

# MANAGEMENT PLAN 2016–2020

## **Kujataa**

—

a subarctic farming landscape  
in Greenland



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## Foreword

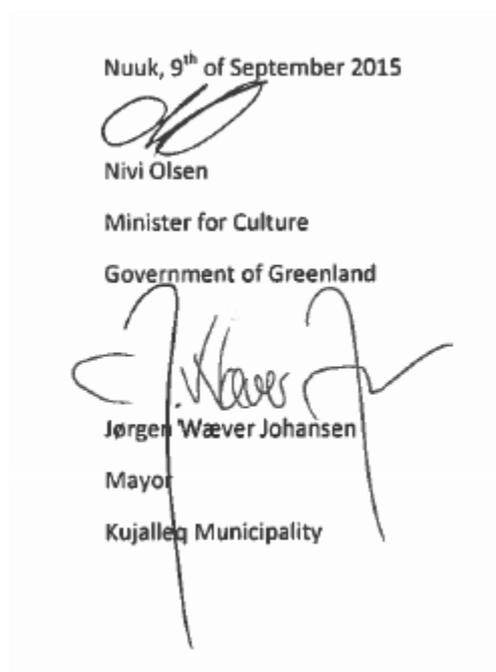
This management plan for *Kujataa – a subarctic farming landscape in Greenland* is intended to promote positive development in the nominated World Heritage property that will secure its cultural landscape values.

The plan has been formulated as a general steering tool for managing authorities to ensure that the property's values are preserved and developed in a sensible balance between conservation and use of the area. The management plan lays down the framework for how we steward Kujataa sustainably and in accordance with the UNESCO World Heritage Convention.

Management of the property will develop progressively over time. Changes in the use of the area and experience gained from previous initiatives will be incorporated into annual assessments of the management of the property and used to make adjustments to the management plan. This first management plan represents a decisive step towards the targeted management of the nominated World Heritage property.

During the course of its preparation, elements of this draft management plan have been discussed with relevant parties, including the population of Kujalleq Municipality, which has been involved through public meetings and visits to selected sheep farms.

We hope that this plan can form the foundation for good working relationships aimed at preserving Greenland's cultural heritage.



## 1 Introduction

In 1996, the Nordic Council of Ministers published the report “Verdensarv i Norden” – World Heritage in the Nordic Countries (NORD 1996:30), which proposed new Nordic properties that the nation states were recommended to nominate to UNESCO. The report contained three proposals for Greenlandic World Heritage properties, one of which encompassed the Hvalsey church ruin (Qaqortukuloq), the episcopal seat of Gardar (Igaliku) and Brattahlid (Qassiarsuk), the Norse/Inuit Greenlandic cultural landscape located in the former Narsaq and Qaqortoq Municipalities in South Greenland. In autumn 2002, Greenland called on the Danish Government to be party to nominating these three areas for inscription on UNESCO’s Tentative List.

Kujataa became an official candidate for the World Heritage List in February 2003. Since then, work has been ongoing to delimit, examine and describe the proposed World Heritage property, update legislation and rules and plan the management of the property’s values.

In 2006, the foundation Aage V. Jensens Fond granted funds to the Directorate (now Ministry) of Culture, Education, Research and Church for work on a World Heritage project in South Greenland. In the first phase of the project, information meetings were held about the plans for a future World Heritage area in South Greenland and within the Government of Greenland with the participation of a wide range of interested parties. A steering group was formed, which then travelled around in connection with the first meetings in Narsarsuaq, Qassiarsuk, Igaliku, Narsaq, Qaqortukuloq and Qaqortoq. The steering group agreed on a new storyline for the World Heritage project in South Greenland under the title “Kujataa – Arktisk bondekultur i 1000 år” (Kujataa – an Arctic farming culture through a millennium). In 2007, agreement was reached in the steering group on delimitation of the nominated World Heritage property; this comprises five component parts, which together constitute the core area of both the Norse and the more recent Greenlandic farming landscape.

In 2007, Aage V. Jensens Fond granted financial support for the second phase of the project. The consultant at the time, Peter Nielsen, undertook a fact-finding trip with representatives of the then Heritage Agency of Denmark and the Swedish international expert Birgitta Hoberg on World Heritage. The comments received were used to produce “Notat om det eventuelt kommende Verdensarvsområde i Sydgrønland” (Memorandum on a potential future World Heritage property in South Greenland) of 16th September 2008, subsequent to which some adjustments were made in relation to the delimitation of the component parts. In 2009, new maps were produced with revised boundaries for the nominated World Heritage property. These were subsequently approved by the Government of Greenland after negotiations with the Ministry of Mineral Resources.

In 2013, a new steering group was established, comprising members from the Ministry of Culture, the Greenland National Museum and Archives, Kujalleq Municipality and the Danish Agency for Culture. This steering group has been leading the ongoing work on the third phase of the project, which has included an examination of the existing building stock. Conservation guidelines have been laid down for each individual building.

The Government of Greenland has, in conjunction with Kujalleq Municipality and the Greenland National Museum and Archives, taken a number of initiatives aimed at preserving the property’s values. Further measures are underway or planned for the coming years. This Management Plan contains both.

## 2 Outstanding Universal Value (OUV) of Kujataa

Kujataa is an outstanding example of human settlement, with a unique economic regime in a challenging environment, proposed under UNESCO criterion number (v).

### **Proposed statement of outstanding universal Value**

#### *Brief synthesis*

#### **Summary of factual information**

*Kujataa – a subarctic farming landscape in Greenland* is located in the municipality of Kujalleq in South Greenland. The nominated property is made up of five component parts that together represent the demographic and administrative core of a farming community based on a combination of animal husbandry and marine mammal hunting established by Norse colonists in the 10th century AD and continued to this day by Inuit farmers.

#### **Summary of qualities**

The overall landscape of pastures, fields, ruins and present-day buildings is an outstanding example of a human settlement and land use in the Arctic, which is representative of a unique farming culture. Kujataa represents the first European settlement in the New World and the earliest introduction of farming into the Arctic. The resulting cultural landscape, shaped by grazing both in medieval and modern times, is composed of grassy slopes and willow copses and characterised by low settlement densities with isolated farmsteads surrounded by cultivated fields. The landscape of Kujataa represents an exceptionally comprehensive preservation of a medieval Northern European culture. The five component parts contain the full range of relics relating to Norse Greenlandic culture dating from the 10th to the 15th centuries AD, with complete examples of monumental architecture as well as key sites illustrative of the adaptation of the Inuit to a farming way of life from the 18th century onwards.

#### **Justification of criterion**

Situated between the cold desert of the Greenland ice cap and the cool outer coast of the Labrador Sea, Kujataa is an oasis with a relatively mild climate. Subsistence practices based on a combination of animal husbandry and sea mammal hunting represent unique adaptations in both Norse and Inuit cultural contexts and have resulted in a distinctive cultural landscape where cultivated fields and managed pastures contrast with the barren wastes of the Arctic. Kujataa is an extremely marginal landscape for farming, vulnerable to environmental change in the present as well as during the Middle Ages, illustrating both the fragility and resilience of cultural traditions.

#### **Statement of integrity**

The boundaries of the nominated property are clearly defined and encompass all of the elements necessary to express its outstanding universal value. A comprehensive range of farming landscape is represented, including fields, meadows and pastures and including introduced and naturalised plants. All of the known elements relating to Norse Greenlandic culture—including farms,

churches, cemeteries and outfield structures—are represented in large numbers and the full range of variation. The nominated property includes key sites relating to the reintroduction of farming in the 1780s and encompasses the core areas of contemporary farming. Thule Inuit culture is represented on the nominated property by graves, summer camps and other relics of seasonal exploitation.

### **Statement of authenticity**

The nominated property has authenticity because the landscape retains the pastoral character introduced in the 10th century AD, exemplified by isolated farms surrounded by cultivated fields and interspersed by managed pastures set against a background of vast and untouched wilderness. The archaeological remains of the Norse Greenlandic settlements in Kujataa have retained the highest degree of authenticity. The form, design and material composition of houses and other relics of this culture are unquestionably European and Norse. The characteristics and distinguishing features of Greenland Norse and Thule Inuit material culture are clear and well known. This has been established through large scale excavations, extensive field surveys and intensive typological, art historical and environmental analyses stretching back into the 19th century. The historical view of the Norse Greenlandic settlements draws on contemporary written records from Iceland and Norway dating back to the 12th to 15th centuries AD. Conservation of architectural monuments has primarily taken place in the last 20 years based on the principle of ensuring structural stability rather than rebuilding. The majority of the Norse Greenlandic sites have suffered no anthropogenic modification since their abandonment. Modern sheep farms, located mostly on or adjacent to Norse Greenlandic farm sites, respect and reanimate the medieval settlement pattern, maintaining the landscape's managed character. Detailed historical documentation and protected historic buildings in the farming settlements bear witness to the farming culture of modern Inuit.

