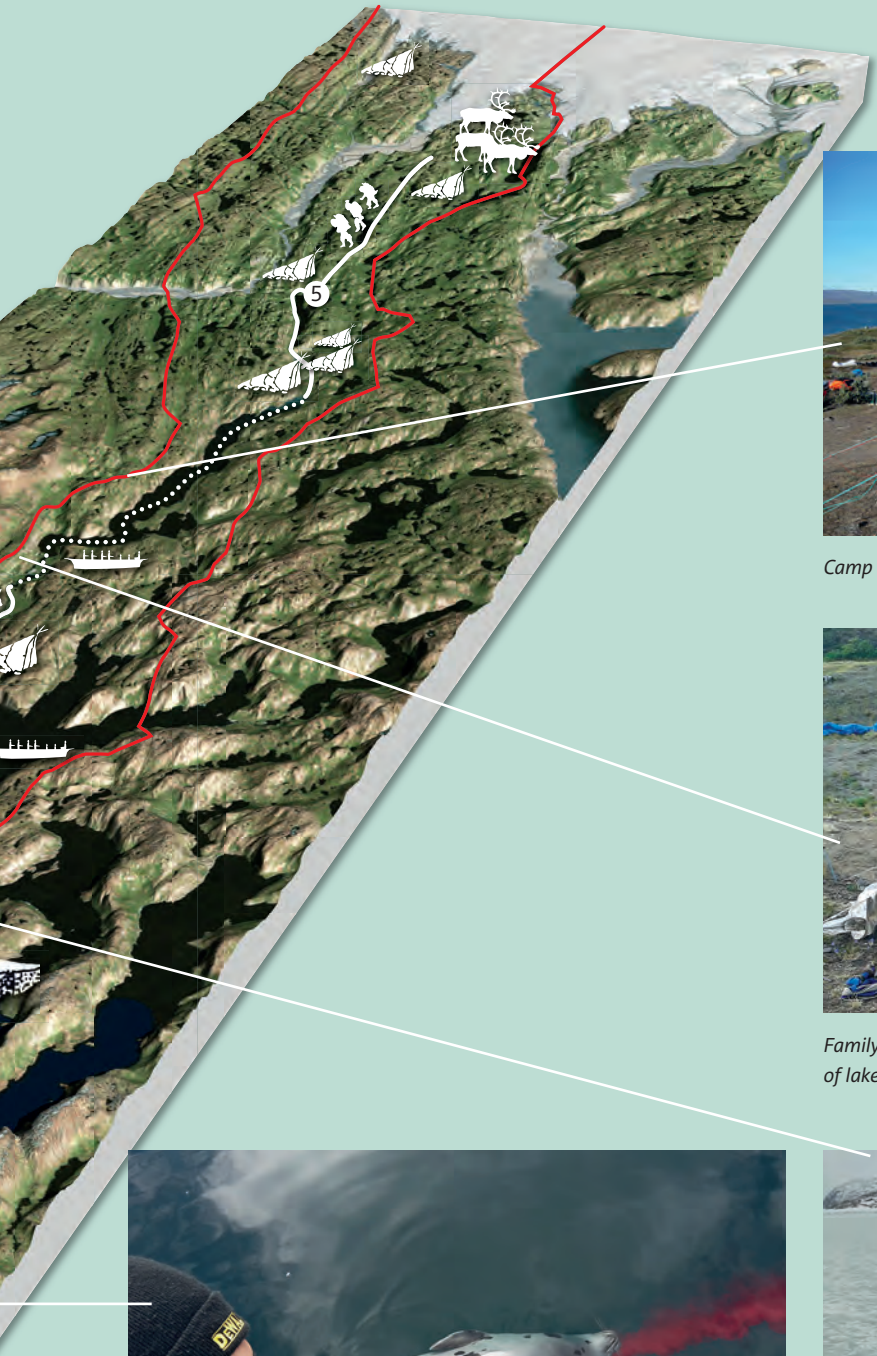


Photo: Kristian Kreutzmann.

Camp by lake Tasersuaq. Caribou meat is dried on racks.

Photo: Niels Berthelsen.

Family dinner in tent at the camp site Umiivik in western end of lake Tasersuaq.

Photo: Kristine Kruse.

Seal is the main prey of the coastal region. In this case a ringed seal has been successfully killed.

Photo: Agnethe Berthelsen.

Fishing cod on winter ice near Sarfannguit.

2. Description

Photo: Laust Løgstrup.

Fig. 2.2. A view looking west over the lake of Aasivissuit in the eastern interior of the nominated area.

2.a Description of Property

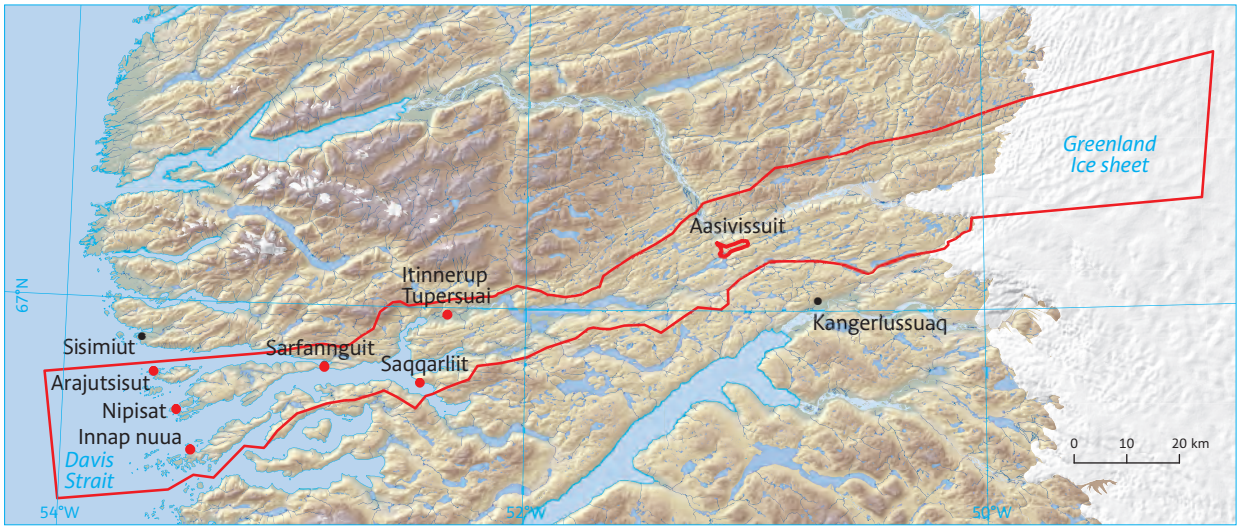
Aasivissuit – Nipisat is situated just north of the Arctic Circle between the northernmost limit of the coastal 'open water area' and the southernmost limit of formation of widespread land-fast ice during winter. Between the Greenland ice sheet to the east and the Davis Strait to the west, the highly varied topography, with an archipelago, a deeply indented coastline, east-west oriented fjords and high plains, gives access to numerous different ecotones, with marine, terrestrial and avian game species available during different seasons (Figs 2.1, 2.2).

Seasonal climatic variations and their effects on the accessibility of game animals, and a topography characterised by east-west oriented troughs, have moulded the human settlement pattern from the arrival of the first humans around 2500 BC to the present. The ruins, trails and preserved hunting systems demonstrate traditional sustainable land use based on seasonal migrations between coastal winter settlements and interior summer camps.

The hunting culture evident in Aasivissuit – Nipisat is demonstrated by seven key sites with well-preserved ruins and one contemporary settlement. The seven archaeological sites are representative of the principal chronological periods in the prehistory and history of Greenland, and the contemporary settlement of Sarfannguit links present hunting practices with the past. The sites have also been selected as typical

Fig. 2.1. A view over the colonial establishment of Nepisene, which was established in the early 18th century and burned down by Dutch whalers before being reoccupied by Inuit. Inuit found the surviving turf and stone walls from the Danish-Norwegian dwellings suitable for reuse in the construction of two to three communal houses. The tallest standing turf walls in the foreground are the ruins of these Inuit houses.

Photo: Jens Fog Jensen.



Map. 2.1. Key localities in Aasivissuit – Nipisat.

Table 2.1 - Key sites

Place name	No.	Area	FM no.	NKAH	Longitude	Latitude
Aasivissuit	1	Interior	67V2-III-006	2845	51°08.164'	67°06.067'
Itinnerup tupersuai	2	Itinneq	66V1-00I-017	2618	52°20.566'	66°59.501'
Saqqarliit	3	Avalleq	66V1-00I-013	2609	52°27.194'	66°52.192'
Sarfannguit	4	Sarfannguaq	66V1-00I-023	2629	52°51.626'	66°53.830'
Arajutsisut	5	Maniitsorsuaq	66V1-0IV-042	285	53°36.513'	66°52.645'
Innap nuua	6	Sallersua	66V1-0IV-028	2703	53°26.324'	66°44.775'
Nipisat	7	with: Saqqaq, colonial warehouse	66V1-0IV-035	307	53°29.608'	66°48.876'
		Paleo-Inuit, Thule	66V1-0IV-090	324	53°29.888'	66°48.764'
		Thule, graves	66V1-0IV-091	276	53°30.000'	66°48.656'
		Thule, grave field		5527	53°30.073'	66°48.859'
		Colonial house, Inuit turf houses		5526	53°30.708'	66°48.780'
		Thule, communal house		5534	53°30.927'	66°48.761'

List of key sites, with place names, location, archival references and coordinates.

representatives of the principal hunting and fishing activities throughout the annual round of traditional subsistence hunting in this region: Winter settlements on the coast oriented towards hunting marine mammals, spring and summer settlements in the intermediate 'fjord-land' oriented towards catching spawning capelin and arctic char, which can be taken in the rivers, and summer and autumn sites in the interior high plains, where caribou is the principal game species.

From east to west the key sites are:

1) *Aasivissuit*, a multicomponent site in the interior high plain with many different hunting features including a 3.9 km large caribou drive system – the largest known in Greenland – and traces of human settlement through millennia. Most of the visible features are from the Thule culture and historical settlements dating from the late 15th to the 19th century.

2) *Itinnerup tupersuai* comprises typical summer camps with numerous tent rings, tent houses and open-air hearths. These are situated on the ancient route from the coast to the interior as intermediate settlements on the seasonal migration. The current appearance of these sites, and most of the visible ruins, results from their use in the 19th and 20th centuries, but nearby heathen graves provide evidence of much earlier occupation.

3) *Saqqarliit* is an abandoned historical settlement in the easternmost part of Ikertooq Fjord. The chapel and a few other houses are still standing. The settlement was established as a fishing settlement in 1859 and abandoned in 1961. In addition to foundations, ruined buildings and a Christian graveyard from the historical period, there are also older heathen graves, which tell the story of much earlier occupations of the site.

4) *Sarfannguit* is the only active community in Aasivissuit – Nipisat. Sarfannguit was established as a fishing community in the mid-19th century, and still retains this function. A restored fish production facility at the quay, built in 1922 and rebuilt for its current use as shop in in 1976, and an old school chapel, built in 1908, are representatives of the colonial period.

5) *Arajutsisut* is a large multicomponent Thule settlement. Arajutsisut is a spectacular Thule and historical Inuit camp with ruins of seven communal houses, three rectangular winter houses and one round winter house from the Early Thule period. The most spectacular of these buildings are typical for the 17th and 18th century coastal settlement in Aasivissuit – Nipisat.

6) *Inap nuua* is a multicomponent site situated on a point on the northern side of the island of Sallersuaq. The locality has three very well-preserved communal houses; one is more than 25 m in length and is divided into several sections by transverse internal walls. Another well-preserved communal house is situated within a concentration of earlier round houses, together with some later rectangular and trapezoid Thule houses.

7) *Nipisat* is a multicomponent Saqqaq culture, colonial and historical Inuit site. Heathen graves indicate that the pre-colonial Thule culture settled here too. The principal component is the Saqqaq culture site of Nipisat. Good conditions of preservation have resulted in the recovery of a remarkably complete finds dating from the Saqqaq culture: the first humans in West Greenland. Nearby is the colonial establishment of Nepisene, established in 1724. This chronological component has three principal structures from the Nepisene settlement:

    1) The 34 m long, 9.6 m wide and c. 0.5 m high turf wall of the warehouse, situated in the southeastern part of the island.

    2) The ruin of the dwelling, which was a three-winged building situated in a cove on the central part of the southern shore of the island. After its final demolition by Dutch whalers in 1731, two Inuit families took possession of the site by building two rectangular winter houses, which partly overlap and obscure the colonial dwelling.

    3) The battery, situated 100 m further to the west of the dwelling.

Aasivissuit – Nipisat is an exceptionally well-preserved cultural landscape where the camp sites of prehistoric and historical peoples can be visited by present-day travellers.

The traces of human settlement in Aasivissuit – Nipisat form a complete 'fossilised hunter-gatherer landscape', complimented by early colonial impact on the landscape and with small, colourful modern wooden houses reflecting present-day use of the sea and fjord. The ancient ruined dwellings and built structures are of types well known from other parts of Greenland and the Arctic, but the density of sites, their good state of preservation and the fact that only two of them have been investigated systematically, makes Aasivissuit – Nipisat truly unique as a representative of an arctic hunting landscape (Fig. 2.3).

Fig. 2.3. Abandoned houses still stand in the settlement of Saqqarliit in the fjord Avalleq near the confluence with the fjord Ikertooq.

Photo: Johannes Müller.

2.b History and Development

2.b.i Setting the scene

The landscape in which people settled is dominated by an east-west-oriented crystalline basement that has been heavily weathered and eroded, especially by the ice sheet. About 18,000 years ago, at the end of the last ice age, the margin of the Greenland ice sheet extended to the edge of the continental shelf (Bennike et al. 2011; Henriksen 2005; Roberts et al. 2009.). The landscape was weighed down by the ice and the Sisimiut area lay 140 m below present sea level, while the area around the settlement Kangerlussuaq was 60 m lower than today (Bennike et al. 2011).

About 11,700 years ago, the climate became warmer and the ice began to retreat. About 6000 years ago, it reached a position about 40 km east of the present ice margin. It was in this landscape that the first pioneers, the Saqqaq people, hunted 5000 years ago (Fig. 2.4). About 3500 years ago, the climate began to cool slightly and the ice margin advanced to its present-day position (Henriksen 2005; Levy et al. 2012).

As the ice lost its grip on the coastal zone and retreated, pressure on the land was released and a major uplift began. Already by 8000 years ago, the land had risen 100 m and, following a gradually decreasing curve, it reached its present level about 3000 years ago (Bennike et al. 2011). The uplift of about 140 m evident in the outer parts of the area is the largest known in Greenland. Furthermore, the area's broad east-west extent acts as an absorber of uplift and depression resulting from the constant small adjustments of the ice margin (Bennike et al. 2011). This means that coastal settlements in the area, which are typically situated just above the high-water mark, have been better protected from marine erosion than in other locations in West Greenland (Fig. 2.5).

When the first people hunted in this area 4500 years ago, the ice margin was situated 40 km east of its present position due to a warmer climate. The easternmost delimitation of the nominated area is situated about 40 km east of the margin of the Greenland ice sheet, at about 1200 m a.s.l. A total of 105,200 ha of the nominated area is therefore covered by the ice sheet. The ice sheet margin has for many years been the object of international studies, which have contributed to an understanding of the reaction of the ice sheet to climate change (Mernild et al. 2010; As et al. 2012).

Inland waterways

The east-west-oriented geological structures create natural waterways, consisting of long, narrow lakes interconnected by clear-water rivers. The inhabitants of the area have, in all periods, made use of these waterways, especially the lake system at Tasersuaq

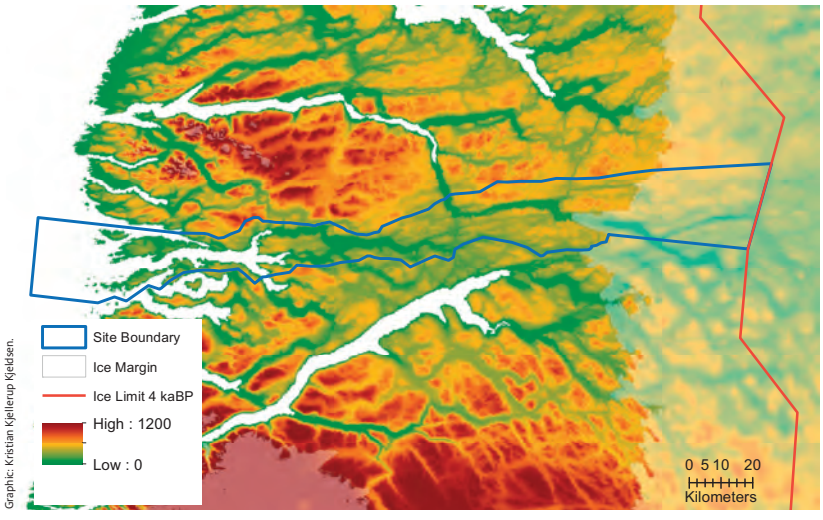


Fig. 2.4. Topography of the ice-free and subglacial area of Aasivissuit – Nipisat. When the first people arrived in West Greenland around 4500 years ago, the ice sheet had retreated to a position c. 40 km to the east of the present ice margin. Radar images of the subglacial topography reveal that huge valleys, lakes and rivers, and therefore human hunting grounds, must have extended to the east of the present ice margin.

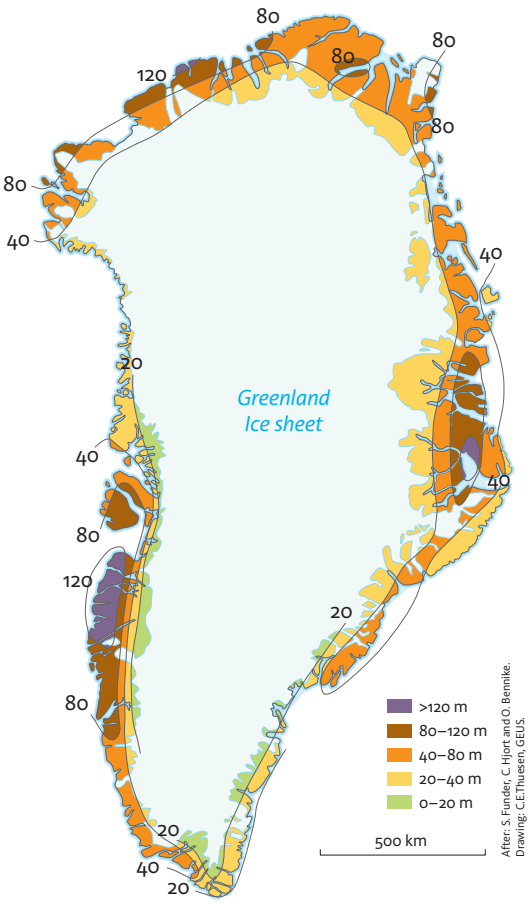


Fig. 2.5. Altitude of postglacial marine limits in Greenland. The western coastal part of Aasivisuit – Nipisat is characterised by the most dramatic postglacial rebound known in Greenland, and the land uplift continued for many centuries after the arrival of humans. Early Saqqaq culture campsites are therefore often situated on raised shorelines above 10 m a.s.l. and this has protected the old deposits from coastal erosion.

and Aasivissuit Tasiat, and thereby gained access to the interior. Moreover, the mighty meltwater river Isortoq drains the ice sheet and flows through the eastern part of the area. The river water contains large amounts of suspended silt and is completely opaque. The river has also been used as a transport route by caribou hunters, in order to reach the ice margin (Fig. 2.6).

Climatic gradients and seasonal spaces

The climate in the nominated area is arctic, and with an average temperature for the warmest month of between 5° and 10°C, it belongs as such to the subarctic zone (Born & Böcher 2001, fig. 2.b.i.3). For seven to eight months of the year, the average temperature is below 0°C and the precipitation is mostly in the form of snow. The large protrusion of the ice cap south of the area provides shelter from depressions coming from the south, and makes the climate, especially in the interior, very arid, continental and almost desert-like (Haarløv 1980). The annual temperature curve for the interior shows dramatic fluctuations with a difference of almost 30°C between summer and winter. Towards the western part of the area, the climate becomes milder due to the proximity of the ocean and the annual temperature range decreases. The steep climate gradient from the coast to the interior is very important for both plants and animals and consequently also for the people who live there. The arctic climate determines the seasonal and geographical distribution of resources and thereby the seasonal movements of the area's inhabitants.

Sea, ice and resource hot spots

Ocean, sounds and long, branched fjords dominate the western part of the nominated area, and the long

Fig. 2.6. The huge meltwater river Isortoq carries tonnes of suspended glacial silt from the ice sheet to the sea. This is deposited in deltas that, due to gradual land upheaval, turn into dusty plains where dust storms are frequent. The river has traditionally been used for transport by umiaq and kayak into the caribou hunting grounds in the interior.

Photo: Bjarne Grønnow.

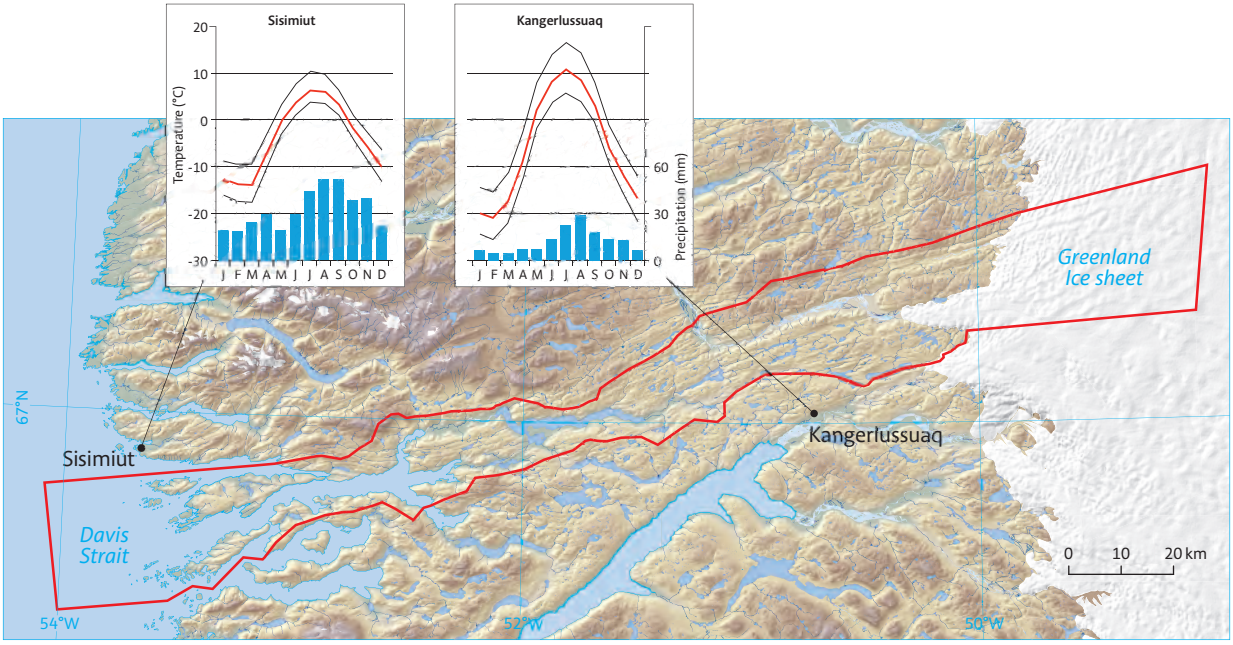


Fig. 2.7. The climate differs greatly from maritime Sisimiut to continental Kangerlussuaq. In Sisimiut, annual precipitation averages 383 mm and July air temperature averages 6.3°C, creating a moist, low-arctic climate regime strongly influenced by the warm, northward-flowing West Greenland current. With a seasonal temperature amplitude of 40°C and a low annual precipitation of 140 mm, Kangerlussuaq has a very continental climate that is accentuated by the proximity of the ice cap. This east-west oriented climatic gradient determines the diversity and distribution of plants and animals and thereby the seasonal movements of the hunters.

stretch of coast was the natural place for the area's inhabitants to settle. From here there was free access to the rich, living resources of the sea. The West Greenland current, which flows north along the coast, dominates living conditions in the area. It brings nutrients and heat and it both sustains abundant wildlife and keeps the ocean ice-free. The sea ice, however, accumulates in the more sheltered fjords and bays along the coast, where it is used as a base for fishing and hunting. Sarfannguit is the southernmost settlement in West Greenland with travel by dog sledge, which is highly dependent on good ice cover. The fjord ice settles in sheltered areas around Christmas and breaks up in May-June. This may, however, vary from year to year, and given the present global warming regime, the ice cover is becoming more unstable and short-lived.

The nominated property is characterised by a tide of 4.2 m (Bennike et al. 2011). Twice a day, the tide forces huge volumes of water through straits and sounds and past points at relatively high current velocities. In winter, this tidal current prevents the ice from forming in many places and along the coast it creates an 'ice foot', where the sea ice breaks. Places with strong currents and tidal cracks are important for sea mammals and birds, and also for the inhabitants who come to hunt at these resource hot spots.

Resources of the land

On land, plants and animals must adjust to considerable seasonal changes in temperature, precipitation and snow cover; factors that also vary with elevation above sea level and distance from the outer coast. The living conditions in this arctic environment are tough, and this means that the number of species here is quite limited.

The vegetation in Aasivissuit – Nipisat covers a little more than 80% of the landscape, the remainder comprises bare rock or soil. As the vegetation typically does not grow above knee height, the contours of the landscape, and its cultural sites, are very conspicuous. 50% of the vegetation cover consists of dwarf-shrubs like crowberry, willow and dwarf birch, while grass and steppe vegetation, which occurs primarily in the inte-

Fig. 2.8. - Plants

Photos: Henning Thing.

Fig.2.8. The arctic landscape has a diversity of beautiful flowers and plants and many of them, such as crowberries, blueberries and lingonberries, are important sources of vitamins in the traditional diet.

rior, makes up about 10%. The nominated property's desert-like interior steppe zone is unique to West Greenland. A number of rare vascular plants are found here. One species – Greenland blue-eyed grass (*Sisyrinchium groenlandicum*) – is endemic and grows only east of Sisimiut and at Nuup Kangerlua (Böcher 2000).

The vegetation often reveals where in the landscape people have lived. Along the coast, blue lyme grass forms distinct patches and often indicates nutrient-rich midden deposits, turf houses or other cultural remains. The interior summer tent camps are frequently covered with lush, green grass and the caribou often graze here, maintaining a dense sward where scrub is prevented from growing (Grønnow et al. 1983).

Crowberries, blueberries and lingonberries are found everywhere in Aasivissuit – Nipisat, along with other edible plants, and these have traditionally been picked by the region's inhabitants and provide important nutrients and general enjoyment (Fig. 2.8).

The nominated area has always been rich in bird life (Fig.2.9). In summer, the landscape is teeming with small birds and their song is heard everywhere. Freshwater birds are found by most of the numerous ponds and lakes, ptarmigan are ubiquitous, and all are in danger of falling prey to the peregrine falcon, the gyrfalcon, or the rare bald eagle (Salomonsen & Gitz-Johansen 1950; Burnham & Mattox 1984). Special mention should be made of the Greenland white-fronted goose (Anser albifrons flavirostris), which owes its name to the fact that it only breeds in West Greenland and no other place on Earth. About 18,000 geese make up the total breeding population of this endemic subspecies, which is red-listed due to its recent decline. In order to protect it, the inner part of the nominated area has been declared a Ramsar area (ch. 5.b).

Arctic hare, polar fox and caribou are the native mammals of the region. Caribou is the prime game species, but hare has always been hunted for its tasty meat and soft skin, and fox for its fine fur. A fourth land mammal – the musk ox – was introduced to the area south of Kangerlussuaq in 1962 and since then its numbers have increased to the present total of 10,000. Musk oxen have also spread to the nominated area (Johansen et al. 2007) (Fig. 2.10).

Photos: Unless otherwise satated, Henning Thing.

Fig.2.9. The interior has an interesting birdlife. Ptarmigan and raven are found here year round, while geese, duck, small passerines and birds of prey migrate south in autumn to overwinter in either North America or Europe and Africa.

Caribou, the prime game species of the interior

The caribou in the nominated area form part of the largest population in Greenland. In 2005 there were estimated to be 90,000 animals (Cuyler et al. 2005). The caribou move over large areas and each year they migrate to the best grazing grounds and areas where they can calve and not be disturbed by midges and flies. In spring the female caribou migrate to areas closer to the ice sheet, where ice melt and vegetation growth

Fig. 2.9. - Birdlife of the interior

Photo: Anthony David Fox.

begins earlier. Here, on the great plains and in the valleys, they calve in May and June (Figs 2.11, 2.12). After the calving, the female caribou gather, with or without calves, in herds of variable size and cover short distances to good foraging grounds. The bulls often move alone, or in groups of a few animals, and not in the same areas as the cows (Fig. 2.13) (Johansen et al. 2007).

Photo: Henning Thing.

Fig. 2.10. The musk ox is a newcomer to West Greenland. Twenty-seven individuals introduced from northeastern Greenland in 1962 have multiplied into a herd of more than 10,000 animals. They are subsistence hunted for meat and some trophy hunting also takes place.

Photo: Henning Thing.

Fig.2.11. Caribou cows congregate in May at calving grounds in the interior. In spring, large lakes are still frozen, but these eventually thaw and later in the season, together with the rivers that connect them, they form important waterways which people use for transport from the coastal winter settlements to the inland hunting areas.

Photo: Henning Thing.

Fig. 2.12. Caribou cow and calf in the interior. Caribou skin was prized for clothing and bed covers. The skins had special uses, according to the season and the sex and age of the animal. Calf skin was for example used for thinner garments to be worn in summer.

Photo: Henning Thing.

Fig. 2.13. Three young caribou bulls in prime condition in August. The fat or tunnoq of these pre-rut bulls is highly prized as winter provisions with a high calorific content. Traditionally, tunnoq was, and still is, used instead of cream in coffee.

Photo: Jens Fog Jensen.

Fig. 2.14. Humpback whales and other large whale species are common in the sounds and bays of the nominated area. Whales have traditionally been hunted and were one of the main reasons for early European settlement in the area.

During summer, the caribou gain weight and build up fat deposits to sustain them through the winter, and by the end of August most of the animals in the herd begin to migrate west. It is especially during these migrations that the caribou make their characteristic tracks, which traverse the landscape from east to west. In certain areas, the landscape forms topographical bottlenecks, where the caribou flock during migration. The large caribou hunter settlement of Aasivissuit is situated at just such a bottleneck (Grønnow et al. 1983).

After rutting in October-November, most of the caribou stay in the coastal parts of the nominated area, where they forage by scratching through the snow cover.

The size of the caribou population is subject to large natural fluctuations. Historical data show that the population collapsed in 1750, 1850, 1920 and 1970, and that these declines can result in a reduction of up to 90% of the total population (Meldgaard 1986; Post & Forchhammer 2002). When the population is on the decline, the animals migrate to the interior and become more stationary (Meldgaard 1986). These fluctuations in population obviously have a great impact on reindeer hunting in the area, and both hunting intensity and hunting methods are adapted to the size of the caribou population (Grønnow et al. 1983).

Resources of the sea

The West Greenland current, the ice-free sea and the extensive banks have always provided favourable living conditions for fish and marine mammals. Most of the fish, seal and whale species known in the eastern Arctic are found along the coasts in Aasivissuit – Nipisat.

When spring is coming, and biological production in the sea increases, myriads of fishes are drawn to the shallower and warmer water in the area. Especially capelin are seen in May-June, spawning in their millions along the coast, where they can literally be scooped up with landing nets. Many predators benefit from this concentration of food, and schools of harp seal, hooded seal and common porpoise, as well as Atlantic cod and arctic char, frequent the area. Later in the spring and in summer, larger whales appear, such as the humpback whale, fin whale and minke whale, and the harbour seal is also seen on rare occasions (Fig. 2.14) (Bendixen 2010; Bobé 2010; Gotfredsen & Møbjerg 2004; Muus et al. 1990).

In summer, the razorbill, black guillemot, arctic tern, common eider, black-legged kittiwake, Iceland gull and glaucous gull breed in small colonies in the archipelago and fjords of the nominated area (Johansen et al. 2007; Mosbech et al. 2000) (Fig. 2.15). Birds' eggs have traditionally been collected both for immediate consump-

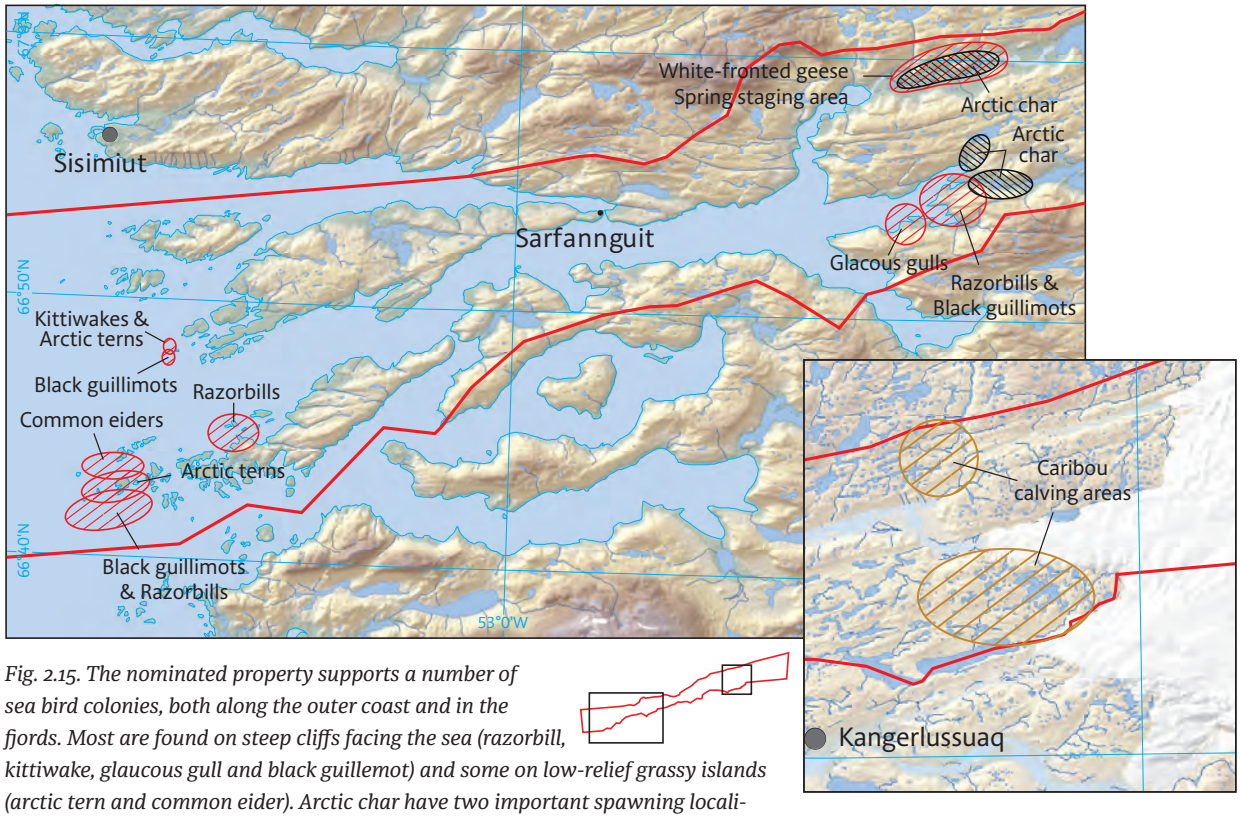


Fig. 2.15. The nominated property supports a number of sea bird colonies, both along the outer coast and in the fjords. Most are found on steep cliffs facing the sea (razorbill, kittiwake, glaucous gull and black guillemot) and some on low-relief grassy islands (arctic tern and common eider). Arctic char have two important spawning localities in the area's largest freshwater systems at the head of fjords, and further inland, caribou congregate in their thousands during summer. All these concentrations of natural resources have been exploited by Inuit through millennia and have determined their seasonal movements in the area.

tion and for storage, and the birds themselves are hunted when possible, as a welcome supplement to the daily diet. During winter, most migratory mammals and birds disappear, but ice-adapted species, like the ringed seal and the bearded seal, spend the winter in the area and constitute the mainstay of the local food economy (Fig. 2.16) (Gotfredsen & Møbjerg 2004).

The arctic char is found in the fjords, rivers and lakes everywhere within the nominated area and it occurs in both its anadromous and a landlocked form, which never leaves fresh water. This migratory fish spends three to four years in fresh water after hatching, before swimming out to sea to fatten up. It grows quickly on the marine diet and some years later returns to the river where it hatched. This ascent takes place during summer, in July-August, when the fish is typically caught. Particularly favourable rivers for ascending char are found at the heads of fjords in the nominated area, Itinneq being the most famous (Mosbech et al. 2000).

The dynamics and availability of the living resources

Seen from a resource point of view, the coastal and marine zones of the nominated area are some of the richest in Greenland. The ice-free sea, the biological diversity and production and the availability of resources have all provided the inhabitants of the area with a stable livelihood. This is why the largest degree of cultural continuity in Greenland is found here (Born & Böcher 2001; Gotfredsen & Møbjerg 2004), including visits by Norse hunters and Dutch whalers. This is also where Danish colonists established their second permanent station (Box 9, page 68).

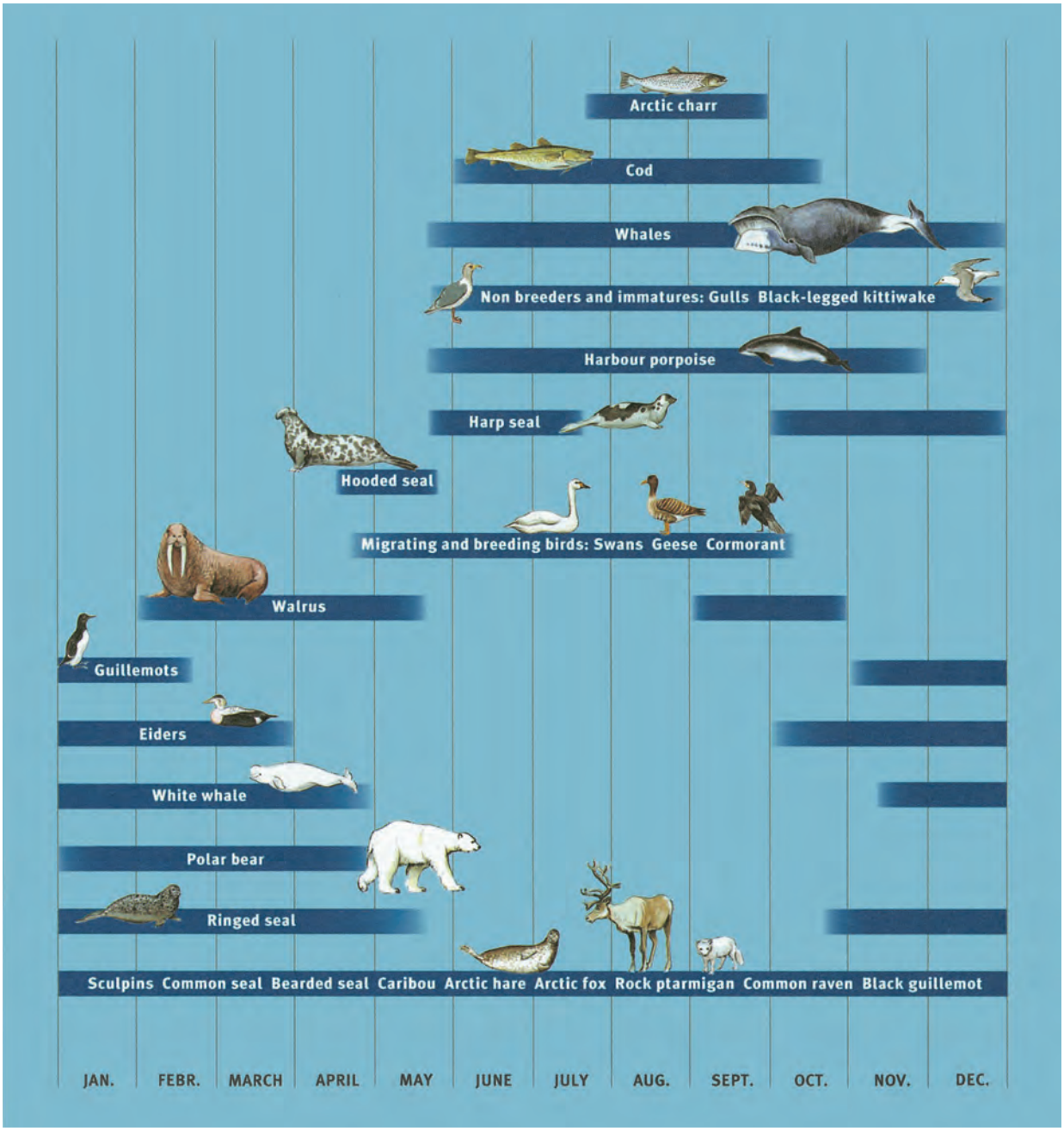


Fig. 2.16. Present-day seasonal variation in game animals in Aasivissuit – Nipisat. Minor discrepancies from the seasonal occurrence of the species in prehistoric times must be anticipated.

At the same time, the major seasonal variations in the occurrence and availability of wild faunal resources determine the nomadic life that the inhabitants of the nominated area have led for more than 4000 years (Gotfredsen & Møbjerg 2004; Meldgaard 2004). These naturally-occurring decadal and centurial variations in the size, distribution and availability of the animal populations have meant that the inhabitants of the area have often had to adjust their seasonal movements to the prevailing resource situation (Grønnow et al. 1983; Meldgaard 2004).

2.b.ii Human presence

Aasivissuit – Nipisat has traces of more than 4200 years of human settlement. Virtually all remains left by the Saqqaq and Greenlandic Dorset cultures are hidden in the ground or deeply buried below cultural layers and ruins left at the same places during more recent episodes of settlement. The Paleo-Inuit and Inuit travelled from Arctic Canada to West Greenland in several waves of immigration. First the Saqqaq 2500-700 BC, then Greenlandic Dorset 800 BC - AD 1 and in the 13th to 15th centuries the Thule culture dispersed from North to northwestern Greenland. Finally, in the early 18th century, colonists from the kingdom of Denmark-Norway established their first colonies on the island of Nipisat, close to the spot where the Saqqaq people had settled 4000 years before.

Each of these distinct groups of settlers had characteristic technologies and different types of tools, weaponry and accommodation.

But the archaeological and historical records show that they all shared a combined exploitation of marine resources, hunted or gathered from coastal sites, and terrestrial game species hunted in the interior. All the prehistoric and early historical Inuit societies were nomadic, living most of the year in the coastal archipelagos or in settlements in the fjord-land. In late summer and autumn, the hunters ventured to camps in the interior to hunt caribou. In Aasivissuit – Nipisat, the age-old travelling route can be followed today, from the turf- and stone-built winter houses on the island of Nipisat, or on the coast, to intermediate camps at the head of Maligiaq Fjord and in the river valley Itinneq.

The following sections describe the history of principal sites and ruins throughout the cultural landscape of Aasivissuit – Nipisat, beginning at the 4000-year-old coastal Saqqaq site of Nipisat and ending at the fishing community of Sarfannguit.

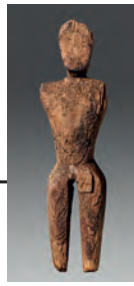
Paleo-Inuit, the first people

The first people in West Greenland have been named the Saqqaq culture, after the settlement of Saqqaq in Disko Bay, where their remains were first recognised. The Saqqaq people quickly adopted a metamorphosed slate called killiaq as their preferred lithic raw material, and to such a degree that it can be regarded as a deliberate choice and a cultural marker. The characteristic ways of shaping the grey and greenish killiaq, through combinations of polishing and knapping, have given rise to the definition of the Saqqaq culture, which has its densest clustering and most continuously inhabited areas in central West Greenland. However, its distribution extends from Ellesmere Island, at the Gate to Greenland, to Dove Bay in northeast Greenland. DNA analysis of human hair from the Qeqertasussuk settlement in Disko Bay shows a distant genetic link between Saqqaq people and small populations that now live on the islands off Siberia (Rasmussen et al. 2010). There is no genetic link between Saqqaq people and Inuit living in Greenland today.

There are three principal areas of Saqqaq settlement in West Greenland: Disko Bay, the Sisimiut and the Nuuk areas. These areas are the most investigated, but they are also the places where the Saqqaq culture can be seen to have flourished best, in terms of settlement density and duration. The finds show that the Saqqaq culture was, from the outset, a fully adapted maritime-oriented hunting culture that used light harpoons, darts, a variety of lances and bows and arrows, as well as kayak-like vessels. Their basic food was marine: seal, fish, seabirds and whale, but also included a significant element of caribou (Grønnow 1994; Meldgaard 2004).

The Saqqaq culture in Aasivissuit – Nipisat

Nipisat is the key site for the Saqqaq culture in the area (Box 3, page 44). The radiocarbon dates indicate that the culture persisted at this locality at least from 2200 BC until 700 BC, and perhaps until 500 BC. The oldest known radiocarbon-dated Saqqaq site is situated at Qivittup Nuua, just south of the nominated area, confirming that the Saqqaq people must have



settled in the area shortly after their arrival in West Greenland. Several Saqqaq sites have been investigated in the vicinity of Sisimiut (Kramer 1996a; Møbjerg & Grummesgaard 1996), demonstrating the broad range of hunting and travelling engaged in by the Saqqaq people. The distribution of Saqqaq sites shows that most settlements are situated on the coast (Fig. 2.17). For most of the year, the Saqqaq people are believed to have lived on the coast and in archipelago environments, where they subsisted on marine resources. However, the distribution of sites, and stray finds of Saqqaq artefacts deep in the interior, also shows that, ever since the first people arrived in this part of Greenland, they ventured inland, via the Maligiaq – Itinneq – Tasersuaq corridor, to exploit the caribou herds living there.

The distribution of Saqqaq sites gives a general impression of the Saqqaq land use, whereas Nipisat reveals the life of the Saqqaq people in much greater detail.

Nipisat

The Nipisat Saqqaq site is situated in the southeastern part of Nipisat. Archaeological excavations of large parts of the site were conducted between 1989 and 1994 and the artefacts are on display at the museum in Sisimiut. Other areas of the site remain untouched.

The site of the settlement has been raised slightly by post-glacial rebound and today it is located 50 m from the shore at an elevation of 9 m a.s.l., on a series of raised beaches that slope eastwards. The excavated site shows no evidence of disturbance from later settlements and now the entire area is covered with dense vegetation so nothing can be seen on the surface (Fig. 2.18). Nipisat is outstanding in two ways. First of all, it has remains from three chronologically distinct phases of settlement. Secondly, thick deposits of crushed shells above and below the cultural layer provide excellent conditions for the preservation of bone, antler and ivory. An area of more than 200 m^2 was

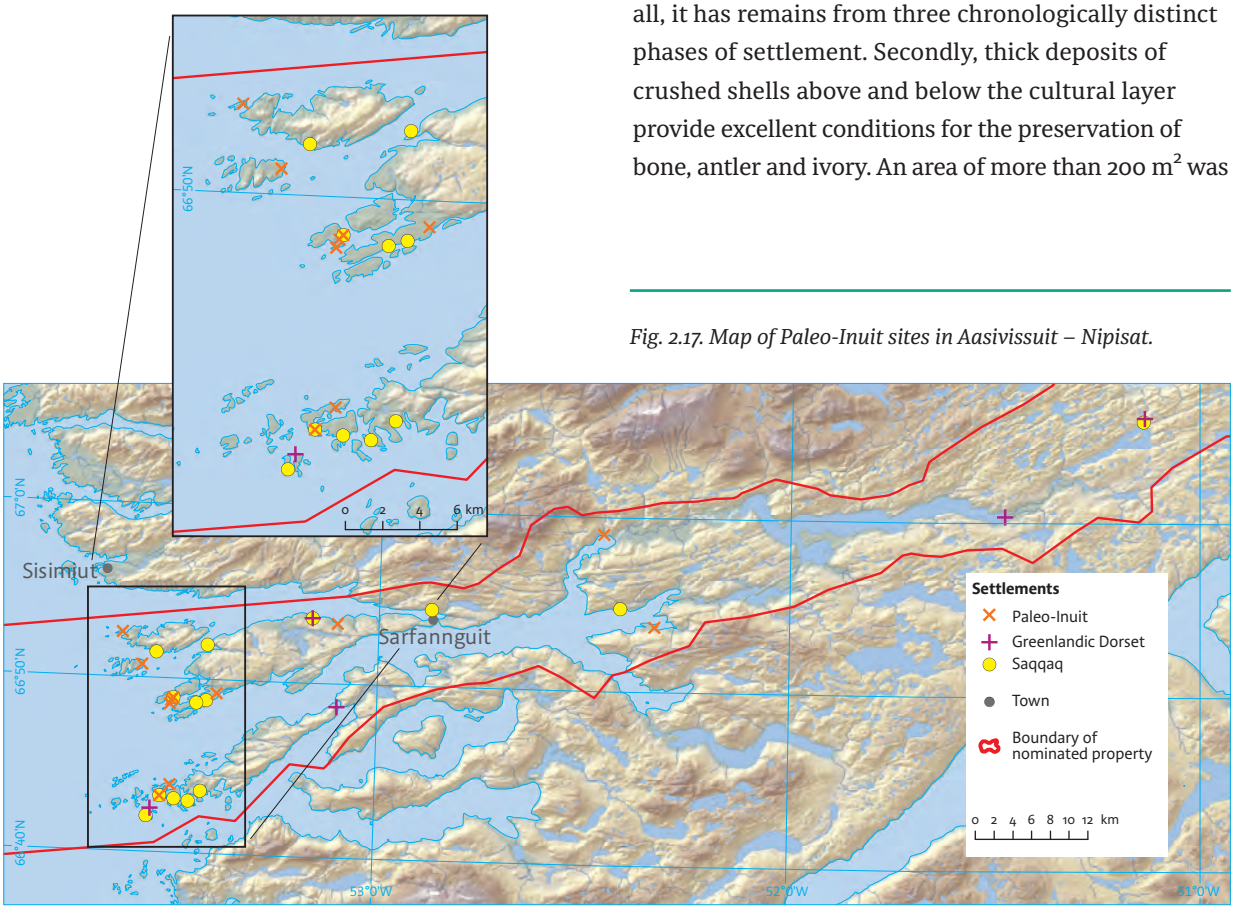


Fig. 2.17. Map of Paleo-Inuit sites in Aasivissuit – Nipisat.

Photo: Jens Fog Jensen.

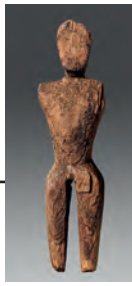
Fig. 2.18. The Nipisat site, situated on the southeastern point of the island of the same name, is a well-documented settlement occupied by the first people, the Saqqaq culture, between 2000 and 600 BC. The cultural layers and features are buried beneath later layers of turf and no structures are visible from the Stone Age occupations. The tent rings visible on the surface are from recent summer camps and the concrete base was built for an ionosphere station in the 1950s.

excavated in the period 1989-94, producing more than 1000 artefacts, several thousand waste flakes and 65,000 bone fragments (Gotfredsen & Møbjerg 2004). The chronological differences are reflected in the artefact morphology. The latest Saqqaq deposits are a unique feature, which document that technological changes, such as the invention of the soapstone lamp and the use of new types of weapon blades, occurred during the final centuries of the culture. Although there is variation between the different parts of the site, the deposits form two well-defined cultural layers, separated by a layer of sterile shell gravel.