### **Requirements for protection and management**

A combination of effective legislation and well-organised municipal planning strategies—together with an up-to-date management plan—and a dedicated local community, contribute to the long-term protection and management of the nominated property and ensure the preservation of its outstanding universal value.

Following the inscription to the World Heritage List, the site will be governed and managed by a steering group with representation from the Government of Greenland, the Greenland National Museum and Archives, Kujalleq Municipality, village councils, sheep farmers, the Danish Agency for Culture and Palaces and the tourism industry. Day-to-day management will be carried out by a local secretariat headed by a site manager and a staff of site rangers in close collaboration with the authorities represented in the steering group.

All ancient monuments in the property are protected by the Greenland Parliament (Inatsisartut) Act on Cultural Heritage Protection and Conservation. This act ensures a protection zone of 20 metres around each ruin except for agricultural surface cultivation that may take place up to a distance of two metres from a monument. The ruin groups at Sissarluttoq (component part 3) and at the Qaqortukuloq/Upernaviarsuk (Hvalsey) site (component part 5) are further protected by their status as “cultural heritage areas”, including a much wider protection zone around the monuments, where no agricultural activities can take place with exception of pasture for sheep grazing during

summer. The important ruin groups in Qassiarsuk (component part 1) and Igaliku (component part 2) also have an additional protection zone through municipal planning.

The listed buildings in the property are protected by the same act as the ancient monuments, ensuring that demolition is prevented and that any alterations are carefully controlled. The Greenland National Museum and Archives is the responsible authority and offers advice and information on the maintenance of listed buildings. Furthermore, listed buildings are protected under the municipal planning.

These values are central to Kujataa's status, and the management plan is particularly focussed on protecting and conserving these values.

### 3 The aim of this management plan

The overall aim of this management plan is to protect the values of universal significance that form the basis for the nomination of Kujataa for the World Heritage List in relation to other national and regional values, visions and codes of practice.

Here we have a cultural landscape that is one of the absolutely most marginal on earth in which to practise agriculture, both during the Middle Ages and in the present day. It is a landscape with the well preserved remains of a Northern European farming and hunting society that existed from the end of the 10th century until its enigmatic disappearance in the middle of the 15th century.

Furthermore it is a settlement in South Greenland that involved cultural encounters between people from, respectively, "East" and "West", and which represented a milestone in the global spread of humankind since we migrated out of Africa.

The complete description of the nominated World Heritage property in Kujataa is contained in the nomination material for inscription of the area on UNESCO's World Heritage List.

This management plan is a practical administrative tool intended to safeguard the property's universal values.

This management plan has the following aims:

- Protect cultural heritage values and agriculture
- Safeguard buildings
- Develop use of the area
- Spread knowledge of the World Heritage area
- Ensure that all users have an understanding of the World Heritage area and its unique value and promote the local population's pride, interest and respect in relation to it
- Give all users the opportunity for safe, enriching and informative experiences
- Ensure that tourism develops on a sustainable foundation
- Create a sound and sustainable balance between the various uses and interests associated with the area
- Support research and ensure recording and communication of findings to the local population and for the benefit of other researchers and interested parties

For a more detailed description of the World Heritage, reference is made to the nomination documents.

The management plan comprises a toolbox of measures that must be implemented and adjusted over time as the area develops, and it therefore encompasses ongoing initiatives and both short and long-term visions.

## 4 Responsibility for the World Heritage area

UNESCO manages the international World Heritage Programme, which builds on the “Convention Concerning the Protection of the World Cultural and Natural Heritage” of 1972, which has the goal of preserving the world’s unique natural and cultural heritage for future generations.

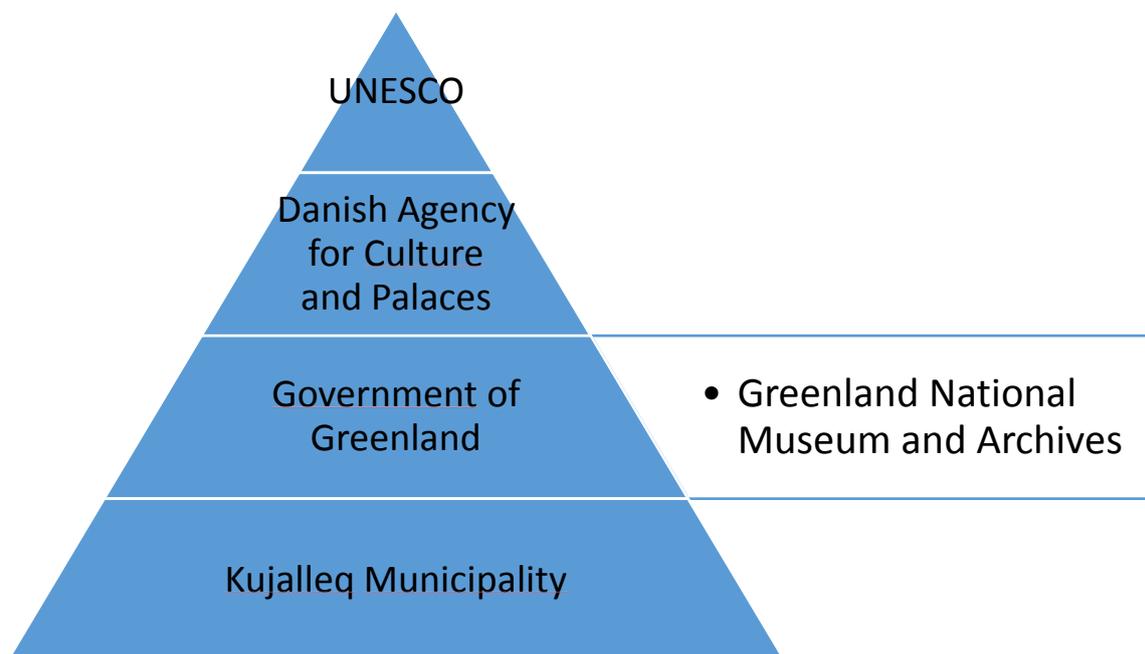
The Danish Agency for Culture and Palaces assumes, on behalf of the Danish Realm, overall responsibility for the nominated World Heritage area in relation to UNESCO.

In relation to the authorities of the Danish Realm, the Greenland Government assumes overall responsibility for World Heritage areas in Greenland. As the Kujataa area has been nominated as a cultural heritage area, the responsibility within the Government of Greenland lies with the Ministry of Culture, which is responsible for historic assets deemed worthy of conservation and protection.

Responsibility for the general supervision and administration of historic assets lies with Greenland National Museum and Archives, in accordance with current legislation.

Kujallaq Municipality is responsible for activities in the local area as such, in accordance with the rules applicable to Greenlandic municipalities.

Fig.1. Responsibilities for the nominated World Heritage area of Kujataa:



The responsibility for the nominated World Heritage area is divided between the Government of Greenland, the Greenland National Museum and Archives and Kujalleq Municipality. This division of tasks is based on the distribution of tasks set out in national legislation (see Chapter 5).

### 4.1 Organisation

#### The steering group

In preparation for the nomination to the UNESCO World Heritage List, a steering group was set up, which reports directly to the Mayor of Kujalleq Municipality and the Minister of Culture.