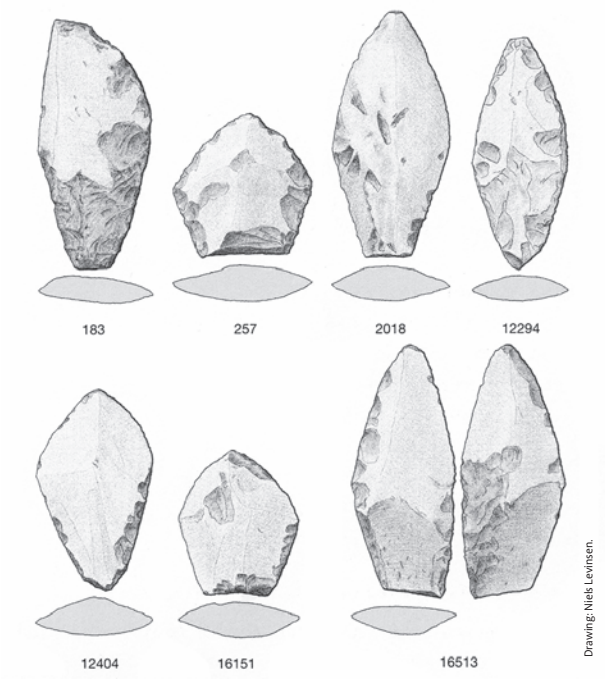
Compared to all other early Paleo-Inuit sites in Greenland, some of the unique characteristics of Nipisat are its dates and tool inventory associated with the latest phase of occupation: phase 3. The radiocarbon dates indicate that the Saqqaq culture continued in this particular area until around 700 BC, and maybe until 500 BC. This is longer than anywhere else in Greenland, and several hundred years after the arrival of the later Dorset culture in other parts of the country (Gotfredsen & Møbjerg 2004: 35). In addition to the scientific dates, there is also the lithic tool category of bevelled blades (Fig. 2.19) and soapstone objects; these are found associated primarily with the latest Saqqaq phases (Table 2.2).

The dwellings

The Saqqaq people lived in tent dwellings all year round, and the dwelling structures at Nipisat are similar to Saqqaq dwellings in other areas. Two well-preserved



stone-set hearths, filled with cooking stones (Fig. 2.20), have been discovered in the southernmost part of the excavated area at Nipisat. The southernmost stone-set hearth is a mid-passage hearth from phase 1, where the stone-lined hearth is situated between two parallel rows of stones extending from the entrance to the rear of the dwelling, dividing the floor space into two opposing halves, where sleeping platforms could be placed. From phase 2 there is a box-hearth, but the stone structure around it is poorly defined. It is noteworthy that no artefacts whatever were found around this hearth, and only very few bones. There are no hearths from phase 3, and only very few stone features relate to this period. At this time, the burning of driftwood and local scrub is believed to have been largely supplanted by the use of soapstone lamps and the use of blubber from sea mammals as fuel.



Drawing: Niels Levinsen.

Fig. 2.19. Bevelled blades. Bevelled blades are a characteristic stone artefact introduced during the final phases of the Saqqaq culture in about 1300-600 BC.

Saqqaq tools and weaponry

A total of 717 lithic tools (incl. soapstone and whetstones), 28,282 lithic flakes, 314 artefacts of bone, antler and ivory and 65,000 discarded bones from game animals have been recovered from Nipisat. The artefacts and bones demonstrate how well the Saqqaq people adapted to the local resources and living conditions, and that the Saqqaq hunting culture thrived in this area for almost 2000 years (Fig. 2.21).

Photo: Stig Grummesgaard -Nielsen.

Fig. 2.20. Stone-set Saqqaq hearth with cooking stones. The fist-sized stones were heated in the hearth and could then be used to boil soup held in a skin container.

Table 2.2 - Dating of phases at Nipisat

Phase	Radiocarbon date	Characteristic artefacts
1	AAR-3630 3650 ± 65 Calendric Age calibrated BP: 3987 ± 88 Calendric Age calBC: 2037 ± 88 AAR-6699 3450 ± 45 Calendric Age calibrated BP: 3733 ± 73 Calendric Age calBC: 1783 ± 73	
2	K-6031 3490 ± 80 Calendric Age calBP: 3769 ±100 Calendric Age calBC: 1819 ± 100 AAR-3670 3085 ± 45 Calendric Age calBP: 3306 ± 50 Calendric Age calBC: 1356 ± 50	
3	AAR-3572 3065 ± 40 Calendric Age calBP: 3286 ± 56 Calendric Age calBC: 1336 ± 56 AAR-3574 2455 ± 50 Calendric Age calibrated BP: 2542 ± 124 Calendric Age calBC: 592 ± 124	

Drawings: Niels Levinsen and John Pind.

Table 2.2. Table of dates for the three principal phases of occupation of the Nipisat site. Artefact types characteristic for the latest phase are shown to the right.

Fig. 2.21. Saqqaq stone tools. From left to right: Three burins of killiaq, a metamorphosed slate favoured for tool production by the Saqqaq people, two arrowheads of agate and six harpoon blades; the five dark, bluish-grey examples are made of killiaq, while the white example is made of quartzite.

The lithic inventory is dominated by types similar to those seen at other Saqqaq sites, with burins being the most common lithic tool, followed by bifacial blades with a tapered stem, scrapers and micro-blades, during the youngest phase.

Resource exploitation

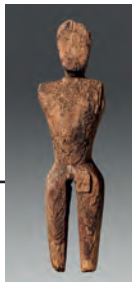
The faunal material, comprised of more than 65,000 bones, includes 41 species, namely four species of fish, 24 species of bird and 13 species of mammal. The key species in the food economy were caribou and seal, in particular the common seal. It is striking that caribou played such an important role at a coastal site; it is likely that the caribou were killed on the mainland and transported to the settlement, presumably by boat (Gotfredsen 1996, 1998). Common seal is the dominant seal species at Nipisat, but harp seal, harbour porpoise, walrus and baleen whales were also hunted. The walrus played a more important role in the later period of occupation. Dog bones are only known from the later period, but the presence of dog in the earlier layer is indicated by a number of dog-gnawed caribou bones. Polar bear was found in layer 2 at Nipisat, the first time this species has been recorded on a Saqqaq site. Birds were also an important resource for the inhabitants of Nipisat, with gulls and eider duck predominating. Again, there are differences between the earlier and the later periods: The great auk was identified only in the early layer, but geese and swans were more numerous in the later period. Finds of caribou calves, half-grown seals and unfledged eider and geese suggest that the site was occupied from June to September (Fig. 2.22).

Interestingly, a total of 50 bones from the now extinct great auk have been recovered from Nipisat. Subfossil bones of great auk from the sites of Qeqertasussuk and Nipisat show that, due to slightly warmer climatic conditions, the great auk probably had a more northern distribution in prehistoric time than is known from historical records.

Chronological change

The most striking change, however, occurred around 1300 BC, when a new tool inventory was taken into use, including large, heavy, tanged antler harpoons or lance heads with an elongated line hole for fastening to the fore shaft, along with several types of bevelled harpoon and lance blades (Gotfredsen & Møbjerg 2004: figs 91, 92, 112). This latest Saqqaq phase is not known from anywhere else in the Saqqaq world, making Nipisat unique relative to all other known Saqqaq sites (Fig. 2.23).

These types have been interpreted as indicating a greater emphasis on the exploitation of marine mam-



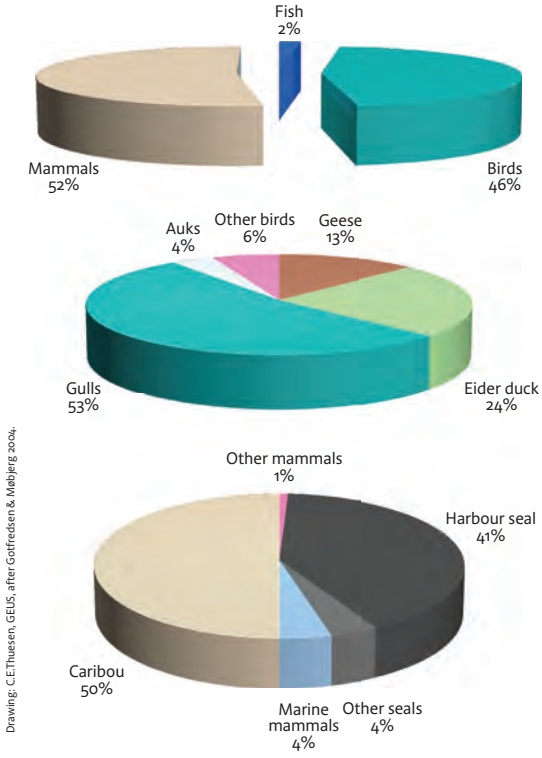


Fig. 2.22. The bones recovered from the Nipisat site are dominated by mammal (52%) and bird (46%) bones, with only 2% fish bones. The larger body size of these mammals made seal and caribou by far the most important food sources for the Saqqaq people on Nipisat.

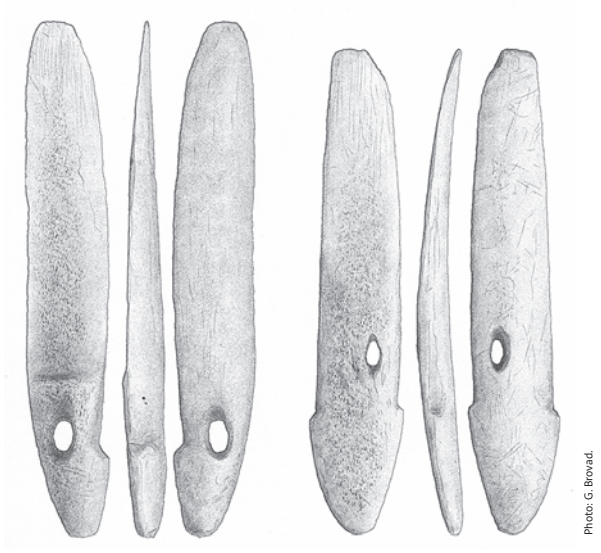


Fig. 2.23. Caribou bones recovered from 1 m² in phase 3. All the larger bones, and the mandibles, have been split and crushed in order to extract the nutritious marrow.

Summary

Nipisat was an attractive place to live. For more than a millennium, the locality was visited by Saqqaq people during the warm season, although it may have lain deserted for decades. It seems that a combination of terrestrial game and marine resources was exploited here for centuries, without any major changes.

mals such as walrus and whale. At the same time, the well-known Saqqaq harpoon, and the associated small triangular killiaq harpoon end-blades, disappears from the archaeological record. We see the introduction of the use of soapstone for lamps, as well as a range of artefacts probably used for fishing. Tool types such as scrapers, burins, needles and pressure flakers remained unaltered throughout a period of almost 2000 years. The morphological differences observed in these tool types are interpreted as being functional, rather than chronological, in origin.

When comparing technological change with resource exploitation, it is interesting that, despite changes in the tool inventory, hunting strategies remained more or less constant.

The earliest settlers in the Sisimiut area brought with them a highly complex technology for the exploitation of both marine and terrestrial resources. Despite the apparent stability in resource exploitation, changes in tool technology are evident. This is especially true in phase 3, when many new types were introduced.

The resolution of the three chronological phases does not allow detection of any fluctuations in the caribou population. Caribou numbers in West Greenland are known to have been subject to fluctuations in historical and prehistoric times (Meldgaard 1986).

Greenlandic Dorset

Around 800 BC, new groups of Paleo-Inuit migrated from eastern Canada to Greenland (Sørensen 2012: 339-340). The newcomers brought new modes of

Box 4 - Nipisat

Nipisat has a spectacular and unique diversity of well-preserved archaeological remains. The 4000-year-old Saqqaq site of Nipisat is situated on the southeastern point of the island. This site has been thoroughly excavated, but none of the Stone Age dwelling structures are visible there today. A little less than 100 m to the north of the Saqqaq site is a rocky knoll on which there is a 3 x 2.5 m winter house with a kitchen niche built into the entrance passage. Moving from here to the west, along the southern shore of the island, one passes by a string of well-preserved features and ruins. On a gravel ridge 30 m to the west of the Saqqaq site is a burial ground containing four Christian graves. And 200 m to the west is a flat grassy area where the spectacular ruin of the colonial warehouse can be seen. The turf and stone walls stand 0.6-0.8 m high all around the building, which measures 34 x 9 m.

In a stone field to the north of the site there is an old, heathen burial ground containing a large number of graves, some of which have been opened, others are still intact. To the east of the burial ground, on a gravel terrace, are traces of a playground for Inuit children, with small stone-built models of boats and a house.

From the warehouse there is approximately 600 m to a small cove in the central part of the southern shore of Nipisat Island. There is a ruin complex, incorporating both colonial and Inuit houses, in the eastern part of the cove. The cove was the site of the second colony to be established by the Danish authorities in Greenland in 1724. The first establishment was burned down by Dutch whalers as early as 1725, but was rebuilt by the Danes in 1730. The ground plan that can be discerned today represents the place as it was rebuilt in 1730. The

Archaelogical sites on Nipisat.

three-winged ground plan is well-defined as flat areas to north, while towards the shore, immediately south of the ruin complex, are turf and stone walls standing to a height of 1.7 m. These represent historical communal houses built into the ruins of the colonial residence and reusing the walls of the colonial quarters. Following the shore towards the west, in the middle of the cove one passes the battery established to defend the possessions. There is an ice-scoured knoll rising to about 1.5 m above the surrounding terrain, where the battery was constructed, with breastworks for three cannon. The turf-built earthworks have crumbled but their outline is still visible.

In the western side of the cove is a 12 x 6 m communal house, which must have been built after abandonment of the colony. Finally, there are several large stone-set graves along the rocky shore further to the west of the cove where the colonial living quarters are located.

weapon manufacture and different preferences with respect to raw materials for lithic tool production and archaeologists now term this later Paleo-Inuit phase: Greenlandic Dorset.

In the broad sweep of cultural evolution, the above-mentioned typological changes are believed to be part of a technological change towards the adoption of more 'ice and snow' technologies (Maxwell 1985). The Dorset tool inventory therefore includes sledge shoes for the first time, and in Arctic Canada there are examples of the earliest use of snow knives and cold-trap entrances to dwellings. Curiously, the sledges used by the Dorset people are not believed to have been pulled by dogs, since dog bones have not yet been found at Dorset sites. And the lack of standard-

ised arrowheads and bow drills – as evident from the fact that virtually all holes in Dorset artefacts were made by gouging and not by drilling – has led to the conclusion that the Dorset people did not use bows and arrows either.

Several Greenlandic Dorset sites have been located through systematic surveys undertaken to the north of Sisimiut (Kramer 1996a). In this region, studies of site elevation have shown that the coastal Saqqaq sites are today situated above 8 m a.s.l., whereas the Greenlandic Dorset sites, as well as many Thule camp sites, are situated below 8 m a.s.l.

The Saqqaq culture still thrived at the Nipisat site when Greenlandic Dorset dispersed from the region around Nares Strait to Disko Bay. The latest Saqqaq dates from Nipisat (Jensen 2006: 173) overlap the oldest Greenlandic Dorset dates from Disko Bay, 400 km further to the north.

Greenlandic Dorset in Aasivissuit – Nipisat

In Aasivissuit – Nipisat, Greenlandic Dorset has been documented at five localities (Table 2.3). The presence of Dorset artefacts on coastal sites, as well as in the deepest layers at the midden in Aasivissuit, indicates that Greenlandic Dorset had the same land-use pattern as the Saqqaq people. On one of the sites on the coast, Siorarliit East, two tent features have been discovered in association with a cultural layer containing lithic material, charcoal and bone. The Dorset artefacts from Aasivissuit are limited to chalcedony flakes and a few bones, deeply buried in the lowest layers of the midden. Aasivissuit could easily have been accessed from Kangerlussuaq Fjord, where one site (the Malmqvist site) is completely dominated by caribou bones, indicating a possible gateway to the interior. Another possible evidence of Dorset presence is a fore shaft of walrus tusk from the easternmost end of Tasersuaq (Schilling 1996: 114). The evidence from the coastal sites Ikerasaarsuk and Inussuat consists of stray finds of Dorset artefacts; in the case of Ikerasaarsuk, the precise finds context is ambiguous, but apparently the artefacts originate from deposits beneath a Thule communal house.

Table 2.3 - Greenlandic Dorset Sites in Aasivissuit – Nipisat

Name	No. in FM archive (Nunniffiit)	Geographical setting	Finds
Siorarliit kangia	182	Archipelago	Stray find; structure
Ikerasaarsuk	2707	Fjord	Stray find
Inussugaat	3239	Fjord	Stray find
Tasersuaq	2842	Interior, lake	Stray find
Aasivissuit	2845	Interior, lake	Midden; radiocarbon date

Summary of Greenlandic Dorset

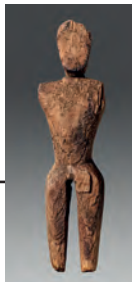
The Greenlandic Dorset sites that are currently known show that the Dorset people settled throughout Aasivissuit – Nipisat. However, the number of Greenlandic Dorset sites found in the neighbouring areas to the north and south of the nominated property indicates that there must be many more sites from this period within the area than have been recorded so far.

Summary of the Paleo-Inuit epoch

Intensive archaeological mapping and excavations in Aasivissuit – Nipisat and the hinterland to Sisimiut have shown that there are numerous and often well-preserved coastal settlements dating back to the arrival of the first people. The archaeological investigations at Nipisat have also shown that Aasivissuit – Nipisat hosts rich deposits from the latest Saqqaq phase, which are not known from the well-preserved Saqqaq sites at Disko Bay. Finds from camp sites along the route inland and in the deep interior, such as Aasivissuit, show that people have, from the earliest times, exploited inland resources and travelled to the caribou hunting grounds along the paths that are still used today. The distribution of sites from the Greenlandic Dorset culture indicates that these people used the available resources according to the same basic pattern as their Saqqaq predecessors and Thule successors. Saqqaq and Dorset caribou hunting in the interior does, however, appear to have been less intensive than the Inuit communal caribou hunting of early historical times.

Photo: Jens Fog Jensen.

25 m long communal house at the locality of Innap Nuua. It has four internal walls forming five compartments – the front wall has collapsed.

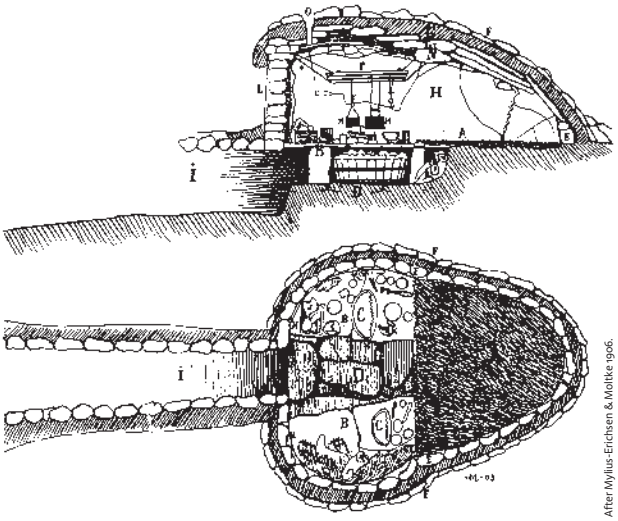


2.b.iii The Inuit epoch

Thule culture

Inuit in Greenland are the descendants of Thule people who migrated into Greenland from Canada, and ultimately Alaska, around AD 1100.

The Thule people brought with them a sophisticated marine-hunting technology that had been developed in the Bering Sea area (Gulløv 2004). They mastered all the technologies associated with Inuit, such as the use of teamed dogs, sledges and vessels, in the form of kayak and umiaq. They hunted animals as large as bowhead whale with harpoons and shot caribou with bow and arrows. Their houses were heated by a soapstone lamp burning marine-mammal oil: A soapstone pot could be suspended over the lamp when cooking.



After Mylius-Erichsen & Moltke 1906.

Fig. 2.24. The earliest Thule settlements are characterised by round and clover-leaf shaped winter dwellings. This house type was very similar to ethnographically documented cloverleaf-shaped house types from West Greenland.

Winter and summer settlements

In winter, Thule people congregated in semi-permanent settlements, where families lived in round, single-family houses of stone, peat, driftwood and/or whale ribs, with a sunken (= cold-trap) entrance (Figs 2.24, 2.25). Stone slabs covered the floor and piles of furs served as bedding. Another winter dwelling was the igloo, or snow house. In Arctic Canada some Inuit groups lived for several months in igloos built on the sea ice, when

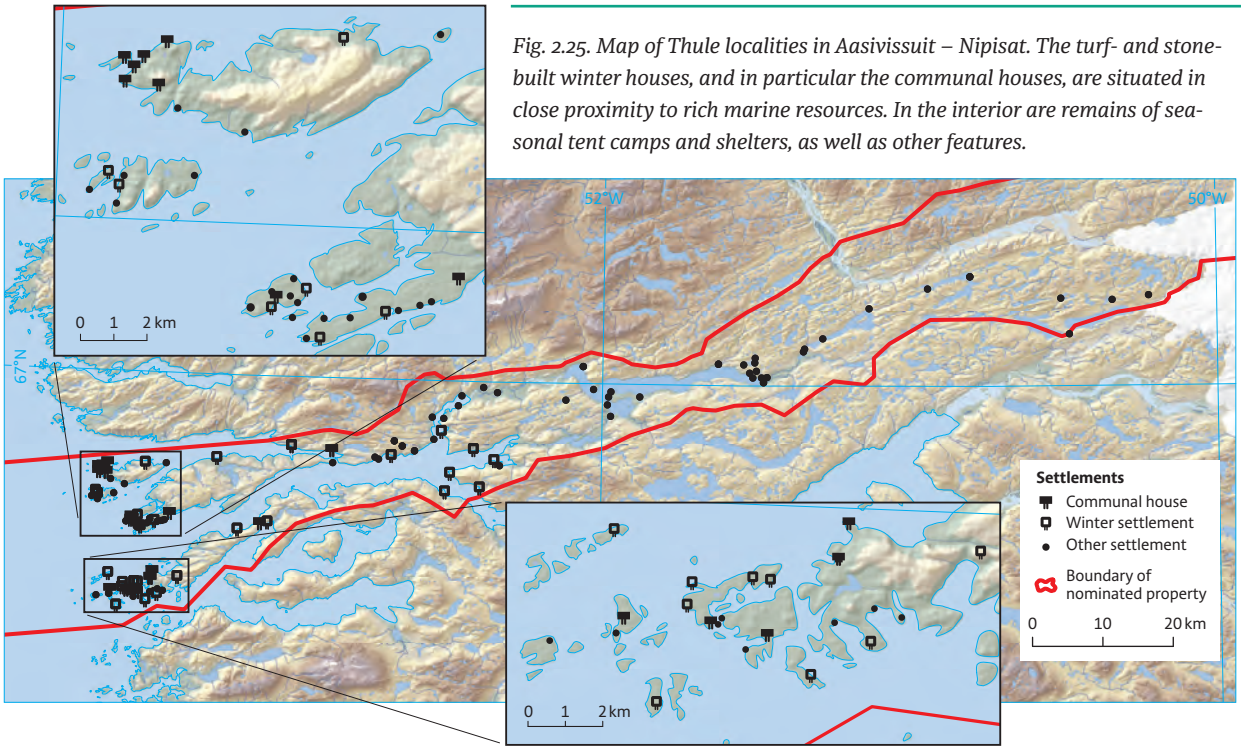


Fig. 2.25. Map of Thule localities in Aasivissuit – Nipisat. The turf- and stone-built winter houses, and in particular the communal houses, are situated in close proximity to rich marine resources. In the interior are remains of seasonal tent camps and shelters, as well as other features.

they went sealing on the land-fast ice during winter. In Greenland, the igloo was only used regularly by the Inughuit in northernmost regions, but finds of snow knives as far south as Disko Bay indicate that the earlier Thule culture settlers may also have used this dwelling type this far south.

On and near the settlements are meat caches, and sometimes stone-built stands for kayak and umiaq are also preserved. Large middens often accumulated in front of the semi-permanent winter dwellings, and stone-built graves were, for the first time, taken into common use. In many places, these heathen graves are the most easily recognisable physical trace of earliest Inuit occupation, since the Thule dwellings have often been obliterated by natural degradation or historical settlements at the same localities.

In spring, most families abandoned the winter dwellings and moved into tents. With these portable dwellings the families could now roam the landscape in pursuit of the wide range of resources offered during spring and summer: collecting eggs and berries, fishing at char river runs and hunting caribou in the interior.

Box 5 - Early Thule evidence in Aasivissuit – Nipisat

Aasivissuit has evidence showing that the site was used by Thule people as early as AD 1250, and along the shores in the western part of the nominated area are several settlements with round and cloverleaf-shaped house ruins that are typical for the Early Thule culture. In some cases, there is just one or a few early house sites preserved, but some sites, such as Qaarusulik and Innap Nuua, have several of these Early Thule culture ruins. Qaarusulik is also where one of the few chronologically significant artefacts known from the area was found: a winged needle case, a characteristic household object typical for Early Thule settlements.

The Early Thule settlements are characterised by round and cloverleaf-shaped house ruins.

Photo: Anne-Christine Løventoft

Very old collapsed and overgrown Thule round house at Qaarusulik.

Photo: Jens Fog Jensen.

Cloverleaf-shaped house at Innap Nuua.

3 cm

Photo: John Lee.

The winged needle case is a characteristic artefact known from Early Thule culture sites all over the eastern Arctic. This one was found on Qaarusulik. National Museum of Denmark; es_Lc_1358.

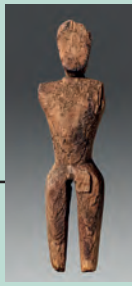


Fig. 2.26-2.29. - Thule weapons and household utensils

Fig. 2.26. Thule harpoon heads from sites in Aasivissuit – Nipisat and the vicinity of Sisimiut. Three of the harpoon heads have blades of iron, most likely acquired from Europeans. Prior to the European presence, Greenland Inuit acquired iron from meteorites in the Thule district, and telluric iron from the Nuussuaq Peninsula approximately 400 km to the north of Aasivissuit – Nipisat.

Fig. 2.27. Thule culture arrowheads made from caribou antler. Bow and arrows were primarily used for inland hunting prior to Inuit acquisition of rifles in the 19th century (see Fig. 2.44. no. 1-5).

Fig. 2.28. Ulos or women's knives. The ulo is both a scraper and a knife, primarily used by women when skinning game animals and when scraping hides for use in clothing or for kayak or tent skins.

Fig. 2.29. Soapstone lamp. Soapstone of high quality was acquired from other regions. In pre-colonial times soapstone lamps were the principal source of both heat and light in the winter house.

The tents were framed with wooden poles (from driftwood) and covered with the hides of seals, caribou or other animals. The coverings were weighed down along the ground with large stones, which today are found as 'tent rings'.

Thule weapons and household utensils

The material culture of the Thule people differed in several ways from their Paleo-Inuit predecessors. First of all, the use of knapped stone for knife and weapon blades ceased in the Thule culture. Apart from some isolated examples of prolonged use of lithic technologies, most Thule culture lithic tool production was based on the use of slate, which was cut and polished into harpoon blades and ulus (woman's knives, also known as ulos). In Greenland, the Thule people acquired both meteoritic and Norse iron as well as telluric iron (extracted in Disko Bay) for the production of weapon points and blades (Jensen et al. 2015). The most important hunting weapons were the harpoon (Fig. 2.26) propelled with an atlatl and the bow and arrows (Fig. 2.27). Fire was made by the wood-on-wood technique in contrast to the Paleo-Inuit preference for using pyrite and strike-a-light (Stapert & Johansen 2003). The ulu (Fig. 2.28) is a characteristic formalised Thule culture tool, a household utensil,

Box 6 - The Thule expansion and Norse encounters

Similar to the Paleo-Inuit migrations, the Thule migration split in two directions upon arrival in Greenland. Some groups crossed Melville Bay and continued southwards during subsequent generations into West Greenland, where they gradually settled in all parts of the country (Gulløv 1997). During this expansion they encountered the Norse hunters, who occupied part of the southwest coast of Greenland from the 9th to the mid-15th century. Around AD 1500, the two Inuit groups met up in South Greenland and by this time Greenland was settled all along the coastline exclusively by Inuit. It is conceivable that Inuit and Norse peoples met in Aasivissuit – Nipisat, but there is no direct evidence to support this suggestion. The only object of Norse origin found in the nominated area is a chess piece, a queen carved in ivory, which was discovered on the island of Qeqertaq (Peat Island) in Ikertooq Fjord. This enigmatic stray find indicates that future investigations may well reveal further evidence of similar cultural interaction in this area.

Chess piece (queen) of ivory of Norse origin discovered on the island of Qeqertaq in Ikertooq Fjord.

Inuit expansion in Greenland between AD 1200–1500. The Norse Western Settlement was inhabited from AD 1000–1350, and the eastern Settlement between AD 985 and 1425. In around AD 1500 Inuit found in all of Greenland.

and the use of soapstone lamps (Fig. 2.29) and pots was extensive.

Local adaption

When the Thule people arrived in the Sisimiut area, they would have been well-accustomed to living in the High Arctic and to employing the ice and snow technologies that characterise the regions to the north, such as the dog sledge, the igloo, seal hunting at breathing holes etc. It is likely that the open-water hunting and fishing economy, which became typical for southwestern Greenland, was adapted in the Aasivissuit – Nipisat region. In the open-water area of Sisimiut, Thule people had to focus on kayaking, fishing and techniques suitable for open-water hunting. The western archipelago and fjords of Aasivissuit – Nipisat were a perfect environment for this transformation of technology and economy. Heathen graves in all parts of the coastal environment indicate that Thule people settled near many of the most attractive natural food sources.

Thule sites in Aasivissuit – Nipisat

In West Greenland, artefacts and traces of the Early Thule culture are known from many different areas (Mathiassen 1931a, 1931b; Jordan 1984). In Aasivissuit – Nipisat the site of Qaarusulik has five cloverleaf-shaped winter houses, and Innap Nuua, situated in the western part of Sallersuaq on the southern side of the fjord og Ikertooq (Box 7, page 54), has eight of these buildings, typologically dated to the early centuries of the Thule culture. In the interior, 13th century Thule presence on Aasivissuit is documented by a radiocarbon date from the deeper part of the excavated midden.

Summary of Thule culture

Around AD 1000, the Thule culture evolved as a specialised whaling and maritime hunting culture in the Bering Strait region. Soon after, the culture undertook a swift eastwards migration and dispersal, which to some degree must have been made possible by the Thule people's mastery of efficient means of transport. During the 14th century, the Norse settlements declined and contracted, whereas the Thule culture expanded and dispersed to all parts of Greenland.

Final Thule culture, Aasivissuit and early colonisation

In the late 1500s, European exploration turned towards Greenlandic waters. In 1605, 1606 and 1607 James Hall was engaged by King Christian IV of Denmark to explore Greenland and re-establish contact with the Norse. The voyages brought Hall into several of the fjords around Sisimiut. Hall's fourth voyage in 1612 was a private enterprise, when he explored the same areas as visited before. On 22 July, in the fjord of Amerloq, a group of Inuit who had previously been held captive confronted Hall. One of them struck him in the side with a spear, and he died the next day. Danéll visited Itilleq and the area of Nuuk, the present-day capital of Greenland, in 1654, 1652 and 1653. The maps and descriptions of the land and its people produced by Hall and Danéll are important historical records.

Throughout the 17th century, Dutch and Danish-Norwegian whaling off West Greenland was sporadic, but in the early 18th century the Dutch began more regular and intensive whaling in the Davis Strait. Inuit and the whalers soon developed trade and bartering relations, and the European presence became a driving force in long-distance travel activities in southern Greenland. Inuit obtained iron knives, nails, needles, beads, tobacco, sugar and exotica from the whalers, and the whalers obtained walrus and narwhal teeth and skins from Inuit. Internally, Inuit exchanged soapstone, caribou skin, baleen and driftwood (Fogsgaard 2012; Gad 1967; Gulløv 1997). The uneven distribution of natural resources was balanced by the Inuit internal exchange. South Greenland developed a more fishery dependent economy, and they had limited access to baleen needed for the production of lines. Southwestern Greenland, on the other hand, was rich in driftwood and had many foxes and therefore fox skins. The Nuuk area has the best quality of soapstone for the production of lamps and pots, and in the region of Maligiaq, and around the town of Sisimiut, there were many caribou and walrus. Inuit living in Disko Bay, on the other hand, lacked reindeer skins, soapstone and wood, but had good supplies of baleen. This uneven distribution of natural goods was balanced

by a far-reaching coastal, parallel trading system (Fig. 2.30). Hunting of the inland caribou herds enabled the people of Aasivissuit – Nipisat to acquire exotic goods and to profit from being part of these greater exchange networks. Curiously, East and South Greenlanders took a very active part in this system by organising long umiaq voyages along the coast of West Greenland. Stories from East Greenland mention trading trips lasting several years, beginning in southeastern Greenland and terminating at the well-known site of Sermermiut in Disko Bay, where they overwintered in a huge village before returning home (Egede & Lidegaard 1988).

Communal houses

In late 17th century, these travelling umiaq crews and kayak hunters developed the spectacular communal house, where many families lived in one long building (Fig. 2.31). The communal houses were normally 8-10 m long and 4-5 m wide, and accommodated four to six families or 20 to 30 individuals. Some of the largest communal houses in Greenland are known from Aasivissuit – Nipisat, where the largest, more than 20 m long structures, could have housed as many as eight to ten families. The travelling groups were permitted to erect their large houses in coastal regions, whereas these communal winter houses are rarely seen in the inner fjords.

The cultural change brought about by the contact with Europeans boosted the lifestyle of the South Greenlanders and their bartering voyages because, in addition to the exchange of local commodities such as baleen and soapstone, the presence of Europeans along the route added a new suite of exotic products, such as iron, tobacco, sugar, coffee and firearms, to the trading list. The presence of these early trading stations also enabled Inuit to trade large quantities of caribou hides or whale products with the resource-hungry European settlers.

The communal houses were built either as free-standing structures or with the rear wall dug into sloping terrain. When cut into a slope, the top of the rear wall was often flush with the hillside behind, whereas the front and side walls were built up. Similar to the cold-trap entrance in the earlier Thule houses, occupants reached the living area by crawling upslope through a three-foot high stone- and turf-walled tunnel, which ran perpendicular to the house's long axis.

Floor plans were rectangular/trapezoidal and wider at the back (Birket-Smith 1924: 147). Two transparent gut-skin windows, made from scraped strips of seal gut, admitted light through the front wall, and sometimes a third window was added above the entrance.

The ceiling and outer roof cladding consisted of old, fat-rubbed boat or tent skins, laid over rafters. The skins were weighted with stones and overlain with turf as insulation, to form a flat or slightly pitched roof. Heavy, vertical posts transmitted the roof load to a

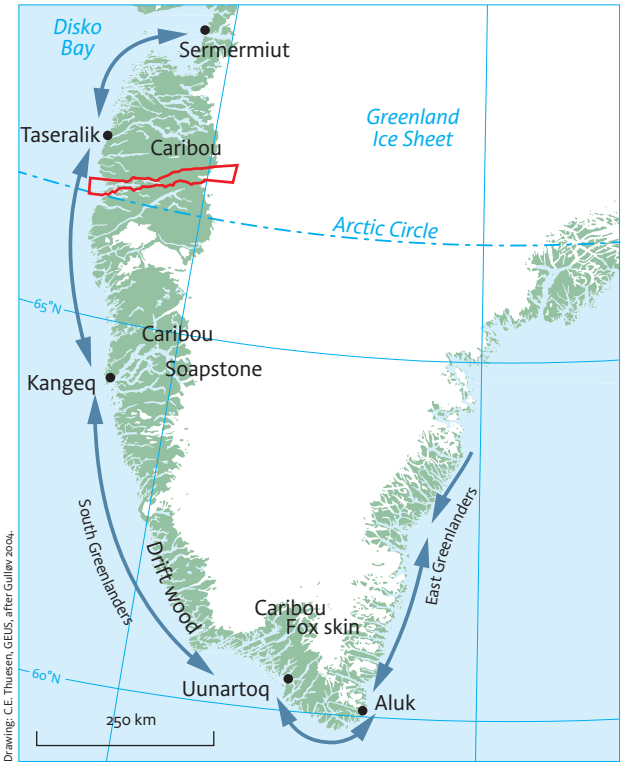
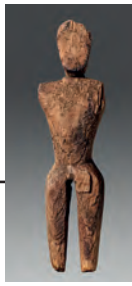


Fig. 2.30. Sketch map showing trade in local and exotic products during the Late Thule culture and early historical period.



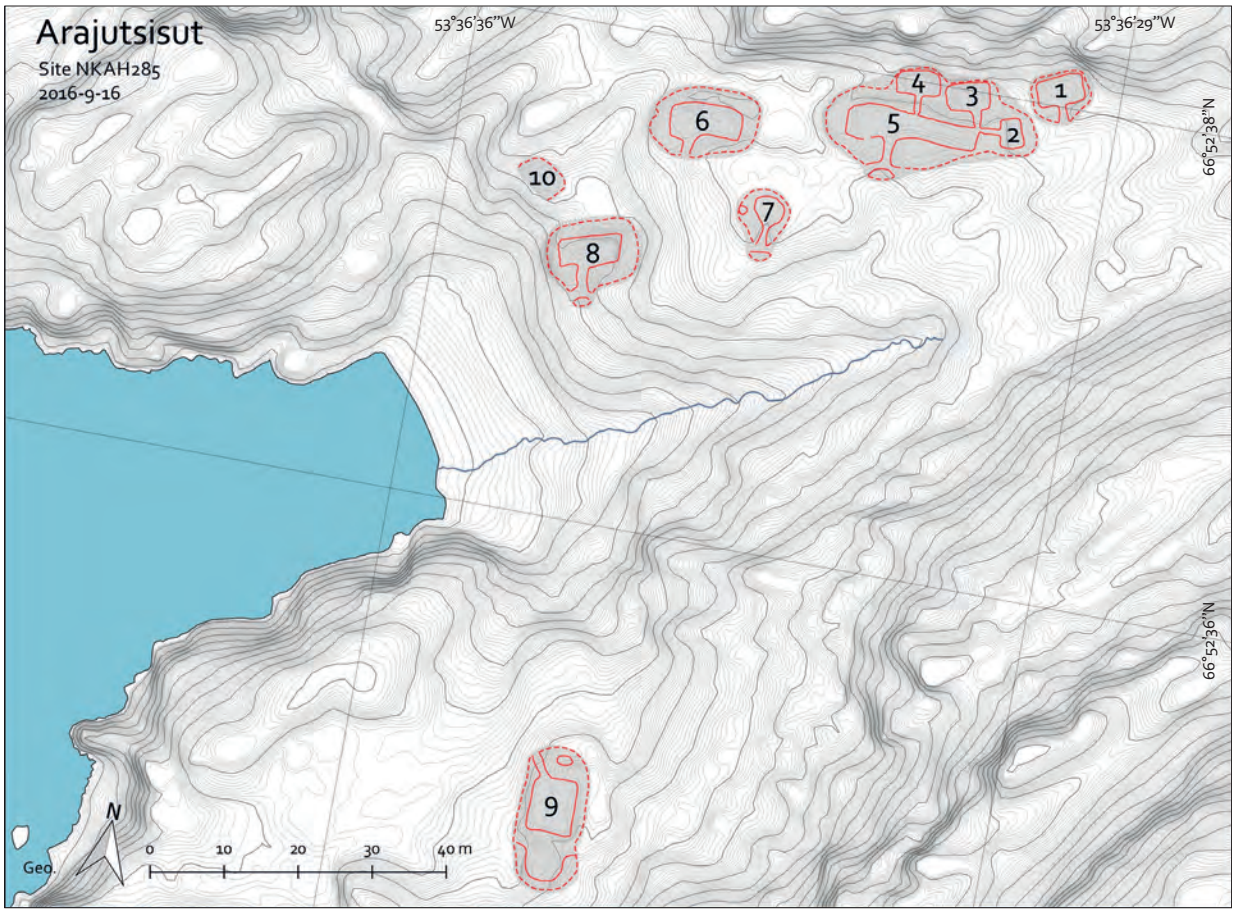


Fig. 2.31. Arajutsisut is a spectacular Thule and colonial period Inuit camp with at least ten ruins comprising spectacular communal houses (nos. 5, 6, 8, 9 and 10), rectangular winter houses (nos. 1, 2, 3 and 4) and one round winter house from the Early Thule period (no. 7).

bare or stone-paved floor. The wooden sleeping platforms ran the length of the rear wall and were about 1.8 m deep and raised a c. 45 cm above the floor. Each family unit had its own 1-2 m wide compartment, separated from the other families by transverse skin partitions (Fig. 2.32).

Each family unit kept its own small wooden lampstand on a stone pedestal in front of the sleeping platform. This was the focus of women's activities indoors. Sometimes the interior walls were insulated with skins, improving comfort and probably cleanliness, as the skins kept wall debris from falling in.

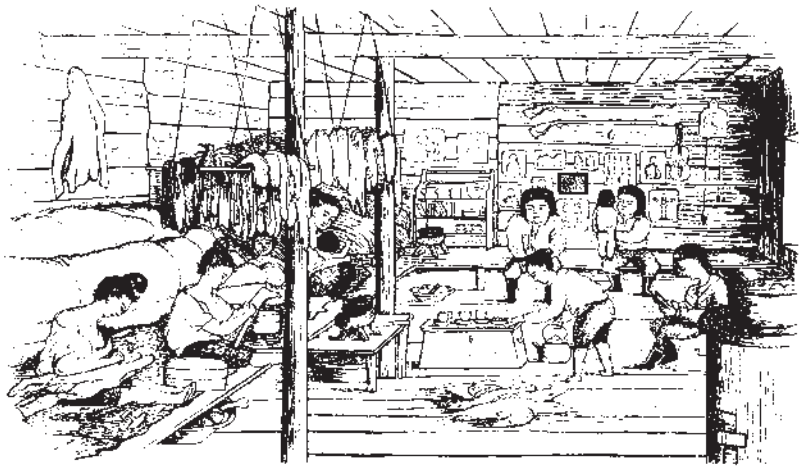


Fig. 2.32. Wood cut of a wealthy communal house cut made by the Greenlandic artist Aron from Kangeq, spring 1860. After Thisted 1999.

Extra platforms were added to the front and side walls, where guests, unmarried men and older boys slept.

After the mid-1800s, multi-family dwellings became less common and in the late 19th century, European stoves supplanted lamps for heating. But the indispensable lamps were kept burning for their light and wooden panels or plank walls became common as well. In the early 20th century, communal houses were abandoned and replaced by smaller single or extended family homes (Birket-Smith 1924: 148).

Box 7 - Innap Nuua

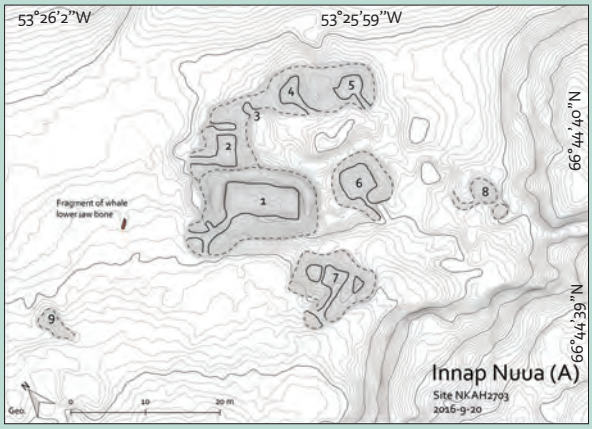
Innap Nuua is an impressive winter settlement with both round houses from the Early Thule period and well-preserved communal houses from the later Thule and Inuit settlement phases. The site is situated on a point on the northern side of the island of Sallersuaq to the south of Ikertooq Fjord. The point is characterised by undulating terrain, with rocky hills separated by areas of more even sedimentary terrain, where the ruins are situated. The site has three ruin groups: A, B and C.

Ruin group A consists of a well-preserved communal house built into older ruins, one of which is a round house.

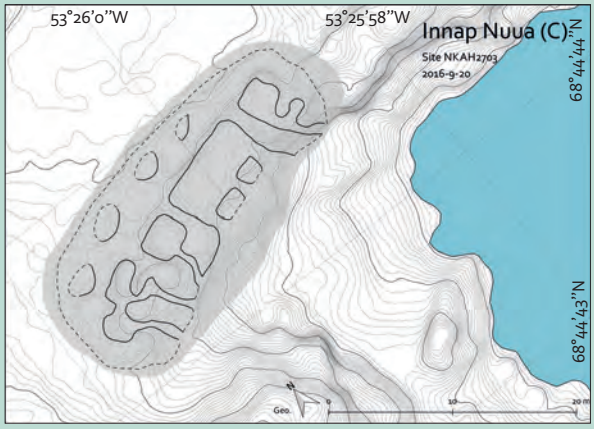
Ruin group B has eight well-preserved dwellings: Four Early Thule round houses, two rectangular winter dwellings and two communal houses. The best preserved of the communal houses is a 11 x 5 m dwelling with walls standing 1.6 m tall. This house was built into an existing house group, whereby earlier ruins or possibly midden deposits have been disturbed.

Ruin group C consists of one enormous, 25 m long and 5.5 m wide communal house that has been divided into five sections by a series of four internal walls. The walls are 1-1.2 m high throughout the ruin.

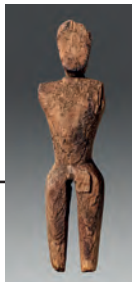
Innap Nuua. Ruin groups A, B and C at site NKAH2703. 2016-9-20.



Innap Nuua (A). Site NKAH2703. 2016-9-20.



Innap Nuua (C). Site NKAH2703. 2016-9-20.



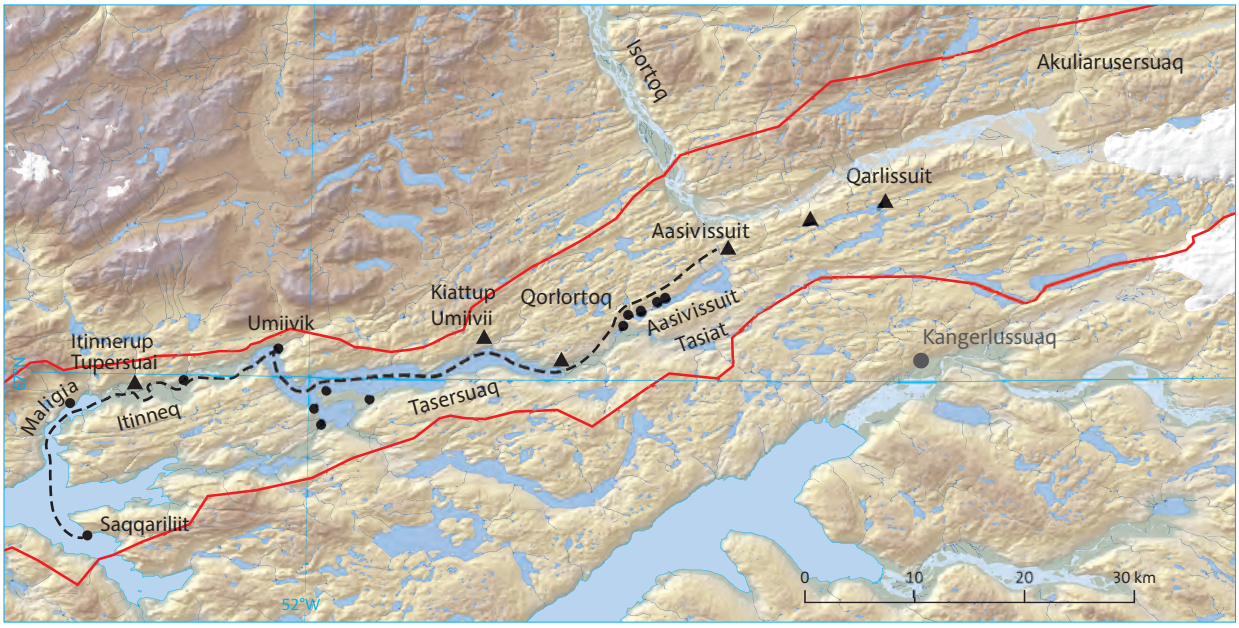


Fig. 2.33. Map showing the route (broken line) from Saqqarliit to Aasivissuit and the archaeologically recorded camp sites along the route. Triangle: camp sites with many ruins (tent houses, tent rings); circle: small camp sites/shelters.

Going to the summer camp

The route from Ikertooq Fjord through Maligiaq and Itinneq to Aasivissuit (Fig. 2.33) has been used from the earliest times. The early use of inland resources is documented by Paleo-Inuit stray finds and sites all along the historically known inland hunting route. This access route is efficient and fast. In two to three days the whole settlement can be moved from the outer coast to the interior and vice versa, and much of the journey can be undertaken using watercraft, allowing greater quantities of bulk goods and provisions to be taken along, than if the distance had to be covered on foot.

Harp seal, trout, capelin and birds were hunted from spring camps at the coast or in the fjord, and the camp broke up as soon as these activities ceased. Then it was time to go caribou hunting. Caribou fur is at its prime from mid-July, and arctic char could be caught in the rivers that were encountered or followed on the way towards the caribou camps in the interior. The summer camps deep inland were mainly frequented by the fjord dwellers from Sarfannguit and Saqqarliit. Later, visiting Europeans on hunting trips hired their crew of porters and guides from Sarfannguit. The residents of Itilleq, on the outer coast south of Ikertooq, travelled south towards Kangerlussuaq and Angujaartorfiup Nunaa to go caribou hunting. In Aasivissuit – Nipisat, the authenticity and integrity of the coast/inland system is perfectly preserved. Most landmarks and archaeological remains along the route represent the last three to four centuries of land use, but finds of much greater age show that the interior hunting tradition dates back to the first people.

At the head of Maligiaq Fjord, just before the valley of Itinneq (i.e. 'the portage'), there is a gathering place. From here, umiaat (i.e. plural of umiaq) and kayaks were carried along Itinneq to the western end of Tasersuaq (i.e. The Large Lake) (Fig. 2.34). Here, by the northern shore, lies the camp of Umiivik, where the umiaat were hauled ashore to dry their hide coverings prior to continuing the journey. It is also said that sometimes the women and children walked from here, whereas at other times the journey by umiaq and kayak continued to the eastern end of Tasersuaq, where the umiaat were left with surplus tents and

equipment. From here, the women and children walked to Aasivissuit, along the northern shore of the Aasivissuit Tasiat, while the men carried kayaks over to Aasivissuit Tasiat and paddled the distance. Kayakers, woman and children would then team up again at the great summer camp of Aasivissuit in the eastern end of Aasivissuit Tasiat.

If the hunting around Aasivissuit proved bad, the hunters went further inland, to the site of Qarlissuit, beautifully situated on an isthmus between two lakes. Here there are minor caribou drives in the hinterland and 12 dwellings, which show that Qarlissuit was regularly, but less intensively used than Aasivissuit. And if hunting still failed, it was possible, as a unique radical solution, to continue further east and cross the glacier Isunnguata Sermia to the hills of Akuliaruserssuak on the northern side of the Isortoq valley which, with its freezing torrents of glacial meltwater, is impassable for most of the year (Box 8).

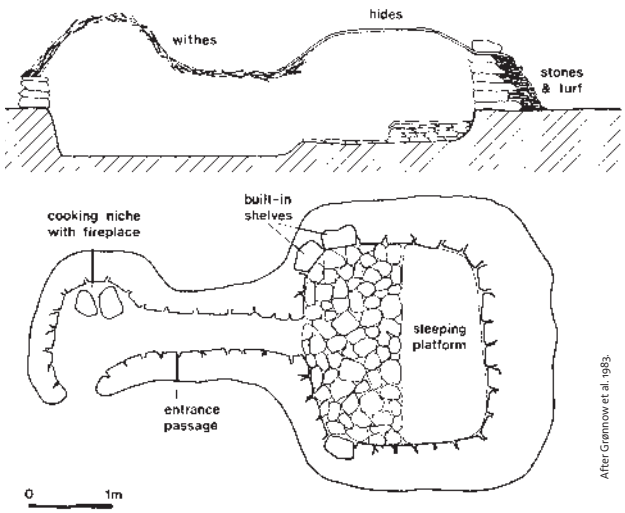
Aasivissuit, the great summer camp

The camp site at Aasivissuit is evident as a 100 x 55 m oval grassy mound on the shore of Aasivissuit Tasiat, surrounded by willow scrub (Fig. 2.35). In this well-defined area, there are 22 tent houses and eight tent rings situated in two groups on a flat, slightly elevated part of the site to the north and on a slightly lower level area to the south, where the excavation was conducted (Grønnow et al. 1983). Centrally, between the dwellings in the lower-lying cluster, there is a whetstone deeply embedded in the cultural deposits. Müller (1906: 494) records that, according to oral tradition, this stone had been brought down from the nearby hill by a named person, though he did not record the name. He also mentions that pieces had been knocked off the stone by

Photo: Laust Løgstrup.

Fig. 2.35. View over the central part of the Aasivissuit camp on the easternmost shore of Aasivissuit Tasiat. Several tent houses are visible on the site.

Fig. 2.36. Principles of tent-house construction.



After Grønnow et al. 1983.

Fig. 2.34. View over westernmost Itinneq from east to west. In the background, the head of Maligiaq Fjord can be seen. At high tide the meandering river is navigable several kilometres into Itinneq. The camp site of Itinneq Tupersuai is situated by the first rapids which mark the limit of this tidal effect.

Photo: Jens Fog Jensen.

hunters, who wanted to take along a piece of the whetstone for use elsewhere. The dwellings at Aasivissuit were either tents or tent houses. The latter is a kind of permanent structure with walls of stone and turf and with a layout similar to that of the winter dwellings. The tent house has a semi-subterranean main room with a sleeping platform at the rear and a c. 3 m long entrance passage with a cooking-niche (Fig. 2.36). The superstructure of the tent house was built of willow withies covered with skins or, in later years, canvas. The entrance passage and the smoke from the fireplace kept the main room free of mosquitos.

Stone-set features around the site

Caches: Stone-set caches for the storage of meat are situated in the terrain surrounding the Aasivissuit site, where the concentrations of meat caches on the point Qimatut Nuua, in the lake to the west of the site, and in the scree uphill to the north of the camp probably relate to communal hunts. The location of these

Box 8 - Müller's journey

One of Rasmus Müller's (1906) hunting stories from West Greenland describes a hunting trip in the summer of 1898 when Müller and his ten Greenlandic companions roamed the inland caribou hunting grounds of Aasivissuit – Nipisat. Müller names and describes the ancient camps, and the game bagged, and he published photographs of some of the places. Müller's account thereby represents an early well-documented journey along the old route from Sarfannguit to the caribou hunting camps of the interior. Interestingly, the guides took Müller across the Isunnguata Sermia (glacier) to the land of Akuliarusersuaq on the northern side. From very early times, this strenuous option was known to have been taken by dedicated caribou hunters in periods of low caribou populations, because the most remote lands close to the ice sheet act as refuges for the caribou population during these 'lows'.

Müller and company had presumably hoped for a nice, crisp Indian summer, but unfortunately they experienced a great deal of rain, slush and snow, which had a considerable adverse effect on both their enjoyment and their hunting fortunes. At night, an ice crust formed on the newly fallen snow. Ice crust cracks and make a noise when sneaking up on game animals and thereby reduced their hunting fortunes. Müller describes the hardships and, in particular, the presence of game animals and the hunting in great detail, making the account an interesting narrative. His naming of camp sites and routes also enables us to reconstruct the trip in great detail, and since the Sarfannguit hunters were his guides, we can assume that they took him to the places they knew and favoured. Müller's journey can therefore be characterised as a traditional stereotype for a traditional caribou hunt during a period of low population size.

List of camps used by Müller in 1898

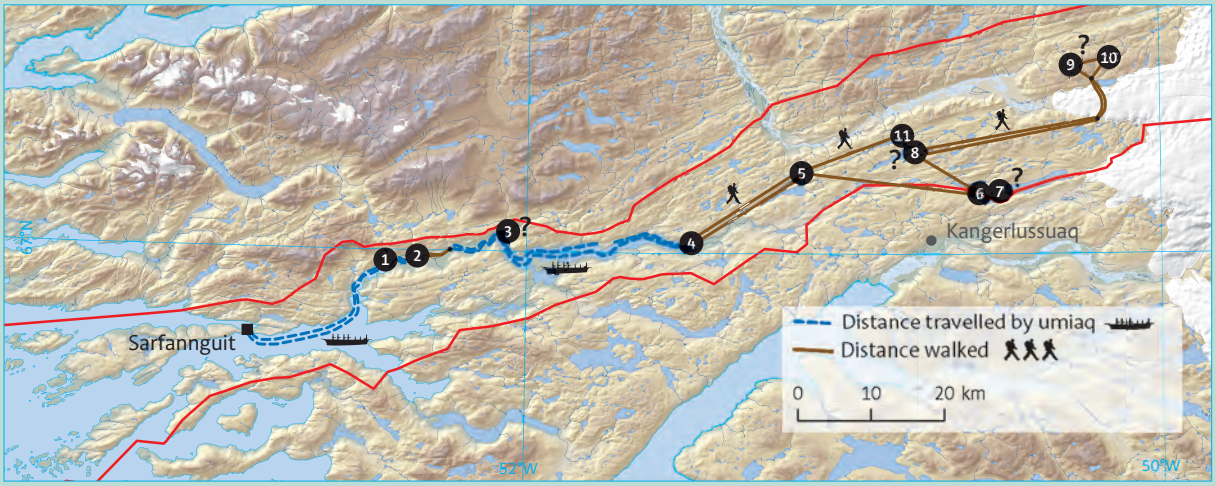
No. on map	Site name	Date of arrival	Date of departure
	Sarfannguit		Aug 28
1	Maligiaq / Itinneq	Aug 28	Aug 29
2	Itinneq Tupersuai I	Aug 29	Aug 30
3	Umiivik ?	Aug 30	Aug 31
4	Tasersuaq	Aug 31	Sep 1
5	Aasivissuit	Sep 1	Sep 2
6	Qingartaq Sanningasoq	Sep 2	Sep 3
7	Sanningasup Tasii ?	Sep 3	Sep 4
8	Sangujallak	Sep 4	Sep 6
9	Akuliarusersuaq 1	Sep 6	Sep 9
10	Akuliarusersuaq 2	Sep 9	Sep 10
8	Sangujallak	Sep 10	Sep 11
11	Qarlissuit	Sep 11	Sep 12
5	Aasivissut	Sep 12	Sep 13
4	Tasersuup Qinnguata Aasivii	Sep 13	Sep 14
2	Itinneq	Sep 14	Sep 15
	Sarfannguit	Sep 15	

Participants:
Hans (Holsteinsborg / Sisimiut) camera porter,
Lars Rønning (Sarfannguit),
Aron Goliathsen (Timerliitt),
Gideon Kajusen (Saqqarliit),
Inger Rønning (the wife of Lars Rønning),
his stepson Kristen,
Nathan Goliathsen (the brother of Aron),
his daughter Salome (aged 17),
his son Berthel (aged 12) and
Gideon's sister Kathrine age (aged 21).

caches is not random. Both the point and the scree are well ventilated and have easy access to boulders for use in cache construction. These stored supplies could be retrieved later by dog sledge in winter and spring.

Naanngisat – a hopping-stone row lies at the top of the ridge running up from the creek Naanngisat Qoorua about 650 m to the east of the camp. It is 24 m long and built of about 40 stones (Fig. 2.37). From oral tradition, this structure is known to be a playground for adults and children. Somewhat similar to hopscotch, the game consisted of one or two participants hopping on one leg from one stone to the next, either side by side or towards each other. The 'naanngisat' is therefore a material manifestation of the many social activities that are often elusive in the archaeological record.

Graves: On the terrace surface just east of the camp lie six putative stone-set graves. They consist of 1-1.6 m diameter round to oval heaps of stones. A 7th century



Reconstruction of Müller's journey. Distances travelled by Umiaq are marked with a dotted line and walked distances are shown with a solid line. The latter are shown as straight lines rather than marking the actual routes following the contours or for example streams, because Müller rarely describes his chosen route. In several cases, he does though mention that the group split up and followed different routes in order to cover as much terrain as possible while hiking and scouting for caribou. In such cases, the group met at the agreed campsites in the afternoon. The exact locations of some camps are uncertain. These localities are marked with a question mark.

Travel from Sarfannguit to Maligiaq was by umiaq.

The umiaq is carried over land at Itinneq.

Resting at Aasivissuit. Most of the tent-houses were overgrown and had not been in use for many years when Müller and his hunting party camped at Aasivissuit.

Photo: Henning Thing.

Fig. 2.37. Row of hopping stones situated on a gravel ridge a few hundred metres from the camp site.

stone-set grave is situated near the lake shore in the valley of Tunit Qooruat to the west of the camp.

Hunting systems

One of the most spectacular characteristics of Aasivissuit is the extent of the hunting systems in its hinterland. Hunting blinds and inussuit (plural of inussuk = cairn) form kilometre-long drive systems, whereby the caribou herds could be controlled and directed into selected areas for mass slaughter. The following section is a two-step description of the Aasivissuit hunting system. First, there is a brief description of the principal architectural features, their size and construction, there then follow a description of the operation of the system, the function and manning of its various elements and placing of hunters and drivers in the landscape.

During periods of population maxima, the caribou herds of Aasivissuit – Nipisat make annual migrations in spring from winter grazing ranges in the western part to breeding areas in the vicinity of the inland ice sheet to the east, and vice versa in autumn (Fig. 2.38). Mainly cows and calves make these migrations. The bulls tend to remain in the interior when the cows and calves migrate west in autumn. During periods of caribou minima, the browsing herds are more scattered and undertake less predictable seasonal migrations. The congregation of a large number of people and the activation of large-scale caribou drives are therefore most profitable during caribou population maxima, since it is only during these periods that the herd behaviour is predictable enough to justify and support the gathering together of a lot of people in one place.

In periods of population minima, Inuit society must adapt and change its way of hunting, towards stalking by a few individuals or small groups tracking down the caribou. In addition to this behavioural parameter relative to the use of caribou drives, there is also a technological aspect relating to the range and accuracy of weapons employed. Hunting with bow and arrows requires the hunters to be within a shooting range not exceeding 10 m. The hunting blinds therefore constitute important coverts for the hunters while they wait for the animals to get close, and they may be used both for large-scale communal hunts and when smaller groups intercept single animals or smaller herds. The introduction of firearms, brought by Europeans, increased the shooting range tenfold and probably reduced the incentive to use drive systems.

The caribou drive, stone wall and shooting blinds

The two main features of the Aasivissuit hunting system are the huge, impressive caribou drive system, intended to direct the caribou close to the stone wall, where hunters would lie in wait to kill the animals. The drive system, the wall and the use of beaters, bowmen and armed kayakers on the lake, made effective use of the topography and turned the area into an extremely functional death-trap for migrating caribou. Nowhere else in Greenland are there hunting

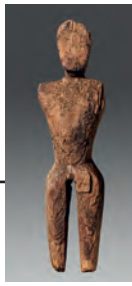


Photo: Henning Thing.

Fig. 2.38. During the autumn migration, the scattered caribou herds becomes a predictable resource at topographical bottlenecks. At selected locations, such as in large gullies and by cliffs or lakes, the hunters are able to intercept the caribou.

systems of this size. Operating the system required a large number of people, as well as experience and leadership. The whole system is therefore also a reflection of Inuit social organisation and capabilities.

The huge caribou drive is, with some interruptions, an impressive, fully visible, 3.9 km long line of inussuit, situated on the SSE side of the east-west oriented hill just north of the Aasivissuit site (Fig. 2.39). The inussuit are mainly (70%) composite, being built of six to ten stones, whereas the remainder (30%) are single stone inussuit, where a single stone is placed atop another stone or large natural boulder. The basic components of the entire system are constructed of local materials.

Photo: Bjarne Grønnow.

Fig. 2.39. Innusuit (cairns) at Aasivissuit. Leather thongs could be suspended between the innusuit to enhance their function as a barrier, and at intervals along the drive line there would be drivers, often children or women, to help move the caribou in the right direction.

Photo: Jens Fog Jensen.

Fig.2.40. Shooting blind. Cresent-shaped walls of stones acted as coverts for hunters who lay in wait for the approaching caribou.

The stone wall is a 70 m long, partially collapsed wall of stones situated 150 m west of the camp site. It begins in the talus below the escarpment on the hill northwest of the camp site and runs down to the flat area near the lakeshore. To the west of the wall there are remnants of an earlier wall. The most recent wall is 20-60 cm high, but it was originally higher. The numerous caribou trails that today cross the wall confirm that the drive system effectively forced the caribou into shooting range.

Shooting blinds, solitary, in pairs or in groups, are situated at several localities in the surrounding terrain. These coverts are sometimes associated with smaller lines of inussuit and they testify to episodes of individual hunting, companion hunting or communal hunting (Fig. 2.40).

Individual hunting is where a solitary hunter, having located his prey, will place himself in the blind in order to wait for the animal(s) to pass by within shooting range. The hunter may, in advance, have set up a minor system of inussuit to direct the animals in the right direction, or the local topography may restrict their movements so they pass by the shooting blind. Companion hunting is when two men hunt together.

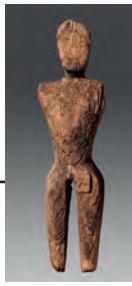
This hunting form is testified to by paired shooting blinds and possibly by the occasional occurrence of very large shooting blinds. Apart from the pleasure of company, such situations had the advantage that two shooters could kill more animals if a small flock passed by. Finally, there are localities such as the small valley of Igaq, to the north of Aasivissuit, where there are eight shooting blinds. This situation probably represents cooperation between beaters and concealed hunters. In this small valley, beaters would have been able to surround foraging caribou and drive them towards the many hunters concealed in their shooting blinds at the mouth of the valley.

The operation of the hunting system

The operation of such a large and complex caribou drive required many hunters and many drivers. Information on the operation of caribou drive systems has been collected since the early 18th century, and when collated, the following story emerges (Grønnow et al. 1983: 42):

Upon arrival at the hunting camp, families settled in their respective tent houses. The hunting system was repaired, and collapsed inussuit were rebuilt. Some parts of the long line of inussuit may have been linked with seal-skin thongs, and overturned turves or fluttering bird wings were placed on the top to reinforce their deflecting effect.

At some point, scouts went up to hilltops in the far eastern end of the drive line (the incoming end) to look for the caribou, and when approaching herds were spotted, women and children took up their positions at predestined locations along the drive line or in the open terrain, while the men were situated at two principal kill sites.



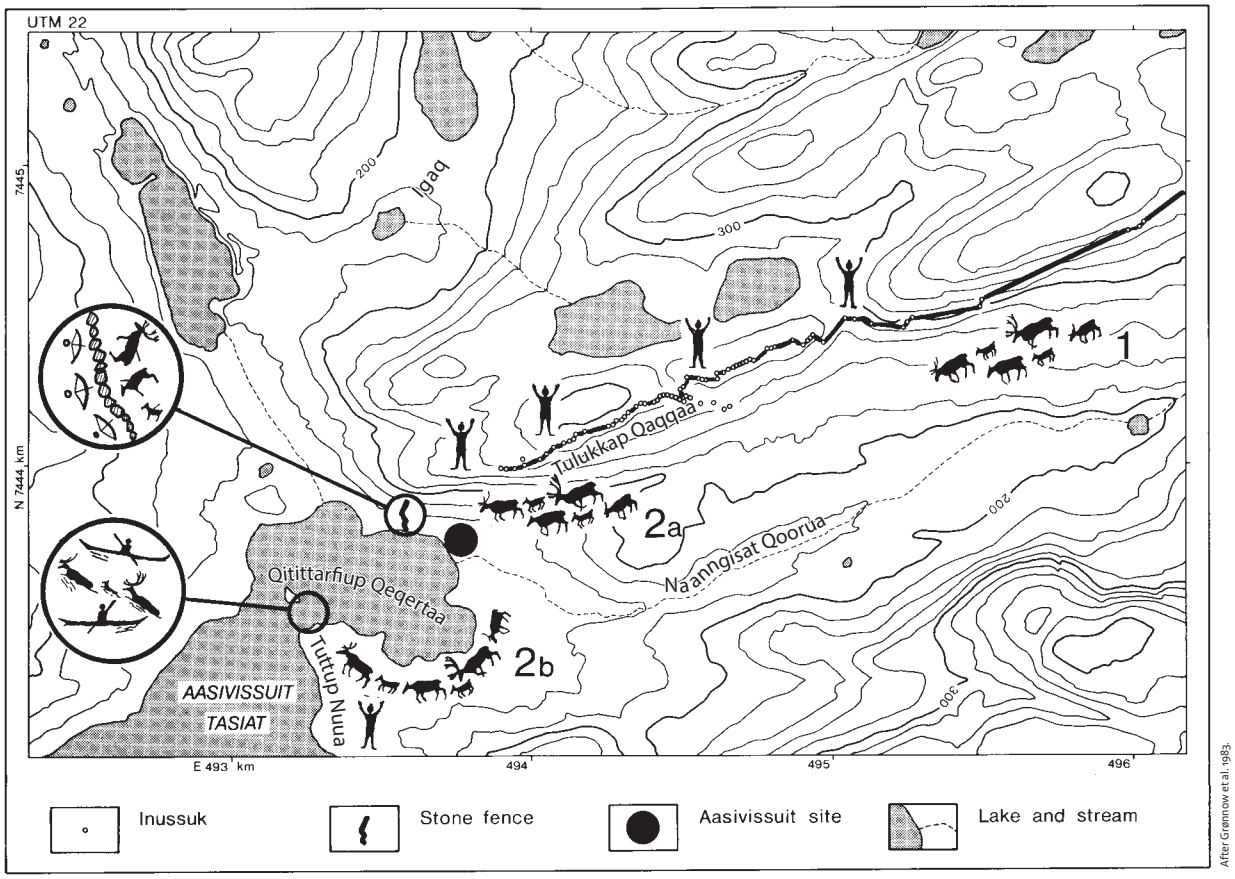


Fig. 2.41. Interpretation of the function of the hunting system at Aasivissuit. 1: The caribou flock has been guided WSW and is now moving along sections II and I of the activated inussuk row (thick black line). Beaters could be placed along the row to ensure that the caribou follow the trails towards the lake: According to the direction of the trails, two alternative ways of executing the final kill are proposed (2a and 2b). 2a. The caribou are killed by bowmen hidden behind the stone wall. 2b. The caribou follow the trails to the swimming place and are killed by hunters in kayaks.

1) Hunters with bow and arrows would hide behind the stone wall that blocks the narrow passage between Aasivissuit Tasiat and the hill just north of the site.

2) Hunters in kayaks would kill swimming animals in the lake (Fig. 2.41). The hunting of swimming animals has been preferred in many localities across the Arctic where caribou cross rivers or lakes, since the animals are relatively easy prey for men in kayaks. Beaters can be placed along the water to prevent the caribou from coming ashore. In this way it was possible to kill an entire flock of swimming caribou.

The killing started when the caribou herds came closer to the camp. The inussuk line kept the animals in the open valley leading towards Aasivissuit Tasiat. If they attempted to cross the hill in a northwesterly direction, women and children waved their arms to scare them off. In this way, the flock was directed toward the narrow 'gate' between Aasivissuit Tasiat and the hill Tulukkap Qaqqaa, where bowmen waited behind the stone wall. Some flocks could take a more southwesterly route, trying to cross the lake, by the Tuttup Nuua point and the islet of Qititarfiup Qeqertaa. Here, men in kayaks waited by the point and the swimming animals were killed before they reached the opposite shore of the lake.

Photo: Bjarne Grønnow.

Fig. 2.42. Caribou bones are present throughout the midden at Aasivissuit, but the stratigraphy is characterised by two distinct layers where they are densely packed. These layers were accumulated during communal hunts undertaken when the caribou population peaked in the late 17th – early 18th century, and again in early 19th century.

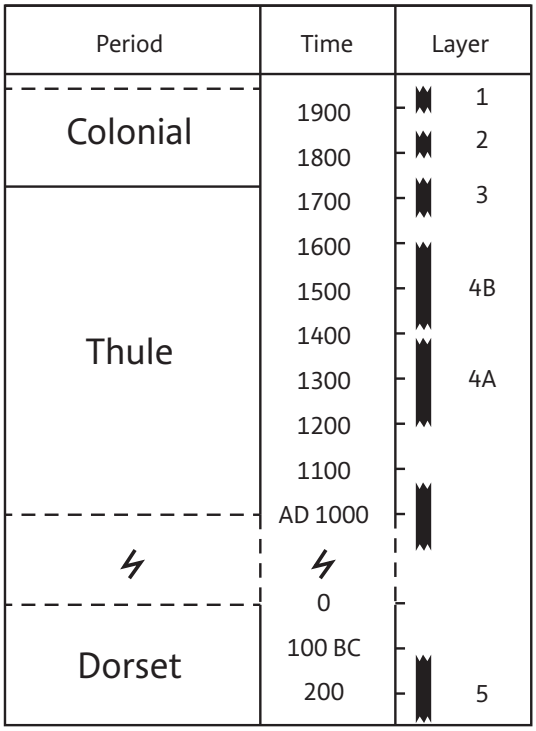


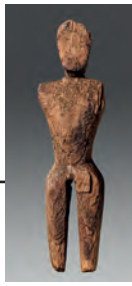
Fig 2.43. Sketch of the principal occupation episodes of Aasivissuit.

The story of Aasivissuit as revealed by the midden

The history of the site and the hunt was revealed by excavations undertaken in the late 1970s. A 15.5 m long section was excavated through the midden and the preserved caribou bones and finds tell the story in great detail (Fig. 2.42) (Grønnow et al. 1983). The recovery of lithic debitage and a microblade from the deepest and earliest deposits (layer 5) in a nearby, but separate, excavation sector shows that Paleo-Inuit caribou hunters settled here even before the arrival of the Thule people. The debitage is of chalcedony, which was predominantly used by the Greenlandic Dorset culture, and this typological dating has been confirmed by a radiocarbon date for caribou bones from the same layer of 2155 ± 75 BP. Very few caribou bones were preserved in the deepest layers, although at this depth the soil is moist and partially permanently frozen, which results in good conditions for the preservation of bone. The patchy development of cultural layers during the first human occupation of the camp site demonstrates that the use of Aasivissuit during the Saqqaq and Greenlandic Dorset cultures was probably sporadic and that the site was presumably used by small groups during these centuries (Fig. 2.43).

Layers 4a and b show that Thule people visited Aasivissuit already in the 13th century, shortly after their arrival in West Greenland. Throughout the 13th to the 16th centuries their visits were frequent, perhaps even recurrent on an annual basis. However, the deposition of caribou bones is still patchy, which shows that the site was mainly used by small groups of hunters who hunted with bow and arrows by stalking or perhaps using minor drive systems. In addition to caribou, some white-fronted geese were also taken.

Layer 3 dates from the 17th century to the first half of the 18h century, and from this period there is a massive deposition of caribou bones, which now form compact 'bone beds' in the section. The dense layers



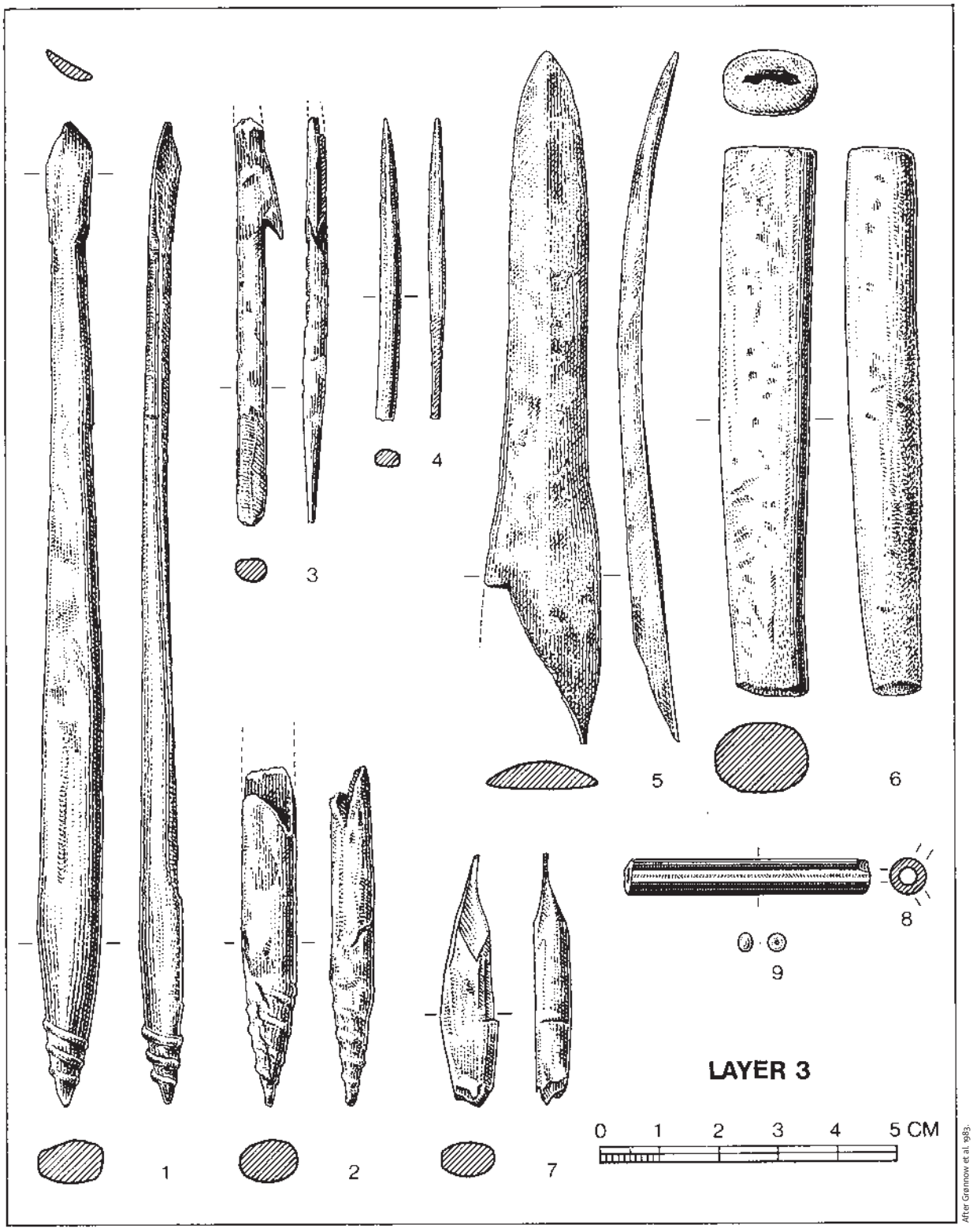


Fig. 2.44. Finds from layer 3. 1-2: Arrowheads with screw tang (antler). 3: Fragment of distal end of arrowhead (antler). 4: Awl with secondary working (bone or antler). 5: Point of arrowhead (antler). 6: Knife handle (antler). 7. Base of lateral branch of fishing spear or bird dart with secondary working. 8, 9: Glass beads.

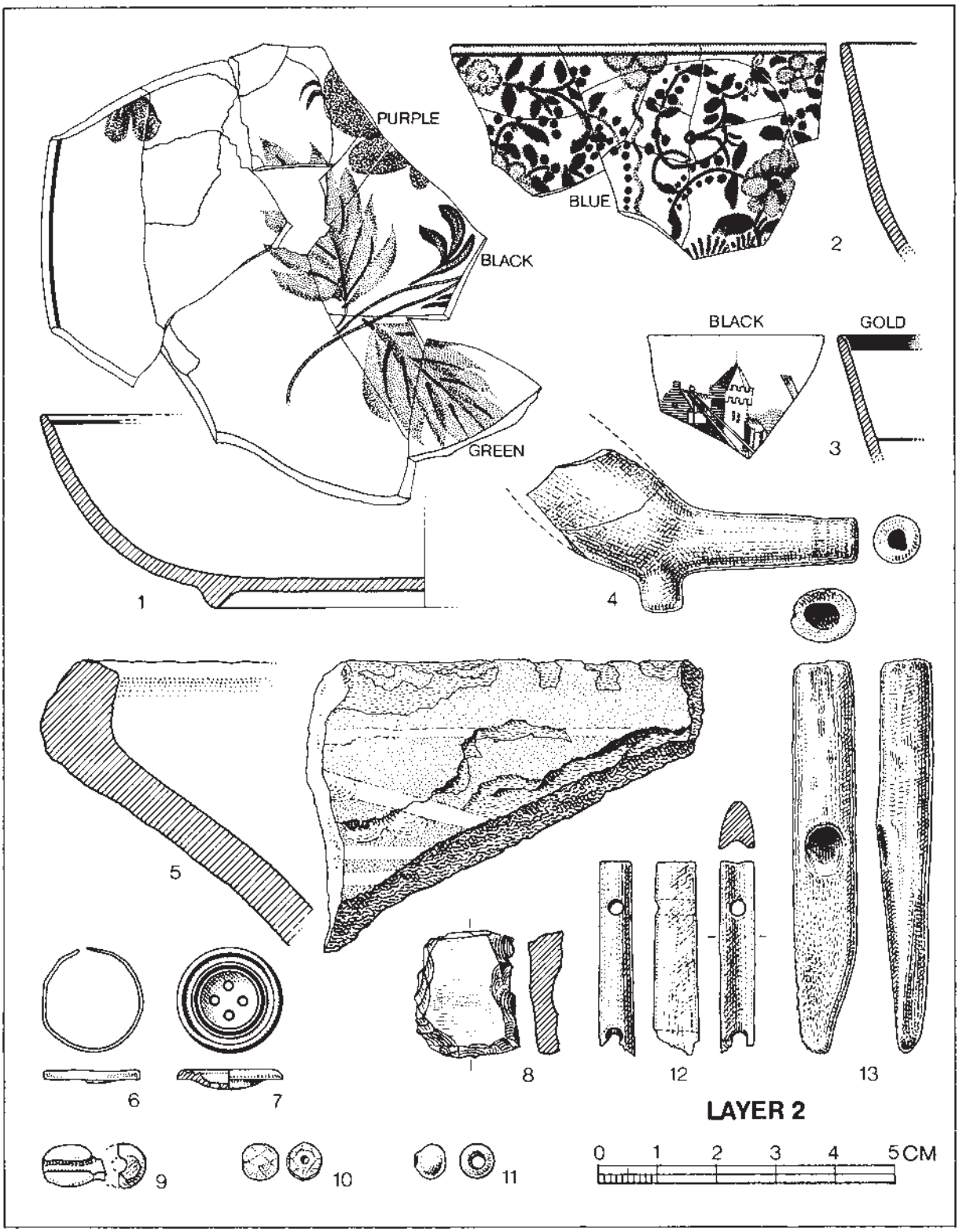


Fig. 2.45. Finds from layer 2. 1-3: Faience sherds. 4: Fragment of clay pipe. 5: Earthenware sherds. 6: Metal ring. 7: Pewter button. 8. Gunflint. 9-11: Glass beads. 12: Edge-trimming fragment (antler or bone). 13: Line terminal (antler).

of caribou bones show that, during these years, intensive large-scale caribou hunts were undertaken. It was during this period that the extensive hunting drive and many of the hunting blinds and tent houses were built. In addition to the faunal remains, there are also artefacts in the form of antler arrowheads with a screw tang (Fig. 2.44), a knife handle and imported glass beads (Grønnow et al. 1983: 64-65).

Layer 2 dates to the period 1800-1850. During this period the deposits of caribou bone again become less dense showing that the large communal hunts had either ceased or occurred less frequently. However, the artefacts contain several exemplary finds, documenting the technological change that occurred during these decades (Fig. 2.45). Among the traded European goods are faience sherds, earthenware, a pewter button and glass beads: Importantly, the replacement of bow and arrows by flint-lock guns is shown by finds of gunflint. The casting of lead bullets is also documented at Aasivissuit by drops of lead waste among the finds.

Layer 1 is the top layer with recent vegetation, and finds of cartridge cases from more modern breech loaders shows that the use of Aasivissuit continued into the 20th century. From this period, written sources supplement the archaeological evidence (Müller 1906; Nordenskiöld 1914), and to illustrate the sporadic use of Aasivissuit during this period, attention can be drawn to a comment by Müller (1906: 494), who states that during his visit most of the tent houses were dilapidated and overgrown with grass and that just five or six of them appeared to have been maintained recently.

Artefacts

The finds from Aasivissuit include traditional Inuit weaponry and household utensils, as well as surprisingly many imported European objects from the layers dating to the colonial period. The weapons include arrowheads and part of a bird dart. The use of imported weapons is illustrated by the presence of gunflint and waste drops from lead casting. Several antler knife handles were found, and the household utensils included sherds of imported faience and earthenware with decoration as well as soapstone pots and lamps traded from other parts of Greenland.

Fauna

The bones recovered from the Aasivissuit excavations are, as expected, completely dominated by caribou, which comprise more than 90% of the bones identified to species (Grønnow et al. 1983: 69). But other summer species, such as white-fronted goose and mallard, are also well represented. Interestingly, several marine species also occur. Harp seal bones, a single bone of common seal and a cod or uvaq bone have also been identified. These species, which are exotic to the interior, must be the remains of provisions brought in from the coast. The solitary cod or uvaq bone is believed to be the remains of dried fish taken along for the journey.

Fig. 2.46. Dense layer of well-preserved caribou bones in the midden at Aasivissuit.

Photo: Morten Meldgaard.

Photo: Jens Fog Jensen.

Fig. 2.48. In the southeastern part of Nipisat are the well-preserved turf walls of the 34 m long and 9.6 m wide warehouse.

2.b.iv Colonial period Nepisene

The colony of Nepisene was the second settlement to be established by the Danish-Norwegian administration in Greenland (Fig 2.47). The founder of the mission, Hans Egede, had heard of the rich whale hunting in Nipisat Sound, and he knew that there were many Dutch whalers in these waters. So in the summer of 1724 it was decided to establish a more permanent Danish presence at Nipisat, in an attempt to monopolise both whaling and trade with the Greenlanders (Bobé 1914; Gad 1969: 70-71). However, no whales were caught during the first year, and the following summer the colony ran low on supplies and was abandoned. Dutch whalers seized the opportunity to get rid of a 'competitor' and in September 1725 Hans Egede heard from Greenlandic informants that the colony had been burned down by the Dutch.

In 1729-30, the Nepisene colony was rebuilt and this time a proper fortress was planned, but they had to make do with less: In the little cove on the southern side of Nipisat Island, a dwelling and administration was established in a three-winged building, and 800 m to the east a warehouse was built on the southeastern part of the island (Fig. 2.48).

Jakob Geelmuyden (1704-68) was the new inspector and bookkeeper. However, as early as 1731, history repeated itself, as all the colonists were recalled to Denmark by Royal Order. Part of Nepisene was then dismantled and taken back to Nuuk (the present capital), and the remaining unattended buildings were again burned down by Dutch privateers.

The ground plan of the three-winged dwelling was recorded by Geelmuyden in 1729/30 (Gad 1969: 187, pl. XV). From his plan, the location and function of various quarters can be inferred (Box 9): The southern wing was home to soldiers and sailors, who occupied two quarters, and furthest west there was a blacksmith with his forge. The brewery took up most of the eastern wing and the main house towards north hosted the quarters, living rooms and storage of the governor, captain and priest. The harpooner and commander also shared quarters in this wing, and there were quarters for sergeants and quarters for the bookkeeper and the provisioning manager. In the yard between the three buildings were lean-to sheds for pigs and cows, and a bread oven adjacent to the mash tun for brewing.

Today, the full extent of these buildings is difficult to identify, since Inuit turf houses were built overlapping these earlier structures during the 18th and 19th centuries (Fig. 2.49).

The ruins of 1) the warehouse, 2) the dwelling and 3) the battery are still visible on the island of Nipisat (Fig. 2.50). While the Saqqaq site, 80 m away from the warehouse, faces the sloping terrain towards east and the sea, making it easy to land kayaks and prey, the warehouse faces south on the southeastern part of Nipisat Island, at a place with relatively deep water

Photo: Jens Fog Jensen.

Fig. 2.49. Ruins of the Nepisene colony, seen from the southeast. A test pit dug through the midden layers, which are characterised by the lush vegetation on the slopes towards the shore, have shown that the site has rich refuse layers, with good preservation of bones deposited during episodes of Inuit occupation.

Box 9 - Colony of Nipisene

Nepisene was the second colony to be established by Danish-Norwegians in 1724. The visible structures are a ruin complex with remains from the original colony, as well as later Inuit communal houses that were built into the ruins of the demolished colony.

On the northern side of the ruins there is also a quite large trapezoid Inuit winter house that was most probably built with turf reused from the ruins left by the colonists.

The principal structures are:

A) The northern wing of the original colony.

B) The east wing of the colony with turf walls preserved to a height of c. 1.2 m. The southernmost part, and possibly also the northern end, of this house was later occupied by Inuit.

C) The south wing. In this part of the structure an Inuit communal house has been built into the ruin. In the western side of the front wall is a 4 m long entrance passage running towards the shore and this has a niche on its eastern side.

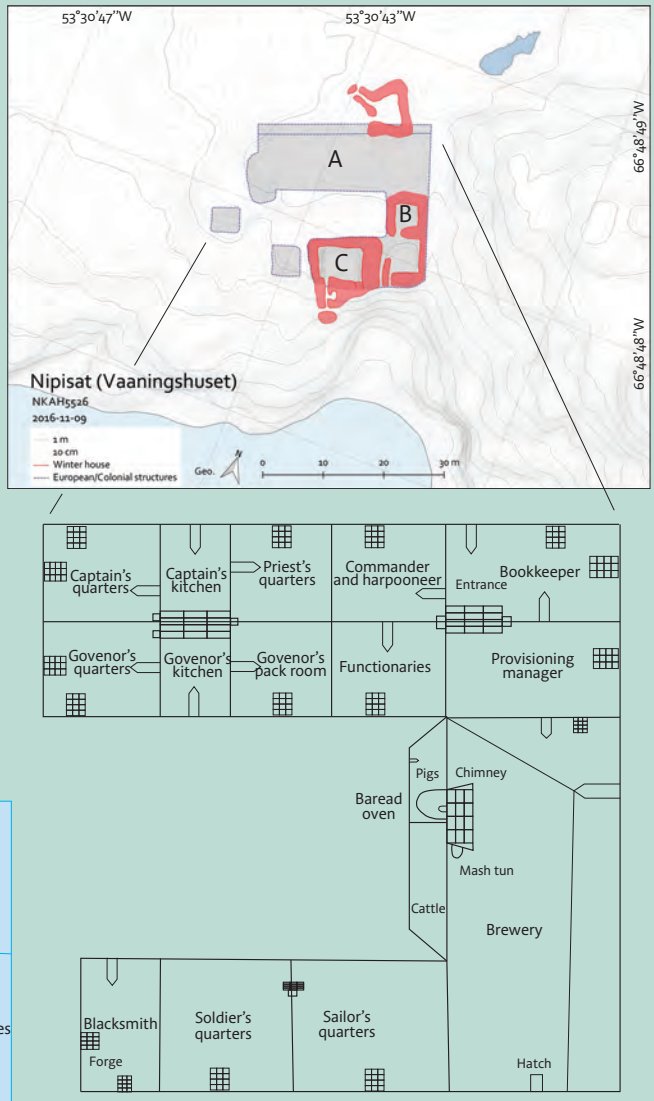


Fig. 2.49. Floor plan of the living quarters of the colony rebuilt at Nipisat in 1730. The plan is based on the sketch drawn by Jacob Geelmuyden in 1729/30, published in Gad 1967b.

near the shore, well suited for the mooring of vessels while unloading and loading. Originally, the structure measured 34 x 9.6 m and stood two stories high. There was a 2 m wide gate in the northern wall and in the eastern gable. Today, the 0.75-1 m high and c. 1.25 m wide walls stand as a well-defined landmark from the time of the first colonial settlers.

Located 100 m to the west of the living quarters is the battery for three cannon. The bastion appears today as a slightly raised area, somewhat dilapidated.

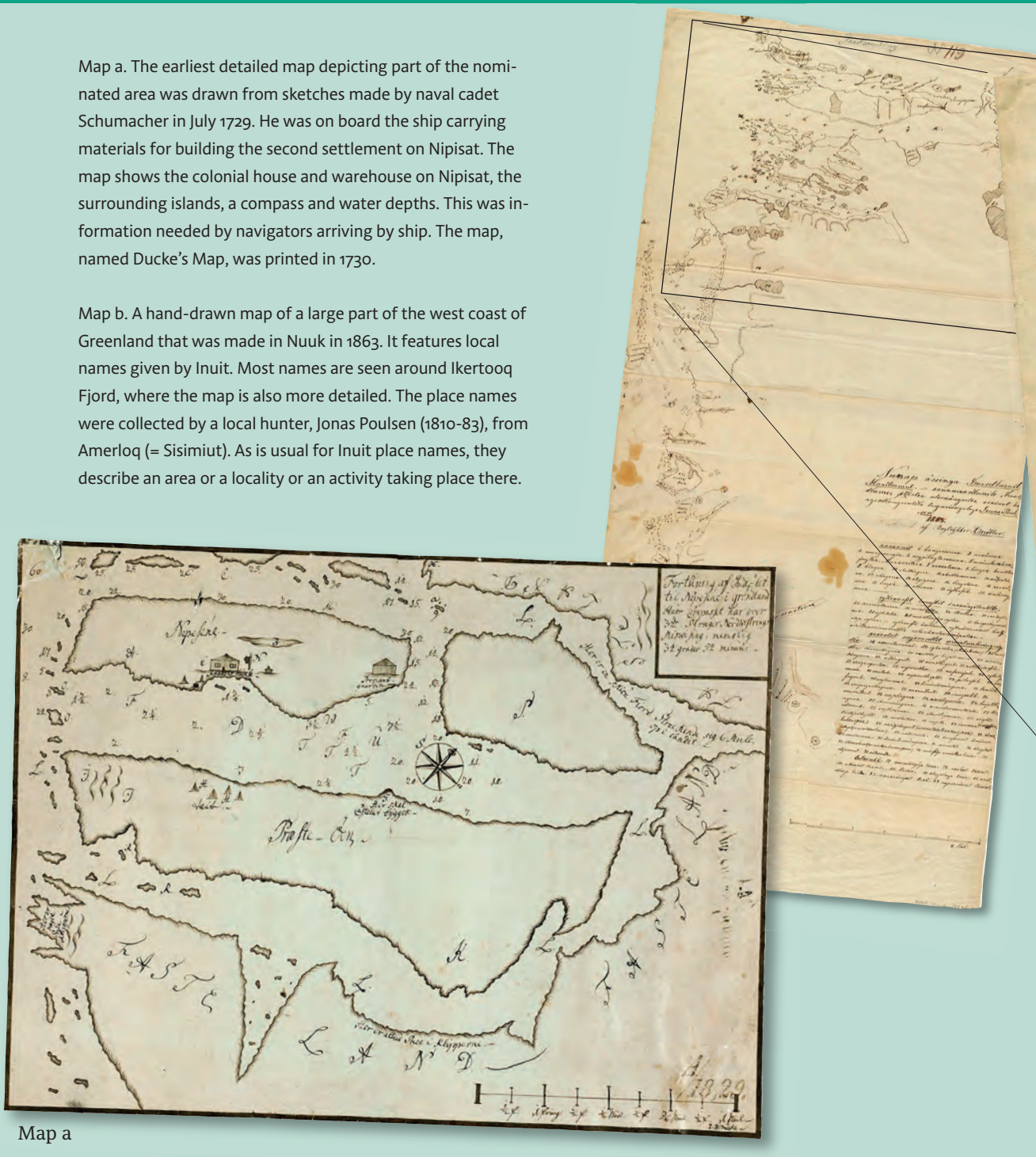
Photo: Jens Fog Jensen.

Fig. 2.50. Looking east along the northern wall of the warehouse, situated in the eastern part of Nipisat Island. Note the door opening in the foreground.

Box 10 - The first maps

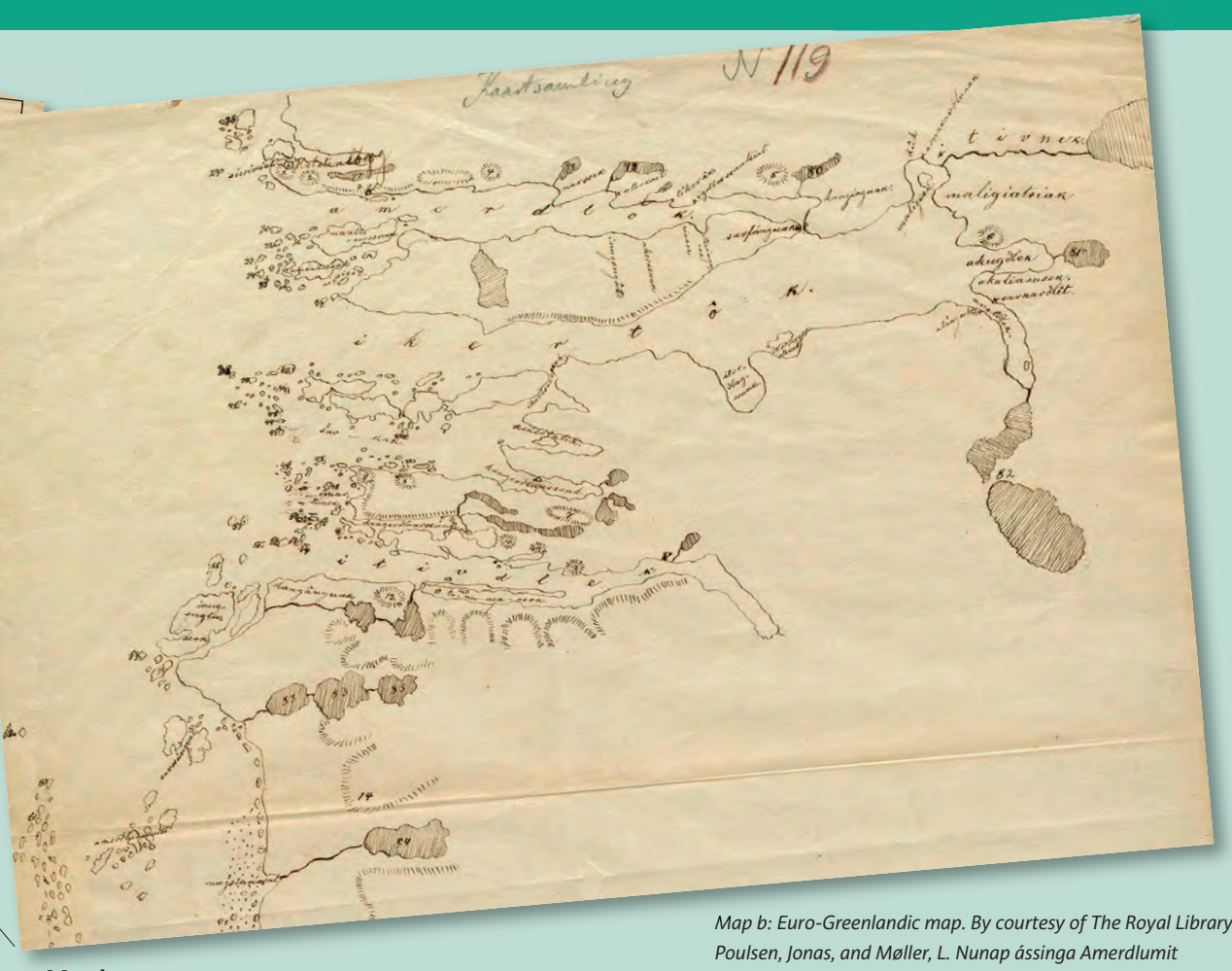
Map a. The earliest detailed map depicting part of the nominated area was drawn from sketches made by naval cadet Schumacher in July 1729. He was on board the ship carrying materials for building the second settlement on Nipisat. The map shows the colonial house and warehouse on Nipisat, the surrounding islands, a compass and water depths. This was information needed by navigators arriving by ship. The map, named Ducke's Map, was printed in 1730.

Map b. A hand-drawn map of a large part of the west coast of Greenland that was made in Nuuk in 1863. It features local names given by Inuit. Most names are seen around Ikertooq Fjord, where the map is also more detailed. The place names were collected by a local hunter, Jonas Poulsen (1810-83), from Amerloq (= Sisimiut). As is usual for Inuit place names, they describe an area or a locality or an activity taking place there.



Map a

Map a: By courtesy of The Royal Library: Ducke, I. B. Forteining, Af Indlöbit Til Nepesene I Gröndland Huor Compasset Har over 3de Stræger Nordwestrings. Miswising, Nemblig 32 Grader 54 Minuter. S.l.: [s.n.], 2008. Lauge Kochs Samling Nr. 10. Web.



Map b

Map b: Euro-Greenlandic map. By courtesy of The Royal Library: Poulsen, Jonas, and Møller, L. Nunap ássinga Amerdlumit Manîsumut-sanane Kardlunilo Amerdlume, Piniartok Utorkángortok Arkinut Kangerdlugnutdlo Taiguvissigalugo Jonas Poulsen. S.l.: [s.n.], 2008. Rinks Samling Nr. 119. Web.

Examples of place names on map b from the nominated area:

Amerdlok / Amerloq – The narrow fjord
Ikertôk / Ikertooq – The wide fjord
Maligiak / Maligiaq – The track to follow

6 Anarnitsoq / Anarnitsoq – A smell of faeces, i.e. the place where the seal hunter goes to defecate when lying in wait for seals on the fjord ice in winter
30 Avatdleq / Avalleq – The outermost of two islands
31 Avqutínguaq / Aqqutinnguaq – The small road (sailing route between islands)
32 Avatdliup kujalerssua / Avalliup kujalersua – The large (island) south of the outer (island)
33 Simiutánguaq / Simiutannguaq – The little cork (island in mouth of fjord)
34 Qilángait / Qilanngaat – The puffins
35 Siorardíinguit / Siorarlinnguit – The small islands
36 Autdlâniarfik / Aallaaniarfik – The shooting place; prominent piece of land where the birds fly past
37 Ivigsugartoq / Ivissugartoq – Slightly protruding but isolated island
39 Avferarjuk / Afferarjuk – An island in a depression between two mountains of equal height
40 Igdluligssuaq / Illulissuaq – The large inhabited place
41 Eqaluk / Eqaluk – The trout
43 Pilavfik / Pilaffik – The skinning place (a place where whale or walrus are skinned)

Photo Jette Bang, Danish Arctic Institute.

Children in front of the church in Saqqarliit 1939.

2.b.v Historical settlements

Introduction

The historical era (18th century to mid-20th century) was a period of radical change in all areas of life. Christianity replaced Inuit shamanism. Literacy was introduced with the first missionaries, and from the mid-19th century formal seminaries (teacher training colleges) were established in Nuuk and Ilulissat. Literacy was thereby the rule in the late 19th century. Material culture, housing and eventually the economy also changed, as Greenland gradually became connected to the Nordic exchange systems of the modern world. These developments and links were initiated, supervised and controlled by the Royal Greenland Trading Department, which represented the Danish colonial administration of Greenland. However, throughout the 18th and 19th centuries, the subsistence economy relied mostly on products acquired by the traditional means of whaling, sealing and caribou hunting, and life on most of the small settlements therefore continued with the same annual rhythm as prior to colonisation. In the early 20th century, local authorities and the colonial administration increasingly encouraged and supported fishery as they realised that more could be earned in this way than by the traditional modes of production (Fig. 2.51). The process of introducing fishery as a principal occupation was strongly boosted by a mild spell in the oceanographic circulation, resulting in large stocks of cod in Greenlandic waters in the first two thirds of the 20th century.