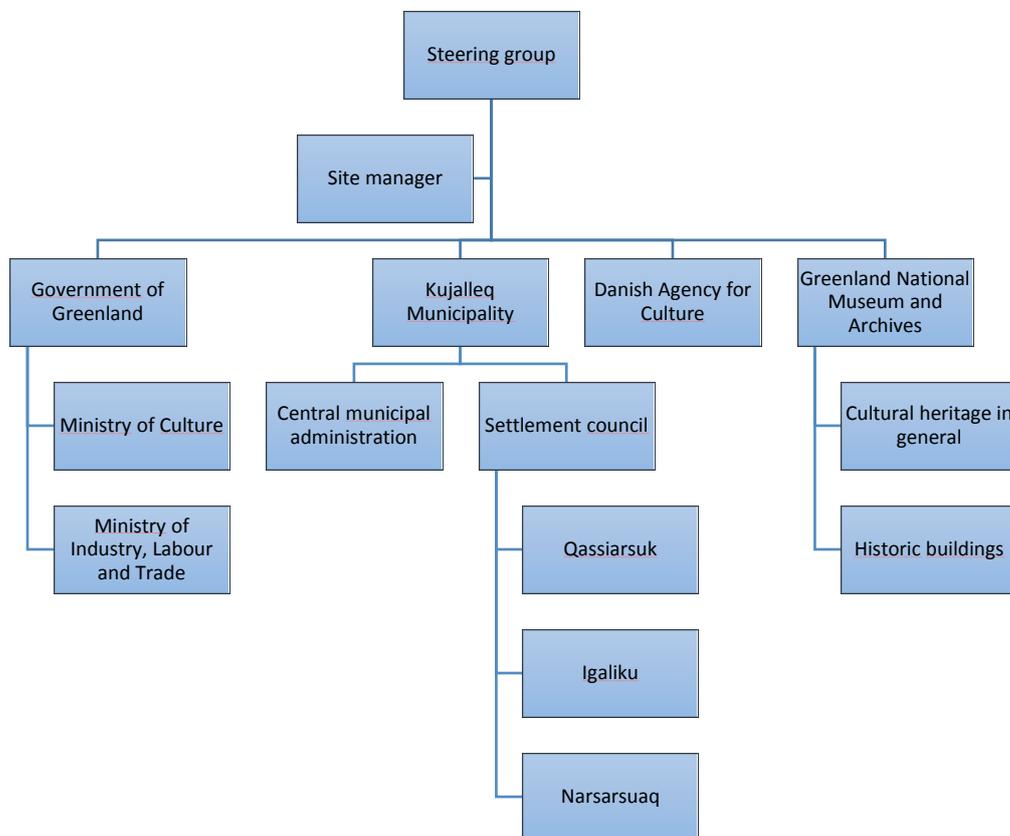
The steering group comprises representatives of the four main parties involved: the Danish Agency for Culture and Palaces, the Government of Greenland, Kujalleq Municipality and the Greenland National Museum and Archives.

The steering group primarily handles the project’s relations with the four above-mentioned parties and with the UNESCO system. The steering group also has overall responsibility with regard to organisation and finances.

The current steering group shall function until such time as the area may be inscribed on the World Heritage List. If the area is inscribed on the World Heritage List, a permanent steering group shall be established to manage the future World Heritage area. This steering group shall have the following members:

- Kujalleq Municipality shall nominate two representatives:
  - One from the central municipal administration (chair), and
  - One from the joint settlement council for Igaliku, Qassiarsuk and Narsarsuaq.
- The Danish Agency for Culture and Palaces shall nominate one representative
- The Government of Greenland shall nominate two representatives:
  - One from the Ministry of Culture
  - One from the Ministry of Industry, Labour and Trade
- The Greenland National Museum and Archives shall appoint two representatives
  - One for the cultural heritage in general
  - One for historic buildings

Organisational diagram of the steering group



The site manager (project manager) for the area shall act as secretary for the steering group.

The members shall meet once a year in the nominated World Heritage area. Due to the significant geographical distances involved, further contact shall take place between the members of the steering group via electronic means of communication.

The tasks and competencies of the steering group

The steering group shall consider and take decisions concerning the overall management of the area in Kujataa and maintain contact with UNESCO. Final decisions shall be made in accordance with the allocation of responsibilities described above.

The steering group shall consider among other things:

- 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 which can optimise the area's assets
- How such initiatives can be financed

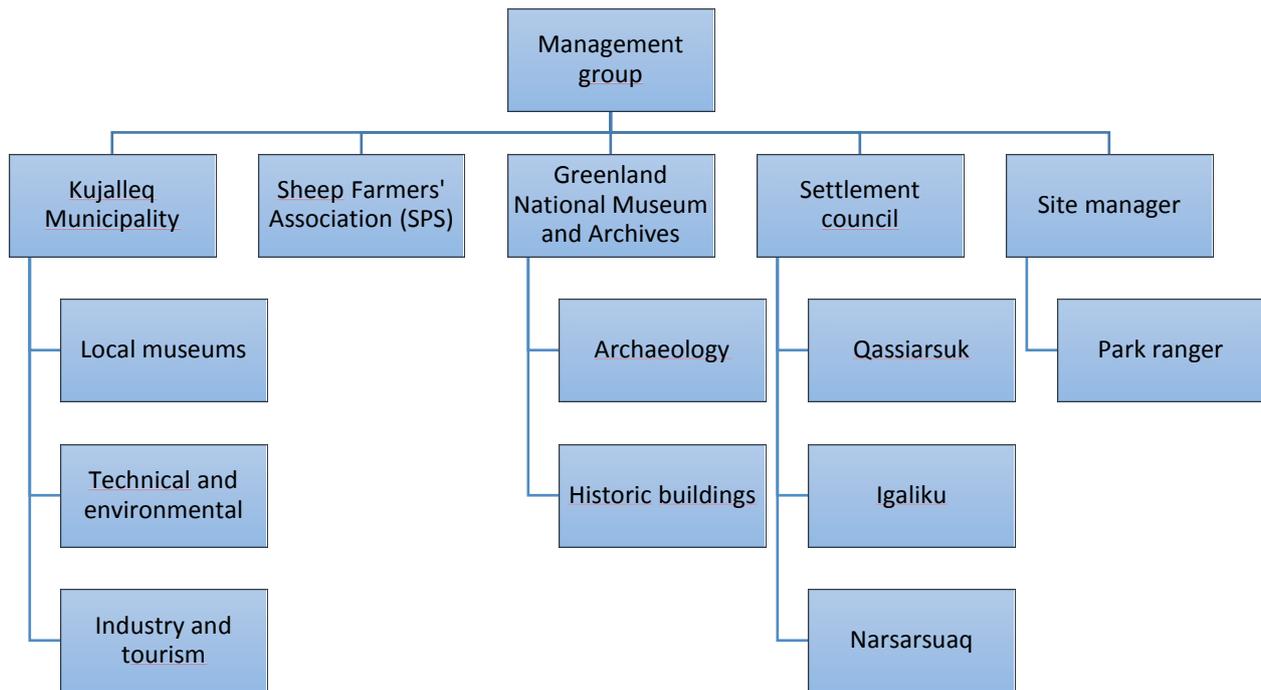
## 4.2 Project groups

### **Management group**

Day-to-day activities, monitoring and division into sub-projects in the area shall be undertaken by a site manager in cooperation with a park ranger (attendant) and the management group for the World Heritage area in Kujataa. The management group shall consist of expert representatives from the Greenland National Museum and Archives, Kujalleq Municipality and the local area. The composition of the group is proposed as follows:

1. One Greenland National Museum representative for archaeological matters
2. One Greenland National Museum representative for historic buildings
3. One Kujalleq Municipality representative for the local museums in the municipality
4. One Kujalleq Municipality representative from the business/tourism sector
5. One Kujalleq Municipality representative for technical and environmental matters
6. One member from the cooperative Sheep Farmers' Association SPS, representing local sheep farmers
7. One representative from the joint settlement council/office in Igaliku
8. One representative from the joint settlement council/ office in Qassiarsuk
9. One representative from the joint settlement council/ office in Narsarsuaq
10. Site manager

Organisational diagram of the management group



The group shall hold quarterly (telephone) meetings on the status of the area and coordinate new initiatives.

Description of the tasks of the management group:

- Oversee the running and monitoring of the World Heritage area and implement new initiatives
- Identify the need for and propose revision of the management plan and monitoring plan to the steering group
- Establish and maintain risk contingency facilities
- Report regularly to UNESCO
- Coordinate the execution of tasks in the area.

#### Local Interest Groups

The establishment of a local group with a particular interest in the status of the nominated area as a World Heritage area is under consideration. During the nomination process, this group shall comprise the three members of the joint settlement council, who communicate with interested citizens in the area via their network. Later, a special contact group with a broader membership may be established explicitly in relation to the World Heritage project. The main purpose of this group is to involve the local population in the work, keep interested parties informed of developments and make it possible to provide input for further work. The group shall, when nomination of the World Heritage area has taken place, consist of citizens with a special interest in being involved in the development of the future World Heritage area, such as sheep farmers, tradesmen (carpenters, plumbers, electricians etc.) and tourism businesses. Communication shall take place primarily through meetings in the local area as well as through (electronic) newsletters and other means of online communication.

### Local network

Local authorities, institutions, businesses and associations shall be informed and consulted in relevant cases.

### **4.3 Site management**

A site management office shall be established in Kujalleq Municipality that shall be responsible for the daily running, maintenance, marketing/communication and development of the area.

#### Organisation

An independent tourism institution called Destination South Greenland has been established by stakeholders within the tourist trade and is financed by a service contract with the municipality. This organisation shall employ one tourism consultant/site manager, who shall lead and manage projects in the nominated World Heritage area as well as other sites in South Greenland, including Uunartoq and Herjolfsnaes. The site management office shall be established as a self-governing institution financed by grants from the municipality, the Government of Greenland, foundations and other sources of income.