Sisimiut was a centre for the trade in caribou skin, and for many years the population of Sisimiut district maintained a more nomadic lifestyle than people in southern Greenland. However, in the 19th century the population became increasingly sedentary as more and more families lived in the settlements with a trading post, church and a small school. In the 1800s, eight small settlements were registered in Aasivissuit – Nipisat, although they were never inhabited simultaneously (Fig. 2.52) (Haarløv 1980). These were always located by the sea, and most often on or near localities that had

Photo: Helge Larsen, Danish Arctic Institute.

Fig. 2.51. The introduction of fishing as a principal occupation was boosted significantly by a mild spell in ocean circulation resulting in large stocks of cod in Greenlandic waters during the first two thirds of the 20th century. In spite of continued industrialisation and global upsizing of fishery vessels, Greenland still has major inshore fisheries, based in settlements such as Sarfannguit in Aasivissuit – Nipisat.

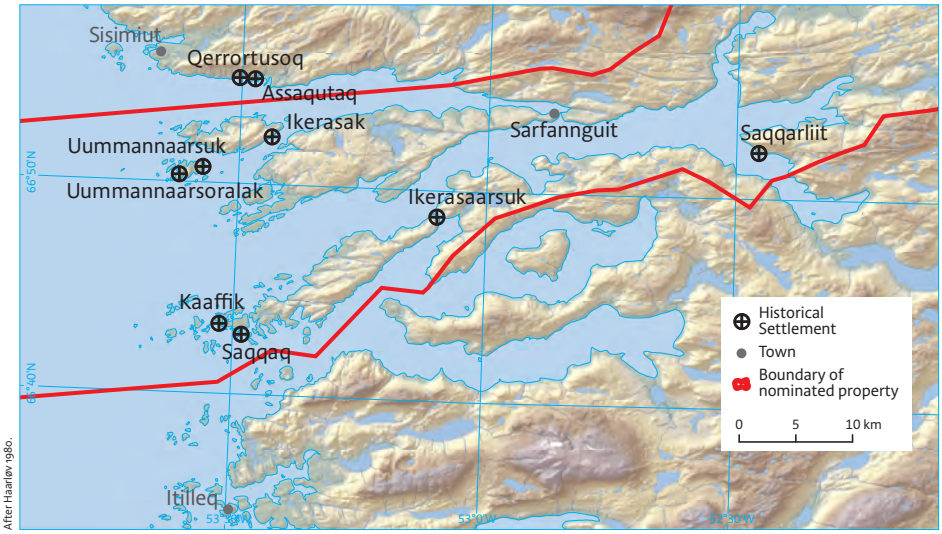


Fig. 2.52. In the 1800s, eight small settlements were recorded in Aasivissuit – Nipisat, although these were never inhabited simultaneously. These settlements were always located by the sea and most often on or near localities that had previously been used by the local population for hunting and fishing.

previously been used by the local population for hunting and fishing. In 1850, the settlements of Uummannaarsuk, Sarfannguit, Ikerasaarsuk, Saqqarliit, Saqqaq and Kaaffik had a total of 299 inhabitants including one Dane. In 1900, the three settlements of Sarfannguit, Saqqarliit and Saqqaq had a total of 224 inhabitants, and in 1950, the settlements of Uummannaarsuk, Ikerasak, Sarfannguit, Ikerasaarsuk, Saqqarliit and Saqqaq had a population of about 500. The settlements of Ikerasak, Uummannaarsuk, Saqqarliit and Saqqaq were abandoned between 1952 and 1962, leaving Sarfannguit as the only settlement remaining in Aasivissuit – Nipisat in 2016 (Table 2.4).

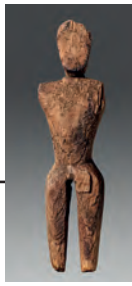
In the early colonial period, each of the major administrative centres was termed a colony, and in principle the area between these colonies was not under colonial jurisdiction, but used by Inuit and governed by their customs. Smaller settlements were established around the colonies. The colonies exist today as towns. The smaller settlements (outposts) were, however, subject to many changes through the years. They could be closed and opened within a few years; they could be moved to another place; they could be closed permanently and so on. No matter what happened – whenever the colonial administration built a house, a shop, a church or the like, everything was noted in the annual reports from the colonial manager to the general administration in Denmark. All imports of nails, timber, butter, knives, drinking glass, bread, flour, lead, guns, sewing needles and thread etc. were meticulously noted in the annual records, together with all exports of the skins of seal, polar bear, fish and birds, as well as feathers, down, antler, ivory etc.

Table 2.4 - List of historical settlements in Aasivissuit – Nipisat, with time of establishment and abandonment

No.	Name	Established	Abandoned	Comments
1	Ikerasak	1856	1955	
2	Uummannaarsoralak	1862?	?	
3	Uummannaarsuk	Pre-1887	1962	Inhabited 1787-1861, 1920-62
4	Sarfannguit	1843		Still inhabited
5	Saqqarliit	1859	1961	
6	Ikerasaarsuk	Pre-1849	1955	Inhabited 1849-61, 1903-19, 1928-55
7	Kaaffik	1825	1857	Inhabited 1825-51 and 1853-57
8	Saqqaq	1839	1952	

Consequently, archaeologists and historians who undertake research aimed at interpreting and understanding material from a colonial period excavation, or the life lived in the colonies of former times, or the interaction between Inuit and Danes, have access to a world-class archive of detailed written material. From the archival material, we know that in 1854 Uummannaarsuk had:

"A storage house with walls of turf and stone, flat roof of old boards, discarded oars and covered by turf. A door



Watercolour by Andreas Nicolaus Kornerup (1857-89). National Museum of Denmark.

Fig. 2.53. Interior of a house in Sisimiut in 1879. At an early stage, the Greenlandic houses were fitted with glass windows and interior wooden panels or board walls, as well as iron stoves. However, the traditional layout was largely maintained, with a raised sleeping platform along the rear wall, and smaller benches or platforms along the front and gable walls.

with hinges, lock and key. The dwelling is a log house, with board roof, ceiling and floor, three windows with shutters and an additional small window. There is a porch with two doors, hinges and lock. In the kitchen there is a stove with chimney through the roof and a window. A door with hinges and lock to the first room which has board walls. A door with hinges and lock to the second room which also has board walls, an oven and a corner shelf and a corner cabinet. From the room there is access to the larder through a door with hinges and lock. A staircase leads to the loft where there is access through a hatch with hinges and drag lock and lockbolt.

The latrine has a door with hinges and lock.

A Greenlandic house with walls of earth, stone and turf. The roof is made of discarded oars, and covered with peat in the Greenlandic way. Two doors with frames, hinges and stable door handles. One set of windows with shutters. A bed of old boards and some panels along the walls. On the nearby hill, there is a flagpole with flag cord." (Translated from Frandsen 2016).

In order to envisage the small settlements of the 19th century, one must imagine a collection of traditional Greenlandic houses and just a few European buildings in the form of log houses in larger settlements or Scandinavian style wooden-framed houses in smaller settlements. At an early stage, the Greenlandic houses were fitted with glass windows and interior wooden panels or board walls as well as an iron stove. However, the traditional layout was largely maintained with a raised sleeping platform along the rear wall, and smaller benches or platforms along the front and gable walls. Apart from the incorporations of new products, life and location must have been very similar to Inuit life prior to colonisation (Fig. 2.53).

Photo: The Danish Arctic Institute.

Fig. 2.54. Dried fish on a rack in Sarfannguit (1954-58). Between the 1920s and the mid-1960s, the booming cod fishery brought great wealth to the open-water areas of West Greenland.

The introduction of firearms resulted in the loss of 'bow and arrow technology', but the hunting of sea mammals was only slightly affected, as harpoons and float bladders were still required to bring home the game, even if it was killed using firearms. Already in the late 18th century, shark liver was produced for export, and in the second half of the 19th century, dried fish and stockfish were irregularly produced in Sarfannguit. In the early 20th century, facilities for salt fish production were established in Sarfannguit, and from 1920 large quantities of salt cod were produced at this facility (Fig. 2.54).

While the statistics provide information on the rise of fisheries in the early 20th century, they also tell the story of a major change in the inland hunt. Inuit society changed from semi-nomadic to sedentary and only elderly people moved inland for shorter periods to hunt caribou. This is also evident at Aasivissuit. The caribou skins lost their former significance for the production of clothing as well as for sale, and the colonial administration focused on keeping people active and productive by fishing, vocational jobs and some local whaling. Since the 1950s an increasing proportion of the population has become engaged in administration, and since the 1990s tourism has become an important source of income too.

Ruins

The character of the visible house ruins on the abandoned historical settlements is highly variable. At Saqqarliit (abandoned in 1961) wooden-framed houses still stand next to a Christian cemetery. Saqqaq (abandoned in 1952-53) has ruins of turf houses, a Christian graveyard and several concrete foundations from Scandinavian wooden-framed houses (Figs 2.55, 2.56), whereas the whaling station Uummannaarsoralak has foundations from its 19th century buildings.

In the early 19th century Scandinavian style wooden-framed buildings were mainly used by official institutions and Danish settlers. When dismantled or ruined, these houses leave few visible traces apart from their

Photo: Jens Fog Jensen.

Fig. 2.55. Concrete foundation in the abandoned settlement of Saqqaq. When stripped of buildings, the historical settlements are unimpressive, and their presence may only be revealed by lush vegetation or a few concrete foundations such as this.

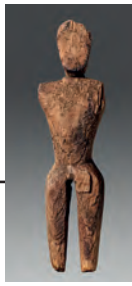


Fig 2.56. The graveyard in the abandoned settlement of Saqqaq reveals that this was once a place where people lived and died.

Photo: Jens Fog Jensen.

foundations. The so-called mixed Danish-Greenlandic houses consist of wooden-framed house types with a pitched roof and stone and turf exterior walls. A modern reconstruction of this house type can be seen today at the museum complex in Sisimiut. When ruined, such structures may lose their square or rectangular outline and become reminiscent of much earlier dwellings with walls of turf. Finally, there are the turf- and stone-built Inuit houses with a flat roof, which can often be dated due to their well-preserved rectangular or trapezoid outline.

Epidemics and hunger

As happened to most New World populations, epidemics struck hard in Greenland following contact with Europeans. In 1800-01, Sisimiut was hit by a severe epidemic of smallpox, which killed almost 90% of the population of the district (Gad 1975: 128; Bobé 2010). In such cases, the deceased were often left dead in their houses and in several cases settlements were abandoned and the few survivors resettled elsewhere. The German geologist Karl Ludwig Giesecke wrote the following on Thursday, June 28th, 1808, in his report (Giesecke 1910: 127) from a journey in the area, after arriving at the small settlement of Omanarsuk (present orthography Uummannaarsuk): *"Auch hier wüteten die Blatter im Jahre 1801. – Die Grönländer bezogen nun doch im verflossenen Winter die Häuser, welche noch voll von Todten lagen, und warfen die Skelette heraus. Hier finden sich viele sehr alte Gräber und Hausrudera. –"* (Translation: Smallpox ravaged this area in 1801. In the past winter the Greenlanders visited the winter houses, which still lay full of deceased. They threw out the skeletons. There are many ancient graves and house ruins here.)

In 1856-57, the district was again hit by hunger and starvation and many people abandoned their settlements to find better hunting grounds or to survive on supplies handed out at the colonies. The settlement of Kaffik was abandoned during this period of poor hunting.

Summary of historical settlements in Aasivissuit – Nipisat

Aasivissuit – Nipisat has a relatively rich record of abandoned historical settlements, in addition to the colonial establishment of Nipisene described in the previous section. These localities link the traditional nomadic hunting culture with the modern sedentary lifestyle, and they tell of the transition from the traditional hunting and fishing culture to the modern fishing and industrialised lifeforms that characterise present Greenlandic society. In the abandoned settlement of Assaqutaq, by the fjord of Amerloq, but just outside the nominated property, visitors can stay at the 'outpost'. Today, Assaqutaq functions as a summer colony for Sisimiut's schools and some buildings are maintained by the municipality, while several families maintain several of the other old houses as summer-houses. Some of the other old abandoned houses in Assaqutaq consequently remain well preserved, while many are left to decay, as are the ruined houses in Saqqarliit. At the remaining abandoned historical settlements there are graveyards, house foundations and some ruins with turf walls to be seen.

Photo: Jens Fog Jensen.

In 2010 the first Greenlandic wind turbine connected to the public power supply was installed in Sarfannguit. The turbine is part of a larger series of experiments with renewable energy conducted by the Arctic Technology Centre.

2.b.vi Sarfannguit and contemporary land use

Today, the resources of Aasivissuit – Nipisat are exploited by hunters from the towns of Sisimiut (population 5539), Kangerlussuaq (population 499) and Sarfannguit (population 113), as well as by hunters and fishers from more distant regions. Only Sarfannguit is within the nominated area, and the current land use will accordingly be described with a focus on this settlement.

Sarfannguit was established in 1843 as a fishing settlement (Fig. 2.57). The population fluctuated greatly during the early years of the settlement, probably as a consequence of epidemics and famine. After 1875, it rose steadily and around 1900 Sarfannguit had 140 inhabitants. Since then, up until the present day, the population has fluctuated between 100 and 160. There is a c. 10% overrepresentation of males (63 males, 50 females in the 2016 census) and a marked 'trough' in the number of individuals in the fertile age groups, from 20-44 (Fig. 2.58), as is typical for smaller settlements throughout the Western World.

The average gross household income in 2014 was 364,020 DKK, placing Sarfannguit among the more prosperous Greenlandic settlements, compared to an average gross household income of 325,611 DKK (Statistics Greenland: http://www.stat.gl/). In 2009, ARTEK (the Arctic Technology Centre, at the Technical University of Denmark) installed the first wind turbine to be connected to the public electricity supply in Sarfannguit (Dragsted et al. 2011). This experimental wind turbine supplies valuable information with respect to the future use of sustainable energy supply in settlements and remote locations.

Fig. 2.57. Sarfannguit, drawn by Aron from Kaneq in 1858. Note turf houses between the colonial wooden-framed buildings.

Courtesy Royal Danish Library.

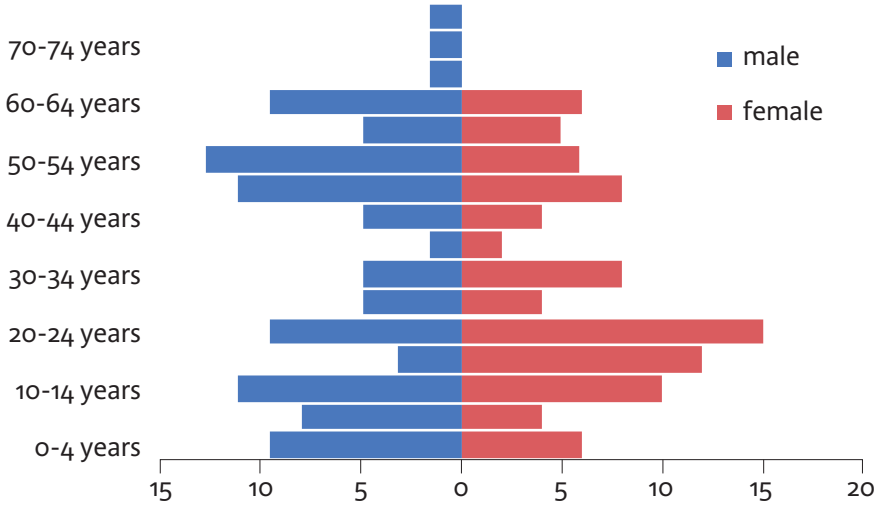


Fig. 2.58. Population pyramid for the inhabitants of Sarfannguit. The small number of inhabitants in the fertile age groups of 20 to 44 years and the small number of children and infants, which gives the pyramid its contracting base, are typical features for declining populations. Based on population data from Greenland Statics 2016.

Situated in the mid-fjord region at the confluence of the fjords of Amerloq and Ikertooq (Figs 2.59, 2.60), Sarfannguit is the natural staging area or 'gateway' for travellers approaching interior regions from the west, the area of traditional coastal winter settlement. This role is underlined by the historical accounts of Müller (1906) and Nordenskiöld (1914), who both hired umiaq crews and vessels for their travels into the interior in the early 20th century.

For the hunters on the coast, the spring months of April and May are the time for catching sculpin and

Photo: Henning Thing.

Fig. 2.59. Sarfannguit means the place by the currents. The tidal flow through the narrows separating the island of Sarfannguaq from the mainland has strong currents, which keep it free of ice even during hard winters.

Photo: Jens Fog Jensen.

Fig. 2.60. The landing stage at Sarfannguit narrows in summer. Two of the larger local fishing vessels, as well as some dinghies, are anchored in the narrows.

hunting ringed seal and hooded seal. By the end of May and early June, capelin spawn along the shores of the fjords where they are caught in great quantities using baskets. This is also the season for the arrival of the harp seal. At the end of June, eggs are collected, and in July and August caribou hunting begins. The autumn months of September and October are the sealing season. The autumn hunting of harp seal is important today, because the fat harp seals that are shot at this time float, whereas the skinny animals shot in spring have a greater risk of sinking before the hunter has had a chance to harpoon the dead animal. Statistics from the Royal Greenland Trading Department reveal the transition in material culture and economy through the last 150 years, from the hunting economy of the early 19th century to the fishing economy of today. The traditional means of transport, the umiaq and the kayak, were common well into the 20th century. A few wooden boats were present already by the end of 19th century but their number and use increased greatly in the 1920s, and motor boats were introduced from 1929 (Fig. 2.61). As the use of wooden and motor-powered boats increased, the use of the umiaq and the kayak declined. The increased use of wooden boats facilitated, and probably also resulted from, an increased reliance on fishery. From the 1890s, Sarfannguit produced dried fish, and from 1911 stock fish and halibut were traded regularly. The production of stockfish therefore increased from 5286 pounds in 1911/12 to 215,108 pounds in 1918/19. In the

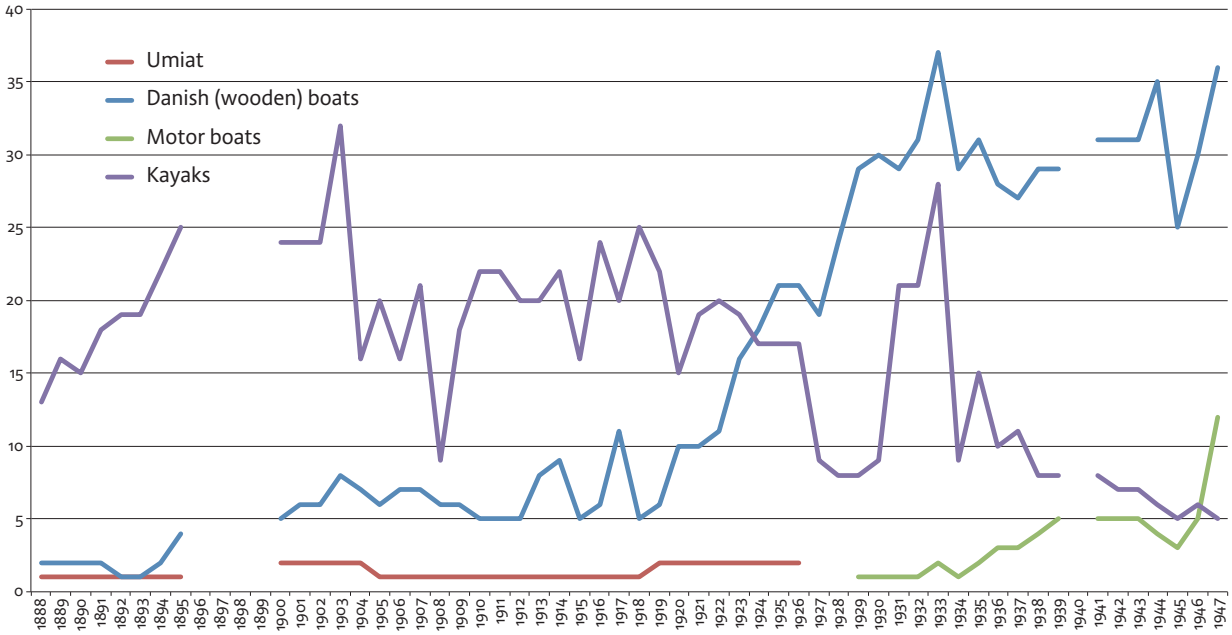


Fig. 2.61. From kayak and umiaq to dinghy and motor boat. From the late 1800s to the Second World War, the economic and technological changes associated with increased fishery activities are clearly reflected in the number of different vessels in Sarfannguit. Based on data from Frandsen 2016.

1920s, cod fishing expanded greatly in West Greenland and Sarfannguit.

Today, Royal Greenland operates a minor fish-processing facility producing salt fish and frozen fish, mainly cod. The facility has a capacity of 15 tons per day, a freezing capacity of 80 tons and employs between one and 13 people (low and high season). A similar number of people are employed in the public administration (school, childcare, care of the elderly, refuse collection and administration). Qeqqata Municipality operates all service facilities and there is state school, childcare and a community centre with laundry and washing facilities. The inshore fishery of the Sarfannguit fishers is undertaken using small cutters and outboard-powered fibreglass dinghies servicing trap nets in the surrounding fjords and bays of Amerloq and Ikertooq. The fishers and hunters' organisation maintains a number of cabins in the open land, where hunters can seek shelter during longer hunting trips.

Every summer some hunters from Sarfannguit sail to Maligiaq to fish for arctic char and to smoke the catch in earth ovens, and some hunters from Sarfannguit and Sisimiut have dinghies located in the western end of lake Tasersuaq to facilitate inland transport when the caribou hunt begins. In contrast to the hunters from Sisimiut, and in particular those from Sarfannguit, who follow the traditional rhythm of the game species throughout the different seasons, the hunters of Kangerlussuaq specialise in the hunting of terrestrial game. Some of the hunters of Kangerlussuaq supplement their income from traditional hunting with organising trophy hunting of musk ox and caribou.

Winter hunting, between January and April, in the interior near Kangerlussuaq has increased in recent years, and when the hunters from Sisimiut and Sarfannguit pursue this activity, they follow the traditional east-west travel routes into the interior, now using dog sledges, snowmobiles and All-Terrain-Vehicles (ATVs).

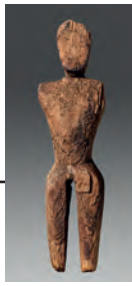


Photo: Visit Greenland.

Photo: Jens Fog Jensen.

2.62. View across the head of Amerloq at Sarfannguit.

Photo: Jens Fog Jensen.

Fig. 2.63. Unloading a dinghy at low tide by the quay in Sarfannguit.

Photo: Ólafur Rafnar Ólafsson.

Sarfannguit at night in October. Aasivissuit – Nipisat is situated just north of the Arctic Circle. Winter is therefore characterised by long, dark nights and at the winter solstice the sun remains below the horizon for a few days. This cold period with long, dark periods is the prime time for the northern lights.


SARFANNG
ATUARF

3. Justification for inscription

3.1.a Brief synthesis

The nominated cultural landscape lies at the heart of the largest ice-free area in Greenland which, in combination with the transitional coastal zone between the 'open-water area' and the high-arctic area of land-fast winter ice, has made it exceptional as a hunting ground for people through millennia. This long history is visible in the landscape in the many ruins and traces left by the Arctic people, including winter settlements with ruins of turf houses along the coast, inussuit (cairns) and trails from the coast to the caribou hunting camps and exceptional caribou drive systems in the interior. The area provides the most complete and best-preserved testimony of arctic hunting traditions from 2500 BC onwards, demonstrating sustainable land use based on seasonal migrations between coast and interior. Colonial ruins at the coast reflect the arrival of Europeans in the 18th century and their interaction with Inuit.

Today, hunters with their families continue these seasonal travels, staying and hunting in the same places as their predecessors and thereby creating a link between past and present (Figs 3.1, 3.2).

Aasivissuit – Nipisat is home to an unusually complete suite of archaeological sites and structures left in the landscape through millennia. The coastal part of the property houses the Paleo-Inuit site of Nipisat from 2200 BC, on the island of the same name, as well as winter dwellings with well-preserved turf and stone walls dating from the late 17th century to the early 19th century. The island also has the ruins of the 18th century colonial establishment of Nepisene. Along the rivers and lakes of the interior we find several summer camps with remains of tent dwellings and inussuit. Although most sites remain undated, they are believed mainly to date from the last 500 years of settlement. The most impressive caribou hunting camp of Aasivissuit has evidence of use during Paleo-Inuit times, 4200 years ago, including a 3.9 km long caribou drive system.

All the characteristic structures and features utilised by Inuit during a full year of traditional nomadic resource exploitation, such as dwellings, graves and hunting systems, convey the history of traditional land use from the Paleo-Inuit period, 4200 years ago, through the colonial period to the present. The latest period is represented by the fishing community of Sarfannguit with 113 inhabitants (2016).

Photo: Olafur Rafner Olafsson.

Fig.3.1. The path from the head of Maligiaq Fjord to the interior follows the old well-trodden route used by caribou hunters through centuries.

3.2. The hiking route between Sisimiut and Kangerlussuaq crosses the old caribou hunters' route to the interior. Well-maintained cabins offer shelter along the hiking route.

Photo: Olafur Rafner Olafsson.

3.1.b Criteria under which inscription is proposed

Criterion (iii) To bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared:

For millennia, people in Aasivissuit – Nipisat have exploited the locally available resources and have adapted their lifestyle and homes to the seasonal rhythm. Precisely this area offers several options for 'the good life' owing to its geography and climatic conditions. Today, the area remains virtually unchanged. The long tradition of locally sustainable land use can be read more easily in landscape and culture than in many other places. The landscape, the camp sites and archaeological remains have, therefore, outstanding universal value.

The area has the well-documented Paleo-Inuit site of Nipisat and hundreds of visible ruins from the Thule culture (c. AD 1250-1700) and the historical period (c. AD 1700-1900). Seven of the best preserved and most accessible of these localities have been selected as key sites for the interpretation of the traditional housing and life in West Greenland. The settlement of Sarfannguit is an active community, where the fishing and hunting culture links present sea and land use with the traditional sustainable nomadic hunting societies of the Thule, Dorset and Saqqaq cultures. Aasivissuit – Nipisat is therefore a 'continuing landscape' with significant material evidence of its evolution over time (Mitchell 2009).

The seven sites are focal points for humans living off the land and sea. The landscape settings, in combination with impressive archaeological and historical remains, tell of traditional land use in time and space throughout the nominated area between the inland ice sheet and the open sea.

Criterion (v) To be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change:

Ruins of dwellings, graves and hunting structures are preserved in their original settings, where they tell of the traditional seasonal migrations and variation in hunting practices throughout the year, as has been the case since the arrival of the first people in about 2200 BC. Winter settlements focusing on the hunting of seals are situated on the outer coast, spring settlements with capelin and char fishing are situated in the fjords, and summer camps and drive systems aimed at intercepting migrating caribou are situated in the interior. The route from the winter settlements to the summer camps can be followed as an old well-trodden trail, eastwards from the head of the fjord of Maligiaq. Along this ancient trail are summer camps

Photo: Jens Fog Jensen.

Fig. 3.3. Antlers left on the summer camp Itinnerup tupersuai which translates as 'the great tent site at the portage'.

with ruins of dwellings, as well as numerous inussuit (way-marker cairns), graves and caches telling the story of abundance of resources.

The archipelago and coastal regions in the western part of Aasivissuit – Nipisat are characterised by numerous settlements with ruins of traditional winter houses with walls built of locally available turf and stone. The earliest of these are the round and cloverleaf-shaped variants dating from the 14th century. In the late 17th century we see the appearance of a spectacular multi-family dwelling: the communal house. Communal houses were inhabited by travelling family groups engaged in trading. As newcomers, they often sited their large houses in the outer archipelago, while the local population were both 'fjord dwellers' and 'archipelago dwellers'. In the 19th century, winter dwellings with a rectangular to trapezoid ground plan became the norm and the collective housing was abandoned. In the 20th century, the traditional turf- and stone-built houses were gradually supplanted by wooden-framed buildings, which is the dominant house form of today. Ruins of all the different house types are present in Aasivissuit – Nipisat, and the situation of these ancient monuments in their original location makes them first-class instruments for conveying the history of hunter-gatherer resilience in an arctic environment (Fig. 3.3).

3.1.c Statement of integrity

Aasivissuit – Nipisat lies at the centre of the area with the greatest uplift of the land since the last ice age. The continuous land upheaval has resulted in fewer sites being eroded by the sea than in most other places. In particular, the sites from the Greenlandic Dorset culture are well protected here, whereas in most other parts of Greenland they have become inundated due to submergence during recent millennia.

The property contains all the elements necessary to express the outstanding universal value of the arctic hunting landscape, including an exceptionally large number of ruin sites in the form of winter dwellings, graves, caches and the great summer camp of Aasivissuit which, in addition to dwelling structures, hosts the largest communal hunting system known in Greenland, as well as temporary dwellings, hunting systems and inussuit. All the principal epochs, Saqqaq culture, Greenlandic Dorset, Thule, historical Inuit and colonial settlers, are represented in the nominated area.

The property, with its area of 417,800 ha, is of adequate size to ensure complete representation of the features and processes that convey its significance, and it does not suffer from the adverse effects of development or neglect. Together with the fact that there is just one landowner (Government of Greenland), these factors have also been crucial to nominating the property without a buffer zone.

Although there are multi-component localities, the archaeological sites are often complete entities with all their principal functions still identifiable in the terrain.

Traditional land use, with its deep historical roots, is mirrored by current land use practised by inhabitants of the settlement of Sarfannguit, which is included in the property, as well as citizens of Kangerlussuaq and Sisimiut, which are close to, but outside the property. During the 18th and 19th centuries, some buildings were erected at specific colonial sites using non-local materials such as concrete, plaster, tiles, glass and iron. During the late 20th century, smaller settlements closed down and the inhabitants relocated to Sisimiut. In addition, recreational cabins have been built in the archipelago, and the settlement of Sarfannguit has seen the erection of a number of new buildings for private and official purposes.

As all settlements are coastal, boat travel along the coast is the main means of local transport. Recently, some cabins have been erected along the Arctic Trail from Kangerlussuaq to Sisimiut, in order to attract and support tourists and keep them on the trail.

Photo: Jens Fog Jensen.

Fig. 3.4. Itinnerup tupersuai is a large camp site on the route towards the caribou hunting grounds in the interior.

3.1.d Statement of authenticity for properties nominated under criteria (i) to (vi)

During the 20th century, the nomadic lifestyle came to an end, and within the nominated property Inuit settled in small settlements with a shop, trading post and school. The old camp sites were then left untouched.

Photo: Jens Fog Jensen.

Looking east from Itinneq. The great lake of Tasersuaq extends from the distant part of the valley and 30 km to the east.

The ruins of turf- and stone-built houses are in their original locations, and all the activity-related structures, such as caches, open-air hearths and graves, remain in the surrounding terrain, most often within sight of each other. The archaeological sites therefore often have the greatest conceivable integrity since they have virtually always been spared the effects of recent development. Following abandonment, the grass and heather vegetation quickly recovered and spread over the settlement surface, such that a mantle of grass turf has protected the archaeological remains from sunlight and other destructive forces (Fig. 3.4).

Archaeological investigations of the Aasivissuit site and at the Stone Age site of Nipisat have provided detailed knowledge of the Thule culture and historical Inuit as well as deep time perspectives on the land-use patterns conveyed by ruin localities and the living hunting traditions of today. Apart from these two localities, virtually all other localities in the nominated area remain untouched and are preserved in their original settings.

Aasivissuit – Nipisat is situated in the part of Greenland where the post-glacial rebound is greatest (as explained in chapter 2.a.i). Consequently, more ruin sites here than anywhere else in Greenland, and in many other parts of the Arctic, can be anticipated to have been saved from the destructive effects of coastal erosion. This positive effect of the post-glacial rebound is particularly relevant for the earliest sites, dating from the Saqqaq (2500-700 BC) and Dorset (800 BC - AD 1) cultures. These ancient camp sites have often been eroded or submerged in other parts of Greenland where the coastal lands have been subject to a process of relative sea level rise during the last 2000 years.

Since the game animals have been the same for thousands of years, so the location of settlements has remained unchanged. There may be local changes with respect to which part of an island it was preferred to settle on, but generally there has been reuse of good locations through the millennia. Reuse is part of life in the Arctic. This is also evident at sites that span hundreds of years: Suitable stones from one structure may have been removed from their contexts to be reused in later structures at the same locality.

The authenticity of the form and design of all aspects of the cultural landscape of Aasivissuit – Nipisat, from individual dwelling ruins to settlements and settlement patterns as well as free-standing stone-built features in the landscape, is demonstrated by the fact that all structures and localities are in their authentic setting and context. The form of the house ruins from any given place or time reflects the housing customs and social structure at the place and time of the settlement. An important element of authenticity and completeness is the settlement pattern preserved in the archaeological sites. The fact that all sites from a full annual round are in their original setting and in a good state of preservation makes the settlement pattern fully representative of the traditional lifestyle and land use, whereby different parts of the landscape were exploited in different seasons.

Authenticity of materials and substance is manifested in several ways. The living resources of Aasivissuit – Nipisat have remained little changed through millennia. The species list and the season of hunting the various game animals have remained unchanged since the arrival of the first people, although there are temporal fluctuations in the economic importance of some game species. The materials and substance obtained by present-day hunters are consequently the same as those exploited by Paleo-Inuit hunters in 2400 BC.

The authenticity of use and function of the cultural landscape of Aasivissuit – Nipisat and its elements relies on the same arguments as outlined for form and design and materials and substance. The form and method of exploitation of the renewable resources, represented mainly by seal, whale, fish and caribou, have changed over time as the local inhabitants responded to markets and the need for survival. However, the function of game species and fish as the

principal means of providing a subsistence food supply and/or establishing an income by selling the proceeds of the hunt or the right to hunt the animals, as practised by hunting tour operators of today, remains the same. The archaeological sites, and the settlement of Sarfannguit, are all in their authentic settings and their only function is as places where hunters and fishers live or have lived. There is no local industrial development to affect the nominated property, neither have any effects of long-distance pollution been detected.

The authenticity of language is illustrated by the many original place names that have been collected, firstly by Danish and later by Greenlandic authorities, which can be accessed digitally on NunaGis and Nunniffiit (http://nunniffiit.natmus.gl/), the publicly accessible register of ancient monuments of the National Museum of Greenland. These place names tell of earlier uses or processes that are still relevant today: Examples within the nominated property include Itinneq, meaning the portage (Fig. 3.3), and Aasivissuit, meaning the great summer camp.

3.1.e Protection and management requirements

The nominated area is owned by Naalakkersuisut (Government of Greenland) and administered by Qeqqata Municipality and is covered by extensive legal restrictions, partly through national legislation and partly through municipal planning.

The most important regulations concerning the area are the Heritage Protection Act, the Executive Order on Cultural Heritage Protection (due to come into force in 2017), the Museum Act, the Planning Act and the Environmental Protection Act. In addition to the above, other legislation exists with provisions that may influence activities in the area.

The Greenland National Museum and Archives is the administrative authority for archaeological sites and ruins and will provide management plans for the key locations, according to the Museum Act.

Qeqqata Municipality is responsible for planning regulations in settlements and the open areas (wilderness) within the nominated property, according to the Planning Act, and is also responsible for the handling of refuse and waste water according to the Environmental Protection Act.

The management plan, which has been approved by the municipality, after a hearing by the government and the local population, sets out the framework for cooperation between all involved parties, with the aim of protecting, preserving, monitoring and promoting the outstanding universal value of the nominated property.

Steering committee

The central body of the management framework is the steering group, which embodies the joint responsibility for the nominated property. It ensures coordination of the management by making decisions regarding the structure, goals and procedures of the management system. The group consists of representatives from local and national levels.

The site manager will have an office in the Section for Sustainability in Qeqqata Municipality. The site manager will be responsible for daily operations, maintenance, marketing and public relations, development, monitoring and reporting. He/she will be responsible for one or more park rangers who will take care of the daily maintenance of the nominated property.

Funding is provided jointly by Qeqqata Municipality, the Government of Greenland, Greenland National Museum and Archives and other stakeholders.
Sources of expertise and training for management of the nominated property, over and above the experts directly involved, mainly comprise national and local museums and other institutions. Staff will be hired for the secretariat to implement site management plans. Initiatives will be launched to provide the required training and education of employees to care for and maintain the nominated property in a competent and professional way.

Long-term challenges

Natural long-term threats to the archaeological sites are very few. The impact from increased tourism might result in degradation of vegetation and thereby erosion. Monitoring and infrastructure measures, such as repeat photography, visual inspection, marked paths and no-go-zones, as described in the management plan, will assure that such processes remain under the full control of the authorities.

The continuing use of the land has the potential to degrade ruins and sites on a local scale, but monitoring and management will be implemented to reduce damage of historical resources in the vicinity of the camps used today. On a larger geographical scale, the continuing sustainable land use by the inhabitants of Sarfannguit, Sisimiut and Kangerlussuaq keeps alive local knowledge and underpins protection of the area against conflicting development (Fig. 3.5a, b).

Fig. 3.5a and 3.5b. The western coastal part of the nominated area comprises fjord-land and an archipelago, where ruins of ancient winter settlements are found in virtually every cove with a sheltered landing place for watercraft.

Photo: Jens Fog Jensen.

3.2 Comparative analysis

Arctic adaptations

Inuit and archaeological traces of their predecessors are, with some variations, known from the Bering Strait in the west to East Greenland in the east, and from Ellesmere Island and northernmost Greenland towards the Arctic Ocean in the north to the Atlantic shores of Labrador and Newfoundland in the south; a vast territory extending more than 5000 km east-west and 3000 km north-south (Fig. 3.6).

On arctic shores throughout this huge territory are archaeological traces of former Inuit settlements (McGhee 1984) as well as numerous contemporaneous settlements, where subsistence hunting of marine and terrestrial game animals is still widely practised. All Inuit adaptations traditionally included a dual land and sea (or sea ice) phase, according to the availability and quality of the resources: walrus, seals, polar bear, caribou, Musk ox, foxes and birds. According to the most influential ethnographic literature (Boas 1967; Rasmussen 1925; Balicki 1970; Burch 1998), all Inuit thereby balanced the hunting of marine fauna with seasonal forays into the interior to fish for arctic char and hunt caribou (Gordon 1989). The principle archaeological traces from the cold season are semi-subterranean turf- and stone-built houses with cold-trap entrances, and from the milder season, tent sites marked by oval to circular peripheries of up to head-sized stones (tent rings). In addition to these dwelling remains there is a variety of other structures: caches, graves, cairns and hunting systems that are often situated far from the camp sites and there-

Fig. 3.6. Comparative analysis has been undertaken on sites 1 to 15. Nominated area is marked in red. Inuit area extent is based on Freemann (1976b).

fore also appear to be underrepresented in the archaeological literature.

The central region of Arctic Canada, from Baffin Land to Coppermine River and Banks Island and from the district of Keewatin (west of Hudson Bay) in the south to Devon Island in the north, has been divided into a number of tribal territories according to the lands regularly frequented by different groups of Inuit. In this region Damas (1984) identified three principal ecological zones of Inuit ways of life:

1) In the western and central parts of the area, the Copper and Netsilik Inuit inhabit a region that, during the cold season, is characterised by a continuous sheet of land-fast ice, which connects islands, peninsulas and continental areas. During the short summer season, the land-fast sea ice melts and open-water conditions prevail. Subsistence activities centre on breathing-hole sealing during much of the winter period. Until the more permanent settling of Inuit in communities with a school service etc. during the 20th century, much of the cold season breathing-hole hunting here was done from 'igloo' or snow-house settlements on the land-fast ice, which means that many winter camps have disappeared without leaving any observable traces. The warm season is spent hunting caribou at drives and fishing. Polar bear and musk ox constitute secondary sources of meat in most places.
2) The Igloolik Inuit occupy the Foxe Basin, and share it with Inuit of northern Baffin Island, and the ways of life characteristic for this region are largely also shared by Inuit of southern Baffin Island. The region is characterised by the existence of a narrow fringe of land-fast ice bordering the moving pack ice or open water, where large sea mammals such as the walrus, narwhal, beluga and, in earlier times, the Greenland whale can be caught. The seasonal economic cycle of the Igloolik differs from the Netsilik and Copper Inuit in that seals and the larger sea animals are hunted in summer from kayaks and, in the case of the walrus in particular, through the thin ice which forms along the floe edge under favourable conditions during the winter. While breathing-hole sealing and caribou hunting and fishing are important, as in the west, the sea mammal phase of the economic cycle is accentuated to a greater degree among the Igloolik Inuit. The method of hunting seals sleeping on the surface of the spring ice is highly developed in the regions occupied by the Igloolik Inuit, but seldom practiced by Netsilik or Copper Inuit. The superior resource base of the Igloolik is reflected in the usually longer periods of subsistence on stored foods during the annual cycle, compared with the situation further west.
3) The third regional adaption of the Central Inuit is the one of the Kivallirmiut (Caribou Inuit) occupying the Barren Grounds to the west of Hudson Bay. As indicated by their English name, the Kivallirmiut rely almost totally on caribou for food, clothing and shelter. Most of the population live permanently in the interior, where they hunt the seasonally migrating herds of caribou and fish in lakes and streams.

Towards the west, Inuit and the traces of their predecessors are found on the Alaskan shores of the Arctic Ocean and Bering Strait and some groups also occupy inland territories such as the Brooks Range. Finally, there are also the Siberian Yupiks of Chukotka and St. Lawrence Island in the Bering Strait. The communities of these regions are characterised by other adaptions to the availability of game animals for example whale hunting or caribou hunting as practised by the settlers of interior regions.

The distribution of Inuit over such varied and dispersed territories as outline above relied on numerous local adaptions of technology and behaviour. The use of snow- and ice-dependent technologies, such as the hunting of ringed seal from land-fast sea ice during winter, dog-sledge driving or the use of the iconic igloo (snow house), therefore prevailed in the parts of central Canadian Arctic and northern Greenland where they are advantageous, whereas open-water hunting and fishing techniques from kayak and umiaq prevailed in open-water regions of Alaska and southern Greenland.

3.2.a Comparative analysis, introduction

In the following sections, Aasivissuit – Nipisat will be compared to other regions in Greenland and Arctic Canada. Subsequently, we will also make comparisons with selected hunter-gatherer cultural landscapes situated in other parts of the world that lie beyond the geo-cultural region of Inuit.

This exercise may sound straightforward, but to date no sites in the New World Arctic have been inscribed on the World Heritage List as a cultural landscape and there are generally few hunter-gatherer cultural landscapes on the World Heritage List (Table 3.1; Fig. 3.7) (ICOMOS 2004). The comparative analysis will therefore also include other World Heritage Sites or sites on the World Heritage Tentative List, where cultural criteria underpin the nomination. Similarly, there are no well-defined or 'officially endorsed' cultural landscapes for comparison in the geo-cultural region of the eastern Arctic, where all national parks initially appear to have been

Fig.3.7. Map of World Heritage Sites inscribed as cultural landscapes. Note the heavy clustering of World Heritage cultural landscapes in Europe. These appear to reflect the ambitions of the heritage industry rather than historical or conservational circumstances. Data from: http://whc.unesco.org/ Aug. 2016.

Table 3.1 - List of World Heritage Sites inscribed as cultural landscapes

Country	No on map	Name of property
Afghanisrtan	1	Cultural Landscape and Archaeological Remains of the Bamiyan Valley
Andorra	2	Madriu-Perafita-Claror Valley
Argentina	3	Quebrada de Humahuaca**
Australia	4	Uluru-Kata Tjuta National Park (mixed)**
Austria	5	Hallstatt-Dachstein / Salzkammergut Cultural Landscape
	6	Wachau Cultural Landscape
	7	Fertö / Neusiedlersee Cultural Landscape *
Azerbaijan	8	Gobustan Rock Art Cultural Landscape**
Brazil	9	Rio de Janeiro: Carioca Landscapes between the Mountain and the Sea
	10	Pampulha Modern Ensemble
Canada	11	Landscape of Grand Pré
Chad	12	Ennedi Massif: Natural and Cultural Landscape**
China	13	Lushan National Park
	14	Mount Wutai
	15	West Lake Cultural Landscape of Hangzhou
	16	Cultural Landscape of Honghe Hani Rice Terraces
	99	Zuojiang Huashan Rock Art Cultural Landscape
Colombia	17	Coffee Cultural Landscape of Colombia
Cuba	18	Viñales Valley
	19	Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba
Czech Republic	20	Lednice-Valtice Cultural Landscape
Denmark	21	The par force hunting landscape in North Zealand
Ethiopia	22	Konso Cultural Landscape
France	23	Pyrénées - Mont Perdu *
	24	Jurisdiction of Saint-Emilion
	25	The Loire Valley between Sully-sur-Loire and Chalonnes 2
	26	The Causses and the Cévennes, Mediterranean agro-pastoral Cultural Landscape
	27	Nord-Pas de Calais Mining Basin
	28	Champagne Hillsides, Houses and Cellars
	29	Climats, terroirs of Burgundy
Gabon	30	Ecosystem and Relict Cultural Landscape of Lopé-Okanda**
Germany	31	Garden Kingdom of Dessau-Wörlitz
	32	Upper Middle Rhine Valley
	33	Dresden Elbe Valley Delisted 2009
	34	Muskauer Park / Park Mużakowski *
	35	Bergpark Wilhelmshöhe
Hungary	36	Hortobágy National Park - the Puszta
	7	Fertö / Neusiedlersee Cultural Landscape *
	37	Tokaj Wine Region Historic Cultural Landscape
Iceland	38	Þingvellir National Park
India	39	Rock Shelters of Bhimbetka**
Indonesia	40	Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy
Iran (Islamic Republic of)	41	Bam and its Cultural Landscape
	42	The Persian Garden
	43	Cultural Landscape of Maymand
Israel	44	Incense Route - Desert Cities in the Negev
Italy	45	Costiera Amalfitana
	46	Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)
	47	Cilento and Vallo di Diano National Park with the Archeological Sites of Paestum and Velia, and the Certosa di Padula
	48	Sacri Monti of Piedmont and Lombardy
	49	Val d'Orcia
	50	Medici Villas and Gardens in Tuscany
	51	Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato
Japan	52	Sacred Sites and Pilgrimage Routes in the Kii Mountain Range
	53	I wami Ginzan Silver Mine and its Cultural Landscape
Kazakhstan	54	Petroglyphs within the Archaeological Landscape of Tamgaly
Kenya	55	Sacred Mijikenda Kaya Forests
Kyrgyzstan	56	Sulaiman-Too Sacred Mountain
Lao People's Democratic Republic	57	Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape
Lebanon	58	Ouadi Qadisha (the Holy Valley) and the Forest of the Cedars of God (Horsh Arz el-Rab)
Lithuania	59	Curonian Spit *
	60	Kernavė Archaeological Site (Cultural Reserve of Kernavė)
Madagascar	61	Royal Hill of Ambohimanga
Mauritius	62	Le Morne Cultural Landscape
Mexico	63	Agave Landscape and Ancient Industrial Facilities of Tequila
	64	Prehistoric Caves of Yagul and Mitla in the Central Valley of Oaxaca
Mongolia	65	Orkhon Valley Cultural Landscape
New Zealand	66	Tongariro National Park**
Nigeria	67	Sukur Cultural Landscape
	68	Osun-Osogbo Sacred Grove
Norway	69	Vegaøyan - The Vega Archipelago**
Palestine	70	Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir
Papua New Guinea	71	Kuk Early Agricultural Site
Philippines	72	Rice Terraces of the Philippine Cordilleras
Poland	73	Kalwaria Zebrzydowska: the Mannerist Architectural and Park Landscape Complex and Pilgrimage Park
	34	Muskauer Park / Park Mużakowski *
Portugal	74	Cultural Landscape of Sintra
	75	Alto Douro Wine Region
	76	Landscape of the Pico Island Vineyard Culture
Russian Federation	59	Curonian Spit *
Senegal	77	Saloum Delta**
	78	Bassari Country: Bassari, Fula and Bedik Cultural Landscapes
Singapore	79	Singapore Botanical Gardens
South Africa	80	Mapungubwe Cultural Landscape
	81	Richtersveld Cultural and Botanical Landscape**
Spain	23	Pyrénées - Mont Perdu *
	82	Aranjuez Cultural Landscape
	83	Cultural Landscape of the Serra de Tramuntana
Sweden	84	Agricultural Landscape of Southern Öland
Switzerland	85	Lavaux, Vineyard Terraces
Syrian Arab Republic	86	Ancient Villages of Northern Syria
Togo	87	Koutammakou, the Land of the Batammariba
Turkey	88	Diyarbakır Fortress and Hevsel Gardens Cultural Landscape
Ukraine	89	Ancient City of Tauric Chersonese and its Chora
United Kingdom of Great Britain and Northern Ireland	90	St Kilda
	91	Blaenavon Industrial Landscape
	92	Royal Botanic Gardens, Kew
	93	Cornwall and West Devon Mining Landscape
United States of America	94	Papahānaumokuākea**
Uruguay	95	Fray Bentos Industrial Landscape
Vanuatu	96	Chief Roi Mata's Domain**
Viet Nam	97	Trang An Landscape Complex**
Zimbabwe	98	Matobo Hills**

Transnational sites are marked with *

*Table 3.1. List of World Heritage Sites inscribed as cultural landscapes. Cultural landscapes representing hunter-gatherer-fisher modes of production, or with a major presence of these, are marked with**. Data from: http://whc.unesco.org/. Aug. 2016).*

preserved for natural rather than cultural reasons, although cultural criteria have often been added during later years. The comparative analysis therefore focuses on 15 areas with high densities of ruin sites, and most often also with topographic characteristics comparable to Aasivissuit – Nipisat, as regional representatives for cultural landscapes in Alaska and the eastern Arctic. Finally, we have also selected two areas in Norway, both with extensive caribou hunting systems for more detailed comparison beyond the eastern Arctic. All of these localities are listed in table 3.3, where selected qualities are compared for each locality.

Cultural landscapes and hunter-gatherers

Indigenous peoples, and hunter-gatherers in particular, have a tendency to leave few visible cultural imprints on the land, and "aboriginal cultural landscapes often lack substantial material or morphological cultural artefacts of the kind used as a basis for defining heritage value in most cultural landscapes" (Prosper 2007: 119).

Hunting societies of the High Arctic do, however, constitute a unique exception. The lack of trees has for millennia spurred peoples of the Arctic to use stones and turf as building materials for their dwellings, shelters and landmarks in ways that to some extent are comparable to the adoption of similar solutions by desert peoples. Many parts of the Canadian Arctic and Greenland have consequently readily visible traces of former Inuit habitations (Freeman 1976; Brice-Bennett 1977; Gulløv 1986). Where resources or good camp sites are scarce, habitation sites may be far apart, whereas ecological hot spots, such as the mouths of the large fjords in West Greenland, are densely dotted with ruins and archaeological sites from centuries and sometimes millennia of human settlement.

Table 3.2 - Principal themes and inquisitive questions to be compared between different areas in the geocultural region of eastern Arctic, Alaska and Scandinavia

Theme or characteristic	Question(s) to be answered
Transect from inland ice to sea	Does the area have human settlement in a landscape between the sea and inland ice?
A full annual round, i.e. winter and summer settlements	Does the area have settlement that convey a full annual round of hunter-gatherer activities?
Stone Age settlements	Does the area have 'early' human occupations?
Thule culture	Does the area have Thule culture settlements?
Historical settlements	Does the area have sites that tell of land use in historical times?
Colonial structures	Does the area have archaeological features representative of colonial settlement?
Contemporaneous land use	Does the area have current settlements where 'traditional' land use is practised?
Caribou drives	Does the area have caribou drives?
Communal houses	Does the area have multi-family communal houses?
Level of documentary evidence	How well are the sources published?
Visibility and preservation of structures	How well is the evidence preserved in situ?

The durable, physical characteristics of the stone- and turf-built structures are a unique quality of Aasivissuit – Nipisat, which has resulted in a landscape where every point offering a good view of the surrounding sea and with a good spot for landing a kayak is dotted with ancient ruins, as well as more recent and sometimes contemporary camp sites. Understanding the function and significance of these ruins, as well as the present-day settlement and land use demands a landscape perspective. The boundary of the nominated area is therefore drawn to include dwellings and settlements representative of a whole year of traditional hunting and gathering between the inland ice sheet and the open sea, and to be representative of all human societies that have settled here through millennia.

In the Aasivissuit – Nipisat region, the coastal winter and spring settlements are supplemented with an equally well-preserved and diverse network of summer settlements along rivers and lakes in the interior. The completely preserved and visible system of winter settlements, the route to the interior, the summer camps and the caribou drives in the interior constitute a truly unique archaeological manifestation of the land-use pattern of millennia, based primarily on seal hunting, whaling and fishing in the marine environment, and char fishing and caribou hunting in the interior. Aasivissuit – Nipisat can be termed an 'ethnographic landscape' (Evans et al. 2001; Andrews 2004), and this traditional land use is still practised by

hunters from Sisimiut and Kangerlussuaq and, in particular, by the hunters and fishers living in the settlement of Sarfannguit in the western part of the nominated area. Aasivissuit – Nipisat is therefore categorised as a continuing, organically evolved landscape.

The presence of similar qualities within restricted areas in other regions has been evaluated by asking the questions listed in table 3.2 with reference to each of the areas of comparison. The localities selected for comparison with Aasivissuit – Nipisat have been chosen on the basis of a variety of criteria. First of all, it is crucial that published data are available; secondly, many regions with slight or peripheral similarities have been dismissed for this very reason; this applies for example to localities in Siberia, as well as for sites in East Greenland, where caribou drives are known in the vicinity of Tasiilaq. There are no caribou there today and caribou hunting has therefore ceased. After an initial literature survey, a limited number of areas with multiple archaeological similarities to Aasivissuit – Nipisat were then selected for more systematic comparison of their qualities. In order to do this, the qualities and documentary evidence from each site were entered into a form and given a 'three star' or yes/no evaluation with regard to each point of the principal elements, as shown in table 3.3.

The results are summarised in table 3.3. The degree to which a given site has been judged to meet the required qualities has been scaled as follows: +++ 'to a high degree', ++ 'to some degree', + 'to a low degree' and – 'quality judged not to be present at all'. The evaluation is based primarily on published data and secondarily on personal inquiries where published data are limited.

The integrity and authenticity of Aasivissuit – Nipisat relies on the fact that the area possesses ample evidence for each of the required characteristics, and that some of this evidence is well investigated and mapped, whereas other sites are 'known' but otherwise in their 'natural state', leaving such localities with maximum authenticity, but available for future investigation and interpretation.

1 Eastern Midsommersø and Jørgen Brønlund Fjord, North Greenland

Eastern Midsommersø and Jørgen Brønlund Fjord in Peary Land is an area of particular cultural-historical importance within the Greenland National Park (Barr 2013). Topographically, Jørgen Brønlund Fjord in the east, Wandel Dal in the centre and Aftenstjerne Sø to the west of Midsummer Sø, form a funnel that acted as a corridor for the first humans, as well as for later migrants passing northwards in Greenland and into northeastern Greenland. Three areas with concentrations of archaeological sites in this corridor have been selected as being of particular importance:

1) Nedre Midsommer Sø,
2) a small area around the large archaeological sites of Deltaterrasserne and Vandfaldsnæs at the head of Jørgen Brønlund Fjord and
3) the mouth of Jørgen Brønlund Fjord, where there are many archaeological sites scattered in a terrain of clay plains with small hills.

During the period of the Independence I settlement (2400-2000 BC), these hills formed islands and spits, and most of the prehistoric camp sites are situated on fossil beach terraces that formed the shoreline 4400 years ago. This easternmost part of Jørgen Brønlund Fjord therefore also has spectacular qualities as an area of raised seabed and fossil shorelines (Bennike 1987) (Fig. 3.8).

Summary of comparative analysis: The principal cultural-historical qualities of the Wandel Dal – Brønlund Fjord corridor are the numerous ruins that constitute the legacy of three consecutive waves of migrating peoples passing through Peary Land and into northeastern Greenland. Most numerous are the ruins left by the first settlers of Independence I (2300 BP), but the Greenlandic Dorset culture (2800-2200 BP) is also represented by several localities, and the most recent migration of Thule people, from the 15th century AD, has also left many dwelling ruins. However, the 'ruinscape' of Midsommersøerne and Jørgen Brønlund Fjord is qualitatively very different from the ruins evident along the Aasivissuit – Nipisat route.

Photo: Claus Andreasen.

Fig. 3.8. Thule culture tent ring at Oksejægerpynten in Jørgen Brønlund Fjord. Peary Land has numerous prehistoric settlements, in particular clustered along the islands Midsommersøerne in the interior and the shores of Jørgen Brønlund Fjord. However, no Thule winter settlements or caribou hunting systems are known here, and the area is not subject to contemporary land use.

1) The ruins along Midsommersøerne and Jørgen Brønlund Fjord are not part of a caribou hunting system, but more of a migration route. Consequently, no caribou drives have been recorded in Peary Land.

2) The dwelling remains along Midsommersøerne and Jørgen Brønlund Fjord are all relatively short-term stone-built structures, and there are no remains of the characteristic turf- and stone-walled winter houses that characterise the coastal settlements in the fjord and archipelago of Aasivissuit – Nipisat.

3) Peary Land appears to have been depopulated centuries ago, and the settlement system of Midsommersøerne and Jørgen Brønlund Fjord therefore also lacks the link with the present.

There are no colonial structures and there are no inhabited places in Peary Land and, as a consequence, there is no contemporaneous land use to link current hunting traditions with the historical resources from the past, as is the case in the area of Nipisat – Aasivissuit.

2 Lake Tasersiaq and its hinterland, West Greenland

Lake Tasersiaq is a 65 km long and up to 2.5 km wide lake situated approximately 100 km to the south of Aasivissuit – Nipisat. The area has a rich heritage with caribou hunting camps and associated structures concentrated along the northern shores of the lake Tasersiaq and in adjoining valleys (Grønnow 2009b; Knudsen 2009a, 2009b; Odgaard et al. 2003, 2008).

In conjunction with the nearby inland route of Arnangernup Qoorua (Secher et al. 1987), the wealth of inland settlement sites and hunting systems in this area constitute a cultural landscape of great value, which was part of the West Greenland hunting area originally placed on the World Heritage Tentative List. In addition to camps and hunting systems from the Thule culture and historical times, recent surveys have revealed several Paleo-Inuit camp sites in the inland region of Angujaartorfik (Knudsen 2009b). This indicates that the West Greenland interior has a great potential for discovery of ancient camp sites deep in the inland regions and even dating from the periods of the earliest settlers more than 4000 years ago.

The many camp sites now known along lake Tasersiaq were not known when the area of Arnangernup Qoorua – Aasivissuit was placed on the World Heritage Tentative List. These sites, and the routes from this inland region to the fjord of Kangerlussuaq, were only fully discovered when surveys were carried out in 2008, prior to the realisation of a projected hydroelectric development, which has now been put on hold. The Government of Greenland has, however, reserved the lakes in the inland regions to the south of Kangerlussuaq for hydroelectric purposes, which poses an overwhelming threat to most archaeological sites along the lake Tasersiaq. Furthermore, larger sectors are reserved for mineral extraction, which

Fig. 3.9. Thule culture stone-built tent houses by the shore of the lake of Tussaap Tasia in the Nuuk region. The interior to the east of Nuuk, the capital of Greenland, has numerous caribou hunting camps. However, the associated caribou drives are not as extensive as at Aasivisuit.

Photo: Claus Andreasen.

poses an additional threat to the preservation and authenticity of the region south of Kangerlussuaq. Grønnow (2009b) also points to the fact that the caribou of Angujaartorfiup Nunaa live and migrate in more dispersed patterns, and this has resulted in the construction of small and medium-sized hunting systems as the most common types in this particular area. Furthermore, the access route is topographically quite different from the Maligiaq – Aasivissuit route. The Tasersiaq region therefore lies generally quite distant from the outer coastal regions, resulting in very few winter settlements along the shores of the fjord of Kangerlussuaq (Pasda 2014).

Summary of comparative analysis: Lake Tasersuaq and its hinterland have many qualities similar to those of Aasivissuit – Nipisat, by virtue of this being one of Greenland's principal caribou hunting grounds. However, the lake Tasersuaq region is more isolated from coastal settlements, the known caribou drives are smaller and, importantly, the authenticity of the landscape, as well as ruinscape, is severely threatened by hydro-electric development and mineral extraction, since very large segments of the ice-free land south of Kangerlussuaq have been reserved for these purposes.

3 Nuuk, West Greenland

The Nuuk region, 300 km to the south of Aasivissuit – Nipisat, is characterised by a history of Inuit settlement with many similarities to that of Aasivissuit – Nipisat. However, there are also fundamental topographical and cultural-historical differences. In the outer fjord and archipelago area there are numerous Thule winter settlements, localities with impressive communal houses and the ruins of Haabetz Colonie (Gulløv & Kapel 1979) as a representative of the contacts between Europeans and Inuit. The coastal archipelago has therefore been included on a list of important cultural landscapes (Barr 2013). The inner fjord area, on the other hand, is dominated by Norse settlements dating from the 8th to the early 14th century. When Inuit settled the area, they quickly exploited all available resources, including the caribou grazing at the heads of fjords and in the interior (McGovern 1982). However, large-scale communal hunting systems have not been located in the Nuuk region (Pasda 2014). So even though there are spectacular coastal settlements with communal houses, inland Thule and more recent Inuit camps with well-preserved tent rings and tent-house dwellings, the 'hunting landscape' of Nuuk is less coherent than that of Aasivissuit – Nipisat. Stone Age settlements are present, but none of the excavated localities (Appelt & Pind 1996; Meldgaard 1961; Hinnerson Berglund 2004) have preservation of organic objects similar to Nipisat, and the presence of Paleo-Inuit has as yet only been documented in the coastal regions in this part of Greenland. Kapisillit near the head of Kapisillit Kangerlua is the only living settlement where subsistence hunting prevails in the region of Nuuk. However, this hunting appears only weakly related to ancient hunting practices: For example, the archaeologically and historically documented caribou hunting camps (Pasda 2011) are not visited by modern hunters (Fig. 3.9).

Summary of comparative analysis: Nuuk Fjord and adjacent inland regions have many similarities to Aasivissuit – Nipisat. The cultural history throughout the era of Paleo-Inuit is similar, and the arrival and settling of Inuit, and their house forms, are largely similar too. However, in the inner fjord area of the Nuuk region the Norse (8th-14th century) settlements have left the marked imprint of an agricultural society, which interferes heavily with the traces of hunting societies that are also evident. Although substantial dwellings are known (Pasda 2014), the communal hunting systems in the Nuuk region are all smaller, most often with fewer than 20 inussuit and with no more than six tent rings or tent-house dwellings on the associated camp sites. Finally, the principal caribou hunting areas in Nuuk lie quite distant from the winter settlements on the outer coast, and there is little topographical coherence between the winter settlements in the archipelago and the interior.

4 Lady Franklin Bay, Arctic Canada

The islands to the north of Lancaster Sound form an archipelago that is almost continuously bound up in land-fast ice or dense, unnavigable pack ice. To the east, and separated from Greenland by the Nares Strait, are the partially ice-capped Ellesmere and Axel Heiberg Islands, both with mountains of up to 2500 m in height and deeply incised by fjords. The northern coast is extended by ice shelves stretching out into the Arctic Ocean. The western islands in the archipelago around Sverdrup Basin are less mountainous and without glaciers. The marine and terrestrial faunas of this high-arctic environment are limited in both species and numbers: Peary caribou and musk ox are the principal terrestrial game animals and ringed seal is the principal marine game species. Human settlement in this region is heavily oriented towards the southern islands along the shores of Lancaster Sound, Viscount Melville Sound and M'Clure Strait, which through millennia have acted as a conduit for east-west-oriented migrations. However, the greatest densities of prehistoric human settlements are known from Lady Franklin Bay – Lake Hazen in the Quttinirpaaq National Park on Ellesmere Island, which is on the UNESCO World Heritage Tentative List, and in the Bache Peninsula region of southeastern Ellesmere Island (Schledermann 1990). In northernmost Ellesmere Island there are 4000-year-old settlements dating from the arrival of the first humans, as well as from the more recent migrations of Inuit. On the northern shore of the northeast-facing mouth of Lady Franklin Bay is the historical site of Fort Conger (Bertulli et al. 2013; Dawson et al. 2013).

Virtually all known Inuit cultures in eastern Arctic Canada and Greenland have lived in or passed through the area, but the general settlement and population density has been much less intense than further south in Canada and Greenland. More than 200 archaeological sites have been recorded in Quttinirpaaq. These include dwellings of the Independence, Dorset and Thule peoples who inhabited the area discontinuously from about 2500 BC to AD 1700. The Inuit settlements are of great importance for an understanding of human settlement in northeastern Canada and northwestern Greenland (Sutherland 1986), and the site of Fort Conger left by the ill-fated American Lady Franklin Bay Expedition (1881-84) is an exceptional example of western polar exploration. Other localities, such as the Lake Hazen DRB Camp or Tanquary Fiord DRB Camp, which also act as access points to the park, reflect Cold War research activities and the desire of NATO countries to control the Arctic. Grise Fjord, on southern Ellesmere Island, and Resolute on Cornwallis Island, are the only two remaining communities and their land use rarely extends this far north (Freeman 1976b).

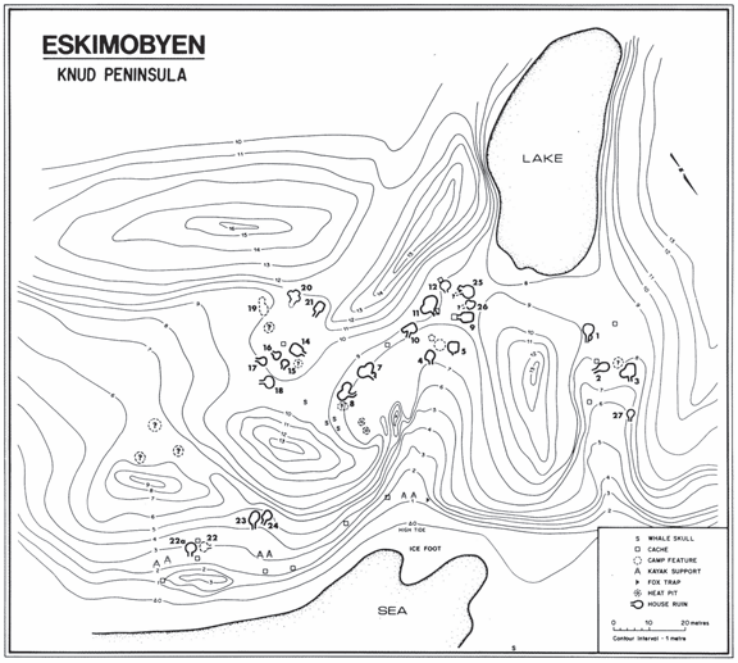
Summary of comparative analysis: The Paleo-Inuit settlements and Inuit occupation of Quttinirpaaq are important and unique when considering their latitude and proximity to the Arctic Ocean. However, the area has far fewer historical settlements than areas of similar size in West Greenland. Although the Lake Hazen 'corridor' has inland settlements, these appear largely to be oriented towards musk ox hunting and not be the inland settlements in a coast-inland settlement system. Archaeologically, demographically and cultural-historically, Ellesmere Island and the northernmost islands of the Arctic Archipelago therefore do

not compare well with the outstanding universal value of Aasivissuit – Nipisat. Winter settlements include round house forms, but the tradition of large communal houses never spread this far north, and caribou drives have not been reported. The cultural history, as well as the character of preserved monuments of Lady Franklin Bay, therefore corresponds much better to regions in North Greenland and in particular Peary Land, where the geological, climatic and wildlife parameters are also similar.

5 Bache Peninsula, Ellesmere Island, Canada

Numerous Paleo-Inuit and Thule culture settlements have been investigated in the Bache Peninsula region of southeastern Ellesmere Island (Schledermann 1990; McCullock 1989). The terrestrial resources of this region include the same species as those of northernmost Ellesmere Island. However, being situated in the southern Kane Basin, the settlers of Bache Peninsula have access to marine resources of the North Water Polynya too. The Bache Peninsula appears therefore to have been settled by Paleo-Inuit and Inuit throughout large parts of prehistory. Schledermann (1990) has published well-preserved early Paleo-Inuit, Saqqaq and Pre-Dorset sites, as well as later sites contemporaneous with the Greenlandic Dorset culture and spectacular Late Dorset sites with monumental longhouse structures. The Thule settlement of this area is quite unique too. The Skraeling Island settlement is a very large camp site with 23 turf- and stone-built winter houses of the ancient cloverleaf-shaped type, and the Eskimobyen site has 27 Thule dwellings, some of which are Early Thule in date (Fig. 3.10).

Caribou bones occur sporadically on the investigated camp sites, but the caribou herds of the High Arctic were not comparable, in terms of size or migration patterns, with the herds of regular seasonally migrating caribou living further south. The faunal analysis of preserved bones from the excavated features on Skraeling Island demonstrates, accordingly, a heavy reliance on small seal (primarily ringed seal), and the coast-inland dynamics characterising settlement patterns in Aasivissuit – Nipisat do not exist in the Bache Peninsula



Reprinted by courtesy of Canadian Museum of History, after McCullough 1989.

Fig. 3.10. Ground plan of the Eskimobyen site to the south of Bache Peninsula. The 27 winter houses are the result of repeated occupations through both early and later Thule phases.

region. The Bache Peninsula region has therefore spectacular Paleo-Inuit and Early Thule culture settlements, resulting from multiple episodes of human migration and settlement periods exploiting marine resources.

Summary of comparative analysis: Although the Bache Peninsula is rich in remains from human settlements through millennia, it has a high-arctic setting and as such is characterised by temporally and geographically more limited resources than West Greenland. Bache Peninsula has rich Paleo-Inuit and Thule settlements, but the use of communal houses or longhouses, characteristic for the 18th and 19th century settlements in West Greenland, never reached this far north. Similarly, Bache Peninsula has neither colonial nor historical settlements, and caribou hunting systems are lacking too – as is mostly the case in large parts of the High Arctic. The Bache Peninsula forms a spectacular coastal polynya-oriented cultural landscape, with evidence of human occupation through

Printed by courtesy of Sylvie LeBlanc

Fig. 3.11. Examples of Inussuit on northern Baffin Island. Top) Window innusuk used for sighting directional landmarks. Bottom) Single boulder inussuit forming a caribou drive lane. Both at localities near the Steensby inlet on northern Baffin Island.

millennia, but without the coast-inland dynamic seen in Aasivissuit – Nipisat.

6 Sirmilik National Park, Eclipse Sound and Milne Inlet, Baffin Island, Canada

Both Inuit and Paleo-Inuit occupation is known from virtually all parts of Baffin Island (Freeman 1976) including inland regions, in particular around Nettling Lake and Amadjuak Lake (Stenton 1991; Milne et al. 2013). Most archaeological attention has been focussed on the northwestern (Mathiassen 1927; Mary Rousselière 1976) and southeastern parts of the island around Frobisher Bay (Fitzhugh & Olin 1993), and the southern shore (Maxwell 1985). The topography of Baffin Island is highly varied, ranging from rugged ice-capped and deeply-incised mountain ranges in the east to the flat lowlands that characterise the western shores towards Foxe Basin.

In northern Baffin Island, most of Bylot Island, together with two large areas on the adjacent mainland, are protected as part of the Sirmilik National Park. Several Thule culture and Inuit winter settlements, with house ruins of stone and turf, such as Button Point, Nunguvik and Mittimatalik (Pond Inlet), are known in Eclipse Sound, and Paleo-Inuit occupations are also present. Some of the most spectacular finds from this region are the Late Dorset artefacts from the sites of Nunguvik and Button Point (Mary-Rousselière 1979). Late Dorset is not represented in West Greenland south of Melville Bay at this point in time, so the prehistory of the two regions is consequently quite different. Similarly, the history of the European contact period differs greatly between the two regions. The initial exploration of Baffin Island occurred as early as the 1600s, but permanent trading posts or missions were not established until the 1900s, which is almost two hundred years later than the establishment of permanent European presence in West Greenland.

Caribou hunting and inland regions

Caribou are sometimes present on Bylot Island, but here the herds appear to be unstable. About 20 to 30 inussuit have been recorded at one site in Oliver Sound (Parks Canada 2014), but apart from this possible caribou drive, caribou hunting systems or inland settlements are not reported in the region around Eclipse Sound. For people living in northern Baffin Island, the principal caribou hunting grounds were the inland regions south of Milne Inlet, even though winter and spring hunting also took place closer to the coast (Freeman 1976: 59). Milne Inlet has for centuries been an access route to the interior, and kilometre-long alignments of inussuit, for pathfinding and caribou hunting systems, are known in the inland regions between Milne Inlet and Steensby Inlet approximately 200 km

to the SSW (LeBlanc nd) (Fig. 3.11). The historical land-use pattern is also known to have involved journeys to these distant localities (Brody 1976, vol. 1).

Summary of comparative analysis: The early cultural history of Baffin Island shows numerous similarities with that of West Greenland (Maxwell 1985). The most important archaeological and early historical Inuit sites, such as Button Point, Nunguvik and Saatut in the Bylot Sound, have numerous house ruins of turf and stone, but the use of communal houses, known from the 18th and 19th centuries in West Greenland, was never adopted here. Similarly, large communal hunting systems have not been documented in the interior, and the exploitation of inland resources is therefore not as well testified to by camp sites and caribou drives as in Aasivissuit.

7 Lake Harbour and Soper Heritage River, Baffin Island, Canada

The fjord-lands of southern Baffin Island have numerous concentrations of ruined settlements and the caribou were hunted from coastal settlements as well as deep in the interior (Stenton 1991). Around Amadjuak and Nettilling Lakes, both Paleo-Inuit and more recent Inuit sites have been recorded along lake shores and on eskers (Milne 2008; Milne & Donelly 2004; Milne et al. 2013). Stenton (1991) divided the caribou hunting systems of Baffin Island into a 'coastal-upland' pattern and an 'interior-lake' pattern. He found many similarities between the 'interior-lake' caribou hunting system of southern Baffin Island and the exploitation of caribou in West Greenland. However, only minor systems of inussuit have been recorded on southern Baffin Island. Stenton believes that the absence of large-scale communal hunts in this region results from the lack of topographic bottlenecks, which are a prerequisite if the hunters are to control the migrating caribou. In this respect, attention should also be drawn to the unique role of early historical caribou hunting in West Greenland, where the predictable harvest of caribou sustained important social and trade-related needs far beyond the calorific value of the animals killed. The communal hunts in West Greenland were social events, whereby families otherwise living far apart could barter, exchange news and socialise. Another important incentive was the desire to stockpile caribou hides to be traded with Danish settlers.

In southern Baffin Island the first contact between Inuit and Europeans was in 1839, when Scottish captain William Penny entered Cumberland Sound, where he established a whaling station at Kekerten Island. Today, this locality is a territorial park and protected site with remains of the whaling station. Kekerten also acted as a gateway for the renowned Franz Boas during his year-long stay with Inuit (Boas 1967). Inuit and European interaction is testified to by the nearby national historic site of Blacklead Island and the early exploration history is commemorated by the remains at Kodlunarn Island (Fitzhugh & Olin 1993). In addition to these localities, there is a national historic site at Enukso point on Foxe Peninsula. Originally around 200 inussuit stood here. These very large inussuit were built beyond living memory, and their function is somewhat enigmatic, since they do not form a hunting system or mark a travel route. However, the point is known as a departure point for Inuit crossing the troubled and often pack-ice-filled waters of Foxe Channel when travelling to Southampton Island, and the concentration of inussuit is believed to be associated with this function.

Contemporary settlements

Baffin Island has seven Inuit communities: Ikpiarjuk (Arctic Bay), Mittimatalik (Pond Inlet), Kangiqtugaapik (Clyde River) Qikiqtarjuaq, Panniqtuuq (Pangnirtung), Iqaluit – the capital of Nunavut, Kimmirut and Kinngait (Cape Dorset). From these localities, traditional marine and terrestrial resources are exploited by means of transport such as outboard-powered watercraft and snowmobiles (Kemp 1971).

Summary of comparative analysis: The early cultural history of Baffin Island shows numerous similarities to that of West Greenland (Maxwell 1985). The most important archaeological and early historical Inuit sites, such as Button Point, Nunguvik and Saatut in

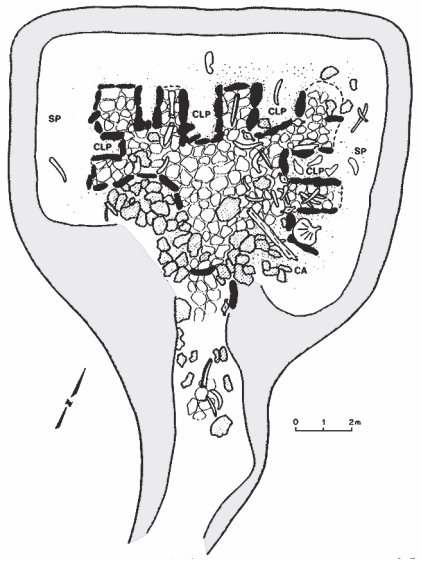


Fig. 3.12. Thule culture communal house near Nain in Labrador. The Labrador coast is the only area outside Greenland where the use of communal houses appears to have become commonplace during the final phases of the Thule culture and the early historical period.

the Bylot Sound and Lake Harbor in southernmost Baffin Island, have numerous house ruins of turf and stone, but the use of communal houses, known from the 18th and 19th centuries in West Greenland, was never adopted here. The evidence of European whaling and colonial settlement differs with respect to both timing and character between the two regions, and the establishment of the Hudson's Bay Company trading posts did not take place before the 20th century on Baffin Island. There are rich ethnographic records of traditional hunting in inland regions, but curiously no major caribou drives have been recorded in the interior around Nettling and Amadjuak Lakes.

8 Nain, Labrador, Canada

Labrador and Ungava have been home to Inuit and their predecessors for thousands of years, and there is a rich and varied archaeological heritage from both Inuit and First Nations. In Labrador, the recorded structures left by Inuit include stone- and turf-walled communal winter houses of similar types to those known from West Greenland (Schledermann 1976) (Fig. 3.12), tent rings and other stone-built structures (Larkham & Brake 2011). Caribou drives are also known from Labrador, although only one from southern Labrador has been published (Fitzhugh 1981). In Labrador, the archipelago near Nain and the adjacent inland regions form a cultural landscape with numerous coastal settlements and historically documented use of inland regions for caribou hunting (Taylor & Turner 1969).

In southern Labrador, Basque whalers were present already at the end of the 16th century, as testified to by the Red Bay Basque whaling station, which is on the World Heritage List (http://whc.unesco.org/en/list/1412). However, Inuit occupation has always been concentrated in northern Labrador, with only a few ventures into southern Labrador.

In northern Labrador, the European contact period began in the second half of the 1700s, when a Moravian Mission was established in Nain and later, in the early 1800s, also in Hebron near the southern border of the Torngat Mountains National Park. Today, Hebron is an abandoned ghost town where the Moravian Church's crumbling ruins and remains of the nearby wooden houses can still be seen, but the nearest inhabited place is Nain almost 250 km to the south of Torngat Mountains (Fitzhugh 1978; Hood 2008).

Summary of comparative analysis: The Thule settlement types and topographic location in Labrador show many similarities to archaeological remains in West Greenland. With the presence of Maritime Archaic people in northern Labrador as early as 7500 BC, the prehistory of Labrador is older and more complicated than that of Greenland. In the Nain region there is an archipelago environment with numerous Thule and Inuit camps on the islands, and deep fjords have, for millennia, formed access routes to the interior where caribou were hunted. However, in spite of this well-documented historical Inuit use of the interior, no information about caribou drives has been published from this area.

9 Wager Bay and Ukkusiksalik National Park, Canada
The 100 km long inlet of Wager Bay in the northeastern part of Hudson Bay forms a natural access route to the interior. Although caribou hunting systems have not been published from the inland regions of Wager Bay, historical evidence shows that caribou hunting did take place in the interior. Most of Wager Bay is protected as the Ukkusiksalik National Park, named after the soapstone found within its boundaries. Renowned Inuit winter settlements are situated in the easternmost part of Wager Bay at Nuvukliit (Rousselière 1984: 431), but several other camp sites – in particular along the northern shore of Wager Bay – are known too (Ukkusiksalik Inuit Knowledge Working Group Mouland & M. Manseau, 2013). Formerly, Wager Bay Inuit are known to have overwintered in the interior, living on cached caribou. However, in the early 20th century, the area was populated by Igloolik Inuit from the north who had a focus on sealing and over-wintered in snow houses (igloos) on the sea ice (Welland 1976: 83ff). The Hudson's Bay Company had a trading post there from 1925 to 1947, called Ford Lake, which stands today as a ghost settlement (cf. Wikipedia.org). The nearest living community is now Naujaat (Repulse Bay), approximately 150 km to the north, and Wager Bay is only used sporadically. The more recent European contact period history of this particular area compares poorly with the history of Aasivissuit – Nipisat.

Summary of comparative analysis: Wager Bay and Ukkusiksalik National Park have many sites and features comparable to those of the coast and fjord-land of Aasivissuit – Nipisat. Ethno-historically there is evidence of caribou hunting in the interior, as is the case for most places settled by Inuit. However, no records of hunting systems are available, even though several topographic bottlenecks do seem to exist. The archaeological traces of inland hunting are consequently a poorly illuminated element in the Wager Bay area. Similarly, the contact with Europeans occurred much later in Wager Bay than in Greenland, and the collective housing form, introduced by the communal house in West Greenland, was never adopted by the Central Inuit.

10 Chesterfield Inlet, Kazan River and Thelon River, Canada
Chesterfield Inlet and its extension of Baker Lake project far into the Barren Grounds. The Thelon and Kazan rivers have their outlets into Baker Lake, and there are impressive caribou hunting systems built by Inuit, Paleo-Inuit and even Paleo-Indian peoples along these rivers (Gordon 1996; Steward et al. 2000). Chesterfield Inlet thus forms an important waterway leading to the inland Barren Grounds, where some of the largest herds of caribou migrate north in spring and south in autumn. This is the land of the Caribou Inuit (Arima 1984), known for their permanent settlements in the interior with just a small proportion of the population venturing to the Hudson Bay coast in order to obtain seal products during winter and spring.

The hunting camps and drive lines by Kazan River take the form of extensive systems situated along the river, as a result of shifts in the migration routes preferred by the caribou during different seasons. Further to the west, Bryan Gordon (1996) has recorded large caribou hunting camps along the Thelon River. These sites have dwelling remains and drive lanes, as well as up to 2 m deep stratified deposits of drift sand culture layers dating 8000 years back in time. Most of the culture layers on these sites belong to archaic Indian cultures arriving from the south. Interestingly, however, these are intersected by Paleo-Inuit culture layers of Pre-Dorset origin. The sites along the Thelon River thereby document the early Paleo-Inuit expansion deep into the interior, towards the treeline on the Barren Grounds.

Thule culture winter settlements are known from the vicinity of the present settlement of Chesterfield Inlet (McCartney 1977), but the general density of winter settlements is lower than in the open-water regions of West Greenland. Paleo-Inuit settlements are known from the west coast of Hudson Bay, but the evidence here is limited, and there are no Paleo-Inuit sites here with preservation of organic materials.

Summary of comparative analysis: The caribou hunting camps and drive lanes along the Kazan and Thelon

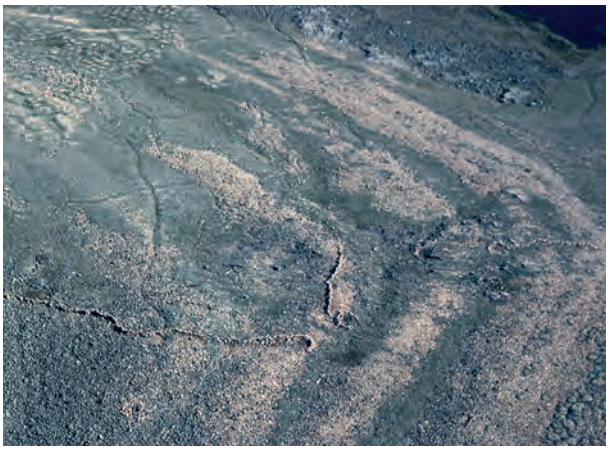


Photo: by courtesy of Jack Brink

Fig. 3.13 Caribou drive lane at POD site on Victoria Island. This is just one of several unusually well-preserved caribou drive lanes on Victoria Island.

rivers constitute unique testimony to the exploitation by past hunting societies of migrating caribou herds that fully compares to the great summer camp of Aasivissuit in West Greenland. The Chesterfield Inlet forms a 150 km waterway connecting the coastal regions of western Hudson Bay to the interior. Thule winter sites are known from the coast near the present settlement of Chesterfield Inlet. However, similar to Wager Bay to the north, contact with Europeans occurred later than in Greenland and the collective housing form, introduced with the communal house in West Greenland, was never adopted by the Central Inuit. The Paleo-Inuit evidence from the Thelon River localities is unique, but apart from these meticulously investigated sites, and the caribou hunting sites along Kazan River, the documentary evidence of other localities is not as detailed.

11 Victoria Island and Banks Island with adjacent mainland regions, Canada

Victoria and Banks Island, together with adjacent mainland regions, were traditionally the territories of the Netsilingmiut and Copper Inuit. The area around the Ekalluk River at the western end of Ferguson Lake, southern Victoria Island, is well known for its impressive caribou drive lanes (Taylor 1967, 1972; Brink 2005; Friesen 2013). The Iqaluktuuq drive is a linear drive lane with inussuit rows extending for several kilometres, whereas the nearby archaeological site, POD site, is shorter, but terminates in spectacular stone walls that form a funnel with an opening just a few metres wide, where hunters could await the game animals, partially hidden in stone-built shooting blinds. Further south there is another drive lane at the site of Oxford Bay, and 300 km north on the west coast of Victoria Island caribou drive lanes have also been recorded at the Kunana site (McGhee 1972). A hundred thousand caribou are known to have crossed both Dease Strait and Dolphin and Union Strait on annual migrations between winter ranges on the Canadian mainland and summer ranges on Victoria Island.

The staging of large caribou herds at river crossings and in coastal regions of southern Victoria Island prior to the freeze-up of the strait, made this plentiful resource highly predictable and attractive to communal hunts. Brink (2005) has classified the drives into linear arrangements of inussuit and boulder walls and funnel-shaped constructions, and Friesen (2013) believes the size of the openings in the structures reveals whether they were built by Late Dorset peoples or Inuit. Only Inuit appear to have used bow and arrows, and Friesen accordingly infers that the longer range of bow-propelled arrows must have allowed Thule hunters to attack caribou at greater distances than the Late Dorset, who are believed to have relied solely on the use of lances (Fig. 3.13).

The caribou systems of Victoria Island, and the nearby archaeological camp sites, are truly impressive structures. The presence of numerous Inuit winter camp sites, as well as Late Dorset longhouse structures nearby and on several more distant camp sites (Savelle et al. 2012), adds a further spectacular aspect to the archaeological landscape around Amundsen Gulf and the current settlement of Cambridge Bay. The stone-built hunting systems and longhouse sites in this region are unique and well-preserved architectural expressions. There does, however, appear to have been little historical use of the caribou hunting systems.

Numerous Thule winter and spring camps are known from the shores of Amundsen Gulf and Coronation Gulf (McGhee 1972), and several sites have been excavated. However, the traditional housing in this region has not been subject to chronological change comparable to that evident in Greenland. In historical times, Inuit living here became known as Copper Inuit (Damas 1984) and like the Netsilik, their neighbouring bands/groups to the east (Balicki 1984), Copper Inuit lived in igloos (snow dwellings) during winter when land-fast ice formed on the sea. In this region the large winter camps, dating from the 18th and 19th centuries, have consequently melted and objects have gone to the bottom of the ocean leaving an incomplete settlement pattern that is underrepresented by winter camps and overrepresented by spring, summer and autumn camps situated on land.

In the early 20th century, the population became concentrated into more permanent centralised communities. However, as in most other parts of the Canadian Arctic, this process began later in the region around Coronation Gulf than it did in West Greenland.

Summary of comparative analysis: The caribou drive lanes around the Ekalluk River are as unique a testimony to exploitation of the migrating caribou herds by past hunting societies as the previously described caribou hunting systems along the Kazan River, and they are fully comparable with the great summer camp of Aasivissuit in West Greenland. However, the caribou migration pattern from mainland Canada to Victoria Island resulted in geographic settings for Victoria Island's caribou drives quite close to the coast, and the cultural landscape of Victoria Island, Banks Island and around Coronation Gulf therefore appears to have a less pronounced coast-inland movement of people.

The area also has a rich record of Thule culture and more recent autumn and winter sites with house ruins of turf and stone, but similar to other regions of the Central Arctic, the stable contact between Europeans and Inuit began almost a century later than in Aasivissuit – Nipisat, and the area never saw the introduction of the communal house form. Including those on mainland Canada, there are seven contemporary Inuit settlements in the area, where the inhabitants practice subsistence hunting using modern means of transport, and in addition to jobs in administration and service industries, some settlements in this region also offer employment in mining and mining service and supply industries (The Kitikmeot Inuit Association, https://kitia.ca/about-kia).

12 Northern Yukon. Ivvavik / Vuntut / Herschel Island (Qikiqtaruk), Canada

Ivvavik National Park of Canada, Vuntut National Park of Canada and Herschel Island (Qikiqtaruk) Territorial Park comprise 15,500 km^2 of wilderness on the Yukon coastal plain. Together, these protected areas are on the UNESCO Tentative List.

Preliminarily, the site has been inscribed with reference to both cultural and natural criteria:

(iv) Together, Ivvavik, Vuntut and Herschel Island is an outstanding example of a landscape that illustrates the very early human occupation of northwestern North America via the Bering Yukon Refugium.

(v) It is an outstanding example of traditional land use representative of two distinctive Indigenous cultural traditions adapting to the extreme environment of the Coastal Plain, the North Slope, the Old Crow Basin and Herschel Island.

(vii) It possesses scenic beauty and natural phenomena, with mountains, wetlands, wild rivers and migrating wildlife spectacles.

(viii) It illustrates geological processes relating to Pleistocene events and Beringia.

(x) It contains significant biological diversity: Its wide range of species includes caribou, bear, waterfowl and marine life.

Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) has many features comparable to Aasivissuit – Nipisat: coastal regions and large interior expanses with caribou drives and fishing camps etc. However, the traditional land use in this particular area is largely ethnically divided between Inuit residing by the shores of the Arctic Ocean, and Gwitchin residing in the interior.

The coastal regions of Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) are therefore the traditional territory of Inupiat, whereas the inland regions are the traditional land of the Gwitchin. This ethnic demographic division is very different from the situation in West Greenland, resulting in marked differences in the traditional principles of resource exploitation, as well as in the material remains left in the landscape in, respectively, West Greenland and on the 'North Slope'. For example, the Vuntut Gwitchin lived in the interior all year round, where they exploited the migrating herds of the Porcupine caribou herd twice each year, when the caribou migrated through their territory. The easy access to wood and timber has resulted in spectacular differences between the structure of the Inupiat dwellings and that of Inuit dwellings in West Greenland. The Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) area consequently supported a spectacular tradition of large, partly wooden houses built by Inupiat living in the coastal regions of Ivvavik and Herschel Island (Qikiqtaruk). This is in contrast to the architectural tradition in West Greenland, where the lack of solid timber resulted in houses built entirely of turf, stone, whalebone, some driftwood and skins. Similarly, the caribou drives in Aasivissuit – Nipisat are mainly built of stones and are therefore well-preserved to the present today, whereas the caribou drives of Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) were built of poles, which have most often collapsed, making the caribou drives difficult to see and preserve for the future (Parks Canada: http://www.pc.gc.ca/eng/pn-np/yt/vuntut/index.aspx).

The contact between Inuit and Europeans intensified in the late 19th century, when whalers discovered bowhead whales in the Beaufort Sea. Shortly after, in 1890, a Euro-American settlement was established at Pauline Cove. The whaling industry boomed in the following years, when an estimated 1500 people resided at Hershel Island, making it the largest Yukon community at that time. Although several wooden-framed buildings were constructed, most residents continued to live on the whaling ships. With the decline in whaling, residents moved away, but other public offices and services were later placed there, and Herschel Island (Qikiqtaruk) was inhabited until 1987. Today, Inuvialuit use the island seasonally for hunting and fishing, and as a place to camp while travelling. The Community House is still standing and is believed to be the oldest frame building in Yukon. It remains in excellent condition, and is now used as a park office and visitor centre.

In addition to the previously mentioned differences in land-use patterns, there are also significant differences in geology and landscape history between the two regions. Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) lies largely in a subarctic setting, with large tracts of taiga, and in contrast to the ice-scoured gneiss terrain of Aasivissuit – Nipisat in West Greenland, Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) was not, or only to a limited extent, glaciated during the last glacial period. This basic difference in quaternary geology and natural history is also evident in the cultural history of the area, since the Einginstack site, with its date of 10,000 BP, represents very early human occupation in North America. These differences in cultural history, structural remains left in the landscape and natural history, make it difficult, if not impossible, to compare the outstanding universal values of the two regions. Finally, differences in the contemporary land use can also be highlighted. Aasivissuit – Nipisat includes the fishing and hunting community of Sarfannguit, whereas Ivvavik, Vuntut and Herschel Island (Qikiqtaruk) have almost 150 km to the nearest Inuit settlement, situated in the Mackenzie Delta, and 50 km to the nearest First Nations settlement of Old Crow to the south of the Vuntut National Park.

The approximately 300 inhabitants of Old Crow practise a traditional subsistence economy in their traditional hunting ranges, whereby the ancient traditions

are kept alive. However, Old Crow lies approximately 75 km south of the Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) area, and the present use of the area is therefore not as integrated as the traditional land use in Aasivissuit – Nipisat.

Summary of comparative analysis: Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) has both coastal settlements and inland caribou drives. There is also a whaling community that could be compared with the Nepisene whaling station, although the latter is almost 150 years older. However, the First Nations' permanent occupation of the interior regions of Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) has defined the land-use patterns. The easy access to wood in Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) not only resulted in the construction of caribou drives of poles, it also facilitated the building of large semi-permanent turf-covered log houses very different from the housing tradition of West Greenland. Finally, the Paleo-Inuit evidence from northern Yukon is not of the same quality as that from Aasivissuit – Nipisat.

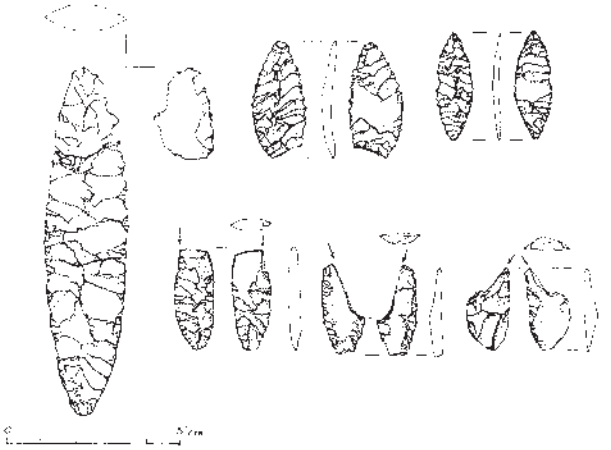


Photo: by courtesy of Jeff Rasic, National Park Service.

Fig. 3.14. Gates of the Arctic is a national park larger than Belgium. The area has traces of Paleo-Indian and Paleo-Inuit settlements, as well as several historical monuments. Top) Paleo-Inuit artefacts from Gates of the Arctic. Bottom) The settlement of Nunamiut is completely circumscribed by Gates of the Arctic, and as such represents unique, contemporary land use within the protected area.

13 Gates of the Arctic National Park and Brooks Range northern Alaska, USA

Gates of the Arctic National Park and Preserve is a U.S. National Park in Alaska. It is the northernmost national park in the U.S. (the entire park lies north of the Arctic Circle) and the second largest at 3428.7 km^2 (342,870 ha), slightly larger in area than Belgium. The park consists primarily of portions of the Brooks Range of mountains which covers 2,900,460 ha.

Brooks Range and Gates of the Arctic are well known for their large herds of migrating caribou that have been exploited by Inuit as well as First Nations since time immemorial, and there is a rich and varied anthropological and archaeological literature on the subject.

Prehistoric settlements

The sheer size of the caribou herds, which number hundreds of thousands, and therefore of the associated human exploitation of this migrating resource, makes the structural remains and caribou hunting landscapes of this region truly impressive and absolutely comparable to the caribou hunting systems known from Aasivissuit – Nipisat. The prehistoric use of Gates of the Arctic is well documented by the presence of Paleo-Indian (Dixon 1975; MacNeish 1956; Rasic 2003) and Paleo-Inuit localities throughout the Brooks Range and northern Alaska (Fig. 3.14). Some of these localities have well-preserved organic remains, enabling detailed studies of the past economy as well as offering the potential for recovery of artefacts of organic material (Tremayne 2011).

The coastal winter settlements from the Mackenzie Delta to Point Barrow are also impressive in terms of

the number, size and construction of their dwellings. Alaskan Inuit were whale hunters and large quantities of food were stored at the whale-hunting camps, where the population could live for months on the cached provisions. The easy access to wood enabled the construction of iconic, monumental, semi-permanent log houses (Lee & Reinhardt 2003). In places, it may also have resulted in the construction of caribou drives using wooden poles rather than stones, as in the case of the previously described Ivvavik / Vuntut National Park. However, numerous caribou drives with stone-built inussuit are described in the literature (Binford 1991).

Historic settlements

The historic land use of Gates of the Arctic is well documented in a number of studies of the Nunamiut settlement in Anatuvuk Pass (Ingstad 1954; Larsen 1958; Binford 1978, 1991, 2009; Brown 2007). These studies shed light on the history of settlement, and they also enable ethno-archaeological interpretations of prehistoric phenomena.

Summary of comparative analysis: Gates of the Arctic National Park and the adjoining lowlands towards the Arctic Ocean form a well-preserved cultural landscape, or rather cultural landscapes, in plural. Several traditional Indian-Eskimo trade routes run through Gates of the Arctic and constitute part of its values (https://www.nps.gov/gaar/learn/significant-values-of-gates-of-the-arctic.htm). However, Gates of the Arctic does not extend to the shores of the Arctic Ocean. It is therefore only by adding this imaginary extension that the full variability of Inuit camp types can be included in the cultural landscape. Gates of the Arctic does have a rich Paleo-Indian and Paleo-Inuit record, including localities with good conditions for the preservation of organic material. Historically, the Nunamiut are known for their atypical permanent occupation of the interior in dome-shaped tents, but this situation is also known to have been highly variable and dependent on the size of caribou herds and options to make a living at the coastal settlements (United States Dept. of the Interior; Alaska Planning Group 1974: 68). The Nunamiut reliance on caribou as their principal game species, as well as the traditional dwelling form, therefore differ significantly from the situation in Aasivissuit – Nipisat. Even if the coastal settlements, such as Point Barrow, are included as a coastal element, the differences in environment, cultural history and housing are considerable.

14 Southern Norway

Since the end of the last ice age, reindeer have been part of the Norwegian fauna and thereby a source of food and raw materials for humans living there. The rich marine resources in Norwegian waters have resulted in a great diversity of coast and inland land-use patterns that show similarities to the hunting landscapes of West Greenland, but which, on decisive points, are also different.

In southern Norway, extensive reindeer hunting systems are known from Hardangervidda and Rondane (Indrelid et al. 2015). The reindeer drives here have stone walls, cairn alignments, corral-like structures and pitfalls, which were not used by Inuit, and the site of Sumtangen (Indrelid & Hufthammer 2011) is an example of a Norwegian reindeer hunting site where the animals were driven into a lake to be killed from boats.

Most reindeer drives in the mountainous regions of southern Norway are dated to the Viking Age and Early Medieval period, although some of them are believed to have been in use both earlier and later (Jordhøy et al. 2005; Jordhøy 2008). Importantly though, the late prehistoric and Medieval mass hunts in the southern Norwegian highlands were imbedded in an agrarian economy very different from the hunting communities off West Greenland.

Indrelid and Hufthammer note that the mass hunts at Sumtangen and several similar sites in the hinterland were most likely organised by merchants or perhaps the Crown, but with their practical execution being undertaken by local farmers from the nearby valleys. The motivating factors for the mass hunts at Sumtangen

show, therefore, similarities to those of communal hunts in West Greenland. In both places the communal mass hunts are closely tied up with long-distance trade networks, and in both cases the opportunity to trade the surplus from mass kills seems to have been an important incentive relative to the exploitation of the reindeer herds.

Summary of comparative analysis: Norwegian reindeer drive systems have many similarities to drive systems in other parts of the world. However, when comparing with Aasivisuit – Nipisat, it is immediately obvious that the southern Norwegian reindeer drive systems are located in a boreal climate with widespread pine forest and agrarian communities in the valleys. Most of the known southern Norwegian reindeer drives are associated with agrarian communities, and not a predominantly hunting and gathering economy as that practised by Inuit. In addition the widespread use of pitfalls constitutes an architectural and functional difference between the south Norwegian and Greenlandic drive systems. Most importantly though is probably the overall difference between the cultural landscapes of southern Norway and the Arctic: southern Norwegian caribou drive systems are not part of an annual round in a hunting economy with a coastal and an inland phase but more often appear to be opportunistic harvesting of game by people living most of the year in an agrarian economy.

15 Varanger Peninsula, northern Norway

In the Saami area in northern Norway, hunters have used reindeer drive systems for millennia, first for hunting and later for controlling domesticated or semi-domesticated herds. At the 'Rock Art of Alta' World Heritage Site, there is a 5-6000-year-old rock carving depicting a leaf-shaped corral containing reindeer, and not far away at, the Varanger Peninsula, the Saami government Samediggi has proposed the inclusion of 'Várjjat Siida 12,000 years of indigenous arctic heritage' on the World Heritage Tentative List. This serial nomination proposal includes the four sites of Ceavccageađgi / Mortensnes, Noidiidčearru / Kjøpmannskjølen, Gollevárre and Ruovdenjunlovta / Gropbakkengen, which display a variety of archaeological features characteristic of Sami ways of life and history. In many ways, the four localities are analogous to the key localities of Aasivissuit – Nipisat. The site of Slettnes (Hesjedal 1996) has settlements from the Stone Age to the present day, which makes it rather analogous to the archaeological remains on Nipisat. Reindeer hunting systems are known from the site of Noidiidčearru / Kjøpmannskjølen and reindeer pitfall systems are present at Gollevárre (analogous to the archaeological traces at Aasivissuit), and finally the site of Ruovdenjunlovta / Gropbakkengen has pit-houses analogous to the winter settlements evident along the coast and in the archipelago of western Aasivissuit – Nipisat. The archaeological sites on Varanger Peninsula thereby reflect the principal activities in the Saami land-use pattern similar to the seasonal activities testified to by the coastal and inland sites of Aasivissuit – Nipisat.