A tourism consultant/site manager shall be appointed to manage this organisation. Further, one park ranger (or possibly two) shall be appointed to look after the area.

The obligations of the municipality, the Government of Greenland and the Greenland National Museum and Archives with regard to the area shall be executed and handled by the relevant authorities, but in cooperation with and under the coordination of the site manager. The site manager may also purchase services from the settlement offices—such as dissemination of informational materials, service in information centres, supervision etc.—and can apply for project funding from foundations. The site manager acts as a chair in the above-mentioned management group.

The tasks of the site manager:

- Implementation of the management plan (including follow-up activities, conducting annual evaluations and altering daily management routines as required)
- Project fundraising (obtaining funds for various initiatives, drawing up budgets, keeping accounts and writing reports)
- Management and/or consultation services for projects within the area
- Contact with the local population
- Information and communication about the World Heritage nomination project
- Monitoring, preparing and reporting on developments in the nominated World Heritage area
- Procurement of permits in connection with the execution of projects
- Membership in working group(s)
- Financial management
- Management of official visits in relation to the nominated World Heritage area (presentations, meetings and tours, possibly in cooperation with the park ranger)
- Serve as secretary for the steering group
- Chair the local management group
- Cooperate with site managers in other World Heritage areas.

The site manager reports to Kujalleq Municipality. Management of the World Heritage area shall be undertaken in cooperation with the Ministry of Culture in accordance with the stipulated distribution of responsibilities. The site manager appoints and manages the park ranger.

#### **4.4 Park ranger**

From 2017, a park ranger shall be hired (with the possibility of appointing a second park ranger at a later date). The tasks assigned to the park ranger may be delegated to several individuals who already undertake similar functions in the five component parts.

##### Tasks

- Inspect natural and cultural assets in the area
- Be alert to development trends in the area
- Advise and inform users and visitors
- Help the site manager with various mainly administrative tasks during the winter season
- Check, report on and react to breaches of the law and of the risk contingency measures
- Cleaning/waste management in the area

##### Qualifications

The park ranger shall be out-going, authoritative and proficient in Greenlandic, Danish and English. The park ranger shall also possess the required practical skills, such as a driving licence, knowledge of first aid and of the guidelines for navigation.

## 5 National legislation

This chapter explains the national legislation and the draft statutory instrument relating to the area subject to this World Heritage nomination. The current legislation and the draft executive order relevant to the area are attached as annexe 11a.

### 5.1 The Heritage Protection Act

Greenland has statutory protection (designation) of historic assets, i.e. scheduling, listing and other cultural heritage conservation management measures, specified in dedicated legislation. This was achieved through Greenland Parliament (Inatsisartut) Act no. 11 of 19 May 2010 on Cultural Heritage Protection and Conservation (The Heritage Protection Act). The Act came into force on 1 July 2010.

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 Act allows for the Government of Greenland (Naalakkersuisut), in extraordinary cases, and with substantiated reference to general considerations for the development of society, to set aside contemplated designation, i.e. scheduling, listing and other cultural heritage conservation management measures, or to change or annul existing scheduling, listing or other cultural heritage conservation management measures.

In the event of the Government of Greenland making a decision with reference to general considerations for the development of society, it must, in conjunction with this, make a decision with respect to how to ensure responsible and proper recording of the historic asset in question, and the insight and information it contains.

The Heritage Protection Act also defines what is meant by the term historic assets, namely ancient monuments, historic buildings and historical areas, and what is understood by each of these individual components. The Act contains separate regulations for ancient monuments, historic buildings and historic areas.

#### Historic areas

Historic areas are defined as areas possessing a historic value.

The sub-areas that are encompassed by, and collectively constitute, the nominated World Heritage area possess a historic 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 historic area can, under the terms of the Heritage Protection Act, be protected by scheduling or other cultural heritage conservation management measures, if the conservation or protection of this historic area is of major significance. The Greenland National Museum and Archives is responsible for making the decision, subject to prior notification and consultation. This consultation must encompass the public, the owner, users with an “areal allocation” (for more on the Greenlandic concept of land allotment, also known as an “areal allocation”, see section 5.4 on the Planning Act below) or other rights of use to the area and the municipality in which the historic area is located, the Government of Greenland and other relevant parties. Furthermore, the Cultural Heritage Board, established under the Act, must be consulted separately.

Scheduling or other forms of cultural heritage conservation management of historic areas encompass the relations that exist between several historic assets or an area with which particular events are associated.

Scheduling and other cultural heritage conservation management measures have juridical consequences, some of which are common, while others differ. Scheduling and other heritage conservation management measures must be respected by all those with right of use of the historic area, regardless of when this right was established. This is a common consequence.

Scheduling means that no activities whatsoever may take place within the area apart from public access. The Greenland National Museum and Archives can grant exemption to this under very special circumstances.

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 Heritage Protection Act operates accordingly with two levels of cultural heritage protection, whereby scheduling is the stronger and other cultural heritage conservation management is the weaker, in relation to the restrictions imposed on the use of the area consequent on the implemented protection.

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, including the demarcation and use of the area, its management and access to it, with or without payment of a fee. An executive order has been created for the area in question (see section 5.2 below for more details).

The Greenland National Museum and Archives publishes decisions made with respect to scheduling or other cultural heritage conservation management, and alterations to or annulment of such measures, within 14 days of such decisions being made. At the same time, owners, users with a land allotment (areal allocation) or other rights of use of the area and the municipality in which the historical area is located, as well as other interested parties, are informed directly.

The Greenland National Museum and Archives is obliged to keep a record of historic areas that are scheduled or subject to other cultural heritage conservation management, including a statement of the provisions attached to this scheduling or other cultural heritage conservation management.

The Greenland National Museum and Archives is also obliged to monitor historic 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.

#### Ancient monuments

The Heritage Protection Act also contains separate chapters on the designation of ancient monuments and historic buildings. Unlike historic areas, these are only subject to either scheduling, in the case of ancient monuments, or listing, in the case of historic buildings.

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

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 AD 1900 or after are also automatically protected.

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, cairns, fields and the stone walls associated with them, the protection of which is of significant importance due to them having a historic 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 metres of ancient monuments and activities within 2–20 metres are restricted to agricultural practices and the construction of paths leading to the ancient monuments. Agricultural practices encompass superficial preparation of the soil, by harrowing to a depth of 15 cm, manuring, planting and the use of the area for grazing. The Greenland National Museum and Archives can grant consent for other agricultural practices, such as the removal of stones and the erection of information boards, installation of rubbish bins and similar equipment appropriate to public access to the ancient monuments. The Greenland National Museum and Archives can grant exemption from these provisions on the basis of special grounds.

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.

As in the case of the historical areas, scheduling, alterations to scheduling and de-scheduling are all published.

As in the case of the historic areas, the Greenland National Museum and Archives is obliged to keep a record of all known scheduled ancient monuments, including details of the provisions attached to the scheduling. The Greenland National Museum and Archives is also obliged to monitor the status of scheduled ancient monuments and must also carry out maintenance of important scheduled ancient monuments within the constraints of the financial limits laid down in the national budget.

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. These provisions oblige the Greenland National Museum and Archives to cooperate with the planning and mineral resources authorities and other parties involved in the exploitation of the nation's resources such that ancient monuments—and the insights and information that they contain—are secured for posterity.

Similarly, the planning and mineral resources authorities and other parties involved in the exploitation of the nation's resources are obliged to consult the Greenland National Museum and Archives in relation to the preparation of planning material and the processing of permits that can have consequences for ancient monuments.

The planning and mineral resources authorities and other parties involved in the exploitation of the nation's resources are obliged, in connection with the processing of permits that can have consequences for ancient monuments, to inform applicants of the contents of relevant provisions under the Heritage Protection Act.

The Heritage Protection Act also requires developers involved in major earthworks to involve the Greenland National Museum and Archives in the planning process relating to these.

In this respect, the Heritage Protection Act also contains provisions referring to archaeological inspections and investigations, including the stipulated timeframe for these and who should cover the costs.

The Greenland National Museum and Archives decides whether earthworks can be carried out to the extent that they do not affect ancient monuments, an archaeological inspection or an archaeological investigation. In making this decision, emphasis is placed on protecting ancient monuments, securing the execution of an archaeological inspection or archaeological investigation and the possibility of initiating the earthworks.

Should ancient monuments be encountered during earthworks, the developer must immediately report the discovery to the Greenland National Museum and Archives and work must be halted insofar as it affects the ancient monument. The Greenland National Museum and Archives decides whether an archaeological study should be conducted and/or whether scheduling should be initiated.

The Greenland National Museum and Archives can grant permission to other institutions and academic organisations for the excavation of ancient monuments and archaeological sites and specify the conditions for these permits.

#### Historic buildings

Historic 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.