Summary of comparative analysis: In spite of the many qualities of Várjjat Siida, there are also significant differences between the two regions, over and above the obvious one that Saami cultural history has its own trajectory, which differs from that of Inuit. The landscape of the Varanger Peninsula is characterised by an ice-scoured basement, like the landscape of Aasivissuit – Nipisat. However, the presence of the inland ice sheet in eastern Aasivissuit – Nipisat adds a dramatic and dynamic element to the West Greenland landscape that is not present on the Varanger Peninsula. Several different house forms of turf and stone have been employed in Varanger, including large multi-family occupations (Odner 1992). In Varanger, the different house forms change according to both functional and chronological parameters. The chronological change in house form from round houses to communal houses and square houses evident in Aasivissuit – Nipisat consequently represents a simpler scheme than that of the Saami housing. Most important of all, when comparing the cultural landscape of Saami peoples to that of West Greenland, is the Saami domestication of reindeer, which has resulted in a pastoralist way of life very different from that of Inuit

hunter-gatherers. Finally, the expansion of Norwegians into areas traditionally inhabited by Saami occurred earlier, and is somewhat more complex, than the 18th century colonisation of Greenland.

3.2.b Result of comparative analysis

The principal qualities of Aasivissuit – Nipisat have been compared to similar qualities in the areas selected for comparison in table 3.3. From this it can be seen that well-preserved ancient camp sites, spectacular house forms and hunting systems, similar to those of Aasivissuit – Nipisat, are also preserved in other regions of the Arctic. However, the unique preservation of all feature types and localities from all principal chronological epochs is unique to Aasivissuit – Nipisat, as is the landscape setting of the coastal winter settlements in the archipelago. The deeply incised fjordland that acts as a gateway to the high-relief valley of Itinneq, and the spectacular caribou hunting camps and caribou drives of the interior, form a complete 'footprint' of traditional sustainable land use. The eastern boundary on the ice sheet marks the ultimate limit of traditional land use. Yet the historical evidence shows that even the glaciers were occasionally crossed to reach the most remote hunting grounds. Nipisat hosts the Stone Age site of Nipisat, which testifies to the life of the first humans who occupied the eastern Arctic around 4500 years ago. As a unique feature, Nipisat has extensive culture layers from the later Saqqaq culture, dated to 1200-700 BC. So far it is the only excavated site where this phase is well represented and dated by radiocarbon analysis.

Coastal winter settlements, with houses built of turf and stone, and inland summer camps with portable dwellings, are stereotypes of Inuit material culture. Equally so are caribou hunting systems and several other stone-built features that were used by traditional Inuit. The archaeological remains of such features are known from many parts of the eastern Arctic. However, in Aasivissuit – Nipisat the traces of prehistoric and historic settlements left during millennia of human habitation are exceptionally well preserved. Aasivissuit – Nipisat was attractive to human

		Aasivissuit – Nipisat	1 Eastern Midsommersø and Jørgen Brønlund Fjord
Landscape and land-use parameter	Transect from inland ice to sea	XXX	XXX
	A full annual round	XXX	-
Chronological parameters	Stone Age settlements	XXX	XXX
	Thule culture	XX	XX
	Historical settlements	XXX	-
	Colonial structures and cultural encounters	XX	-
	Contemporaneous land use	XXX	-
Special features	Caribou drives	XXX	-
	Communal houses	XXX	-
Documentation and preservation	Level of documentary evidence	XXX	XXX
	Visibility and preservation of structures	XXX	XXX

See Fig. 3.6. for location of comparative sites.

settlement due to access to both coastal and inland resources, all-year open water areas to the south and regions with land-fast winter ice to the north. The different environments and their game animals offered many different resources, which have maintained relatively stable living conditions for humans through millennia. The topographically well-defined territory of Aasivissuit – Nipisat, between the Greenland ice sheet and the sea, fjords and mountain ranges therefore has representative settlements and house forms from all the principal phases in the prehistory and history of West Greenland.

The introduction of the communal house, by the travelling south Greenlanders of the 17th century, represents a radical change in house form that is unique to West Greenland and Labrador. Aasivissuit – Nipisat has some of the finest and largest examples of communal houses known from West Greenland. None of these have been subject to excavation within the nominated area and only a few are known to be severely affected by erosion, which makes these ruins as authentic as they can be.

The well-preserved ruins of the colonial settlement of Nepisene, and the Inuit houses that were built later into

Table 3.3 - Summary of comparative analysis tabulating the qualities of the areas compared to the principal selected qualities of Aasivissuit – Nipisat

	2 Lake Tasersiaq and its hinterland	3 Nuuk	4 High Arctic Archipelago Lady Franklin Bay	5 Bache Peninsula	6 Sirmilik National Park, Eclipse Sound and Milne Inlet	7 Lake Harbour and Soper Heritage River	8 Nain, Labrador, Canada	9 Wager Bay	10 Chester-field Inlet, Kazan River and Thelon River	11 Victoria and Banks Islands with adjacent mainland regions	12 Northern Yukon, Ivvavik / Vuntut / Herschel Island	13 Gates of the Arctic National Park and Brooks Range northern Alaska	14 Southern Norway	15 Varanger Peninsula northern Norway
	XX	XX	XXX	XX	XXX	-	-	-	-	-	-	-	-	-
	XX	XXX	XX	XX	XXX	XX	XXX	XXX	XXX	XX	XXX	XXX	XXX	XXX
	X	XXX	XXX	XXX	XXX	XX	XXX	XX	X	XXX	XX	XXX	XXX	XXX
	XXX	XX	XX	XXX	XXX	XXX	XX	XXX	XX	XX	X	X	-	-
	XX	XXX	X	X	XX	X	XXX	X	XX	XXX	XX	XX	XXX	XXX
	-	XX	X	-	X	X	XX	XX	XX	XX	XXX	XX	-	-
	XX	XX	XX	-	XX	XXX	XX	X	XXX	XXX	XX	XXX	XXX	XXX
	XX	XX	-	-	-	-	XX	X	XXX	XXX	XXX	XXX	XXX	XXX
	X	XXX	-	-	-	-	XX	-	-	-	-	-	-	XX
	XX	XXX	XX	XXX	XX	XX	XX	X	XX	XXX	XXX	XXX	XXX	XXX
	XXX	XXX	XXX	XXX	XXX	XX?	XXX	XXX	XX	XXX	XX	XX	XXX	XXX

the colonial structures, form an impressive ruin complex with a great future potential to illustrate cultural encounters during the early years of colonisation. Other regions, such as Northern Ellesmere Island, also have spectacular remains from trading posts or expeditions. However, in most of the eastern Arctic, both colonisation and the establishment of missionary stations came later than in Greenland.

When comparing the maps of Canadian National parks and nearby Inuit and First Nations land rights, it looks as if the park boundaries often avoid native land. It is unclear whether this is intentional, to establish maximum protection for the inscribed nature and wildlife, whether the boundaries have been drawn to avoid complications of overlapping jurisdictions or other entanglements that may result from multiple ownership, or whether other technical, political, legal or historical reasons are involved. However, when it comes to the protection of cultural landscapes this situation is unfortunate, because local land use represents the human-nature interaction from which all cultural landscapes result.

Very few national parks (Gates of the Arctic in Alaska being an important exception) circumscribe existing permanent settlements. By including the thriving settlement of Sarfannguit in Aasivissuit – Nipisat, the living tradition of sustainable inshore fishing and hunting is supported by opportunities to include revenue generated by tourism in the incomes of the families of Sarfannguit. The preservation of skills and local knowledge held by the people living and operating in the nominated area is important for the interpretation of the archaeological heritage, and their daily application is essential to keeping alive the continuing cultural landscape of Aasivissuit – Nipisat. The presence of well-preserved dwellings remains, communal houses, hunting systems and landscape elements and of a living hunter and fisher community within the nominated area is unique.

The seasonal run of arctic char in Itinneq is renowned. Arctic char is an important temporally and geographically predictable resource that is available just at the right time and place when families are moving towards the interior to hunt caribou in the autumn. Today, the dried and smoked char meat is an excellent, but hard to obtain delicacy.

Photo: Jens Fog Jensen

3.3 Proposed Statement of Outstanding Universal Value

3.3.a Brief synthesis

The nominated cultural landscape lies at the heart of the largest ice-free area in Greenland which, in combination with the transitional coastal zone between the 'open water area' and the high-arctic area of land-fast winter ice, has made it exceptional as a hunting ground for people through millennia. This long history is visible in the landscape in the form of the many ruins and traces left by the Arctic people, including winter settlements with ruins of turf houses along the coast, inussuk (cairns) and trails leading from the coast to the caribou hunting camps and remarkable caribou drive systems in the interior. The area provides the most complete and best-preserved testimony of Arctic hunting traditions from 2500 BC onwards, providing evidence of sustainable land use, based on seasonal migrations between coast and interior. Colonial ruins on the coast reflect the arrival of Europeans in the 18th century and their interaction with Inuit.

Photo: Morten Meldgaard.

Fig. 3.16. To the east, the nominated property extends approximately 40 km on to the Greenland ice sheet. Models based on climate reconstructions suggest that, 4500 years ago, the Greenland ice sheet had retreated approximately to this position.

Today, hunters with families continue their seasonal travels, staying and hunting in the same places as their predecessors and thereby forging a link between past and present (Fig. 3.15).

3.3.b Justification for criteria

Criterion (iii) To bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared.

For millennia, peoples in Aasivissuit – Nipisat have exploited the locally available resources and have adapted their lifestyles and homes to the seasonal rhythm. Due to is geography and climatic conditions, this specific area offers several options for 'the good life'. Today, the area remains virtually unchanged. The long tradition of locally sustainable land use can be read more easily in landscape and culture than in many other places. The landscape, the camp sites and archaeological remains therefore have outstanding universal value (Fig. 3.16).

The area has the well-documented Paleo-Inuit site of Nipisat and hundreds of visible ruins from the Thule culture (c. AD 1250-1700) and the historical period (c. AD 1700-1900). Seven of the best preserved and most accessible of these localities have been selected as key sites for interpretation of the traditional housing and life in West Greenland. The settlement of Sarfannguit is an active community, where the fishing and hunting culture links the present sea and land use to the traditional sustainable nomadic hunting societies of the Thule, Dorset and Saqqaq cultures. Aasivissuit – Nipisat is therefore a 'continuing landscape' with significant material evidence of its evolution over time (Mitchell 2009).

Fig. 3.15. The great summer camp of Aasivissuit is a unique and well-preserved inland caribou hunting camp used for both communal mass hunts as well as by smaller groups of caribou hunters through millennia.

Photo: Laust Løgstrup.

Photo: Jens Fog Jensen.

Fig. 3.17. Thule culture winter house in Amitsukujooq, in the archipelago to the south of the outlet of Ikertooq Fjord. The fjords and archipelagos in the western part of the nominated area have numerous ruin sites from the historical, Thule and Paleo-Inuit epochs.

The seven sites are focal points for humans living off the land and the sea. The landscape settings, in combination with impressive archaeological remains, testify to the traditional land use in time and space throughout the nominated area, between the inland ice sheet and the open sea (Fig. 3.17).

Criterion (v) to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.

Ruins of dwellings, graves and hunting features are preserved in their original settings, where they testify to the traditional seasonal migrations and variation in hunting practices throughout the year, as has been the case since the arrival of the first people in c. 2500 BC. Winter settlements focusing on the hunting of seals are situated on the outer coast, spring settlements with fishing for capelin and char are situated in the fjords, and summer camps where migrating caribou could be intercepted in extensive drive systems are situated in the interior. The route from the winter settlements to the summer camps can be followed as an old well-trodden trail running eastwards from the head of Maligiaq Fjord. Along this ancient trail are summer camps with dwelling ruins as well as numer-

Photo: Jens Fog Jensen.

Fig. 3.18. Ruin of the colony of Nepisene on the island of Nipisat. The colony was burned down by Dutch whalers in 1725 and again in 1731. Shortly afterwards the site was taken over by Inuit who appear to have built communal houses in the abandoned colony.

ous inussuit (way-marker cairns), graves and caches conveying the story of abundance. Ruins of all the different house types are present in Aasivissuit – Nipisat, and the situation of these ancient monuments in their original settings makes them first class settings for conveying the history of hunter gatherer resilience in an arctic environment.

3.3.c Statement of integrity

The property contains all the elements necessary to express the outstanding universal value of the Inuit hunting landscape, including an exceptionally large number of ruin sites in the form of winter dwellings, graves, caches and the great summer camp of Aasivissuit, which in addition to dwelling structures hosts the largest communal hunting system known in Greenland, as well as temporary dwellings, hunting systems and inussuit. All the principal epochs, from the Saqqaq culture of 2400 BC, to Greenlandic Dorset, Thule, historical Inuit and colonial settlers are represented within the nominated area.

The property has an area of 417,800 ha and is therefore of an adequate size to ensure the complete representation of the features and processes that testify to its significance, and it does not suffer from the adverse effects of development or neglect. Together with the fact that there is just one landowner (Government of Greenland) and that any future industrial development in the area has been explicitly rejected, these factors have been crucial to nominating the property without a buffer zone.

3.3.d Statement of authenticity for properties nominated under criteria (i) to (vi)

Aasivissuit – Nipisat is situated in the part of Greenland where the post-glacial rebound is greatest (as explained in chapter 2.a.i). Consequently, more ruin sites here than anywhere else in Greenland and in many other parts of the Arctic can be anticipated to have avoided destruction by coastal erosion. This positive effect of the post-glacial rebound is particularly relevant for the earliest sites dating, from the Saqqaq (2400-500 BC) and Dorset (800 BC - AD 1) cultures, since these ancient camp sites have often become eroded or submerged in other parts of Greenland where coastal lands have been subject to a process of depression during the last 2000 years.

Since the prey species have remained the same for thousands of years, so have the locations of the settle-

ments. There may have been local changes with respect to which part of an island was preferred for settlement, but in general there has been reuse of good locations through millennia. Reuse is part of life in the Arctic and this is also evident on sites that span hundreds of years: Suitable stones from one structure may have been removed from their contexts to be reused in later structures at the same locality (Fig. 3.18).

3.3.e Requirements for protection and management

The nominated area is owned by Naalakkersuisut (Government of Greenland) and administered by Qeqqata Municipality. The nominated area, and all surrounding landscapes, are consequently administered by the same authorities. Currently an area in the easternmost part of the nominated area is protected as the southern part of the larger Ramsar area no. 386, Eqalummiut Nunaat and Nassuttuup Nunaa, extending northwards along the margin of the ice sheet beyond the area nominated as the Aasivissuit – Nipisat World Heritage Site.

The Greenland National Museum and Archives is the administrative authority for protected monuments, and the Ministry of Mineral Resources – which issues raw material licences – has agreed not to issue prospecting licences within the nominated World Heritage Site. Local stewardship for monitoring key localities and general status will be encouraged in the settlements of Sarfannguit and Kangerlussuaq. The legislative basis and organisation of the site management will ensure that developmental or economic challenges will not affect the property in any significant manner.

Specific long-term expectations

Natural, long-term threats to the archaeological sites are very limited. The impact of increased tourism may, on the other hand, have an effect if visitor numbers increase significantly. Increased traffic may result in degradation of vegetation and thereby erosion. Monitoring and infrastructure measures, such as repeat photography, visual inspection, marked paths and no-go zones, described in the management plan, will ensure that such processes remain under the full control of the authorities.

The continuing use of the land has the potential to degrade ruins and sites on a local scale, but monitoring

Photo: Jacob Svendesen.

Fig. 3.19. Roasting caribou steak during an autumn hunting trip to the interior. The situation of the living fisher-hunter settlement of Sarfannguit within the nominated area represents a unique continuation of traditional, sustainable land use.

and management will be implemented to reduce damage to historical resources in the vicinity of the camps used today. On a larger geographic scale, sustainable continuing land use by the citizens of Sarfannguit, Sisimiut and Kangerlussuaq keeps local knowledge alive and underpins the protection of the site against conflicting development (Figs 3.19, 3.20).

Photo: Johannes Müller.

Fig. 3.20. Throughout winter, travel by dog sledge is still a common means of transport for Greenlandic hunters, as well as for recreational purposes. Aasivissuit – Nipisat is situated near the southern limit for dog-sledge use, legally defined in West Greenland as 66°N.

In addition to house ruins, graves and caches, objects are also sometimes visible at the ancient settlements. Here, at the site of Innap Nuua, a whale mandible 'plank' with an axe-chopped hole for towing has been left in front of the house ruins seen in background. These objects are protected by law and should always be left in situ.

4. State of Conservation and factors affecting the Property

4.a Present state of conservation in the property

The archaeological sites and ruins in the property are generally protected by the natural vegetation cover, with no serious threats, although some natural degradation can be detected. The overall state of conservation of the sites is good (Fig. 4.1).

The settlement of Sarfannguit is gradually being modernised, while at the same time the inhabitants are maintaining fishing and hunting as their main sources of income. The layout of the settlement is authentic and small wooden houses are the primary house type (Fig. 4.2).

The scale of the settlement is in accordance with tradition. There is a local fishing industry and a local school with 21 pupils (2016) (Fig. 4.3).

Photo: Jens Fog Jensen.

Fig. 4.1. Ancient ruin from the Thule culture on Nipisat Island. The outline of the low, eroded turf walls is visible. The ruin is protected by law.

Photo: Jens Fog Jensen.

Fig. 4.3. Sarfannguit. The universal game of football being played in the yard of the local shop.

Fig. 4.2. Sarfannguit. The settlement is situated on the north side of a slope facing the fjord of Amerloq.

Photo: Jens Fog Jensen.

Photo: Jens Fog Jensen.

Photo: Jens Fog Jensen.

Fig. 4.4. Ruin in front of summerhouse on the island of Qaarusulik in the Aasivissuit – Nipisat archipelago.

Photo: Anne-Christine Løventoft-Jessen, 2016.

Fig. 4.5. Drying rack for cod, trout and salmon at a summerhouse, Qaarusulik. Structures like these are essential to the way of life of present-day Inuit, whether professional or hobby fishermen and hunters. Catching, preparing and eating the same food as everyone else for many generations establishes a strong link with nature and with the history of the family and the area.

Summerhouses are normally situated on the islands and along the coasts. The focus of the owners is almost always towards marine activities, which means that they seldom need more space than the footprint of the house and a few outdoor activities associated with fishing. Some houses are situated near protected sites and agreements will be made between the authorities and the owners about safeguarding the monuments, while not preventing the owners from undertaking their normal activities (Figs 4.4, 4.5).

4.b Factors affecting the property

There is an ambition to promote local, national and international interest in the area. This could lead to a desire for special developments that, in some situations, are likely to result in extra pressure on the landscape, fauna and heritage sites.

(i) Development pressures

Aasivissuit – Nipisat is only affected by development processes to a very limited degree, apart from those occurring locally in Sarfannguit. There are no licences for mineral exploitation and no plans for hydro-electric plants.

All major activities that may affect the protected sites and other protected localities can only be undertaken with the approval of the central authorities. All minor activities are governed by the municipal plan and its associated regulations.

Archaeological surveys and excavations

The Greenland National Museum and Archives will continue to survey the area. If excavations are to be undertaken, these will be conducted in accordance with museum guidelines regarding disruption and re-establishment of ancient monuments following scientific research.

General experience from surveying the wilderness in Greenland suggests that new sites and new information will turn up whenever a new survey is undertaken. In a cultural landscape like Aasivissuit – Nipisat

these surveys will often also involve cooperation with local users and interviews regarding fauna, ruins, nature, land use and place names.

The Greenland National Museum and Archives has conducted a study on the possible destructive effects of marine oil pollution on protected prehistoric sites on the shoreline (Mosbech et al. 2000).

Traffic and Infrastructure

Winter traffic. During winter, when the ground is frozen and covered by snow, dog sledging is permitted within the nominated area; the use of snowmobiles and ATVs is only permitted on 'official winter tracks'. There are two winter tracks between Sisimiut and Kangerlussuaq (Fig. 4.6).

Photo: Pipaluk Lykke Lægstrup.

Fig. 4.6. Dog sledge in hills north of Tasersuaq. During winter, the dog sledge is a unique means of transportation. It takes skill, experience and knowledge of the local nature. The materials used for the sledge have changed through the centuries, but the construction of the sledge has not.

These activities are considered not to be harmful to the cultural remains, due to the protection offered by the snow cover, and to have only a minimal effect on nature. Hunting in the wilderness area in winter is undertaken by means of dog sledges.

All-Year Traffic. Within the nominated area are two small, short dirt tracks. One, from Kangerlussuaq to the inland ice sheet, was established in 1999, when a test centre for cars was constructed on the ice sheet. The centre is now closed, and today the road is mainly used by tourist operators, who transport almost 10,000 people (tourists) a year in buses from Kangerlussuaq to the ice sheet and back (Fig. 4.7). The tourist operators offer special trips from Kangerlussuaq to the inland ice sheet, whereby tourists stay overnight in special camps near or on the ice sheet itself.

Photo: Hans Holt Poulsen.

Fig. 4.7. The dirt track between Kangerlussuaq and the inland ice sheet.

The other track connects the northern shore of Maligiaq via Itinneq to a small dammed lake north of the nominated area. It was built as a maintenance road in 2009, when the dams were constructed. Today, the road, or rather the path, is mainly used by hikers, hunters and scientists (Fig. 4.8).

A new 3-4 m wide and 130 km long dirt track is planned to connect Sisimiut and Kangerlussuaq.

Photo: Jens Fog Jensen.

Fig. 4.8. The 2009 track running northwards from Itinneq (Oles Lakseelv) to a small lake further north is no longer in use for vehicles, and the vegetation is now recovering. The original impact of the vehicles on the ground will be visible for years to come. The track is now part of the Arctic Circle Trail, a hiking route between Kangerlussuaq and Sisimiut.

Around 35 km will be within the nominated area and will take traffic through the lowland area between the lake Tasersuaq and Aasivissuit Tasiat (Fig. 4.9). From an area to be decided, small paths/dirt tracks will connect the road to possible landing sites on the two lakes: Tasersuaq and Aasivissuit Tasiat. The route of the road will take appropriate account of the landscape and the archaeological sites.

Prior to the establishment of road such as this, a both a Heritage Impact Assessment (HIA) and an Environmental Impact Assessment (EIA) will be undertaken as part of the EIA, possible effects on wildlife will also be evaluated. These assessments will also be guided by sustain-

Fig. 4.9. There is very little infrastructure in Aasivissuit – Nipisat and most parts of the area can only be reached on foot or by helicopter. Nomination of the site for inclusion on the Unesco World Heritage List also includes the planning of the infrastructure and visitor centres to accommodate increased numbers of visitors.

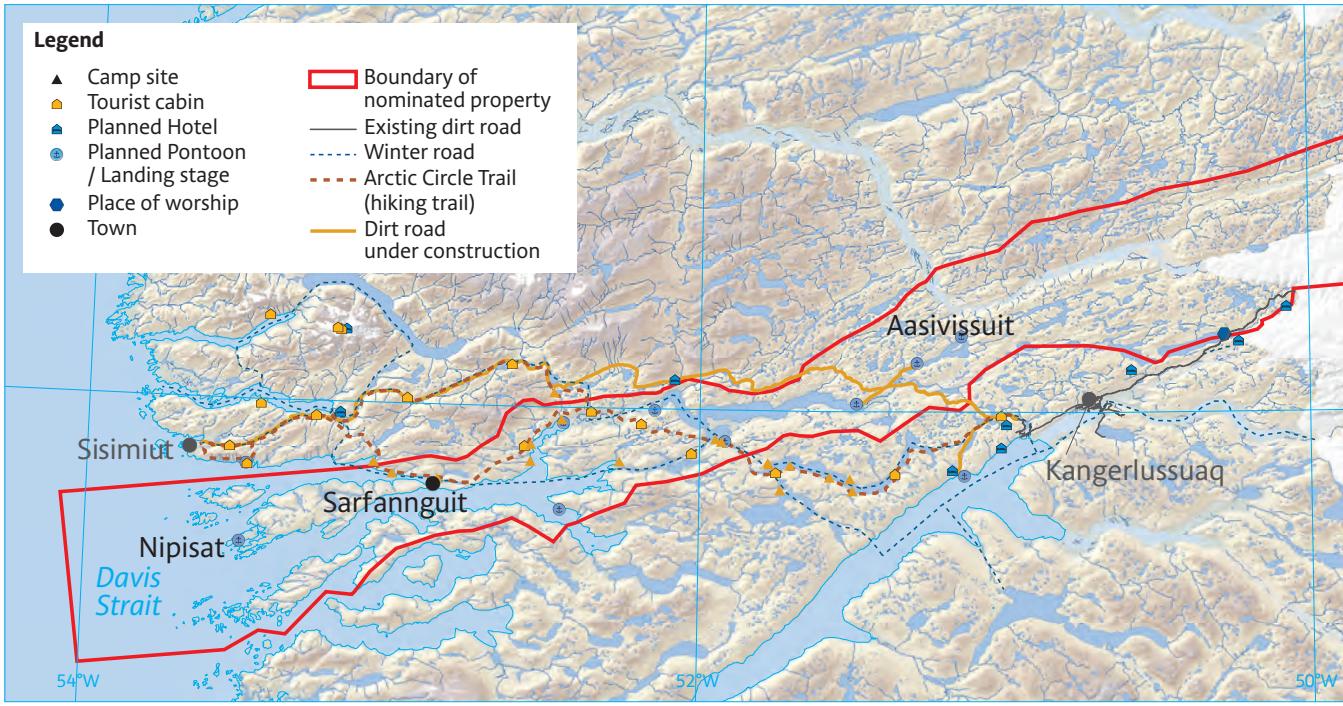


Fig. 4.10. Qeqqata Municipality has established a bridge for hikers near Itinneq Tupersuai in Itinneq across the river connecting Maligiaq Fjord and the lake Tasersuaq. Other bridges may be established in carefully selected places to help hikers cross the often dangerous, ice-cold rivers.

Photo: Jens Fog Jensen.

ability guidelines, as set up by the Steering Committee and Qeqqata Municipality (Figs 4.10, 4.11).

The road will provide easy access to spectacular sights and visitor facilities in the heart of the property. Such ease of access to the central part of the property may increase unauthorised traffic outside the road. This, and any other negative impacts, will be carefully monitored and controlled.

Further development initiatives may include the establishment of landing sites for boats, camping sites, rubbish bins, drying racks for fish etc.

Such initiatives will be carefully considered before permission is granted. Any such initiative at or close to protected sites must be approved by the Greenland

Fig. 4.11. Signpost to the bridge.

Photo: Ólafur Rafnar Ólafsson

Photo: Jens Fog Jensen, 2016.

Fig. 4.12. Midden layers on the island of Nipisat being examined to determine the thickness of the non-frozen layer of earth.

National Museum and Archives according to the Heritage Act.

Hunting and fishing activities are covered by current legal regulations and taking account of the ambition to maintain sustainability.

(ii) Environmental pressures

The main environmental pressures affecting the property are the effects of climate change, which are particularly noticeable in arctic areas. This applies in particular to erosion both by water and wind.

Degradation due to natural causes could be exacerbated by visitor impact, which may increase the effect of erosion, for example by removing vegetation. However, it can be concluded that the rate of degradation from natural causes is slow, apart from at sites that are particularly exposed to erosion.

Wind erosion

Drifting sand and blow-outs occasionally result in exposure and destruction of cultural layers. In the property, there are patchy occurrences of wind erosion on the Aasivissuit site and at the Saqqaq site of Tlingit (Meldgaard 1977). In general, the dry climate of the interior is anticipated to result in greater wind erosion in the eastern parts than in the western zone.

Climate change

Climate change towards wetter conditions, together with the winter cold, could accelerate the degradation of structural details in the form of cracked stones. Similarly, greater temperature differences can result in increased degradation of organic material in kitchen middens, not least because the upper limit of the local permafrost may be may migrate downwards. The position of the permafrost below the surface will be monitored at some locations (Figs 4.12, 4.13).

(iii) Natural disasters and risk preparedness

There is no known risk of destruction of the landscape or the cultural sites from any form of natural catastrophe.

- There is weak volcanic activity all over Greenland, with levels of 3-4 on the Richter scale.

- There can be a risk of water draining from lakes on and within the ices sheet, combined with massive melting of the surface of the ice sheet, leading to flooding of the Isortoq valley.

The volcanic activity is not considered a problem. The potential flooding is an irregular, but natural activity, which is considered to have no impact on the cultural landscape and the archaeological sites.

(iv) Responsible visitation at World Heritage Sites

In 2015, almost 10,000 visitors were taken in buses from Kangerlussuaq to the ice sheet along the existing dirt

Photo: Jens Fog Jensen, 2016.

Fig. 4.13. Extremely well-preserved bones from a Thule culture midden on the island of Nipisat. The fine preservation of bones such as these is enhanced by local permafrost. Climate change may reduce the permafrost. This will have a destructive impact on the archaeological remains. Breakdown and destruction of remains such as bones, which are an important source of information on past behaviour and resource exploitation, will be critical to the interpretation and understanding of past ways of life and resource exploitation.

road. These visitors are not considered to be a threat as they are accompanied by guides and they do not leave the track.

During summer, a total of about 1000 visitors go hiking in the area. These are not considered to pose any considerable threat. Most hikers depart from and return to Kangerlussuaq and most stay outside the nominated area or follow the dirt road to the ice sheet. Those who walk between Kangerlussuaq and Sisimiut generally follow the marked route: Arctic Circle Trail.

About 300 scientists work in the area, mainly in the summer in the eastern area of Aasivissuit – Nipisat and on the ice sheet. With World Heritage status, the number of visitors is expected to increase, but it is difficult to estimate reliable figures.

Tourism will be monitored and analyses of visitor behaviour will show whether regulatory initiatives are required at particularly vulnerable localities.

A set of general guidelines will be produced for behaviour in the area, with specific guidelines for selected ruin complexes. The establishment of attractive transport corridors, marked hiking routes and relevant signage will contribute to controlling visitor behaviour patterns.

Facilities such as camping sites, good access points to lakes, fords across rivers etc. and for refuse disposal will also be established.

All initiatives will take account of sustainability, which also means a high degree of involvement of local stakeholders and inhabitants.

(v) Number of inhabitants within the property

The present number of people living within the borders of the nominated area is limited to the inhabitants of the settlement of Sarfannguit: 113 (2016).

In autumn, the widespread dwarf birch scrub of the interior turns flaming red, the caribou are in prime condition and by late autumn their winter coat is fully developed. Caribou were therefore a source of many different raw materials: meat for food, skins for clothing, sinews for strings and cords and antler for tools.

Photo: Johannes Müller

A large well-preserved communal house in ruin group B at the site of Innap Nuua (see Box 7, page 54).

5. Protection and Management of the Property

The nominated area is protected and conserved by an established framework of national legislation and protective designations as well as by local planning policies. These arrangements are reinforced by a series of national legislative and local planning documents. These are listed and described in more detail in Annex 2, the Management Plan.

The management plan (Annex 2) was formulated by a working group, with participants from the Greenland National Museum and Archives, Qeqqata Municipality and the Government of Greenland. The management plan for the proposed World Heritage Site sets out agreed objectives for the site.

Photo: Ólafur Rafnar Ólafsson, 2016.

Fig. 5.1. Tourist cabin at Eqalugaarniarfik in Itinneq. The cabin was built, and is owned and operated, by Qeqqata Municipality.

5.a Ownership

There is no private ownership of land in Greenland, and therefore all land is owned by the Government of Greenland. Individuals and institutions can be entitled to use defined areas but without ownership. Land use is regulated through an established legal system (Fig. 5.1).

Ancient monuments

All ancient monuments predating AD 1900 are protected and under the administration of the Greenland National Museum and Archives (NKA), and cannot be subject to private ownership.

Buildings

Some buildings are privately owned and some are owned by the public sector.

Table 5.1 - Breakdown of the ownership of buildings in Sarfannguit

Sarfannguit: ownership of buildings and technical installations	Family house	Warehouses, shops and production buildings	Public institutions (church, school etc.)	Infrastructure (technical installations)	Abandoned buildings
Private	43				
Company	1	9		3	
Municipality	10	1	4	1	
Government of Greenland			3	9	2

Photo: Jens Fog Jensen.

5.b Protective designation

The nominated area is regulated by extensive legal restrictions, partly through national legislation and partly through municipal planning.

National and local regulation of the area:

- The Heritage Protection Act – Inatsisartut Act no. 11, 19 May 2010 on Cultural Heritage Protection and Conservation
- Executive Order on Cultural Heritage Protection, to come into force in 2017
- The Museum Act – Inatsisartut Act no. 8, 3 June 2015 on museum activities
- The Planning Act – Inatsisartut Act no. 17, 17 November 2010 on Planning and Land Use
- Inatsisartut Act no. 9, 22 November 2011 on Environmental Protection, revised in Inatsisartut Act no. 1, 29 May 2012
- Executive Order no. 12, 21 June 2016 on protection of Greenland's internationally appointed wetlands and protection of some species of water birds ('The Ramsar Executive Order')

In addition, other legislation exists with provisions that may influence activities in an area. These include, but are not limited to:

- Landsting Act no. 29, 18 December 2003 on Preservation of Natural Amenities
- Inatsisartut Act no. 1, 29 May 2012
- Landsting Act no. 12, 29 October 1999 on Catching and Hunting revised in Landsting Act no. 1, 16 May 2008
- Inatsisartut Act no. 7, 7 December 2009 on Mineral Resources and Mineral Resources Activities, revised in Inatsisartut Act no. 16, 3 June 2015.
- Inatsisartut Act no. 25, 18 December 2012 on Large-Scale Construction Projects, revised in Inatsisartut Act no. 13, 29 November 2013
- Landsting Act no. 20, 20 November 2006 on the Use of Biological Resources for Commercial and Research Purposes
- Inatsisartut Act no. 19, 3 December 2012 on Concessions for Tourist Business in Selected Areas
- Landsting Act no. 832, 18 December 1991 on Traffic Rules in Greenland, as proclaimed in Executive Order no. 995, 26 October, 2009

The Landsting was the official name of the Greenland Parliament from May 1979 until June 2009. Thereafter, Inatsisartut has been used as the official name of the Greenland Parliament.

The Heritage Protection Act

The introduction to the Heritage Protection Act identifies the aims of the legislation. It states that the act forms part of the national responsibility to protect historic assets as a cultural resource, as scientific source material and as an enduring basis for the perception, self-understanding, well-being and activities of present and future generations. The act also acknowledges that Greenland's cultural heritage is an important part of world history and of the history of humanity and that Greenland, through active protection of the cultural heritage in the form of designation (scheduling, listing) and other cultural heritage conservation management measures, plays its part in safeguarding the global cultural heritage.

The Heritage Protection Act also defines what is meant by the term historic assets, namely ancient monuments, historical buildings and historical areas.

Historical areas

Historical areas are defined as areas possessing an historical value. The sub-areas that are encompassed by, and collectively constitute, the nominated World Heritage Site possess an historical value and as such, under the terms of the Heritage Protection Act, can be considered as areas that can be protected with reference to the act.

An historical area can, under the terms of the Heritage Protection Act, be protected by scheduling (i.e. granting protection as a nationally important archaeological and/or historical site) or other cultural heritage conservation management measures, if the conservation or protection of this historical area is of major significance. The Greenland National Museum and Archives is responsible for making the decision, subject to prior notification and consultation.

Other cultural heritage conservation management means that no activities are permitted within the area that may disfigure or damage parts of the area or the area as a whole. The Greenland National Museum and Archives can grant exemption to this under very special circumstances.

The Government of Greenland can, on the recommendation of the Greenland National Museum and Archives, specify provisions with regard to the scheduling or other cultural heritage conservation management of historical areas.

The Greenland National Museum and Archives is also obliged to monitor historical areas that are subject to scheduling or other cultural heritage conservation management, and must also carry out maintenance of such areas within the constraints of the financial limits laid down in the national budget.

Photo: Anne-Christine Løventoft-Jessen, 2016.

Fig 5.2. Ancient inuit graves on Maniitsorsuaq, an island in the archipelago in the nominated area.

Ancient monuments

Ancient monuments are understood as the physical traces of past human activity and the context in which they occur.

Some ancient monuments are automatically protected under the act. This applies to all ancient monuments pre-dating AD 1900, including ruins, settlements, graves and burial grounds. Isolated graves from 1900 or after are also automatically protected (Fig. 5.2).

In addition to these automatically protected (scheduled) ancient monuments, the Greenland National Museum and Archives can, following consultation, make a decision on the scheduling of structures from 1900 or after, such as disused churchyards and cairns, the protection of which is of significant importance due to them having an historical value.

The Government of Greenland can, on the recommendation of the Greenland National Museum and Archives, specify provisions relating to the scheduling of ancient monuments, including the criteria relating to this protection.

Scheduling means that the protected ancient monuments may not be damaged, altered or moved, either totally or in part. No activities may take place within 2 m of ancient monuments and activities within 2–20 m are restricted to agricultural practices and the construction of paths leading to the ancient monuments. The Greenland National Museum and Archives can grant consent for other practices, such as the erection

of information boards, the installation of rubbish bins and the addition of similar equipment appropriate to public access to the ancient monuments. The scheduling must be respected by all rights of use holders for the area in which the ancient monument is located, regardless of when this right was established.

The Heritage Protection Act also contains provisions with respect to the protection of ancient monuments in conjunction with the physical planning process and preparations in advance of earthworks.

Historical buildings

Historical buildings are understood as entire buildings, building exteriors, individual building elements and the immediate surroundings of the building to the extent that these constitute a part of the entity worthy of conservation and protection. There are no listed buildings inside the nominated property.

Executive order on cultural heritage protection

The executive order on cultural heritage protection of the prehistoric and historical area Aasivissuit – Nipisat is presently being written, after which a public hearing will take place before it can be issued. The executive order defines the limits of the area, through a general description in the statutory instrument and a map with coordinates annexed to it. Further to this, the executive order contains provisions relating to access to the area as a whole and its use.

The provisions laid down in the statutory instrument are partly a repetition of the general provisions laid down in the Heritage Protection Act and partly a specification that access and use must be in accordance with the rules relating to scheduled ancient monuments and listed buildings and other cultural heritage conservation management of historical areas. Finally, it will be specified that access to and use of the historical area must take place in accordance with the management plan formulated for the area.

The executive order also includes provisions relating to management and monitoring. These specify that the Greenland National Museum and Archives, in consultation with the municipal council in Qeqqata Municipality, and based on the involvement of interested parties, is to formulate a management plan for the historical area and that this plan should be regularly updated. The executive order identifies, as a minimum, the aims of the management plan and what its contents should be. From this it is clear that the plan is a management tool employed by the managing authorities to ensure that the cultural heritage values of the nominated area are preserved and protected along with public access to the area and the area's continued use and development.

Finally, provisions are specified with respect to sanctions in the event of contravention of the executive order and guidelines are set out in pursuance of it.

The Museum Act

The Museum Act has the aim of safeguarding Greenland's material and immaterial cultural heritage and promoting the work and cooperation of the Greenlandic museum service. The act defines what is understood by, respectively, material and immaterial cultural heritage.

The museum service has, in accordance with the act, through recording, collection, conservation, research, development and communication, the task of safeguarding Greenland's cultural heritage and illuminating Greenlandic cultural and natural history, making collections accessible to the public and available for research and disseminating the results of this research.

The Greenland National Museum and Archives has national responsibility for the tasks incumbent upon the museum service. The act specifies more detailed rules relating to the museum's responsibilities with respect to recording, collecting, establishing and maintaining representative collections, historical research, communication etc. The Greenland Government can – upon suggestion from the Greenland Museums Board – approve that a local museum shall be in charge of all or

some of the obligations within a well-defined geographical area or area of cultural interest.

The Museum Act also specifies rules with respect to the protection of archaeological and/or historical remains. It defines what is understood by national cultural and natural remains. The act also specifies that the Greenland National Museum and Archives is permitted to classify artefacts that are not considered as national cultural or natural remains as being of particular value if these artefacts shed light on significant aspects of Greenland's cultural history.

National cultural and natural remains belong to the Government of Greenland, while classified artefacts belong to their owner.

The Museum Act also specifies rules regarding the duty to report the discovery or acquisition of remains from the past and how these remains should be treated, including storage and submission to the authorities. The act also specifies rules regarding the acquisition and export of artefacts.

The Planning Act

The Planning Act regulates land use in Greenland and is therefore of major relevance for the protection and development of a World Heritage Area.

The Planning Act has the aim of ensuring that land use takes place according to the interests of society as a whole. This aim is to be achieved by:

1) Protection of nature.
2) A socially appropriate ratio between open land (wilderness) and the built environment (human habitation).
3) Land use that, in planning terms, promotes commercially, socially and environmentally favourable development.
4) Involvement of the public in the planning of land use.
5) Harmonisation of points 1–4 in decisions made within the framework of physical and economic planning.

The responsibility for planning lies with the municipality, although the Government of Greenland is the regulatory authority and has the power to issue national planning directives or require the municipality to formulate a specific plan. Municipal planning will, in a number of cases, be bound by other legislative or administrative provisions in pursuance of this. Of particular relevance are the Heritage Protection Act and the Greenland Home Rule Executive Order no. 31 of 30 October 1991 regarding conservation and preservation in municipal planning.

Municipal plans are passed by the municipal council after at least six weeks of public consultation. The plans contain a primary structure and general provisions that can only be altered by the adoption of a new amendment to the municipal plan and detailed provisions to which the municipal council can grant exemption.

Designation of a UNESCO World Heritage Area can, in terms of the Planning Act, be a general provision on a municipal plan and be incorporated once nomination has taken place.

A characteristic aspect of planning in Greenland is that no one is permitted to own land. A specific right of use can be granted to an area, but it is not permitted to mortgage or sell this right of use, only whatever there may be in the form of real estate on the area. The right of use extends only as far as is necessary to accommodate the aim of an areal allocation. A situation can therefore arise where there are several holders of rights to the same area.

Areal allocations are not made for a demarcated area, but for the positioning of a building within a delimited building plot or as close as possible to a particular geographical position. Should someone wish for example to erect a fence around their house, this would require a separate areal allocation, regardless of whether or not the fence lies within the building plot. Areal allocation is only required in cases where an area is withdrawn from common usage for more than two

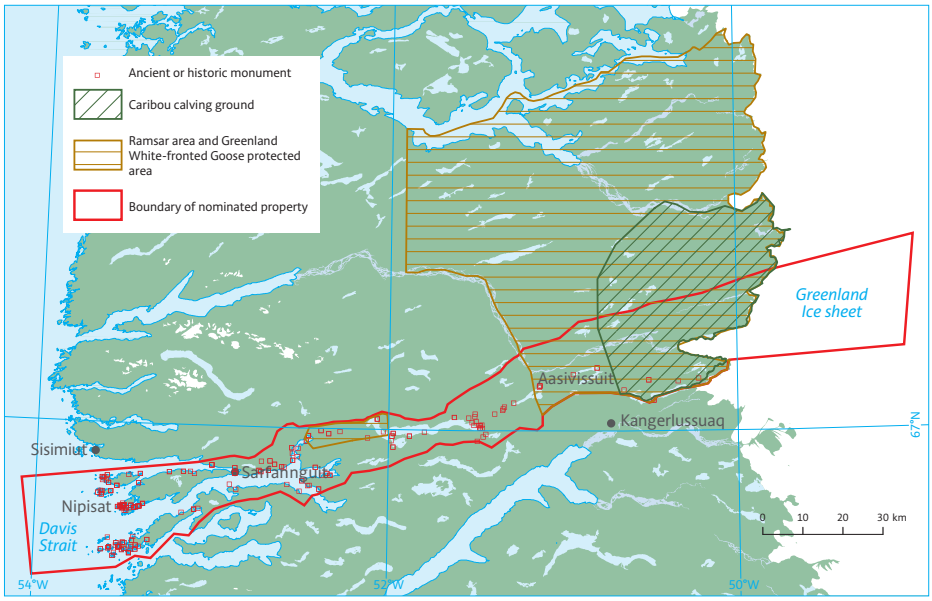


Fig. 5.3. The Ramsar area extends northwards from the Kangerlussuaq area to Nassuttooq (Nordre Strømfjord). The southern boundary of the Ramsar area coincides with the boundary of the nominated area.

months. A holiday cabin requires an areal allocation, while an anchor buoy beside the cabin does not.

The Environment Act

The Environment Act has the aim of protecting nature and the environment, so developments in society can take place on a sustainable basis with respect to human living conditions and conservation of the fauna and flora. The act aims to:

1) Prevent and combat pollution of air, water, ice, open land and soil.
2) Prevent and combat noise pollution.
3) Safeguard the population's health.
4) Provide a basis for planning and efforts to combat pollution.
5) Limit the use and waste of resources.
6) Promote recycling and limits problems with respect to the disposal of refuse.

Qeqqata Municipality applies the act to ensure that use of the open land taken place on an environmentally sustainable basis. An aim that is supported by the above legislation and planning initiatives.

The Executive Order on the Ramsar areas

The goal of the executive order is to protect Greenland's internationally appointed wetlands and to protect some species of water birds and to regulate the activities allowed in the area in order not to degrade conditions for the wildlife (Fig. 5.3).

A part of the Ramsar area no. 386, Eqalummiut Nunaat and Nassuttuup Nunaa, is also part of the nominated property. It is one of the most important areas in Greenland for the threatened goose species Anser albifrons flavirostris, with 3000 individuals (c. 6% of the world population, 2002), which gathers here to moult. Many species of breeding birds use the site. Part of it has been designated as a reserve for caribou, which calve in the area.

The area is protected each year from 15th May to 15th August. The breeding period is from 15th May to 1st June and the moulting period lasts until 15th August.

Other legislation

In addition to the acts mentioned above, there is further legislation and regulation relating for example to commercial activities, the environment and the fauna and flora. See Annex 2, the Management Plan chapter 6. For details regarding regulation of possible mining activities in adjacent areas with a possible effect on the nominated area see Management Plan, Ch. 8.6 on Mining.

5.c Means of implementing protective measures

The Government of Greenland has overall responsibility for the nominated area.

Qeqqata Municipality is the authority responsible for implementing local legislation. The Planning Act is the basic planning tool for Qeqqata Municipality, providing guidance for the local authorities and people in the area with respect to land use.

The Greenland National Museum and Archives is the national authority responsible for implementing legislation encompassed in the Heritage Protection Act and the Museum Act. The Greenland National Museum and Archives is presently formulating an action plan for ruin preservation.

These plans serve as the basic tools providing guidance for the local authorities and people in the area.

5.d Existing plans related to municipality and region in which the proposed property is located

The plans are further described in the Management Plan (Annex 2) .

The municipal plan constitutes the general planning strategy and provides guidelines for further planning via local plans. The plans are available in Greenlandic and Danish at: http://qeqqata.odeum.com

Planning the Future of Qeqqata Municipality

Since 2010, Qeqqata Municipality has been responsible for planning within the entire area of the municipality, including all settlements and the wilderness between them.

Table 5.2 - Existing plans related to municipality and region in which the nominated property is located

Agreed plan	Date of adoption	Agency responsible for preparation
Municipal Plan 2012-2024 for Qeqqata Municipality	May 2014	Qeqqata Municipality
Management Plan for the Kangerlussuaq area	June 2010	Qeqqata Municipality
National Tourism Strategy 2016-2020	2016	Ministry of Industry, Labour and Trade
Action Plan for Ruin Preservation (in prep.)	2017	Greenland National Museum and Archives

The strategy plan for the municipality defines visions and goals for development, thereby providing a framework aimed at developing a sustainable municipality by 2020 in the areas of environmental, educational and social responsibilities.

Since 2102, Qeqqata Municipality has worked on developing sustainable environmental solutions for urban centres in an arctic setting, involving a network of participants on a local, national and international level, in which Artek (the local department of the Danish Technical University) plays an important role.

Municipal plan

Since 2010, Qeqqata Municipality has been responsible for all planning within the entire municipality, including all settlements, areas for summerhouses,

Photo: Jens Fog Jensen, 2016.

Fig. 5.4. Private summerhouse at Ikerasaarsuk. The cabin has a drying shed for fish and meat situated in a windy spot. Behind the point is a sandy beach for landing.

Photo: Jens Fog Jensen, 2016.

Fig. 5.5. The boat is tied to a stone on the slope. There is a pontoon bridge on the beach for easier access. Ikerasaarsuk.

technical installations, wilderness, etc. In addition, there are planned areas for concessional trophy hunting, and along the coast of the fjords there are zones for summerhouses and locations for tourist huts along the Arctic Circle Trail (Figs 5.4, 5.5).

Local tourism

The municipal plan also includes a strategy outlining goals for developing tourism in accordance with the primary national goals for creating a balanced economy for Greenland. These can be summarised in the following statements:

- Ensure cultural features in the nominated area remain visible in order to promote a living history
- Establish easier access to the nominated area through construction of a dirt road between Kangerlussuaq and Sisimiut
- Promote and support increased tourism in the nominated area
- Protect natural assets in the open land
- Encourage and support sustainable hunting of animals
- Encourage recreational and occupational use of the open land
- Support sustainable fisheries and occupational hunting
- Maintain and promote opportunities for recreational hunting and fishing
- Encourage and support the sustainable use of game animals

Wilderness

The dominant zone within the nominated area is wilderness. This is defined as an area where there is more than 5 km to the nearest activity zone; trails are not considered a part of activity zones, but roads will be. In the wilderness, the primary activities are hunting and recreational pursuits associated with experiencing the landscape, fauna and flora. The 5 km zone around activity zones is referred to as a non-allocated area, but will be experienced as wilderness (Figs 5.6, 5.7).

Recreational zone

Along the road from Kangerlussuaq to the inland ice sheet there is a zone allocated for recreational use. This means that, following detailed planning, facilities for tourists and locals can be constructed in certain places. In the Ramsar area, and near Point 660 at the ice margin, permission has been given to build a group of 24 huts, where tourists can experience the ice sheet and its dynamic front, with calving ice etc.

Trophy hunting

New concessions for commercial trophy hunting are planned for specific areas around Kangerlussuaq. Three of these areas are situated within the nominated area. It is a condition that hunting within the nominated area

Fig. 5.6. In addition to the importance of local residents continuing to be able to use the nominated area for recreational purposes, it is also important to maintain extensive areas with an unhindered view and no 'disturbance' from modern objects in the line of sight. This means it will still be possible to experience the enormous space in which people lived in the past. View to the south from Nipisat.

Photo: Jens Fog Jensen, 2016.

Photo: Ólafur Rafnar Ólafsson, 2016.

Fig. 5.7. The unlimited view and the feeling of walking in an area unchanged since the first people arrived here, are elements of major importance in the outstanding universal value of the Aasivissuit – Nipisat cultural landscape. The gateway to the interior, with the river in Itinneq and the fjord of Maligiaq in the background.

must begin from a tent camp, not a permanent hut. Hunting periods are in autumn and winter.

Zones for summerhouses

The zones for summerhouses are located along the coasts of the fjords with easy access by boat. In some places it is possible to reach the summerhouses by snowmobile in winter. At present, there is approximately one summerhouse per km^2. They are normally small, modest houses that do not dominate the landscape (Figs 5.5, 5.8).

The settlement of Sarfannguit

Sarfannguit can only be reached by boat, or in winter by snowmobile. The settlement is situated, as a typical Greenlandic settlement, on north-sloping terrain, with narrow dirt roads, stairs and trails connecting the houses and the different functions in the settlement. (Fig. 5.9).

The settlement area is divided into zones for housing, a fish factory, communal use such as a shop, school, church and hall and technical installations such as an incineration plant, power supply, water supply and so on.

Infrastructure in the nominated area

The municipal council considers it important to establish a dirt road/ATV-track between Sisimiut and Kangerlussuaq, with a link to Sarfannguit. This will improve tourism and local traffic and make it easier to transport local products between Sisimiut/Sarfannguit and Kangerlussuaq and vice versa. It will cross the nominated area between the lake of Tasersuaq and Aasivissuit. A branch of the road will take visitors to the lake, where transport by boat can be arranged to Aasivissuit. There is another dirt road from Maligiaq, via Itinneq and Blind River, to a dam outside the nominated area (Fig. 4.9).

A EIA statement will ensure that construction of the dirt road from Sisimiut to Kangerlussuaq is undertaken in accordance with international standards with regard to protection of the environment. This describes all aspects of the possible influence on the natural environment. The EIA will be completed by autumn 2016 and the dirt road is expected to be constructed in 2017 (see also chapter 4.b (i)).

To make it safe for tourists and locals to visit the various key sites and experience the landscape, it is

planned to establish new landing stages with tidal regulation at marine sites and normal landing stages on the lakes.

Management plan for the Kangerlussuaq area

The management plan for the Kangerlussuaq area has been formulated jointly by the Government of Greenland, Sisimiut and Maniitsoq Municipalities (now combined to form Qeqqata Municipality), hunting organisations, tourism operators etc. A more detailed account of the Kangerlussuaq management plan is given in Annex 2. The aims are:

- To coordinate and regulate the various interests on the basis of an overall assessment
- To establish a long-term strategy that will ensure protection of nature, landscape and culture, and to ensure the development of activities such as hunting, tourism, fishing and other occupations
- To enhance the efficiency of public administration

The management plan for Kangerlussuaq stipulates that, in order to protect calving caribou, all human activities in part of the southern Ramsar area are prohibited from 11th April to 15th July (Fig. 5.3).

National Tourism Strategy 2016-2020

The National Tourism Strategy 2016-2020 has as its main focus on improving conditions for local and national tourist operators in order to reap the economic benefits of the expected increase in tourism.

It highlights the necessity of developing the infrastructure, with new airports, improved harbour and landing facilities, improved accessibility, increased hotel capacity and adventure tourism. It is intended to establish regional visitor centres as entry points for narratives on Greenland's unique and remarkable history. One of these centres is planned for Kangerlussuaq.

Action plan for ruin preservation

The action plan is being formulated by the Greenland National Museum and Archives as the institution responsible for all protected cultural structures and areas

Photo: Jens Fog Jensen, 2016.

Fig. 5.8. Smoking the catch is an old tradition. Qaarusulik.

Photo: Jens Fog Jensen, 2016.

Fig. 5.9. Sarfannguit.

Photo: Ólafur Rafnar Ólafsson, 2016.

Fig. 5.10. Bridges across rivers can be a useful way of attracting hikers, and of directing them to certain areas or away from others that require protection. Bridges may also provide very important help to hikers or rescue teams during bad weather conditions.

Photo: Visit Greenland.

Fig. 5.11. Tent camp near the ice sheet in the easternmost part of the nominated area. Easy access to the inland ice makes Kangerlussuaq a popular starting point for excursions to the ice sheet.

and in close cooperation with Qeqqata Municipality. The action plan includes ongoing mapping and documentation of all protected structures in the property. All ruins and other cultural elements predating AD 1900 are protected under the Heritage Protection Act, whether visible or not and scheduled/listed or not, and ongoing management of the nominated area includes monitoring by the Greenland National Museum and Archives and employment of a site manager and/or a park ranger to ensure that the law is respected, or enforced if contravened.

Cabin owners, and other people or organisations with ownership of structures or planned structures, must be supplied with the most recent and accurate plans/maps indicating the location of protected monuments and buildings and other areas containing cultural assets close to or within their area of interest (Fig. 5.12).

Ruins, middens, graves etc., especially those within the key sites, will be continually monitored and, where necessary, cleared of rubbish, vegetation etc. In most of the area, there is no need for intense management action in response to human or natural

threats, apart from careful planning and positioning of landing sites, trails, information stands etc.

Development of the infrastructure is carried out in close cooperation with the Greenland National Museum and Archives.

There are no plans actively to preserve ruined, but still standing, buildings. On the contrary, it is part of the value of the cultural landscape that fragile, man-made structures decay. These buildings will be recorded (Figs 5.13–5.15).

The development of the action plan is an ongoing process which was begun in 2016.

Photo: Jens Fog Jensen, 2016.

Fig 5.12. Summerhouses at Qaarusulik in the Aasivissuit – Nipisat archipelago are sometimes situated very close to ancient ruins. In cases like these, close cooperation between the site manager, the Greenland National Museum and the owner of the houses will be established.

5.e Property management plan or other management system

The nominated property Aasivissuit – Nipisat is managed within a framework of cooperation to achieve common standards of identification, recording, research, protection, management, monitoring, presentation and understanding of the heritage within the nominated area, in an interdisciplinary manner and within a sustainable structure.

The main goal of the management plan is to create and develop good practice in order to protect, preserve, monitor and promote the outstanding universal value of Aasivissuit – Nipisat.

The Agency for Culture and Palaces has, on behalf of the Danish realm, overall responsibility for the nominated World Heritage Area in relation to UNESCO and is consequently responsible for formal contacts with the latter organisation.

With regard to the state authorities, the Government of Greenland has overall responsibility for World Heritage Areas in Greenland. As Aasivissuit – Nipisat is nominated as a cultural landscape, the main responsibility lies with the Government of Greenland's Ministry of Culture, under whose remit cultural-historical assets fall.

Qeqqata Municipality has responsibility for activities in the local area.

Management plan

A Management Plan (Annex 2) has been prepared by Qeqqata Municipality in close collaboration with its consultants, the Ministry of Culture and the Greenland National Museum and Archives. Elements of the draft management plan were discussed with relevant parties during the process, and the inhabitants of Qeqqata Municipality have been informed about the work and have discussed it at public hearings.

The management plan has been drawn up as a general tool for use by the relevant administrative authorities to ensure a sound balance between conservation and development. The management plan provides a framework for the sustainable preservation of Aasivissuit – Nipisat.

Photo: Johannes Müller.

Fig. 5.13. The old deserted settlement of Saqqarliit in Avalleq Fjord. The only way to reach other populated areas or settlements from here was by boat. The distance to the nearest settlement, Sarfannguit, is c. 20 km.

Photo: Johannes Müller.

Fig. 5.14. The old houses in Saqqarliit are slowly falling apart. It will be considered whether it is possible to maintain one of the houses, with a poster exhibition inside about the settlement, its history and the Aasivissuit – Nipisat heritage area. Saqqarliit has a special history in a remarkable landscape and could be a new and attractive spot for tourist operators. Recording of the settlement is included in the action plan.

Photo: Jens Fog Jensen, 2016.

Management principles of the nominated property

- To monitor the maintenance of the outstanding universal values and the implementation of the management principles
- To establish common principles and guidelines for effective management of the property
- To build capacity for management of the property through cooperation and networking
- To promote Aasivissuit – Nipisat as a common heritage by improving public knowledge and accessibility
- To involve and motivate local organisations, individuals and other stakeholders to participate in the safeguarding of cultural and natural values
- To implement principles of sustainability in future human activities within the nominated area.

Steering committee

Once the management plan has been adopted, a steering committee will be established that will make decisions regarding the structure of the management system, its goals and procedures.

The steering committee shall have the following ten members:

- Qeqqata Municipality shall nominate four representatives:
  - One from the central municipal administration (Chair)
  - One from each of the settlement administrations in Sarfannguit and Kangerlussuaq
  - One from Sisimiut and Kangerlussuaq Museum
- The Danish Agency for Culture and Palaces shall nominate one representative
- The Government of Greenland shall nominate four representatives, one each from:
  - Ministry of Education, Culture, Research and Church
  - Ministry of Fisheries and Hunting
  - Ministry of Independence, Nature, Environment and Agriculture
  - Ministry of Industry, Labour, Trade and Energy
- The Greenland National Museum and Archive shall appoint one representative for the cultural heritage in general.

The steering committee shall consider, among other things, the following:

- The implementation of the principles of sustainability in activities in the area
- General guidelines for activities at sea, on land and in the air
- How business, recreational, tourism and research activities can take place in the area, with due consideration of its status as a World Heritage Site.
- The overall framework for regular reporting to UNESCO
- Evaluation and updating of the management plan
- Evaluation and updating of the monitoring plan
- Various initiatives in the World Heritage Area that can optimise the area's assets
- How such initiatives can be financed
- The site manager's reports.

Site management

A site management function will be established in Qeqqata Municipality with responsibility for all daily activities within the area, marketing, information and reporting and as a secretariat for the steering committee.

The site manager will be based in the Office of Sustainability in Qeqqata Municipality, to run the management organisation. Park rangers may be hired. The site manager will be employed by and refer to Qeqqata Municipality.

5.f Sources and levels of finance

There are economic and other resources from the Government of Greenland, Qeqqata Municipality, the Danish Agency for Culture and Palaces and various

Fig. 5.15. The only house standing in Saqqaq was built by a private individual after the settlement was abandoned. It is used as a summerhouse and hunting cabin.

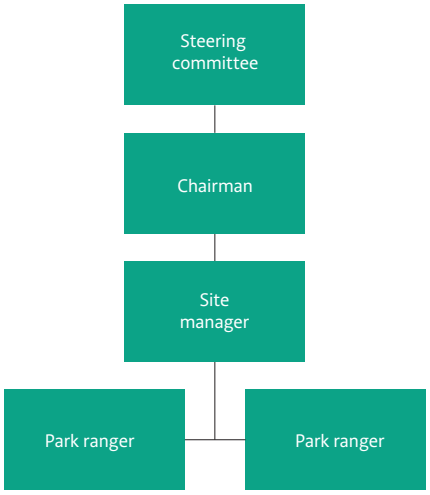


Table 5.3 - Sources and levels of finance

Task	Timeframe	Responsible	Economy
Mapping and surveys protected sites	2017-	NKA	Part of salary, foundation grants
Launch of preliminary monitoring plan – collection of baseline data	2017-18	QK & Site manager Greenland National Museum	Salaries
Formulation of detailed monitoring plan	2018 (immediately after inscription on the World Heritage List)	QK Site manager	Part of salary
Cleaning of dump in Sarfannguit	2016-17	QK	200.000 DKK
Collecting iron scrap	2016-17	QK	200.000 DKK
Improving waste management in the nominated area, particularly along the Arctic Circle Trail and dirt road	2018-19	QK	500.000 DKK
Marking and establishment of cabin on the Arctic Circle Trail in vicinity of Sarfannguit	2018-19	QK	500.000 DKK
Establishing access road to Lake Aasivissuit and other accessibility measures to the Aasivissuit area	2019-20	QK	2.000.000 DKK
Establishing landing place and accessibility measures at Nipisat	2019-20	QK	500.000 DKK
Temporary information material in Sarfannguit, Kangerlussuaq and Sisimiut	2017-18	QK, Site manager, Sisimiut and Kangerlussuaq museum, NKA	200.000 DKK
Info boards at key sites	2019-20	QK NKA	200.000 DKK
Visitor centre	2020->	Steering committee	Foundation grants

QK = Qeqqata Municipality

foundations etc. which constitute the financial framework for the future management of the nominated property, including the preservation and optimisation of its values. Consideration is also being given to the introduction of admission charges for tourists wishing to visit the ruin areas, and possibly specific taxes associated with visits.

The financial framework for the preservation and management of the nominated World Heritage Site is modest in comparison with other Nordic World Heritage Sites, as the income of the municipality and the Government of Greenland is founded on a relatively small population base and the block grant from Denmark, with inter-municipal compensation.

Funding is, to some extent, allocated to the conservation of the cultural heritage. Each year, the Government of Greenland funds a variety of conservation-related activities, such as archaeological excavations and preservation measures for historical monuments, and some of these activities can also take place in the nominated World Heritage Site.

Furthermore, the Government of Greenland and other agencies also fund initiatives to promote tourism. On an annual basis, Qeqqata Municipality allocates funds to improving and promoting conditions for business development (such as tourism), but it also subsidises land administration, including the protection of the cultural heritage. In the future, these funds will also be used to support the World Heritage Site (Table 5.3).

In addition to the sources of finance mentioned above, further possible sources of income will be considered, such as admission fees from tourists and/or tourism operators.

Table 5.4 - Visitor facilities and infrastructure

Location	Locality	Present facilities	Further initiatives	Responsible
Cloce to but outside the nominated area	Sisimiut Kangerlussuaq	Museums with exhibitions, souvenirs, rest rooms	Info boards	QK
			Development of information and communication material	NKA / SM QK
			Home page	NKA / SM QK
			Heritage Site App	NKA / SM QK
	Undecided		Visitor centre	Steering committee

Table 5.5 - Suggested new means of access and initiatives at relevant sites in the nominated area

Locality (in the nominated area)	Present means of access	New initiatives for access	Campsites, information etc.
Several places			Establishing camping sites
Nipisat (many cultures)	Boat	Tidal landing stage Ramps on land	Info-board and shelter, benches, binoculars, toilet
Itinnerup tupersuai (Inuit summer camp)	Hiking, dog sledge	Marked route	Information board
Sarfannguit (active settlement)	Boat and road via Arctic Circle Trail		Camping site, info-board, exhibition, B&B, toilets
Saqqarliit (deserted settlement)	Boat, hiking	Marked route	Camping site, info-board, toilet
Maligiaq (start of hunters' trail to the caribou hunting area)	Boat, hiking, dog sledge	Landing site for boat	Camping site, Info-board, toilet
Aasivissuit (caribou drive and Inuit summer camp)	Boat, hiking, snowmobile, dog sledge	Ramps	Info-board, view-points (platforms with binoculars)
Aasivissuit Tasiat	Dirt road, hiking, snowmobile, dog sledge	Landing sites for canoes and kayaks	Camping site, info-board, booklets, cabin, canoes, kayaks, toilet
Pt. 660, ice sheet view and access point	Dirt road, hiking, bus, bike, snow-mobile, dog sledge		Info-board and shelter, camping site, toilet
Aavitsup tasia/Langesø (caribou calving area)	Dirt road, hiking, bus, bike, snow-mobile, dog sledge		Info-board, binoculars
Through the area	Snowmobile, dog sledge	New dirt road	Info-board, viewpoints, toilets,
Cabin area at the inland ice sheet	Bus, hiking		Cabins, kitchen, toilet, rubbish bins

5.g Sources of expertise and training in conservation and management techniques

Archaeological expertise with respect to the ruins and historical buildings is mainly based at the Greenland National Museum and Archives and Sisimiut Museum.

Expert knowledge within the fields of archaeology, construction and nature management are based on previous and continuing investigations by Greenlandic, Danish and international experts from museums and research institutions with a tradition of academic cooperation. This means that there are qualified experts at the authorities' disposal in all subjects, although only few of these at present locally.

5.h Visitor facilities and infrastructure

The main gateways to the nominated area are the international airport in Kangerlussuaq, the harbour in Kangerlussuaq (cruise ships) and the regional airport in Sisimiut. From Sisimiut and Kangerlussuaq, it is possible today to visit the nominated area by bus (by a small, short dirt road between Kangerlussuaq and the ice sheet), by hiking and by ski, snow scooter and dog sledge in the wintertime. All parts of the fjords and the archipelago are easily accessible by boat in summer, but good harbours and anchoring spots for tourist boats are few.

Photo: Qeqata Municipality 2015

Fig. 5.16. Tourists waiting for sight-seeing buses during a short stop-over and transfer in Kangerlussuaq. Large groups of tourists often arrive and depart with chartered airplanes from and to international destinations. In Kangerlussuaq, they board a cruise ship which will take them north or south along the Greenland west coast.

Many tourists arriving by air from Europe and Iceland make a short stopover (a few hours or one to two days) in Kangerlussuaq to visit the area between Kangerlussuaq and the inland ice sheet (Fig. 5.16).

Private companies in Kangerlussuaq offer a number of visitor services, such as accommodation, information, guided tours, sight-seeing by bus or small airplane, trophy hunting, equipment hire etc. (Table 5.4).

It should be noted that the cultural landscape, the ice sheet and the wildlife are also attractive during wintertime and consequently the continued use of the traditional dog sledge is an important aspect in terms of transmitting information about the past as well as maintaining a sustainable way of transportation for 'access'.

In the nominated property it is possible to stay overnight in private tents and cabins owned by the municipality.

5.i Policies and programmes related to the presentation and promotion of the properties

In the Municipal Plan 2011, Qeqqata Municipality has set out the following objectives for the tourism sector in relation to the nominated World Heritage Area: Qeqqata Municipality will

- promote tourism as a commercial activity, perceived in relation to the municipality as a whole
- promote tourism through a common branding of the unique experiences offered by the region, for example Inuit history, the Greenland ice sheet, and driving dog sledges
- advance the tourism concept with local food-product development in combination with tourism.

Presentation of the nominated area

The cultural history of the nominated area is on display at Sisimiut/Kangerlussuaq Museum and Maniitsoq Museum (Fig. 5. 17).

Sisimiut/Kangerlussuaq Museum is an authorised cultural-historical museum under Qeqqata Municipality, with exhibitions in Sisimiut and Kangerlussuaq.
The Sisimiut department comprises a permanent special exhibition about the Saqqaq settlement at Nipisat with a fine collection of archaeological artefacts. In addition, there are exhibitions on Inuit hunting equipment, means of transport and housing, including 100-year-old models of winter houses and summer tents, together with reconstructions of these two forms of accommodation. In the Kangerlussuaq department there is an exhibition about Kangerlussuaq as an American military base and a poster exhibition on the archaeology of the area. At Sisimiut Airport, there is a special exhibition about the Saqqaq settlement at Asummiut, a Saqqaq-culture settlement close to the airport.

Maniitsoq Museum is an authorised cultural-historical museum under Qeqqata Municipality, with exhibitions in Maniitsoq and Kangaamiut. In Maniitsoq there is a permanent exhibition about caribou hunting and Aasivissuit.

Photo: Anne-Christine Løventoft-Jessen 2015.

Fig. 5.17. Sisimiut Museum is beautifully situated in the old part of Sisimiut. The old buildings house the administration, storage facilities and exhibitions. An old whale jaw bone forms the gateway to the museum area, as a testimony to the old way of life.

At Kangerlussuaq Airport, existing buildings will be used to communicate information about the area. Later, after inscription on the World Heritage List, it is possible that a large visitor centre will be established here. More extensive and detailed information and interpretation about the nominated area will be provided in Sarfannguit, Kangerlussuaq and Sisimiut. Guided tours will be offered by private tourist operators. With regard to further initiatives (Table 5.6). Digital information dissemination via apps and other media will also be considered.

Communication and media initiatives

A website will be hosted by Qeqqata Municipality providing all kinds of information on the nominated area, tourist facilities and educational material (Table 5.6). Timetable for information initiatives assuming that Aasivissuit – Nipisat becomes inscribed as a UNESCO World Heritage Site in 2018 (Table 5.7).

Citizen involvement

Qeqqata Municipality has established a group dedicated to working with citizen involvement during the process of nominating Aasivissuit – Nipisat as an UNESCO World Heritage Site. Since 2011, the group has arranged exhibitions, public meetings, workshops, interviews, meetings with stakeholders and lectures in an effort to involve citizens in the project. Communication has been through a dedicated Facebook page and local media.

Following a local council meeting in 2010, several public meetings held in Sarfannguit, Kangerlussuaq and Sisimiut. In January 2016, a meeting were held at the old people's home in Sisimiut, as well as a large public workshop and exhibition in Sisimiut Cultural Centre. Here, local people gave lectures about life in the abandoned settlements and the application group gave lectures about the history, wildlife and tourism in Aasivissuit – Nipisat. In June and October 2016, similar workshops were held in Kangerlussuaq and Sarfannguit. Here, discussions focused on tourism, in particular on the development of sustainable tourism in Aasivissuit – Nipisat. Throughout the three workshops, group discussions established an exchange of knowledge between the local users of the nominated property and the application group.

In addition, people have been encouraged to send in name suggestions for the nominated property as well as their own photographs. Drawing competitions for children have also been held. Video interviews with hunters and elderly people have been conducted and a small documentary film has been produced. All arrangements have been well attended and reception of the project has been very positive. The application group has benefitted from the dialogue with local users, in particular hunters and tourist operators (Figs 5.18–5.27).

Table 5.6 - Communication and media initiatives

Mobile media	Apps for use in the nominated area and museums must be developed.
Printed media	Pamphlets with maps, routes etc., publications on the World Heritage Area in major languages, educational material etc.
Events	Cultural festivals according to a regular schedule.
Guided tours	Increased number of guided trips (boat trips, walks etc.).
Film, TV, Radio	Information film about the nominated area for public and commercial purposes.
Info boards	Information boards at selected sites in the park.
Exhibits	Exhibitions about the nominated area at museums, airports etc.

Table 5.7 - Timetable

	2018	2019	2020-2024	2025-2030
Website	x			
Apps		x		
Info-boards / binoculars	x	x	x	
Film		x		
Exhibitions		x	x	
Viewpoints by new road				x
Educational material			x	
Brochures, maps, pamphlets	x	x		

5.j Staffing levels and expertise (professional, technical, maintenance)

The Greenland National Museum and Archives has the relevant expertise. Furthermore, professional skills are available at many different institutions in Greenland, with respect to the management of natural resources, education of local guides, promotion of the nominated area etc., plus the site manager and park ranger.

Figs 5.18-5.27 - Citizen involvement

Fig. 5.18. Many inhabitants turned up in Sarfannguit to hear about the nomination of Aasivissuit – Nipisat.

Fig. 5.19. Adam Lyberth, a local tour operator in Kangerlussuaq, talks about his experiences with tourism.

Fig. 5.20. The inhabitants of Sarfannguit are very eager to welcome more tourists and share their local knowledge of the place.

Fig. 5.21. Mayor Hermann Berthelsen talks to the people of Sarfannguit about the possibilities and consequences associated with living in an UNESCO World Heritage Site.

Fig. 5.22. People in Sisimiut have a lot of stories to tell about the nominated property and are curious to know more about its history.

Fig. 5.23.. Exchanging knowledge in Sisimiut. What are the place names and do we hunt in the same places as our ancestors?

Fig. 5.24. The workshop in Sisimiut in January 2016 was well attended.

Fig. 5.25. A portable exhibition which has been displayed in Sarfannguit, Kangerlussuaq and Sisimiut.

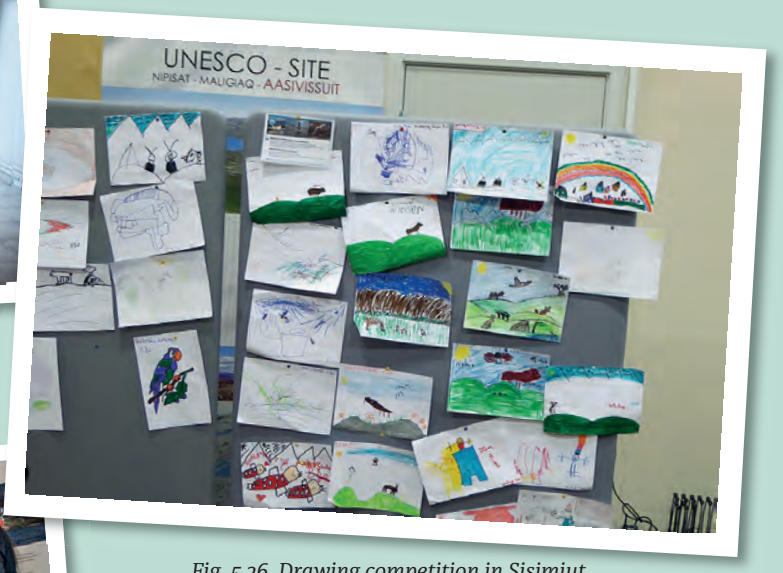


Fig. 5.26. Drawing competition in Sisimiut in January 2016.

Fig. 5.27 The lucky winners of the drawing competition in Kangerlussuaq.

Reactions from local citizens in Sisimiut, Sarfannguit and Kangerlussuaq

Hans Peter Kreutzmann
Electrician, Sisimiut

My name is Hans Peter Kreutzmann and I'm an electrician.

I like to go hunting in my spare time. My paternal grandmother was called Gerda Kreutzmann and her father was David Olsen. He used to be the manager of the trading station in Sarfannguit. David had a major influence on the development of the settlement. He was known as Daaversuaq, Big David. David, Daaversuaq, was good at his job as trading station manager in Sarfannguit and sent various goods and produce abroad. It's probably well known that, in the past, people preserved grouse, salmon and arctic char.

My father went caribou hunting by dog sledge in winter, when the caribou population was high. And the caribou population peaked in the 1970s, when the animals came very close to the town. I first began to go hunting at Saqqarliit. I mostly go caribou hunting at the end of September. Before we set off on a caribou hunt, we usually plan and prepare various things, like organising the gear and provisions. There are usually four boats, and last time there were five of us hunters.

We leave Sisimiut and sail in towards Sarfannguit, past Assaqutaq, Amerloq, Narsaq, Utoqqaat, the narrow route in towards Sarfannguit. We spend the night in Sarfannguit and sail on next day at high tide past Ikertooq, in towards Itinneq and arrive at the camping site. When we reach our destination, we usually secure the boats we are not taking up the river with us, and we can spend hours sailing up the river. The water level in the river has been very low in recent years, and this means you have to be very careful when you sail. We usually use rope and motor to get there quicker. It is not so easy every time to sail through the lake and up the river, the weather can be difficult, but it usually goes all right. The reason I choose to go into the head of Ole's Lakseelv (Itinneq) is because my father taught me to go hunting in the interior, and he taught me how to sail up the river. It has become a tradition, and now I can manage it myself. When we come to Tasersuaq, we sail in until we reach the place where we want to go hunting. I've also been here by dog sledge, because all of this is a hunting area.

When we are out hunting, we spread out and use communications gear. We always shoot animals in the daytime, and on average we take four to five animals a day. Sometimes we have to walk a long way to shoot animals. In a week, we shot 15 animals. We all like going hunting, and especially in Tasersuaq. It's good for body and soul to be out and about gathering winter provisions. We usually meet other hunters, either at the head of the lake or in the southern part of the area. After a week, we sail back by the same route. We usually spend the night in the Orperalak area and continue the next morning and sail out towards the mouth of Ole's Lakseelv at high tide. We load all the meat and provisions and sail on homeward.

> **"I'm pleased about the proposal that it should be made into a UNESCO World Heritage Site, because this area has meant a great deal to us. The area is one of the reasons that my ancestors were able to survive.**

Bodil Olsen
Sisimiut

My name is Bodil Olsen, I am 36 years old, and I come from Sisimiut. My ancestors on my father's side are from Uummannaarsuk, near Sisimiut, and those of my mother's side are from Qerrortusoq. I became interested when I read the announcement in the local paper about a competition to find a name for the Sisimiut hinterland, - I suggested the name 'Nuna ataqqisaq Sisimiut kangia' (The respectful eastern part of the Sisimiut hinterland). It appeared as images in my head as I thought about it. Almost every year, my family and I go on holiday to Uummannaarsuk. I respect my parents and I want my children to respect their ancestors too.

Anna Karen Thomassen Hofmann
Pre-school teacher, Kangerlussuaq

My name is Anna Karen Thomassen Hofmann, but people usually call me Kuka.

I've always been interested in hunting, actually ever since I was a child, when I went on hunting trips with my family to Kangerlussuaq for a month in summer. I moved to Kangerlussuaq when I was 18 years old, and have gone caribou hunting ever since, and hunting has become a natural part of my life.

My motivation for hunting comes from my parents – they had to obtain food from nature through most of the summer by gathering winter provisions in order to survive, and even though I've not known all my ancestors, it seems natural to continue their lifestyle, partly to honour them but also because only a few of us in the family go hunting now. The caribou and musk ox meat that I get is cut up in many different ways; some is hung up to dry and benefits the family throughout the winter.

I usually choose various hunting places in Kangerlussuaq, and before I decide where to go hunting, I usually find out where the tourist hikers and scientists are. The reason I keep away from the places where there are many people is that they can scare the animals very far away so that I end up walking a very long way without shooting anything.

I usually go off alone and experience many things on my hunting trips, but sometimes I also take my children hunting. My husband and I are both very keen hunters, but we have to take it in turns as we can't leave our children of seven and eight years of age alone for a whole weekend. The children have also become interested in hunting, and I usually go off hunting with my eldest daughter.

I don't go hunting just for fun; when I set off it is important to think about which animals it would be appropriate to shoot. So it is important that I don't shoot one that is too big, I must judge whether I can manage to carry a heavy animal because I don't shoot animals that I can't take home with me.

The family's great passion is also going grouse hunting in winter.

> **"So I'm also very pleased to hear that the area will become a UNESCO World Heritage Site, and I support the proposal 100%.**

Laasa Jonathansen
Sarfannguit

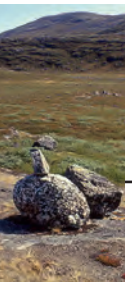
My name is Laasa Jonathansen and I was born in 1941 at Saqqarliit, near Sisimiut. I lived in Saqqarliit until I was about 15 years old, when I moved to the settlement of Sarfannguaq, near Sisimiut, to work in the Royal Greenland Trading Department. When we lived in Saqqarliit there were lots of fish and sea animals all year round. In autumn, we went caribou hunting in the area, and we shot many caribou. That's the way we've always lived – my parents too – grandparents and ancestors. So I'm also very pleased to hear that the area will become a UNESCO World Heritage Site, and I support the proposal 100%.

Magdaline Lennert
Sisimiut

My name is Magdaline Lennert (née Berthelsen) and I was born in 1943 in Uummannaarsuk. I lived in Uummannaarsuk until I was 15 years old. After my 15th birthday, I moved to Sisimiut to make my own way. When we were children in Uummannaarsuk, all the men were either fishers or hunters – and all the young men were brought up to be fishers or hunters. Even then there were a lot of fishing boats in the settlement – so there were lots to do and everyone was busy. Throughout my childhood, my family and I went hunting in the area in Sisimiut's hinterland and therefore I'm pleased about the proposal that it should be made into a UNESCO World Heritage Site, because this area has meant a great deal to us. The area is one of the reasons that my ancestors were able to survive.

Musk-ox hunting in winter. Winter hunting of musk ox has become common in recent decades, when stocks have increased.

Photo: Johannes Müller.



6 Monitoring

Photo: Jens Fog Jensen, 2016.

Fig. 6.1. The Greenland National Museum and Archives owns a small research vessel for surveys and transport during fieldwork, whenever the museum is involved in fieldwork. Boat trips on the fjords and walking in the interior are important with respect to all parties involved in the management of the site, the nature and the monuments. During boat surveys it is possible to invite local users, informants, elders, children etc. to join in and to share knowledge of the area. Here, a survey is being carried out of a Thule culture communal house on Arajutsisut.

6.a Key indicators for measuring state of conservation

The monitoring plan has been formulated with the intention of being able to follow the status and development of the nominated area with respect to the values that constitute the outstanding universal value.

A number of key localities with different qualities have been selected on the basis of their special cultural-historical and/or communication-related assets.

Regular monitoring of the nominated property, and the activities going on within it, is essential for good management. The monitoring programme will have the following goals:

- to document status and any changes in the values of the area specified in the inscription
- to establish baseline data
- to provide data for action if unwanted changes are documented
- to provide data for reports to UNESCO and other relevant partners

Fig. 6.2. A flat stone has been removed recently at the doorway to the colonial warehouse on Nipisat Island. Stones are seldom taken very far away, but are reused in the vicinity. When the structure is recorded in detail, it should be possible to relocate this particular stone in the area, as the impression left by it is quite distinct.

Photo: Jens Fog Jensen, 2016.

Figs 6.3-6.12 - Types of key sites


Fig. 6.3.
Photo: Jens Fog Jensen, 2016.


Fig. 6.4.
Photo: Ólafur Rafnar Ólafsson, 2016.


Fig. 6.6.
Photo: Jens Fog Jensen, 2016.


Fig. 6.7.
Photo: Jens Fog Jensen, 2016.


Fig. 6.8.
Photo: Jens Fog Jensen, 2016.


Fig. 6.10.
Photo: Clemens Pasda, 2003.


Fig. 6.11.
Photo: Jens Fog Jensen, 2016.

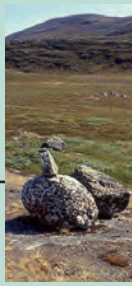


Fig. 6.5.

Fig. 6.9.

Fig. 6.12.

Fig. 6.3. Old turf house (communal house) with walls built of stone and turf. Such sites are vulnerable as natural forces may cause the walls to collapse. Nuungimiut.

Fig. 6.4. Part of house wall built of stone, turf and a piece of a whalebone at the lower left, see Fig. 6.5.

Fig. 6.5. Part of wall built of stone and whalebone.

Fig. 6.6. Perma-frozen cultural layers have been located in several places on the islands, and these sites will be monitored. Nipisat.

Fig 6.7. Coastal erosion of an old turf house, probably built using whalebones as a substitute for driftwood. Whalebones can be seen in the exposed section of this eroded house on Qaarusulik.

Fig. 6.8. New technology will be used in mapping, surveying and recording sites and areas. Curator Mikkel Myrup, Greenland National Museum and Archives, is setting up a drone for survey work.

Fig. 6.9. Inuit graves are often built as a heap of stones piled on top of a chamber. In many cases they are situated with a magnificent view of the surroundings: the old hunting grounds. Many graves have been opened and some have also been robbed of their contents. This lack of respect is unfortunately difficult to prevent in such a huge area. Opened grave on Nipisat.

Fig 6.10. Cairns in the interior. These cairns are very discrete and the story they tell of prehistoric land use will be hidden and forgotten if new cairns are built by visitors to the area.

Fig. 6.11. Although erosion does not seem to be a major problem within the nominated area, it will be important to establish points of reference in order to monitor factors such as solifluction and the extent of local beaches. At this site on Arajutsisut, parts of the old middens and turf houses are slowly sliding down on to the beach.

Fig. 6.12. Erosion of old sites may occur due to wave activity as seen at this site. The narrow cove on Nuummiut, with old turf houses at its head, amplifies the effect of the waves, thereby putting the monuments at further risk. Large pieces of this unstable front may also be torn out during winter, when the earth is partially frozen.

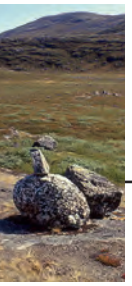


Photo: Jens Fog Jensen, 2016.

Fig. 6.13. Arctic fox may pose a problem at some protected monuments. Here, foxes have dug into the subsoil inside the colonial warehouse at Nipisat. The archaeologist is looking for evidence of whether tools or debitage from the Stone Age period on Nipisat might have been 'excavated' by the foxes. No such evidence was found on this occasion.

The nominated area is too large to monitor on an annual basis; focus will therefore be on regular visits to the key sites which represent all kinds of known structures from prehistory and historical times and situated in a variety of local micro-environments. The special monitoring elements for the different key sites must be site-specific, but some will also be of a more general nature (Figs 6.1–6.13).

Local citizens will be encouraged to take part in the work, and means will be developed to allow tourists also to make reports.

Monitoring of human activities must be undertaken in order to facilitate the development of tourism products and to be able to counteract possible negative effects on nature, cultural monuments or the relationship between the local population and tourists. This monitoring must be undertaken in close cooperation with all tourist operators on an annual basis (Table 6.1-6.3).

Aids and accessories

The Nordic EU project, "Building Shared Knowledge Capital to Support Natural Resource Governance in the Northern Periphery (BuSK)" has the participation of Finland, Sweden, Norway, Iceland, the Faroe Islands, Greenland and Ireland. The main participants from Greenland are the Greenland Institute of Natural Resources and Qeqqata Municipality, with a large number of associated partners.

Table 6.1 - List of key sites

Place name	No.	Area	Surroundings	FM no.	NKAH
Aasivissuit	1	Interior	Grassland	67V2-III-006	2845
Itinnerup tupersuai	2	Itinneq	Valley, fjord	66V1-00I-017	2618
Saqqarliit	3	Avalleq	Coastal, fjord	66V1-00I-013	2609
Sarfannguit	4	Sarfannguaq	Marine, fjord	66V1-00I-023	2629
Arajutsisut	5	Maniitsorsuaq	Marine, island	66V1-0IV-042	285
Inap nuua	6	Sallersua	Marine, island	66V1-0IV-028	2703
Nipisat	7	with Saqqaq site, colonial warehouse	Marine, island	66V1-0IV-035	307
		Paleo-Inuit, Thule		66V1-0IV-090	324
		Thule, graves		66V1-0IV-091	276
		Thule, grave field			5527
		Colonial house, Inuit turf houses			5526
		Thule, communal house			5534

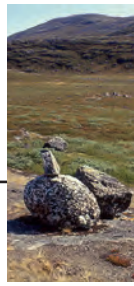


Table 6.2 - Key issues for measuring the state of conservation of the cultural landscape and heritage sites

Focus	Indicator	Method	Evaluation	Frequency	Responsible
Key sites	Number of sites and ruins	Visual inspection and recording	Comparison of data with earlier reports	Every four years	NKA, park ranger
Ruin preservation	Qualitative assessment of the state of a site/ruin	Visual documentation, digital survey etc.	Comparison of site/ruin preservation with previous archival imagery; restoration of ruins if necessary	Every four years	NKA, park ranger (site manager)
Site visibility and presentation	Is the site/ruin clearly visible and accessible?	Visual inspection; removal of vegetation and other obstacles that may impair view/impression of site/ruin	Assessment of the individual sites/ruins to ensure their unimpaired visibility and accessibility	Every four years	NKA, park ranger (site manager)
Cultural landscape	Preservation and state of the cultural landscape Potential conflicts between cultural heritage and tourism, industrial activities etc.	Visual inspection of sites to ensure that the cultural landscape does not degrade Local people (park rangers, fishers, hunters, tourism operators etc.) and visitors are encouraged to report conflicts as they arise Potential conflicts should be resolved through negotiation, restoration of ruins/ sites, better marking and information, or enforcement of existing legislation	Qualitative comparison with previous records on the state and preservation of the cultural landscape Communication with local partners to ensure that heritage site protection and environmental legislation is observed	Every four years Continually	NKA, park ranger lokal partners and citizens NKA, park rangers, site manager, Greenland Institute of Natural Resources Steering committee
Number of privately owned buildings	Is Sarfannguit developing or declining?	Information in public offices	Compare with previous years for trends in the data	Every four years	Qeqqata Municipality
Number of municipally owned buildings	Is Sarfannguit developing or declining?	Information in public offices	Compare with previous years for trends in the data	Every four years	Qeqqata Municipality
Number of buildings owned by business companies	Is Sarfannguit developing or declining?	Information in public offices	Compare with previous years for trends in the data	Every four years	Qeqqata Municipality
Number of summerhouses	Is the number of summerhouses at an acceptable level?	Information in public offices	Compare with previous years for trends in the data	Every year	Qeqqata Municipality
Nature and environment	Climate records Erosion from increased tourism Climate change	Climate data for the area must be collected Monitoring programme for vegetation/erosion at sites with many tourists Monitor level of permafrost at 1-2 cultural sites (middens)	Long-term data are important for monitoring the site and for the interpretation of changes in vegetation, permafrost, river runs etc.	Every four years	Qeqqata Municipality Department of Nature and Environment
Evaluation of the populations of the main animal species	Presence of larger animals like caribou and musk ox Presence of Greenland goose	Visual information	Information will be forwarded to relevant institutions		Park rangers, Greenland Institute of Natural Resources
Development of tourism	Number of visitors at the site Number of overnight stays in facilities in or close to the property Other indicative numbers of visitors to the site Experience of locals with tourists (letters, interviews); experience of visitors with the property (interviews)	Collection of data from relevant persons and companies	Evaluation of impact compared to the number of visitors	Every year	Qeqqata Municipality, Arctic Business Circle, Statistics Greenland
The development of mineral exploration licenses and mineral extraction in neighboring areas	Number of licenses and their location	Ongoing inventory of any license within 30 km from the boundary	Assessment of the potential impact of the nominated area	Ongoing	Qeqqata Municipality Steering Committee

NKA = Greenland National Museum and Archives.

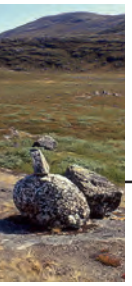


Table 6.3 - Monitering indicators at sites

Indicator	Periodicity	Location of records
Decay of turf walls	Every four years	Greenland National Museum
Depth in cm to permafrost	Every four years	Greenland National Museum
Untouched stones in structures like tent rings or walls (removed stones)	Every four years	Greenland National Museum
Untouched graves (signs of disrespect)	Every two years	Greenland National Museum
Status of selected cairns in caribou drive, Aasivissuit	Every two years	Greenland National Museum
Erosion of vegetation (tourists, animals, wind)	Every four years	Site manager, park ranger
Coastal erosion	Every four years	Greenland National Museum

These indicators will be employed at different sites/ruins. At some ruins more than one indicator will be used; at others only one. Visits, visual inspection by non-professionals, repeat photography, data.

The aims of the project include the involvement of electronic tools such as apps for smart phones etc. in the work of managing the nominated area and gathering and communicating information.

The project is being undertaken in conjunction with the Government of Greenland and local users with the aim of developing an app that can make it easier to monitor the use of, and thereby the impact upon, an area. It will also support the gathering of data with respect to hunters' stories and hunting places and be part of the communication of locally-relevant stories to visitors. It is expected that the project can also be developed to involve school children via an iPad project, as all pupils have been given an iPad for use in their education.

The project will support the involvement of local citizens and visitors in the management of the nominated area. The first version is expected to be ready for trials in spring 2017. The EU project ends in 2019. In 2012-17, a project, 'Pisuna', is being undertaken in South Greenland aimed at incorporating local knowledge from fishers and hunters in the monitoring of natural resources in a collaboration between the Greenland Institute of Natural resources and representatives from the relevant ministries in the Government of Greenland. Experience from this project with also be used in the development of the app solutions.

6.b Administrative arrangements for monitoring the property

The following institutions will be involved in monitoring the nominated property:

Qeqqata Municipality
P.O. Box 1014,
Makkorsip Aqq. 2,
DK-3911 Sisimiut, Greenland
Tel: (+299) 702100; Fax: (+299) 702177
E-mail: qeqqata@qeqqata.gl

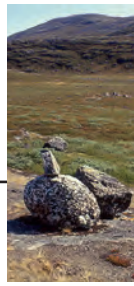
Ministry of Independence, Nature, Environment and Agriculture
Imaneq 1A – 801,
P.O. Box 1614,
DK-3900 Nuuk, Greenland
Tel: (+299) 345000; Fax: (+299) 345410
E-mail: pann@nanoq.gl

Ministry of Fisheries and Hunting
Imaneq 1A 701,
P.O. Box 269,
DK-3900 Nuuk, Greenland
Tel: (+299) 34 50 00; Fax: (+299) 346355

Greenland National Museum and Archives
Hans Egedesvej 8,
P.O. Box 145,
DK-3900 Nuuk, Greenland
E-mail: nka@natmus.gl

Sisimiut and Kangerlussuaq Museum
Jukkorsuup aqq. 6,
P.O. Box 308,
DK-3911 Sisimiut, Greenland
E-mail: sismus@qeqqata.gl

Ministry of Education, Culture, Research and Church. Government of Greenland
P.O. Box 1029,
DK-3900 Nuuk, Greenland
E-mail: ikiin@nanoq.gl



Greenland Institute of Natural Resources
P.O. Box 570,
DK-3900 Nuuk, Greenland
E-mail: info@natur.gl

6.c Results of previous reporting exercises

Mention can be made of the fact that as early as 10th April 1937 (with effect from 1st January 1938), the Danish colonial authorities published a list of cultural-historical localities in Greenland recommended for scheduling by the Danish National Museum. One of these localities was Nipisat in the nominated area. It appears, however, that this did not lead to other actions aimed at securing these assets and neither was the scheduling continued in subsequent Danish legislation.

The comprehensive multidisciplinary report, 'Holsteinborg rapporten' (Haarløv et al. 1980), on natural and cultural assets in what was at that time Sisimiut Municipality, underlined the many assets in the nominated area, but resulted in no actual consequences with respect to preservation of the cultural landscape. The report does, however, constitute important background documentation for the present nomination.

All reports on ruins submitted to museums in Greenland and Denmark have, over time, been collated at the Danish National Museum, where they have been classified, archived and subsequently transferred to a scheduling/listing archive and the Greenland National Museum and Archives in connection with the introduction of the Government of Greenland. All ruins predating AD 1900 are automatically protected, regardless of whether or not they are recorded or are visible on the surface.

Conditions in the Ramsar areas are monitored by the Greenland Institute of Natural Resources and reports are sent to the international Ramsar organisation (http://www.ramsar.org).

Greenland wildlife of economic importance is monitored by the Greenland Institute of Natural Resources. All data from surveys of these animals are published. The latest assessments of the caribou population have been used in the present nomination. (Cuyler et al. 2012).

Photo: Jens Fog Jensen, 2016.

Fig. 6.14. Stone set graves are found in the vicinity of most winter settlements. The graves are very vulnurable to stone lifting and disturbance, and should always be left untouched.

Ruin 10 on the site Arajutsisut is a heavily eroded communal house, where only the rear wall is preserved

7. Documentation

7.a Photographs and audio-visual image inventory and authorisation form

Cover & Summary							
ID. no.	**Format (slide/ print/ video)**	**Caption**	**Date of photo (no/yr)**	**Photographer/ Director of the video**	**Copyright owner (if different from photographer /director of video)**	**Contact details of copyright owner (name, address, tel/fax, and e-mail)**	**Non-ex-clusive cession of rights**
Page 2	digital		n.d.	Destination Arctic Circle		1	No
Page 6	digital		08 2012	Kristian Kreutzmann		2	No
Page 9	digital		07 2016	Jens Fog Jensen		3	Yes
Page 15	digital		07 2016	Jens Fog Jensen		3	Yes
Page 19 top	digital		07 2006	Visit Greenland		22	No
Page 19 bottom	digital		07 2006	Visit Greenland		22	No
Page 22	digital		08 2012	Kristian Kreutzmann		2	No
Page 22	digital		08 2012	Kristian Kreutzmann		2	No
Page 23	digital		08 2012	Kristian Kreutzmann		2	No
Page 23	digital		08 2012	Kristian Kreutzmann		2	No
Page 23	digital		08 2015	Niels Berthellsen		26	No
Page 23	digital		08 2015	Agnete Berthelsen		25	No
Page 24	digital	Fig. 2.1	07 2016	Jens Fog Jensen		3	Yes
Page 25	digital	Fig. 2.2	07 2016	Laust Løgstrup	Qeqqata Kommunia	4	Yes
Page 27	digital	Fig. 2.3	10 2014	Johannes Müller		5	No
Page 29	positive	fig. 2.6	1978	Bjarne Grønnow		6	No
Page 31	positive	Fig. 2.8.		Henning Thing		7	No
Page 32	positive	Fig. 2.9.		Henning Thing		7	No
Page 34	positive	Fig. 2.9.		David Anthony Fox		8	No
Page 34	positive	Fig. 2.10.		Henning Thing		7	No
Page 34	positive	Fig. 2.11.		Henning Thing		7	No
Page 34	positive	Fig. 2.12.		Henning Thing		7	No
Page 34	positive	Fig. 2.13.		Henning Thing		7	No
Page 35	digital	Fig. 2.14	14.07 2016	Jens Fog Jensen		3	Yes
Page 40	digital	Fig. 2.18	07 2016	Jens Fog Jensen		3	Yes
page 41	positive	Fig. 2.20	1994	Stig Grummesgaard Nielsen	Sisimiut and Kangerlussuaq Museum	9	Yes
Page 40	digital	Fig. 2.21		Preben Delholm		10	No
Page 46	digital		07 2016	Jens Fog Jensen		3	Yes
Page 48 left	digital	Box 4	07 2016	Anne-Christine Løventoft-Jessen		3	Yes
Page 48 right	digital	Box 4	07 2016	Jens Fog Jensen		19	Yes
Page 49	digital	Fig. 2.26	2016	John Lee		11	No
Page 49	digital	Fig. 2.27	2016	John Lee		11	No
Page 49	digital	Fig. 2.28	2016	John Lee		11	No
Page 49	digital	Fig. 2.29	2016	John Lee		11	No
Page 56	digital	Fig. 2.34	07 2016	Jens Fog Jensen		3	Yes
Page 57	digital	Fig. 2.35	07 2012	Laust Løgstrup	Qeqqata Kommunia	4	Yes
Page 60	positive	Fig. 2.37	1978	Henning Thing		7	No
Page 61	positive	Fig. 2.38		Henning Thing		7	No
Page 61	positive	Fig. 2.39	1978	Bjarne Grønnow		6	No
Page 62	positive	Fig. 2.40	1990	Jens Fog Jensen		3	Yes
Page 64	positive	Fig. 2.42	1978	Bjarne Grønnow		6	No
Page 67	positive	Fig. 2.46	1978	Morten Meldgaard		12	Yes
Page 68	digital	Fig. 2.48	07 2016	Jens Fog Jensen		3	Yes
Page 69	digital	Fig. 2.49	07 2016	Jens Fog Jensen		3	Yes
page 70	digital	Fig. 2.50	07 2016	Jens Fog Jensen		3	Yes
Page 74	digital		1936	Jette Bang	Danish Arctic Institute	13	No
Page 75	positive	Fig. 2.51	1956	Helge Larsen	Danish Arctic Institute	13	No
Page 75	positive	Fig. 2.51	1956	Helge Larsen	Danish Arctic Institute	13	No
Page 75	positive	Fig. 2.51	1956	Helge Larsen	Danish Arctic Institute	13	No
Page 78	positive	Fig. 2.54	1954-1959		Danish Arctic Institute	13	No
Page 78	digital	Fig. 2.55	07 2016	Jens Fog Jensen		3	Yes
Page 79	digital	Fig. 2.56	07 2016	Jens Fog Jensen		3	Yes
Page 80	digital		07 2016	Jens Fog Jensen		3	Yes
Page 82	positive	Fig. 2.59	1978	Henning Thing		7	No
Page 83	digital	Fig. 2.60	07 2016	Jens Fog Jensen		3	No
Page 85	digital	Fig. 2.62.	07 2007		Visit Greenland	22	No
Page 85	digital	Fig. 2.63	07 2016	Jens Fog Jensen		3	Yes
Page 86 -87	digital		10 2016	Ólafur Rafnar Ólafsson		14	Yes

Photo: Jens Fog Jensen, 2016.