Buildings can only be listed according to a decision made by the Greenland National Museum and Archives following a prior hearing (consultation). The buildings in question must, by virtue of their historic or architectonic value, be of particular significance.

The Government of Greenland can, on the advice of the Greenland National Museum and Archives, specify provisions with respect to the listing of buildings, including the criteria for listing.

The listing must be respected by all holders of rights to the building, regardless of when these rights were established.

The listing of buildings implies particular obligations with regard to maintenance of the buildings and limitations with regard to the carrying out of building works with respect to the building. Accordingly, owners are obliged to maintain a listed building in a sound state in accordance with the listing. General maintenance must be carried out using the same materials, methods and colours as employed to date, and in accordance with state of preservation and appearance of the listed building at the time of listing. The Greenland National Museum and Archives can, subject to the existence of special grounds, grant an exemption in relation to the use of the same materials, methods and colours as those employed to date.

All building works relating to listed buildings require consent from the Greenland National Museum and Archives if these building works affect elements of the building subject to the listing and if the work extends beyond general maintenance. The Greenland National Museum and Archives can attach provisions to the consent.

The Greenland National Museum and Archives can, subject to an application, decide that the cost of maintenance or building work on a listed building be covered entirely or in part by the allocation specified for this purpose in the national budget.

The Greenland National Museum and Archives publishes listings, alterations to listings and de-listings within 14 days of the decision being reached. Owners, users with an areal allocation or other right of use of the building and the municipality in which the building is located, as well as other interested parties, are informed directly.

Decisions relating to listings are recorded by the Court of Greenland at the request of the Greenland National Museum and Archives. The Court of Greenland is obliged to give the Greenland National Museum and Archives notice of change of ownership.

The Greenland National Museum and Archives keeps a record of buildings that are listed, including a statement of the provisions attached to the listing.

The Greenland National Museum and Archives monitors listed buildings.

## **5.2. Executive order on cultural heritage protection**

The executive order on cultural heritage protection for a historic area in South Greenland—which contains five areas around Qassiarsuk, Igaliku, Sissarluttoq, Tasikuluulik, Arpatsivik and Qaqortukuloq-Upernaviarsuk—is issued in pursuance of the Heritage Protection Act and upon the recommendation of the Greenland National Museum and Archives. The executive order enters into force during 2016.

The executive order defines the limits of the area. This is done through a general description in the statutory instrument and a map with coordinates annexed to it.

Further to this, the executive order also contains provisions relating to access to the area as a whole and to the individual component sub-areas and the use of these. The provisions establish public

access to the area according to the restrictions laid down in the executive order, and stipulate that access to a specific area or areas may be conditional upon payment of a fee, which has the purpose of either fully or partially covering the costs associated with establishing, running and maintaining structures erected in connection with providing access to the areas in question.

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 is 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 bans on polluting activities and a framework for the use of the vegetation and the terrain. These specify that activities connected with commercial activities, sheep farming and other forms of agriculture may continue, but must be in accordance with the aims of the statutory instrument and the general rules relating to use of the area. Further to these are provisions relating to camping, the use of open fires and anchoring, landing and periodic limitation of traffic. With respect to the latter, it is stated that rules can be specified by the municipal council in Kujalleq Municipality.

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 Kujalleq Municipality, and subject to 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 the minimum aims of the management plan and what its contents should be. This clearly delineates the plan as a management tool employed by the managing authorities to ensure that the cultural heritage values of the historical area are preserved and protected while guaranteeing public access to the area and its continued use and development.

It is also specified in the executive order that the municipal council in Kujalleq Municipality is responsible for ensuring that the order is observed.

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.

### **5.3 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 material and immaterial cultural heritage. Material cultural heritage comprises portable artefacts, buildings and cultural environments that provide evidence relating to particular epochs or elements in the development of society. The immaterial cultural heritage comprises practices, perceptions, expressions, knowledge and skills, as well as the tools, artefacts and cultural space associated with these, that society, groups and, in some cases, individuals identify as part of their cultural heritage.

The museum service has, in accordance with the Act, through recording, collecting, conserving, research 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 nationwide responsibility for the tasks incumbent upon the museum service. The Act specifies more detailed rules relating to the museum's responsibilities with respect to the recording, collecting, establishing and maintaining of representative collections, historical research, communication etc.

The Museum Act also specifies rules with respect to the protection of archaeological/historic 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.

#### **5.4. The Planning Act**

The Planning Act (Greenland Parliament (Inatsisartut) Act no. 17 of 17 November 2010 on Planning and Land Use) regulates land use in Greenland and is therefore of major relevance for the protection and development of a World Heritage area.

The aim of the Planning Act:

*§ 1. The Parliament 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 the following:*

*1) Protection of nature*

*2) A socially appropriate ratio between open land and the built environment*

*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 municipalities, although the Government of Greenland remains the regulatory authority and can issue national planning directives or require municipalities 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 Greenland Home Rule Executive Order no. 31 of 30 October 1991 on 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 and, in essence, all land is public land. A specific right of use can be granted for 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 in question (i.e. buildings, structures and other improvements). The right of use extends only as far as is necessary to accommodate the aim of a land allotment, also known as an areal allocation. A situation can therefore arise where there are several holders of rights to the same area. For example, an area might be designated for grazing by sheep or reindeer, yet also have a small number of holiday cabins. In so far as these purposes are not mutually exclusive, for example, if the number of cabins has not risen to the point that it precludes grazing, several coexisting rights of use are unproblematic according to the Planning Act.

Areal allocations are not made for a demarcated area, but rather for the positioning of a building or other structure within a delimited plot or as close as possible to a particular geographical position. For example, should a woman wish to erect a fence around her house, this would require a separate areal allocation, regardless of whether or not the fence lies within the plot for her house. Areal allocations are only required in cases where an area is withdrawn from common usage for more than two months. A holiday cabin requires an areal allocation, while an anchor buoy beside the same cabin does not.

## 5.5 Other legislation

In addition to the acts mentioned above, there is further legislation and regulation relating for instance to farming and commercial activities, the environment and the fauna and flora.

This includes “Greenland Parliament (Inatsisartut) Act no. 11 of 12 November 1980 on Nature Conservation in Greenland”.

## 6 The property's values

The values in the nominated property are described below:

In the nomination, Kujataa is described as follows:

*Kujataa – a subarctic farming landscape in Greenland is located in the Kujalleq Municipality in South Greenland. The nominated property is made up of five component parts which together represent the demographic and administrative core of a farming community based on a combination of animal husbandry and marine mammal hunting established by Norse colonists in the 10<sup>th</sup> century AD and continued to this day by Inuit farmers.*

*The overall landscape of pastures, fields, ruins and present-day buildings is an outstanding example of human settlement and land use in the Arctic, which is representative of a unique farming culture. Kujataa constitutes the first European settlement in the New World and the earliest introduction of farming to the Arctic. The resulting cultural landscape, shaped by grazing both in medieval and modern times, is composed of grassy slopes and willow copses and characterised by a low settlement density with isolated farmsteads surrounded by cultivated fields. The landscape of Kujataa represents exceptionally comprehensive preservation of a Northern European medieval culture. The five component parts contain the full range of remains relating to Norse Greenlandic culture dating from the 10th to the 15th century AD, with complete examples of monumental architecture as well as key sites illustrative of the adaptation of Inuit to a farming way of life from the 18th century onwards.*

### Values and goals

The identified values associated with the nominated property and the goals (aims and objectives) associated with these are outlined in the following table:

<b>Assets</b>	<b>Component elements relative to Kujataa as a World Heritage property</b>	<b>Aims and objectives</b>
Landscape values	Subarctic agriculture of both Norse and Inuit  Ancient monuments	Protect and develop farming with respect for the area's unique character and historical significance  Present knowledge of the Norse ruins, Inuit settlements and modern farming to visitors and local users
Cultural values	Archaeological/historical settlements of both Norse and Inuit  Buildings  Modern farming  Recreational use	Protection of the area's cultural and historical values  Safeguarding and maintenance of buildings  Conserve and develop modern farming culture  Regulation of tourist behaviour and movement in the area
Biodiversity values	The area's fauna and flora	Safeguarding in relation to overload/overuse and climate change
Economic values	Modern farming  Tourist destination     Hunting and fishing	Ensure continued development of farming and possible new business potential  Disseminate knowledge of the nominated World Heritage property both inside and outside Greenland  Increase earnings and income in the local area in order to secure the future preservation and communication/presentation of the area  Ensure sustainable tourism, including regulation of tourist behaviour and movement in the area  Inform about the World Heritage area by setting up of information points, followed by a visitor centre in Kujalleq Municipality  Sustainable development of economically beneficial activities associated with the area
Research and education values	Important archaeological/historical settlements  Special living conditions  Agricultural research and development  Climate change	Ensure research opportunities in the area for both national and international benefit  Communication of research findings to the local community, visitors and other interested parties  Support the agricultural research and development at the Upernaviarsuk Agricultural Research Station  Monitor and inform about climate changes in the area.
Other social values	Pride  Development of the local area	Ensure that all users have an understanding of the property and its unique values and promote the population's pride and potential with respect to the nominated World Heritage property

## 7 Threats and management measures in relation to the property's values

This chapter identifies the most significant threats considered (in September 2015) to be of possible consequence for the nominated World Heritage property. In this context, a threat is understood as a challenge that already has had, or is expected to have, consequences for the property.