ID. no.	Format (slide/ print/ video)	Caption	Date of photo (no/yr)	Photographer/ Director of the video	Copyright owner (if different from photographer /director of video)	Contact details of copyright owner (name, address, tel/fax, and e-mail)	Non-exclusive cession of rights
Page 88	digital	Fig. 3.1	07 2016	Ólafur Rafnar Ólafsson		14	Yes
Page 89	digital	Fig. 3.2	07 2016	Ólafur Rafnar Ólafsson		14	Yes
Page 90 -91	digital	Fig. 3.3	07 2016	Jens Fog Jensen		3	Yes
Page 92	digital		07 2016	Jens Fog Jensen		3	Yes
Page 93	digital	Fig. 3.4	07 2016	Jens Fog Jensen		3	Yes
Page 96	digital	Fig. 3.5a	07 2016	Jens Fog Jensen		3	Yes
Page 97	digital	Fig. 3.5b	07 2016	Jens Fog Jensen		3	Yes
Page 104	digital	Fig. 3.8		Claus Andreasen		15	Yes
Page 105	digital	Fig. 3.9		Claus Andreasen		15	Yes
Page 108	digital	Fig. 3.11		Sylvie LeBlanc		16	No
Page 112	digital	Fig. 3.13		Jack Brink		17	No
Page 115	digital	Fig. 3.14		Jeff Rasic		18	No
Page 120 -121	digital		07 2016	Jens Fog Jensen		3	Yes
Page 122	digital	Fig. 3.16		Laust Løgstrup		4	Yes
Page 123	digital	Fig. 3.17		Morten Meldgaard		12	Yes
Page 124	digital	Fig. 3.18	07 2016	Jens Fog Jensen		3	Yes
Page 125	digital	Fig. 3.19	07 2016	Jens Fog Jensen		3	Yes
Page 127	digital	Fig. 3.20	07 2016	Jacob Svendsen		22	No
Page 128 -29	digital	Fig. 3.21	03 2015	Johannes Müller		5	No
Page 130	digital		07 2016	Jens Fog Jensen		3	Yes
Page 131	digital	Fig. 4.1	07 2016	Jens Fog Jensen		3	Yes
Page 131	digital	Fig. 4.2	07 2016	Jens Fog Jensen		3	Yes
Page 131	digital	Fig. 4.3	07 2016	Jens Fog Jensen		3	Yes
Page 132	digital	Fig. 4.4	07 2016	Jens Fog Jensen		3	Yes
Page 132	digital	Fig. 4.5		Anne-Christine Løventoft-Jessen		19	Yes
Page 133	digital	Fig. 4.6		Pipaluk Lykke Løgstrup		20	No
Page 133	digital	Fig. 4.7		Hans Holt Poulsen		21	Yes
Page 134	digital	Fig. 4.8	07 2016	Jens Fog Jensen		3	Yes
Page 135	digital	Fig. 4.10	07 2016	Jens Fog Jensen		3	Yes
Page 135	digital	Fig. 4.11		Ólafur Rafnar Ólafsson		14	Yes
Page 136	digital	Fig. 4.12	07 2016	Jens Fog Jensen		3	Yes
Page 137	digital	Fig. 4.11	07 2016	Jens Fog Jensen		3	Yes
Page 138 -139	digital			Johannes Müller		5	No
Page 140	digital		07 2016	Jens Fog Jensen		3	Yes
Page 141	digital	Fig. 5.1	07 2016	Jens Fog Jensen		3	Yes
Page 143	digital	Fig. 5.2		Anne-Christine Løventoft-Jessen		19	Yes
Page 147	digital	Fig. 5.4	07 2016	Jens Fog Jensen		3	Yes
Page 148	digital	Fig. 5.5	07 2016	Jens Fog Jensen		3	Yes
Page 149	digital	Fig. 5.6	07 2016	Jens Fog Jensen		3	Yes
Page 150	digital	Fig. 5.7		Ólafur Rafnar Ólafsson		14	Yes
Page 151	digital	Fig. 5.8	07 2016	Jens Fog Jensen		3	Yes
Page 151	digital	Fig. 5.9	07 2016	Jens Fog Jensen		3	Yes
Page 151	digital	Fig. 5.10		Ólafur Rafnar Ólafsson		14	Yes
Page 152	digital	Fig. 5.11		Visit Greenland		22	No
Page 153	digital	Fig. 5.12	07 2016	Jens Fog Jensen		3	Yes
Page 154	digital	Fig. 5.13		Johannes Müller		5	No
Page 153	digital	Fig. 5.14		Johannes Müller		5	No
Page 153	digital	Fig. 5.15	07 2016	Jens Fog Jensen		3	Yes
Page 157	digital	Fig. 5.16		Qeqqata Municipality		4	Yes
Page 158	digital	Fig. 5.17		Anne-Christine Løventoft-Jessen		19	Yes
Page 160	digital	Fig. 5.18		Qeqqata Municipality		4	Yes
Page 160	digital	Fig. 5.19		Qeqqata Municipality		4	Yes
Page 160	digital	Fig. 5.20		Qeqqata Municipality		4	Yes
Page 160	digital	Fig. 5.21		Qeqqata Municipality		4	Yes
Page 160	digital	Fig. 5.22		Qeqqata Municipality		4	Yes
Page 161	digital	Fig. 5.23		Qeqqata Municipality		4	Yes
Page 161	digital	Fig. 5.24		Qeqqata Municipality		4	Yes
Page 161	digital	Fig. 5.25		Qeqqata Municipality		4	Yes
Page 161	digital	Fig. 5.26		Qeqqata Municipality		12	Yes
Page 161	digital	Fig. 5.27		Qeqqata Municipality		4	Yes
Page 164 - 165	digital			Johannes Müller		5	No
Page 166	digital	Fig. 6.1	07 2016	Jens Fog Jensen		3	Yes

ID. no.	Format (slide/ print/ video)	Caption	Date of photo (no/yr)	Photographer/ Director of the video /director of video) tel/fax, and e-mail)	Copyright owner (if different from photographer (name, address,	Contact details of copyright owner rights	Non-ex-clusive cession of
Page 167	digital	Fig. 6.2	07 2016	Jens Fog Jensen		3	Yes
Page 168	digital	Fig. 6.3		Jens Fog Jensen		3	Yes
Page 168	digital	Fig. 6.4		Ólafur Rafnar Ólafsson		14	Yes
Page 168	digital	Fig. 6.6	07 2016	Jens Fog Jensen		3	Yes
Page 168	digital	Fig. 6.7	07 2016	jens Fog Jensen		3	Yes
Page 168	digital	Fig. 6.8	07 2016	Jens Fog Jensen		3	Yes
Page 168	digital	Fig. 6.10		Clemens Pasda		23	No
Page 168	digital	Fig. 6.11	07 2016	Jens Fog Jensen		3	Yes
Page 169	digital	Fig. 6.5		Ólafur Rafnar Ólafsson		14	Yes
Page 169	digital	Fig. 6.9	07 2016	Jens Fog Jensen		3	Yes
Page 169	digital	Fig. 6.12	07 2016	Jens Fog Jensen		3	Yes
Page 170	digital	Fig. 6.13	07 2016	Jens Fog Jensen		3	Yes
Page 173	digital	Fig. 6.14	07 2016	Jens Fog Jensen		3	Yes
Page 174	digital		07 2016	Jens Fog Jensen		3	Yes
Page 179	digital		09 2016	Paneeraq Olsen		4	No
Page 186	digital		07 2016	Jens Fog Jensen		3	Yes
Page 188	digital		07 2016	Jens Fog Jensen		3	Yes

Contact details

1. **Destination Arctic Circle**
   Umiarsualivimmut 2, 1.sal
   DK-3911 Sisimiut, Greenland

2. **Kristian Kreutzmann**
   Qeeqi 5-7
   DK-3911 Sisimiut, Greenland
   E-mail: krkr@qeqqata.gl

3. **Jens Fog Jensen**
   Natural History Museum of Denmark
   Øster Voldgade 10-12, forhus 7
   DK-1350 København K, Denmark
   E-mail: jens.jensen@snm.ku.dk

4. **Qeqqata Kommunia**
   Makkorsip Aqq. 2
   3911 Sisimiut, Greenland
   E-mail: qeqqata@qeqqata.gl

5. **Johannes Müller**
   Guutaap aqq. 6
   DK-3911 Sisimiut, Greenland
   E-mail: ujo@icemedia.gl

6. **Bjarne Grønnow**
   Prinsens Palæ Ny Vestergade 10
   DK-1471 København K, Denmark
   E-mail: bjarne.gronnow@natmus.dk

7. **Henning Thing**
   Slotsparken 18B
   DK-2880 Bagsværd, Denmark
   E-mail: thingsunlimited.dk

8. **David Antony Fox**
   Aarhus university
   Department of Bioscience - Arctic Research Centre, Kalø
   Grenåvej 14
   building 8412, H.150
   DK-8410 Rønde, Denmark
   E-mail: tfo@bios.au.dk

9. **Sisimiut and Kangerlussuaq Museum**
   Jukkorsuup Aqq. 6
   Postbox 308
   DK-3911 Sisimiut, Greenland

10. **Preben Delholm**
    Madvigs Allé 12, st. th.
    DK - 1829 Frederiksberg C, Denmark

11. **John Lee**
    National Museum of Denmark
    Prinsens Palæ Ny Vestergade 10
    DK-1471 København K, Denmark
    E-mail: john.lee@natmus.dk

12. **Morten Meldgaard**
    Natural History Museum of Denmark
    Øster Voldgade 10-12, forhus 7
    DK-1350 København K, Denmark
    E-mail: mmeldgaard@snm.ku.dk

13. **Danish Arctic Institute**
    Strandgade 102
    DK-1401 København K, Denmark
    E-mail: arktisk@arktisk.dk

14. Ólafur Rafnar Ólafsson
Umiarsulalivimmut 2
DK-3911 Sisimiut, Greenland
E-mail: olafur@acb.gl

15. Claus Andreasen
Mosevej 72
Ørting
DK-8300 Odder, Denmark
E-mail: claus.andreasen47@gmail.com

16. Sylvie LeBlanc, Ph.D.
Territorial Archaeologist
Department of Culture and Heritage
Box 310, Government of Nunavut
Igloolik, Nunavut
Canada X0A 0L0
E-mail: SLeBlanc1@GOV.NU.CA

17. Jack Brink
Curator of Archaeology
Royal Alberta Museum
12845 - 102 Avenue
Edmonton, Alberta
Canada T5N 0M6
E-mail: Jack.Brink@gov.ab.ca

18. Jeff Rasic
National Park Service
4175 Geist Rd
Fairbanks, AK 99709
E-mail: jeff_rasic@nps.gov

19. Anne-Christine Løventoft-Jessen
Jukkorsuup Aqq. 6
Postbox 308
DK -3911 Sisimiut, Greenland
E-mail: aclj@qeqqata.gl

20. Pipaluk Lykke Løgstrup
Sisit 7
DK-3911 Sisimiut, Greenland
E-mail: natuluk@gmail.com

21. Hans Holt Poulsen
Qeqqata Kommunia
Postboks 1014
Makkorsip Aqq. 2
DK-3911 Sisimiut, Greenland
E-mail: hhpo@qeqqata.gl

22. Visit Greenland
Hans Egedesvej 29
Postboks 1615,
DK-3900 Nuuk, Greenland

23. Clemens Pasda
Bereich für Ur- und Frühgeschichtliche Archäologie
der Friedrich-Schiller-Universität
Löbdergraben 24a
Germany 07743 Jena
E-mail: Clemens.Pasda@uni-jena.de

24. Jacob Svendsen
Telemarksgade 8, 3. th.
DK-2300 København S, Denmark
E-mail: jacob@jacobsvendsen.com

25. Agnethe Berthelsen
Tuapannguanut 8-1
DK-3911 Sisimiut, Greenland
E-mail: agbe@qasapi.com

26. Niels Berthelsen
Aqqartarfik 1-15
DK-3911-Sisimiut, Greenland
E-mail: Nins73@live.dk

Photo: Paneeraq Olsen.

7.b Texts relating to protective designation, copies of property management plans or documented management systems and extracts of other plans relevant to the property

All significant protective designations are listed below (Table 7.1) and described in chapter 5.b.

Table 7.1 - List of protective designation

Protective designation	Year of designation	Legislation	Protected area
Protection of ancient monuments	2010	Heritage Protection Act, no. 11, 19 May 2010	All areas within 20 m of listed ancient monuments older than 1900 AD
Preservation of the cultural landscape and its cultural heritage	2017?	Executive order on cultural heritage protection	The nominated property Aasivissuit – Nipisat
Planning the municipal land and land use	2010	The Planning Act, no. 17, 17 November 2010	A legal instrument to plan on the use of the land
Protective designations of the Environment	2012	Environmental Protection Act, no. 1, 29 May 2012	The environment in and outside the nominated area
Protection of wetlands and some species of birds	2016	Executive Order, no. 12, 21 June, 2016	The RAMSAR area in the eastern ice-free part of the nominated area
Management Plan for Kangerlussuaq	2010		The caribou calving area in the eastern ice-free part of the nominated area

7.c Form and date of most recent records or inventory of property

The ID number, geographical position and selected information about the protected cultural structures and elements are recorded in the Greenland National Museum's national database on scheduled/listed monuments: www.nunniffiit.gl (Fig. 7.1).

Some information on ruins, land use and local resource exploitation is based on information, observations and interviews from the 19th century, but most derives from archaeological surveys undertaken in 1956, 1977, the late 1980s and the major excavations on Aasivissuit and Nipisat. In the summer of 2016 a new series of surveys began to collect data for use in the monitoring of the nominated area.

It should be mentioned that most archaeological surveys in Greenland have always had important elements of local cooperation and this information has also been important in the scientific interpretation of the data. Most of the information is found in diaries, and as notes, drawings, reports, interviews and photos at Sisimiut Museum and the Greenland National Museum and Archives. Most of the relevant material has been scanned and is now included in www.nunniffiit.gl.

The exact positions of some sites are not precise, as locational data have been transferred from old, imprecise maps to new maps but without further checking in the field.

For this nomination, the position of all sites has been re-evaluated and checked on new maps, on Google Earth, with interviews and some fieldwork, etc. in order to verify their correct position.
The archaeological artefacts recovered during the excavations at the Saqqaq site at Nipisat are at Sisimiut

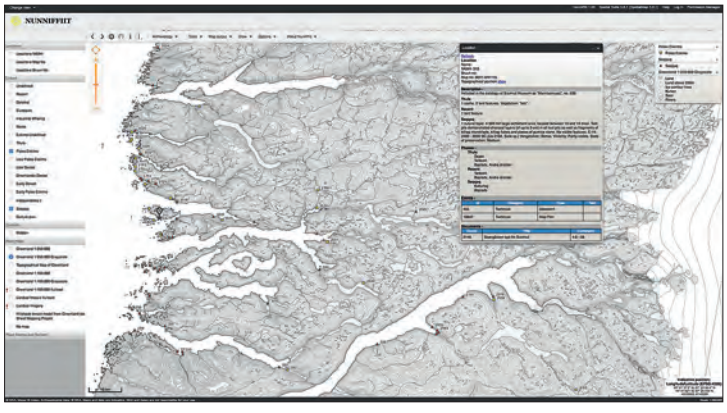


Fig. 7.1. Screen dump of Nunniffiit showing the position and ID numbers of sites from the Saqqaq culture and the Paleo-Inuit period. To the left it is possible to scroll up and down and chose historical periods of interest. Inset is a short description of a chosen locality/site. Survey reports with more details are also accessible from this screen.

Museum. Most other archaeological material from the nominated area is located at Sisimiut Museum or the Greenland National Museum and Archives.

The archaeo-zoological material from the excavations is deposited at the Natural History Museum of Denmark.

7.d Addresses where inventories, records and archives are held

Cultural information

Nunatta Katersugaasivia Allagaateqarfialu / Greenland National Museum and Archives,
Hans Egedesvej 8,
P.O. Box 145,
DK-3900 Nuuk, Greenland
E-mail: nka@natmus.gl

Sisimiut Katersugaasiviat/Sisimiut Museum and Kangerlussuup Katersugaasivia/Kangerlussuaq Museum,
Jukkorsuup aqq. 6,
P.O. Box 308,
DK-3911 Sisimiut, Greenland
E-mail: sismus@qeqqata.gl

National Museum of Denmark,
Frederiksholms Kanal 12,
DK-1220 Copenhagen, Denmark
E-mail: digital.post@natmus.dk

Natural information

Pinngortitaleriffik,
Greenland Institute of Natural Resources,
P.O. Box 570,
DK-3900 Nuuk, Greenland
E-mail: info@natur.gl

Geological Museum, Danish Natural History Museum,
Copenhagen University,
Øster Voldgade 5-7,
DK-1350 Copenhagen, Denmark
E-mail: snm@snm.ku.dk

Botanical Museum, Danish Natural History Museum,
Copenhagen University,
Øster Voldgade 5-7,
DK-1350 Copenhagen, Denmark
E-mail: snm@snm.ku.dk

7.e Bibliography (printed and un-printed material)

Andreasen, C., 2013: Forslag til World Heritage område ved Sisimiut mellem Kangerlussuaq, Aasivissuit og Nipisat. Rapport til Qeqqata kommunia, januar 2013. Report on file at Qeqqata kommunia.

Andrews T.D., 2004: The Land is like a Book: Cultural Landscape Management in the Northwest Territories, Canada. In: Krupnik, I., Mason, R., Horton, T. (eds.). Northern Ethnographic Landscapes: Perspectives from Circumpolar Nations. (Contributions to circumpolar anthropology 6). Washington, Smithsonian Institution

Appelt, M. & Pind, J., 1996: Nunnguaq – a Saqqaq Site from Godthåbsfjorden. In: Grønnow, B. & Pind, J. (eds.). The Paleo-Eskimo Cultures of Greenland. New Perspectives in Greenlandic Archaeology. Danish Polar Center Publication 1. Copenhagen.

Arima, E.Y., 1984: Caribou Eskimo. In: William C. Sturtevant (ed.). Handbook of North American Indians vol. 5 Arctic, 447-462.

As, van D., Hubbard, A., Hasholt, B., Mikkelsen, A., den Broeke, M. & Fausto, R., 2012: Large surface meltwater discharge from the Kangerlussuaq sector of the Greenland ice sheet during the record-warm year 2010 explained by detailed energy balance observations. Cryosphere [serial online] 6(1), 199-209.

Balicki, A., 1970: The Netsilik, Garden City, N.Y: Natural History Press.

Balicki, A., 1984: Netsilik. In: William C. Sturtevant (ed.): Handbook of North American Indians vol. 5 Arctic, pp. 415-430.

Barr, S. (ed.), 2013: Assessment of Cultural Heritage Monuments and Sites in the Arctic. Report to the Arctic Council (SDWG) Project 114.

Bendixen, O., 2010: Holsteinsborg Distrikt. In: Amdrup, G. (ed.): Grønland i Tohundredaaret for Hans Egedes Landing. Vol. 2 (Facsimile edition, 1st edition, Meddr Grønland, Man & society 60). Nationalmuseet & Kommissionen for Videnskabelige Undersøgelser i Grønland. Copenhagen.

Bennike, O., 1987: Quaternary geology and biology of the Jørgen Brønlund Fjord area, North Greenland.Meddr Grønland Geoscience 18. Copenhagen.

Bennike, O., 2000: Palaeoecological studies of Holocene lake sediments from West Greenland. Palaeogeography, Palaeoclimatology, Palaeoecology 155, 285-304.

Bennike, O., Anderson, N.J. & McGowan, S., 2010: Holocene palaeoecology of southwest Greenland inferred from macrofossils in sediments of an oligosaline lake. Journal of Paleolimnology 43, 787-798.

Bennike, O., Wagner, B. & Richter, A., 2011: Relative sea level changes during the Holocene in the Sisimiut area, south-western Greenland. Journal of Quaternary Science 26, 353-361.

Bertulli, M.M., Lyle, D., Dawson, P. C. & Cousins, P. L., 2013: Fort Conger: A site of arctic history in the 21st century. Arctic, 66(3).

Binford, L.R., 1978: Nunamiut ethnoarchaeology. Studies in archaeology. New York, N.Y: Academic Press.

Binford, L.R., 1991: A Corporate Caribou Hunt. Documenting the archaeology of past lifeways. Expedition 33, 33-43.

Binford, L.R., 2009: The construction and tactical placement of dead fall traps by Nunamiut Eskimo. In: Grønnow (ed.): On the track of the Thule Culture from Bering Strait to East Greenland, PNM Publications from the National Museum, Studies in Archaeology and History Vol. 15. Copenhagen

Birket-Smith, K., 1924: Ethnography of the Egedesminde District, with aspects of the general culture of West Greenland. Meddr Grønland 66. Copenhagen.

Birks, J.D.S, Birks, J. D. S. & Penford, N., 1990: Observations on the ecology of arctic foxes Alopex lagopus in Eqalummiut Nunaat, West Greenland. Meddr Grønland, Bioscience 32. Copenhagen

Blæsild, B., 1987: Rekognoscering efter jordfaste fortidsminder i området Saqqarliit, Avalleq, Orioq, Qeqertalaap Tasia, Tasersuaq og Akulleq i Sisimiut kommune. Foreløbig rapport 1. Sisimiut Museum 1987. Report on file at Sisimiut Museum. Sisimiut.

Blæsild, B. & Ebbesen, H., 1989: Sisimiut – Holsteinsborg. Publikationer fra Arktisk Institut nr. 4, Charlottenlund.

Boas, F., 1967: The central Eskimo. University of Nebraska Press.

Bobé, L., 2010: Distriktets Historie. In: Amdrup, G (ed.): Grønland i Tohundredaaret for Hans Egedes Landing. Vol. 2 (Facsimile edition, 1st edition, Meddr Grønland 61). Kommissionen for Videnskabelige Undersøgelser i Grønland & Nationalmuseet. Copenhagen.

Born, E. & Böcher, J., 2001: The ecology of Greenland. Nuuk: Ilinniusiorfik.

Brice-Bennett, C. (ed.), 1977: Our footprints are everywhere: Inuit land use and occupancy in Labrador.

Brink, J., 2005: Inukshuk: Caribou Drive Lanes on Southern Victoria Island, Nunavut, Canada. Arctic Anthropology, 42(1), 1-28.

Brodersen, K.P. & Anderson, N.J., 2002: Distribution of chironomids (Diptera) in low arctic West Greenland lakes: trophic conditions, temperature and environmental reconstruction. Freshwater Biology 47, 1137-1157.

Brody, 1976: Inummarit, The Real People. In: Freemann, M. M. R. (ed.): Inuit Land Use and Occupancy Report, Vols. 1 & 2, Ottawa: DIAND, 1976.

Brown W.E., 2007: The history of the central Brooks Range; gaunt beauty, tenuous life. University of Alaska Press.

Burch, E.S., 1998: The Iñupiaq Eskimo Nations of Northwest Alaska. Fairbanks: University of Alaska Press.

Burnham, W. & Mattox, W.G., 1984: Biology of the peregrine and gyrfalcon in Greenland. Meddr Grønland, Bioscience 14. Copenhagen.

Böcher, T.W., 1949: Climate, soil and lakes in continental West Greenland in relation to plant life Meddr Grønland 147(2). Copenhagen.

Böcher, T.W., 2000: Det Grønne Grønland. Humlebæk: Rhodos.

Cuyler, C., Rosing, M., Egede, J., Heinrich. R. & Mølgaard, H., 2005: Status of two West Greenland caribou populations 1) Akia-Maniitsoq & 2) Kangerlussuaq-Sisimiut. Greenland Institute of Natural Resources. Technical Report 61, Part I - II. Nuuk

Cuyler, C., Rosing, M., Mølgård, H., Heinrich, R., & Raundrup, K., 2011: Revised 2012. Status of two West Greenland caribou populations 2010; 1) Kangerlussuaq-Sisimiut, 2) Akia-Maniitsoq. Pinngortitaleriffik - Greenland Institute of Natural Resources. Technical Report 78, Part I + II. Nuuk.

Damas, D., 1984: Central Eskimo: Introduction. In: William C. Sturtevant (ed.) Handbook of North American Indians vol. 5 Arctic, 391-396. Washington.

Damas, D., 1984: Copper Eskimo. In: William C. Sturtevant (ed.). Handbook of North American Indians vol. 5 Arctic, 397-414. Washington.

Dawson, P.C., Bertulli, M.M., Levy, R., Tucker, C.D.L. & Cousins, P.L., 2013: Application of 3D laser scanning to the preservation of Fort Conger, a historic polar research base on northern Ellesmere Island, Arctic Canada. (Report). Arctic,66(2), 147.

Dixon, E.J. Jr., 1975: The Gallagher flint station, an early man site on the north slope, Arctic Alaska, and its role in relation to the Bering land bridge. Arctic Anthropology, 12(1), 68-75.

Dragsted, J., Villumsen, A., Larsen, E., Jakobsen, K.R., Hudecz, A., Kotol, M. & Villumsen, O., 2011: Fyrtårnsprojekt V - afsluttende rapport 2011. DTU Byg, Danmarks Tekniske Universitet. (DTU Byg Sagsrapport SR-12-01).

Egede, P. & Lidegaard, M., 1988: Efterretninger om Grønland, uddragne af en journal holden fra 1721 til 1788. Grønlandske Selskabs Skrifter 29. Copenhagen.

Evans, M.J., Alexa Roberts, A. & Nelson, P., 2001: Ethnographic Landscapes CRM: The Journal of Heritage Stewardship, 53-56. Vol. 24 (5).

Fitzhugh, W., 1978: Maritime archaic cultures of the central and northern Labrador coast. Arctic Anthropology, 15(2), 61-95.

Fitzhugh, W., 1981: A Prehistoric Caribou Fence from Williams Harbour, Northern Labrador. In Michael Wilson, M., Road, K.L. and Hardy, K.J. (eds.): Megaliths to Medicine Wheels: Boulder Structures in Archaeology.

Fitzhugh, W. & Olin, J.S., 1993: Archaeology of the Frobisher voyages. Smithsonian Institution Press. Washington.

Fleming, K. & Lambeck, K., 2004: Constraints on the Greenland ice sheet since the Last Glacial Maximum from sea-level observations and glacial-rebound models. Quaternary Science Reviews 23, 1053-1077.

Fogsgaard, B., 2012: Dansk hvalfangst i Nordatlanten 1771-1789. Published at: http://www.fogsgaard.org/Hvalfangst.pdf

Fox, A., 1988: The breeding biology of the Greenland White-fronted Goose (Anser albifrons Flavirostris). Meddr Grønland, Bioscience 27. Copenhagen.

Frandsen, H.H., 2016: Extracts from unprinted archival material at the Danish National Archives

Fredskild, B., 1973: Studies in the vegetational history of Greenland. Palaeobotanical investigations of some holocene lake and bog deposits. Meddr Grønland 198(4). Copenhagen.

Fredskild, B., 1996: A phytogeographical study of the vascular plants of West Greenland (62°20´ – 74°00´N). Meddr Grønland, Bioscience 45. Copenhagen.

Freemann, M.M.R. (ed.), 1976: Inuit Land Use and Occupancy Report, Vols. 1 & 2, Ottawa: DIAND.

Friesen, T.M., 2013: The impact of weapon technology on caribou drive system variability in the prehistoric Canadian Arctic. Quaternary International, 297, 13-23.

Gad, F., 1967: Grønlands Historie I. Indtil 1700. Nyt Nordisk Forlag Arnold Busck.

Gad, F., 1969: Grønlands Historie II. 1700-1782. Nyt Nordisk Forlag Arnold Busck.

Gad, F., 1975: Grønlands Historie III: 1782-1808 Nyt Nordisk Forlag.

Giesecke, C.L., 1910: Mineralogisches Reisejournal über Groenland 1806-1813. Meddr Grønland 35, 1-478. Copenhagen.

Glahder, C.M., 1999: Spring Staging Areas of the Greenland White-fronted Goose (Anser Albifrons Flavirostris) in West Greenland. Arctic 52(3), pp. 244-256.

Gordon, B., 1990: World Rangifer communal hunting. In: Davis, L. B., and Reeves, B. O. K. Hunters of the Recent past. London: Unwin Hyman. Print. One World Archaeology 15, pp. 278-303.

Gordon, B., 1996: People of Sunlight; People of Starlight: Barrenland Archaeology in the Northwest Territories of Canada. Archaeological Survey of Canada, Mercury Series Paper 154. Canadian Museum of Civilization.

Gotfredsen, A.B. & Møbjerg, T., 2004: Nipisat – A Saqqaq Culture Site in Sisimiut, Central West Greenland. Meddr Grønland, Man & Society 31. Copenhagen.

Gotfredsen, A.B., 1996: The Fauna from the Saqqaq Site of Nipisat 1, Sisimiut District, West Greenland. Preliminary Results. – In: Grønnow, B. & Pind, J. (eds.). The Paleo-Eskimo Cultures of Greenland. New Perspectives in Greenlandic Archaeology. Danish Polar Center Publication 1. Copenhagen.

Gotfredsen, A.B., 1998: The faunal material of the Saqqaq site Nipisat I, Sisimiut district, west Greenland. – In: Arneborg, J. and Gulløv, H.C. (eds.). Man, Culture and Environment in Ancient Greenland. Report on a research programme. Danish Polar Center. Publication No 4. Pp. 124 – 132. The Danish National Museum and Danish Polar Center. Copenhagen.

Grønnow, B., 2009a: Blessings and Horrors of the Interior: Ethno-Historical Studies of Inuit Perceptions Concerning the Inland Region of West Greenland. Arctic Anthropology,46(1-2), 191-201.

Grønnow, B., 2009b: Caribou Hunting Structures and Hunting Grounds of the Thule Culture in Angujaartorfiup Nunaa, West Greenland. In: On the Track of the Thule Culture from Bering Strait to East Greenland. Proceedings of the SILA Conference: The Thule Culture – New Perspectives in Inuit Prehistory. Papers in Honour of Hans Christian Gulløv. Publications from the National Museum, PNM. Studies in Archaeology and History Vol. 15. Copenhagen 2009.

Grønnow, B., Meldgaard, M. & Nielsen, J.B., 1983: Aasivissuit. The Great Summer Camp. Meddr Grønland, Man & Society 5. Copenhagen.

Gulløv, H.C., 1983: Nuup kommuneani qangarnitsanik eqqaassutit, inuit-kulturip nunaqarfii. Fortidsminder i Nuuk kommune, inuit-kulturens bopladser. Nuuk / Copenhagen: Kalaallit Nunaata katersugaasivia & Nationalmuseet.

Gulløv, H.C., 1997: From Middle Ages to Colonial Times, archaeological and ethnohistorical studies of the Thule culture in South West Greenland 1300-1800 AD. Meddr Grønland. Man & society, 23. Copenhagen.

Gulløv, H. C., 2004: Grønlands Forhistorie. Copenhagen: Gyldendal.

Gulløv, H., & Kapel, H.C., 1979: Haabetz Colonie 1721-1728: A Historical-archaeological Investigation of the Danish-Norwegian Colonization of Greenland. National Museum of Denmark Ethnographical Series 16. Copenhagen.

Hood, B.C., 2008: Towards an Archaeology of the Nain Region, Labrador. Washington, National Museum of Natural History, Smithsonian Institution, Arctic Studies Center, Contributions to Circumpolar Anthropology, 7.

Haarløv, N., Jacobsen, N.K., Meldgaard, J. & Petersen, H.C., 1980: Holsteinsborg. Sisimiut kommune. Natur- og Kulturforhold. Ministeriet for Grønland / Geografisk Institut 1980. Copenhagen.

Henriksen, N., 2005: Grønlands Geologiske Udvikling. Fra urtid til nutid, 270 pp. Danmarks og Grønlands Geologiske Undersøgelse. Copenhagen.

Hesjedal, A., 1996: Arkeologi på Slettnes, dokumentasjon av 11.000 års bosetning. Tromsø Museums skrifter 26. Tromsø: Tromsø Museum.

Hinnerson-Berglund, M., 2004: Mobilitet och estetik, Nuukfjorden på Grönlands västkust som människornas livsvärld för 4000 år sedan (GOTARC Serie B Gothenburg archaeological theses 32). Göteborg.

ICOMOS, 2004: The World Heritage List: Filling the Gaps – an Action Plan for the Future. An Analysis by ICOMOS

Indrelid, S. & Hufthammer, A.K., 2011: Medieval mass trapping of reindeer at the Hardangervidda mountain plateau, South Norway. Quaternary International, 238(1 2), 44.

Indrelid, S., Hjelle, K.L. & Stene, K., 2015: Exploitation of outfield resources – Joint Research at the University Museums of Norway. University Museum of Bergen, 255.

Ingstad, H., 1954: Nunamiut, blandt Alaskas indlands-eskimoer.. Copenhagen.

Jensen, J.F., 2006: The Stone Age of Qeqertarsuup Tunua (Disko Bugt). A regional analysis of the Saqqaq and Dorset Cultures of Central West Greenland. Meddr Grønland, Man & Society 32. Copenhagen.

Jensen, J.F., Appelt, M., Myrup, M., Haack, H. & Taube, M., 2015: Himmelsk og jordisk jern i Grønlands forhistorie. Nationalmuseets Arbejdsmark, 116-131. Nationalmuseet. Copenhagen.

Jordan, R.H., 1984: Neo-Eskimo Prehistory of Greenland. In: William C. Sturtevant (ed.): Handbook of North American Indians vol. 5 Arctic, pp. 540-548. Washington.

Johansen, P., Aastrup, P., Boertmann, D., Glahder, C., Johansen, K., Nymand, J., Rasmussen L.M. & Tamstorf, M., 2007: Datagrundlag for natur og ressourceudnyttelse i forbindelse med udarbejdelse af SMV for aluminiumssmelter og vandkraft i det centrale Vestgrønland. Danmarks Miljøundersøgelser og Grønlands Naturinstitut. Nuuk.

Jordhøy, P., 2008: Ancient wild reindeer pitfall trapping systems as indicators for former migration patterns and habitat use in the Dovre region, southern Norway. Rangifer,28(1), 79-87.

Jordhøy, P., Støren Binns, K. & Hoem, S., 2005: Gammel jakt- og fangstkultur som indikatorer for eldre tiders jaktorganisering, ressurspolitikk og trekkmønster hos rein i Dovretraktene. NINA Rapport 19. Trondheim: Norsk institutt for naturforskning (NINA).

Kemp, W.B., 1971: The Flow of Energy in a Hunting Society. Scientific American. 1971 Sep; 225(3), 105-15.

Knudsen, P.K., 2009a: An Archaeological Survey in the West Greenland Inland, summer 2008 in advance of proposed hydroelectrical power, Report on file Nunatta Katersugaasivia Allagaateqarfialu - Greenland National Museum and Archives.

Knudsen, P.K., 2009b: Culture historical significance on the areas Tasersiaq and Tarsartuup Tasersua in West Greenland & Suggestions for Salvage Archaeology and Documentation in

Case of Damming Lakes. - Report prepared for ALCOA, May 2009. Nunatta Katersugaasivia Allagaateqarfialu / Greenland National Museum and Archives.

Kramer F.E., 1989a: Rekognosceringsrapport sommeren 1988. Rekognoscering efter jordfaste fortidsminder i området Maligiaq, Kiatsit, Taseqqat og Tasersuaq i Sisimiut Kommune. Sisimiut Museum, January 1989. Sisimiut. Report on file at Sisimiut Museum.

Kramer, F.E., 1989b: Rekognoscering i skærgården syd for Sisimiut, Sisimiut kommune 1989. Report on file at Sisimiut Museum.

Kramer, F.E., 1996a: The Paleo-Eskimo Cultures in Sisimiut District, West Greenland: Aspects of Chronology. In: The Paleo-Eskimo Cultures of Greenland. New Perspectives in Greenlandic Archaeology. Danish Polar Center Publications No. 1/1996. Copenhagen.

Larkham, J. & Brake, J., 2011: Documenting Traditional Knowledge Relating to Labrador Inuksuit and other Stone Markers. Final Report Submitted to the Tomgâsok Cultural Centre, April, 2011.

Larsen, H., 1958: Material Culture of the Nunamiut and Its Relation To Other Forms of Eskimo Culture in Northern Alaska. Proceedings of the 32. International Congress of Americanists (32nd), Copenhagen, Denmark.

Lee, M. & Reinhardt, Gregory A., 2003: Eskimo architecture, dwelling and structure in the early historic period. Fairbanks, University of Alaska Press.

LeBlanc, S., nd: Review of Mary River EIS - Cultural and Archaeological component.

Levy, L.B., Kelly, M.A., Howley, J.A. & Ross V.A., 2012: Age of the Orkendalen moraines, Kangerlussuaq, Greenland: Constraints on the extent of the southwestern margin of the Greenland Ice Sheet during the Holocene. (Report). Quaternary Science Reviews 52, 1.

MacNeish, R.S., 1956: The Engigstciak Site on the Yukon Arctic Coast, Anthropological Papers of The University of Alaska 4 (2), 91-111.

Mary-Rousselière, G., 1976: The Paleoeskimo in Northern Baffinland. Memoirs of The Society for American Archaeology, No. 31, 1976, 40-57.

Mary-Rousselière, G., 1979: A few problems elucidated... And new questions raised by recent Dorset finds in the North Baffin Island region. Arctic, Vol. 32 (1), 22-32.

Mary-Rousselière, G., 1984: Iglulik. In: William C. Sturtevant (ed.): Handbook of North American Indians vol. 5 Arctic, 431-446.

Mathiassen, T., 1931a: Inugsuk, a mediaeval Eskimo settlement in Upernivik District, West Greenland Meddr Grønland 77(4). Copenhagen.

Mathiassen, T., 1931b: Ancient Eskimo settlements in the Kangamiut area, Meddr Grønland 91(1). Copenhagen.

Maxwell, M.S., 1985: Prehistory of the Eastern Arctic. New World archaeological record. Orlando: Academic Press, Inc.

McCartney, A.P., 1977: Thule Eskimo prehistory along northwestern Hudson Bay. Mercury series. Archaeological Survey of Canada paper 70. Ottawa, National Museum of Canada.

McCullough, K., 1989: The Ruin Islanders, Thule Culture Pioneers in the Eastern High Arctic. Paper Archaeological Survey of Canada 141. Hull, Canadian Museum of Civilization.

McGhee, R., 1972: Copper Eskimo prehistory. National Museums of Canada, Publications in Archaeology 2.

McGhee, R., 1984: Thule Prehistory of Canada. In: William C. Sturtevant (ed.): Handbook of North American Indians vol. 5 Arctic, 369-376.

McGovern, T. & Jordan, R., 1982: Settlement and Land Use in the Inner Fjords of Godthaab District, West Greenland. Arctic Anthropology 19, no. 1, 63.

Meldgaard, J., 1961: Saqqaq-folket ved Itivnera. Nationalmuseets undersøgelser i sommeren 1960. Tidsskriftet Grønland, 1961(1), 15-23. Copenhagen.

Meldgaard, J., nd: Diaries deposited post mortem at the Danish National Museum. Copenhagen.

Meldgaard, M., 1986: The Greenland caribou, zoogeography, taxonomy, and population dynamics Meddr Grønland, Bioscience 20. Copenhagen.

Mernild, S.H., Liston, G.E., Steffen, K., van Den Broeke, M. & Hasholt, B., 2010: Runoff and mass-balance simulations from the Greenland Ice Sheet at Kangerlussuaq (Søndre Strømfjord) in a 30-year perspective, 1979-2008. The Cryosphere 4(2), 231-242.

Milne, S.B., 2008: Colonisation, Structured Landscapes, and Seasonal Mobility: An Examination of Early Palaeo-Eskimo Land Use Patterns in the Eastern Canadian Arctic. In Barnard, H. and Wendrich, W. (eds), The Archaeology of Mobility: Nomads in the Old and in the New World, 174-199. Los Angeles: Cotsen Institute for Archaeology.

Milne, S.B. & Donnelly, S.M., 2004: Going to the Birds: Examining the Importance of Avian Resources to Pre-Dorset Subsistence Strategies in the Interior of Southern Baffin Island. Arctic Anthropology 41 (1), 90-112.

Milne, S.B., Park, R.W. & Stenton D.R., 2013: For Caribou, Chert, and Company: Assessing Mobility as Evidence for Cultural Continuity among the Palaeo-Eskimos of Baffin Island, Arctic Canada. In: Preston, P. R.: Mobility, Transition and Change in Prehistory and Classical Antiquity. BAR International Series 2534.

Mitchell, N., Rössler, M. & Tricaud, P-M., (Authors/Eds.), 2009: World Heritage Cultural Landscapes. A Handbook for Conservation and Management UNESCO.

Mosbech, A., Anthonsen, K.L., Blyth, A., Boertmann, D., Buch, E., Cake, D., Grøndahl,, L., Hansen, K.Q., Kapel, H., Nielsen, S. Nielsen, N., von Platen, F., Potter, S., Rasch, M., 2000: Environmental Oil Spill Sensivity Atlas for the West Greenland Coastal Zone, Copenhagen: The Danish Energy Agency, Danish Ministry of Environment and Energy and Bureau of Minerals and Petroleum, Government of Greenland.

Muus, B.J., Muus, B., Salomonsen, F. & Vibe, C., 1990: Fauna, fisk, fugle, pattedyr. København

Müller, R., 1906: Vildtet og Jagten i Sydgrønland. København.

Nordenkjöld, O., 1914: Einige Züge der physischen Geographie und der Entwickelungsgeschichte Süd-Grönlands. Geographische Zeitschrift, Band 20, Heft 8, 425-441.

Møbjerg, T. & Grummesgaard-Nielsen, S., 1997: Saqqaqkulturen på Asummiut. Tidsskriftet Grønland, nr. 5-6-7. 1997. Copenhagen.

Odgaard, U., Grønnow, B., Gabriel, M., Pasda, K., Pasda, C. & Damm, C., 2003: Bosættelsesmønstre i Det Centrale Vestgrønland, Feltrapport 12. SILA, Nationalmuseets Center for Grønlandsforskning. Copenhagen.

Odgaard, U. (ed.) with contributions from F. Larsen, M. Myrup, M.L. Petersen, A. Tømmervåg, A. Daly, C. Damm and K. Pasda, 2008: An Archaeological Survey in the West Greenland Inland, summer 2007, in Advance of Proposed Development of hydroelectric Power. Report prepared for ALCOA, April 2008. Nunatta Katersugaasivia Allagaateqarfialu.

Odner, K., 1992: The Varanger Saami, habitation and economy, AD 1200-1900. Series B / Instituttet for sammenlignende kulturforskning 86. Oslo, Scandinavian University Press Institute of Comparative Research in Human Culture.

Parks Canada, 2014: SIRMILIK National Park of Canada, DRAFT Management Plan. January 2014.

Parks Canada, 2016: Vuntut National Park. http://www.pc.gc.ca/eng/pn-np/yt/vuntut/index.aspx

Pasda, C., 2014: Regional Variation in Thule and Colonial Caribou Hunting in West Greenland. Arctic Anthropology,51(1), 41-76.

Pedersen, O. & Brodersen, K.P., 2003: Fantastiske undervandslandskaber i arktiske søer. Urt 27(4), 118-122.

Petersen, H.C., 1994: Registrering af levende ressourcer og naturværdier, Sisimiut kommune. Grønlands Hjemmestyre.

Post, E. & Forchhammer, M.C., 2006: Spatially synchronous population dynamics: An indicator of Pleistocene faunal response to large-scale environmental change in the Holocene. Quaternary International 151, 99-105.

Prosper, L., 2007: Wherein Lies the Heritage Value? Rethinking the Heritage Value of Cultural Landscapes from an Aboriginal Perspective. George Wright Forum 24 (2): 117-24.

Rasic, J., 2003: Ancient Hunters of the Western Brooks Range: Integrating Research and Cultural Resource Management. Alaska Park Science. Winter 21-25 U.S. department of the Interior, National Park service, Alaska Support Office, Anchorage.

Rasmussen, K., 1925: Fra Grønland til Stillehavet, Rejser og Mennesker fra 5. Thule-Ekspedition 1921-24. Copenhagen.

Roberts, H.R., Long, A.J., Schnabel. C., Davies, B.J., Xu, S., Simpson, M.J.R. & Huybrechts, P., 2009: Ice sheet extent and early deglacial history of the southwestern sector of the Greenland Ice Sheet. Quaternary Science Reviews 28, 2760-2773.

Savelle, J., Dyke, A., Whitridge, P. & Poupart, M., 2012: Paleoeskimo Demography on Western Victoria Island, Arctic Canada: Implications for Social Organization and Longhouse Development. Arctic, 65(2), 167-181.

Salomonsen, F. & Gitz-Johansen, Aa., 1950: Grønlands fugle. The birds of Greenland. Copenhagen: Munksgaard.

Secher, K., Bøcher, J., Grønnow, B., Holt, S., Petersen, H.C. & Thing, H., 1987: Arnangarnup Qoorua, Paradisdal i tusinder af år. Pilersuiffik. Nuuk.

Schilling, H., 1996: Paleo-Eskimo Utilization of West Greenland Inland Areas. In: The Paleo-Eskimo Cultures of Greenland. New Perspectives in Greenlandic Archaeology. Danish Polar Center Publications No. 1/1996. Copenhagen.

Schledermann, P., 1976: Thule Culture communal houses in Labrador. Arctic, Vol. 29, no. 1, 1976, S. 27-37.

Schledermann, P., 1990: Crossroads to Greenland, 3000 years of prehistory in the eastern High Arctic. Komatik series 2. Calgary.

Sha, L., Jiang, H. & Knudsen, K.L., 2012: Diatom evidence of climatic change in Holsteinsborg Dyb, west of Greenland, during the last 1200 years. The Holocene 22(3), 347-358.

Stapert, D., Johansen, L., 2003: Flint and pyrite: Making fire in the Stone Age. Antiquity 2003, p. 777-70. Groninger Instituut voor Archeologie

Statistics Greenland: http://www.stat.gl (06 2016)

Stenton, D.R., 1991: Caribou Population Dynamics and Thule Culture Adaptations On Southern Baffin Island, N.W.T. Arctic Anthropology Vol. 28 (2).

Stewart, A., Friesen, T., Keith, D. & Henderson, L., 2000: Archaeology and Oral History of Inuit Land Use on the Kazan River, Nunavut: A Feature-Based Approach. Arctic,53(3), 260-278.

Sørensen, M., 2012: Technology and Tradition in the Astern Arctic, 2500 BC – AD 1200. A Dynamic Technological Investigation of Lithic Assemblages from the Palaeo-Eskimo Traditions of Greenland. Meddr Grønland Vol. 350, Man & Society Vol. 40. Museum Tusculanum Press, University of Copenhagen.

Taylor, W., 1967: Summary of archaeological field work on Banks and Victoria Islands Arctic Canada 1965. Arctic Anthropology, Vol. 4, no. 1, 1967, 21-243.

Taylor Jr., W.E., 1972: An Archaeological Survey Between Cape Parry and Cambridge Bay, N.W.T., Canada in 1963. Archaeological Survey of Canada Paper, 1. National Museums of Canada, Ottawa.

Taylor, J., & Turner, W.,1969: William Turner's Journeys to the Caribou Country with the Labrador Eskimos in 1780. Ethnohistory, 16(2), 141-164.

Ten Brink, N., 1975: Holocene history of the Greenland ice sheet based on radiocarbon-dated moraines in West Greenland. Grønlands Geologiske Undersøgelse, Bulletin 113. Copenhagen.

Thing H., 1982: Structure and annual increase in a population of West Greenland caribou (Rangifer tarandus groenlandicus). Rangifer 2(2), 28-35.

Thisted, K., 1999: 'Således skriver jeg, Aron'. Samlede fortællinger og illustrationer af Aron fra Kangeq. Atuakkiorfik, Nuuk.

Thorhallesen, E., 1914: Beskrivelse over missionerne i Grønlands søndre distrikt, hvilke han som vice-provst visiterede i aarene 1774-1775. Det Grønlandske Selskabs Skrifter I. København.

Tremayne, A. H., 2011: An Analysis of Faunal Remains from a Denbigh Flint Complex Camp at Matcharak Lake, Alaska. Arctic Anthropology, 48(1), 33-53.

Ukkusiksalik Inuit Knowledge Working Group, Mouland, G. and Manseau, M., 2013: Inuit Knowledge of Ukkusiksalik National Park. Parks Canada.

United States dept. of the Interior. Alaska Planning Group, 1974: Proposed Gates of the Arctic National Park, Alaska: final environmental statement / Prepared by Alaska Planning Group, U.S. Department of the Interior.

Vadstrup, S. & Schultz-Lorentzen, H., 1994: Bevar Grønlands bygningskultur og bygningshistorie. Tidsskriftet Grønland 1994 (6).

Vibe, C., 1967: Arctic animals in relation to climatic fluctuations. Meddr Grønland 170(5). Copenhagen.

Weidick, A., 1976: Glaciation and the Quaternary of Greenland: In: Escher, A. & Watt, W.S. (eds.): Geology of Greenland, 430-458. Geological Survey of Greenland. Copenhagen.

Welland, T., 1976: Inuit Land use in Keewatin District and Southampton Island. In: Freemann, M. M. R. (ed.): Inuit Land Use and Occupancy Report, Vol. 1, Ottawa: DIAND, 1976.

Willemse, N.W. et al., 2003: A continuous record of Holocene eolian activity in West Greenland. Quaternary Research 59(3), 322-334.

Large stone built Thule culture grave on the island of Nipisat.

8. Contact information of responsible authorities

8.a Preparer

Name:	Jens Fog Jensen
Title:	PhD, archaeologist
Office Address:	Geological Museum, Copenhagen University, Øster Voldgade 5-7, DK-1350 Copenhagen, Denmark
Tel:	(+45) 41457234
E-mail:	jens.jensen@snm.ku.dk

8.b Official local institution

Qeqqata Municipality,
P.O.Box 1014; Makkorsip Aqq. 2,
DK-3911 Sisimiut, Greenland
Tel: (+299) 702100; Fax: (+299) 702177
E-mail: qeqqata@qeqqata.gl

8.c Other (local) institutions

Greenland

Sisimiut Katersugaasiviat - Sisimiut Museum and Kangerlussuup Katersugaasivia - Kangerlussuaq Museum,
Jukkorsuup aqq. 6, P.O. Box 308,
DK 3911 Sisimiut, Greenland
E-mail: sismus@qeqqata.gl

Nunatta Katersugaasivia Allagaateqarfialu - Greenland National Museum & Archives,
Hans Egedesvej 8, P.O.Box 145,
DK-3900 Nuuk, Greenland
E-mail: nka@natmus.gl

Ilinniartitaanermut, Kultureqarnermut, Ilisimatusarnermut Ilageeqarnermullu Naalakkersuisoqarfik - Ministry of Education, Culture, Research and Church,
P.O. Box 1029,
DK-3900 Nuuk, Greenland
E-mail: ikiin@nanoq.gl

Pinngortitaleriffik - Greenland Institute of Natural Resources,
P.O. Box 570,
DK-3900 Nuuk, Greenland
E-mail: info@natur.gl

Arctic Circle Business,
Umiarsualivimmut 2,
DK-3911 Sisimiut, Greenland
Tel: (+299) 86 35 00.
http://www.arcticcirclebusiness.com

Denmark

Geological Museum, Danish Natural History Museum, Copenhagen University,
Øster Voldgade 5-7,
DK-1350 Copenhagen, Denmark
E-mail: snm@snm.ku.dk

National Museum of Denmark,
Frederiksholms Kanal 12,
DK-1220 Copenhagen, Denmark
E-mail: digital.post@natmus.dk

8.d Official web address

Home Page:	http://www.qeqqata.gl
Contact name:	Paninnguaq Fleischer-Lyberth
E-mail:	qeqqata@qeqqata.gl; panf@qeqqata.gl
Facebook:	https://www.facebook.com/kulturarv Sisimiut

A home page will be established for the nominated area, but for the moment the project is embedded in the Qeqqata Kommunia / Qeqqata Municipality homepage and on Facebook. Acting Site Manager Paninnguaq Fleischer-Lyberth is the contact person.

Photo: Jens Fog Jensen, 2016.

Rainbow spanning the valley of Itinneq. When travelling inland, the boats have to be hauled or carried for some kilometres upriver to the westernmost extent of the lake Tasersuaq.

Photo: Jens Fog Jensen, 2016.

9. Signature on behalf of the State Party

Date

_____

_____

Mette Bock
Minister for Culture and
Minister for Ecclesiastical Affairs

Communal house near the ruins of the colony on Nipisat island. The house is 11 m long and the turf walls stand more than 1.5 m tall.

Photo: Jens Fog Jensen, 2016

ISBN 978-87-8751-986-1

The Aasivissuit – Nipisat area is a unique cultural landscape in an artic setting. It lies at the heart of the largest ice-free area in Greenland which, in combination with the transitional coastal zone between the open-water area and the high-arctic area of land-fast winter ice, has made it an exceptional hunting ground for people through millennia.

Aasivissuit – Nipisat provides the most complete and best-preserved record of arctic hunting traditions from 2500 BC onwards, demonstrating sustainable land use based on seasonal migration between the coast and the interior. In the archipelago towards Davis Strait in the west, there are centuries-old winter settlements with ruins of turf houses on virtually every cove and point. Colonial ruins reflect the arrival of Europeans in the 18th century and their interaction with Inuit. The old well-trodden trail inland passes summer camps, stone-built graves and caches, and far inland there is the great summer camp of Aasivissuit, with its perfectly preserved caribou drive system, 'hopping stones' and meat caches, recalling the joy and social importance of communal hunts.

Today, hunters and their families continue these seasonal journeys, staying and hunting in the same places as their predecessors and thereby forging a tangible link between the past and the present.