The table aims to provide an overview of these threats, and the measures to counter them. Identification of the most significant threats and countermeasures has been undertaken in conjunction with the various parties involved.

<b>Subject:</b>	<b>Reason/threat:</b>	<b>Requires protection of these values:</b>	<b>Management measures:</b>
Ancient monuments	<p><b>Reason:</b> Activities associated with farming, settlement development and tourism</p> <p><b>Threat:</b> New machinery and expansion of the cultivated area can result in damage to both excavated and unexcavated ancient monuments</p> <p>Inappropriate behaviour by tourists could damage the ancient monuments</p> <p><b>Reason:</b> Climate change</p> <p><b>Threat:</b> Warmer climate and temperature fluctuations, increased rainfall and rising sea level can cause decay of organic material, landslides and flooding that could damage the ancient monuments</p> <p><b>Reason:</b> Possible mining in the neighbouring areas</p> <p><b>Threat:</b> Disturbance of the farming culture</p>	<p>Cultural landscape and Norse and Inuit ruins</p> <p>Potentially disfiguring relative to cultural values in the nominated property</p>	<p>Regular updates on the protection (scheduling/listing) legislation etc., ground marking and legal action/prosecution in the event of transgressions</p> <p>See annexe: Action plan for the management of the ruins at key sites</p> <p>Information for sheep farmers on the subject and dialogue in advance of new initiatives</p> <p>The steering group for the nominated property will continually monitor developments in mining and other commercial activities, in neighbouring areas, and act as the consultative body for future prospecting licences etc.</p> <p>The steering group for the nominated property will continually monitor developments in mining and other commercial activities in neighboring areas and act as the consultative body for future prospecting licenses etc.</p>
Building listing and other cultural heritage protection	<p><b>Reason:</b> Renovation and possible extensions</p> <p><b>Threat:</b> Deterioration of architectural or cultural and historical values</p> <p><b>Reason:</b> Climate change</p> <p><b>Threat:</b> Warmer climate and temperature fluctuations, increased rainfall and rising sea level can cause decay of organic material, landslides and flooding that could damage the buildings</p>	<p>Building traditions and working methods</p> <p>Stone house tradition</p>	<p>Information to owners on maintenance and rules relating to building styles/traditions</p> <p>Municipal inspection and prosecution</p> <p>Monitor and inform about the climate changes in the area</p>
<b>Subject:</b>	<b>Reason/threat:</b>	<b>Requires</b>	<b>Management measures:</b>

		<b>protection of these values:</b>	
Farming	<p><b>Reason:</b> Increased activity</p> <p><b>Threat:</b> Damage to and erosion of the cultural landscape</p> <p>Disturbance of the farming culture</p> <p><b>Reason:</b> Possible mining in the neighbouring areas</p> <p><b>Threat:</b> Disturbance of the farming culture</p>	The modern farming	<p>Enforcement of rules relating to activities in the area</p> <p>The steering group for the nominated property will continually monitor developments in mining and other commercial activities in neighbouring areas and act as the consultative body for future prospecting licences etc.</p>
Tourism	<p><b>Reason:</b> Movement/traffic close to the ruins</p> <p><b>Threat:</b> Damage to the ruins</p> <p>Wear and tear on vegetation</p> <p>Change of values, lack of capacity and accessibility to the five areas</p> <p><b>Reason:</b> Existing refuse problem and increased quantities of waste due to growing influx of tourists</p> <p><b>Threat:</b> Visible waste/refuse will deface the cultural landscape.</p>	The cultural landscape and Norse and Inuit ruins	<p>Path and harbour construction and rules for movement/traffic relating to the activities in the area</p> <p>Monitoring of tourism and ongoing evaluation of the need for further regulatory initiatives etc.</p> <p>Analysis of tourist movement/traffic in the nominated property, expansion of facilities and formulation of movement/traffic plans based on the findings</p> <p>Preparation of municipally waste management plan for the two settlements and land areas</p>
Other commercial/industrial activities	<p><b>Reason:</b> Possible building construction associated with the development of other business activities</p> <p><b>Threat:</b> Possible disturbance of the farming culture and overall impression</p>	Potentially disfiguring relative to the cultural values in the nominated property	Future revision of the municipal plan in relation to the accommodation of new businesses in the component parts
Infrastructure	<p><b>Reason:</b> Increased motorised traffic</p> <p>Possible construction of road from Igaliku Kujalleq to the dam at Qorlortorsuaq</p> <p><b>Threat:</b> Noise and pollution</p>	<p>Effects on the ancient monuments</p> <p>Disturbance of the general impression of the cultural landscape</p>	<p>Current improvement of transport infrastructure in the area, including progressive improvements of roads, paths, and landing facilities</p> <p>Due to increased motorised traffic on land, special restrictions near ancient monuments to be considered</p> <p>Increased traffic from the sea can be regulated by rules for navigation and the establishment or maintenance of mooring facilities/berths, enabling nuisance effect of motorboats to be minimised</p> <p>Ground marking of helipads in the</p>

			areas with no helistops, i.e. at Qaqortukuloq (Hvalsey), Sissarluttoq and Tasikuluulik (Vatnahverfi)
<b>Subject:</b>	<b>Reason/threat:</b>	<b>Requires protection of these values:</b>	<b>Management measures:</b>
Recreational activities	<p><b>Reason:</b> Increase in number of people in the area</p> <p>Use of open fires</p> <p><b>Threat:</b></p> <p>Wear and tear on the vegetation</p> <p>Increased risk of fires</p>	<p>The cultural landscape and Norse and Inuit ruins, as well as modern farming</p>	<p>Ground marking of camp sites in Igaliku, Qassiarsuk and Qanisartuut to improve the facilities</p> <p>Establishment of paths and ground marking of hiking routes</p> <p>Guidance of outdoor activities</p>
Settlement development	<p><b>Reason:</b> Increased activities in the settlements and in relation to tourism and use of holiday homes</p> <p>Need to strengthen and reinforce the functions of the service sites (land use etc.)</p> <p><b>Threat:</b> Negative effect on the overall impression of the settlement life</p>	<p>The cultural landscape and the general impression of settlement life in Igaliku and Qassiarsuk</p>	<p>Regular updates on regulations in the nominated property and hearings in conjunction with these</p> <p>Improvement of facilities and infrastructure</p>
Health and safety measures	<p><b>Reason:</b> Increased tourism in the nominated property may make it necessary to upgrade capacity and contingency</p> <p><b>Threat:</b> Increased risk of personal injury and environmental impact</p>	<p>The well-being and state of health of the population and of tourists</p> <p>Protection of the environment</p>	<p>Possible upgrading of capacity and contingency in connection with increased number of visitors to the component parts</p>
Research activities	<p><b>Reason:</b> Possible increased activities in the area</p> <p><b>Threat:</b> Possible disturbance of the overall impression</p>	<p>The cultural landscape and Norse and Inuit ruins</p> <p>The general impression of settlement life in Igaliku and Qassiarsuk</p>	<p>A need for increased facilities, information and restrictions/regulation in the case of a major increase in activity</p>

## 7.1 Management measures

On the basis of the above table, the threats and management measures and initiatives mentioned are described in more detail below.

### 7.1.1 Ancient monuments

The majority of the ancient Norse cultural landscape in the nominated property is also used today for farming. There are a total of 22 farms that are almost exclusively based on sheep husbandry.

The modern farms are distributed across the same limited areas of cultivable land that were exploited by Norse agriculture. Consequently, there is almost always a Norse ruin group in the vicinity of a modern farm.

Developments in agriculture mean that the immediate surroundings (including old homefields) of some of the Norse ruin groups are being swallowed up by field expansion and that “pressure” on the ruins and the ancient structures is generally on the increase. The problem is not, however, so great as to be insoluble in light of (Inatsisartut) Act no. 11 of 19 May 2010 on Conservation and Other Cultural Heritage Protection of Ancient Monuments (The Heritage Protection Act) and the fact that the Greenland National Museum and Archives routinely consults in connection with applications relating to cases of field expansion, extension of farm buildings (sheepcotes), construction or rerouting of roads and wheel tracks etc. The same applies to planned drainage projects in relation to bogs and wet fields with the aim of bringing these into cultivation. There are several examples of how wetland areas such as these can contain important remnants of well preserved Norse cultural remains—even without them necessarily being located in the immediate vicinity of a former Norse farm.

### **Objectives**

The aim is to maintain the continued existence of ancient monuments so they can convey the story that the landscape has to tell us. In order to do this optimally, it is necessary to preserve and render visible selected ruin groups. When selecting a limited number of individual key sites, it is important to bear in mind that other—perhaps less significant—ruin groups are not forgotten. Recording and documenting all ancient monuments, large and small, is a goal in itself. The aim then becomes to provide easier access to information on each individual monument for both the local population and visiting tourists. There is already evidence that forgotten ancient monuments will languish and degenerate over the years, and receive no attention from locals, tourists or researchers.

### **Possibilities and threats**

Despite the conflicting interests between conservation issues and the wish to exploit an agricultural area optimally, it is the heritage authority’s impression that there is a well-founded respect for the Norse ruins among the sheep farmers of South Greenland. There are, however, examples of negligence and a lack of knowledge that have led to the legally determined distance from a ruin not being maintained during field cultivation or other activities, and that damage has occurred to the ruin as a result. It should also be added that even though all the known ruins are marked on the settlement maps for example, some of them are in such a state that only a trained eye is able to identify them in the terrain. For this reason, further ground marking of the ruins will be included in the management plan.

Increased pressure from tourists may have a harmful effect on a number of ancient monuments. In order to manage tourist movements optimally, specific guidelines will be formulated for the individual ruin complexes.

### **Regulation of ancient monuments**

The aforementioned Heritage Protection Act offers sufficient protection to the ancient monuments.

### *Status for regulation*

The archaeological surveys of recent years have shown that, despite a full century of archaeological activity, there are still new discoveries to be made. Each summer, archaeologists from Greenland and abroad map new ancient monuments from both the Norse and Inuit cultures. Norse ruins are, however, most prominent among the new discoveries as these are now often found in inland areas that are only rarely visited.

The utility company Nukissiorfiit is currently preparing to upgrade the hydroelectric plant at Qorlortorsuaq. The construction works will primarily take place outside the nominated property but, in one instance, transport during the construction phase will cross the component part around Igaliku Kujalleq. In 2014, the Greenland National Museum and Archives carried out a survey, and in 2015 it undertook an excavation of Norse localities for Nukissiorfiit in connection with the construction works. These excavations took place outside the nominated property and a survey within the nominated property has shown that if the existing wheel track is used, there will be no conflict between the construction work and the Heritage Protection Act. Nukissiorfiit and the Greenland National Museum and Archives are engaged in a productive dialogue with respect to this project.

### *Future measures (Special initiatives)*

For a number of years, the Greenland National Museum and Archives has given special focus to key sites in Kujataa. For instance, the church ruin at Qaqortukuloq has been carefully restored over the course of several years, and work has been carried out on the stone masonry to secure its future stability. Similarly, at Igaliku, a series of archaeological studies have been undertaken in the infield, along with a project aimed at rendering the ruins of the Norse cathedral more visible. In order to do this, the grass has been cut each year and a solution has now being devised whereby a number of sheep will be permitted to graze the area around the ruins, thereby holding the vegetation in check. In preparation for this, a fence has been erected around the ruins.

## **7.1.2 Listing of buildings and other cultural heritage protection**

It is not permitted for old buildings, unlike other buildings, to be altered using materials of all kinds. These old structures provide evidence of the building traditions and working methods of former times. It is therefore important that all the building data from the building's construction are preserved. Photographs and records constitute important documentation and unique sources of information and provide an indispensable foundation for future research and conservation.

It is important that the owner of a listed house or a house subject to other form of cultural heritage protection is very careful not to diminish the architectural or cultural and historical values of the building. In cases where repairs involve the replacement of one or more parts of the building, use should be made of the same materials and construction techniques as employed in the original if this contributes to maintaining the building's authenticity and integrity. Major works on listed buildings, or buildings subject to other cultural heritage protection, should be carried out by qualified persons, and it is important to observe and record historical architectural traces.

If there is any doubt—for example, if the roof or windows are to be replaced or a partition wall is to be moved, signs mounted on the façade, painting work carried out, etc.—it is always possible to contact a building consultant/expert at the Greenland National Museum and Archives to receive

guidance in identifying the right solution. Lack of knowledge about the details of execution can lead to solutions that may be satisfactory in technical and trade terms, but which often constitute a breach with traditional solutions that are an important part of the building's history.

Building alterations employing the wrong materials and the wrong methods and techniques can, for example, lead to the building losing value and the distinctive character that made it worthy of listing or led to it being identified as a building subject to other cultural heritage protection.

The distinctive building tradition evident in Igaliku overlaps to some degree with the general stone house construction tradition in Greenland, and the unusually large number of preserved buildings constitutes in itself a characteristic, homogeneous and valuable historical architectural entity.

### **Objectives**

The aim is for methods, building styles, materials etc. to be preserved in the selected buildings in order to make it possible to document the construction customs and traditions of former times.

### **Possibilities and threats**

The expected increase in the number of visitors to Igaliku will also consolidate professional service facilities in the form of more shops and places offering overnight accommodation.

An increase in visitor numbers will result in:

- Damage to and erosion of the settlement and its buildings
- Increased risk of vandalism or fires and the like
- Changes to the settlement occupants' cultural and daily life

Furthermore, a desire for modernisations, extensions and new functions could result in increased pressure on the original building culture.

### **Regulation of building listing and other forms of cultural heritage protection**

Both large and small changes require consent from the Greenland National Museum and Archives according to Greenland Parliament (Inatsisartut) Act no. 11 of 19 May 2010, Chapter 3, Article 22 sections 1 and 2.

#### *Regulatory status*

Igaliku currently has 57 houses that are subject to cultural heritage protection. Most of these are documented in reports in which previous use, actual use, building history and architecture are all recorded. A large part of the houses are constructed of the distinctive reddish sandstone that was used for the buildings from Norse times, and many of the houses have indications that they were built using the remains of even older buildings. The buildings in the central part of Igaliku show the historical development of architecture from the early stone house buildings to newer standard homes.

Furthermore, the central part of Igaliku is protected by the provisions of the municipal plan and the area must, in principle, be exempted from new construction. Alterations and extensions must be carried out according to special rules described in Municipal Plan Appendix no. 3, 302-D1.1 under the heading: Detailed provisions.

### **Future measures (special initiatives)**

Development plans should be formulated for the settlements:

- To establish a fixed meeting place for visitors
- To ensure that Igaliku's horticulture (in garden plots) is continued by formulating a garden plan
- To draw up an emergency contingency plan in the case of fire
- To produce action plans for all of the buildings in D1

### 7.1.3 Farming

Farming is today the primary commercial activity in the component parts defined within the nominated area. Currently, this mainly comprises sheep husbandry, but there are also a few horses, small cattle herds and arable agriculture/fodder production associated with livestock rearing. The composition of the livestock has undergone changes over time. For example, the Norse Greenlanders had a greater proportion of cattle than is seen today and, taking into account climate change, new marketing forms and general developments in the farming sector, focus must constantly be maintained on relations between livestock farming and other interests in the area.

Agriculture consists primarily of hay production, for animal fodder, and a parallel cultivation of vegetables, particularly potatoes. To some extent, hay is produced on the same fields as those laid out by the Norse settlers, but field expansion has continually taken place. Work in the fields is predominantly carried out using large modern machinery.

#### **Opportunities**

Given the World Heritage nomination's focus on the continued possibility for commercial development in the nominated property, while also protecting the cultural heritage, there are good opportunities for further development of livestock farming. The World Heritage nomination will give the area a general "lift", both in terms of recognition from the outside world and in the minds of the local population. Likewise, for those involved in livestock farming, a number of supplementary business opportunities will emerge in the form of increased tourism (overnight accommodation, transport, catering, handicrafts etc.), increased research activities and other spin-offs.

#### **Threats**

Farming can, however, take its toll on the landscape and directly affect the historic values that should be protected within the nominated property.

Farming affects the landscape in various ways, depending on its form. The most pronounced influence is evident in the extensive grazing areas, while a more intense impact is seen on the "infield", where hay is made and where the sheep graze more heavily during some periods. The most affected areas are those where the sheep are gathered (for lambing or slaughter). Finally, there are the fields used for growing vegetables, where the soil is under continual tillage (ploughing, harrowing and planting).

Extensive grazing areas: The primary influence on the landscape in the extensive grazing areas is generally grazing impact and animal tracks. These areas have ruins that have not yet been excavated, where special protection is required. There is a relatively large concentration of Viking Age remains, which are protected according to the Heritage Protection Act, but where extensive

grazing is not considered to be a threat to the historic buildings and areas and therefore does not require special regulation or management.

**Infields:** These are actual fields, most often fenced, where intensive use can conflict with conservation interests associated with the ancient monuments unless some form of regulation is applied. Particularly exposed, i.e. vulnerable, ancient monuments must be fenced in so as not to be damaged by the animals. The Greenland National Museum and Archives will regularly assess whether there are such particularly exposed ancient monuments that should be fenced in. Most ancient monuments are, however, robust in the face of animal grazing and it is implicitly understood that *the individual sheep farmer* with the right to use the area will minimise the risk of wear or damage to the ancient monuments during day-to-day farming activities.

**Gathering areas:** The areas where the animals are gathered (for lambing or slaughter) are exposed to considerable wear and erosion and should therefore not contain scheduled ancient monuments. In its areal administration (land allocation), Kujalleq Municipality will ensure that a provision is included to the effect that such an area must be delimited with respect to scheduled ancient monuments.

**Vegetable fields:** In areas where vegetables are grown, the soil is tilled annually, which carries the risk that any ancient monuments present may be affected. The relevant legislation on ancient monuments therefore requires that the Greenland National Museum and Archives be informed should any such ancient monuments be encountered. In the case of significant ancient monuments, these will be scheduled and cultivation of the soil will not be permitted within a 2 metre wide zone surrounding them.

### **Special measures**

The Upernaviarsuk Agricultural Research Station is situated in World Heritage component part 5. In its teaching of agriculture students, the research station will focus on good farming practices in relation to cultivation in a World Heritage area. This can be achieved by giving the students an insight into, and understanding of, the cultural heritage of the area, and by teaching them how to safeguard this while, at the same time, farming in a sustainable manner.

### **Objectives**

Many farmers in South Greenland already have competencies in food production. It is Kujalleq Municipality's goal to develop these further and expand livestock farming through animal breeding and innovation.

The municipality has formulated the following objectives in its municipal plan:

- To make South Greenland Greenland's "breadbasket" by making Narsaq the centre of food production, with INUILI (a college for nutrition, food preparation and catering in Narsaq) as the focal point
- To build a multi-slaughterhouse/food production/processing centre in Narsaq
- To develop the food production sector by supporting initiatives that encourages self-sufficiency and the use of Greenlandic products.

In relation to the nominated World Heritage property, the aim is to ensure protection of the area's historic values, concurrent with continued development opportunities for livestock farming in the

area—today primarily sheep rearing, but with time increasingly relying on other livestock activities, such as dairy and beef farming.

### **Regulation of farming**

Farming today is regulated partly through legislation relating to commercial aspects, and partly through legislation relating to land use and to building and construction (see chapter 5 on legislation).

When a field expansion is planned, a hearing must be held by the Greenland National Museum and Archives in accordance with Greenland Parliament (Inatsisartut) Act no. 11 of 19 May 2010 on Conservation and Heritage Protection of Ancient Monuments. This also applies to planned drainage projects in bogs, marshes and wet field areas where the aim is to incorporate these areas into future cultivation. There are several examples of wetland areas such as these containing important surviving pockets of well preserved Norse culture layers—even though they may not necessarily be located directly adjacent to the ruins of a Norse farm.

In principle, the Heritage Protection Act allows for a scheduled Norse monument to be de-scheduled if it causes considerable inconvenience to farming activities or stands in the way of construction/development work. However, the Greenland National Museum and Archives will only be inclined to look favourably upon such an application in cases where the ruin is poorly preserved and considered to be of inferior historic significance, and then only on condition that the ruin is studied prior to de-scheduling.

### **Regulatory status (measures that are already implemented)**

As a consequence of many years of coexistence between farming and ancient monument protection, a high degree of consideration for the agricultural community has been incorporated into the protection of the cultural heritage. The most significant ruins have been fenced in so they are not exposed to unnecessary pressure from grazing animals. This is true of Igaliku (Gardar) and Qaqortukuloq (Hvalsey), which have both been enclosed with sheep fencing. It has also become established practice in farming that cultivation must take place at an appropriate distance from scheduled ruins.

### **Future measures**

There are still a number of ruins with no clear demarcation between the protected monument and agriculture. In future work on the development of the nominated World Heritage property, it will be considered, in a close dialogue between sheep farmers and museum representatives, where clearer demarcation would be beneficial to both sheep farmers and visitors to the cultural heritage sites. This could take the form of fences, paths or other markers for the places that require special consideration—with respect to farming and the cultural heritage.

### **7.1.4 Tourism**

There has been considerable tourism in South Greenland since the 1960s, based on the Norse era and the known ruin complexes, combined with the other cultural and natural attractions in the area. Tourists have arrived by plane from Narsarsuaq and on cruise ships with one or more ports of call in Greenland. Tourist information other services for tourists have been established and a number of

local tourism companies (Blue Ice, Tasermiut, Greenland Adventure and others) have been founded. These firms arrange tours, transport, overnight accommodation and other services. In 2015, the organisation Destination South Greenland was established, which has among its priorities the marketing and development of the World Heritage area as an attractive tourist area. Local involvement in tourism services has also developed over a number of years, primarily via sheep farmers who, from a base on their sheep farms, offer accommodation and catering and an insight into local everyday life.

### **Objectives**

In its municipal plan of 2011, Kujalleq Municipality has set out the following objectives for the tourism sector in relation to the nominated World Heritage property:

Kujalleq Municipality aims to:

- 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 our region, for example Norse history, Erik the Red, the Greenland ice sheet and the island of Uunartoq
- Preserve and render visible historic buildings and areas from both the Norse and the Inuit cultures and, within this context, apply for inscription on the UNESCO World Heritage List
- Advance the tourism concept with local food product development, in combination with tourism

Most recently, in 2015, Kujalleq Municipality developed a “Strategy for the Development of Tourism in Kujalleq Municipality 2015–2020”, which also forms the basis for the activities of Destination South Greenland. This identifies some of the tourist categories on which development will concentrate: the Ethnophile, the Authenticity Seeker, the Culture Buff and the Special Interest Enthusiast. All of these people will have a considerable interest in visiting the nominated World Heritage property in South Greenland.

The strategy emphasises the following potential elements relative to branding of the area:

- “The Arctic Vikings”: The history of the Norsemen, centred on the future UNESCO sites
- “The Inuit farmers”: Arctic farming—the only area in the Inuit culture where the land is cultivated; farm tourism and walks between farms
- “The Full Circle”: The area where humans met again after their migrating from Africa—the Inuit arriving from the northwest and the Vikings from the east.

Finally, the strategy defines two significant projects that directly relate to the nominated World Heritage property:

1. The establishment of points of information
2. The production of information boards for the nominated component parts

### **Opportunities and threats**

The potential for development of tourism, based on the attractions in the nominated property, is significant. Accessibility and information can, however, be developed to attract many more tourists

to the area. Actual tourist facilities, such as overnight accommodation (in addition to that provided by the sheep farms), places to eat and other tourist activities, which cannot be fitted into the nominated area, can fairly easily be located in neighbouring areas, such as Narsarsuaq, Narsaq or Qaqortoq, where there is a planning basis for such activities.

Increased tourism in the area can, if not regulated, have negative consequences for the very cultural heritage that must be protected. There is an inherent danger that damage can be caused by traffic and tourist movements too close to or within the ruins, erosion of the vegetation and disturbance of the farming activities, which also constitute part of the World Heritage. Moreover, increased tourism will create increased traffic (noise and pollution), as well as greater quantities of refuse within the component parts. These threats will be addressed through management initiatives.

## **Regulation of tourism**

### **Regulatory status (measures that are already implemented)**

The behaviour of the tourists today is mainly regulated through provisions in the legislation relating to the scheduling of ancient monuments and the general rules for activities and traffic in the natural and built environments.

### **Future initiatives (special measures)**

The regulation of tourism can be divided into two phases:

- 1) Actual regulation of the behaviour of tourists within the nominated area today and at the time of nomination
- 2) Regulation prompted by subsequent increased tourism in the area

*Phase 1:* Analyses will be undertaken of the actual tourist traffic in the area and, on the basis of these and the protection requirements, general “traffic plans” will be formulated for tourists in the five component parts. These plans will be implemented via signs, information and possibly fencing. These physical measures will be carefully harmonised with conservation interests and the general appearance of the area.

*Phase 2:* Tourism in the area will be monitored and regular assessments undertaken of the need for further regulation measures or initiatives with regard to directing tourism in a particular direction in relation to the development in the World Heritage property.

## **7.1.5 Mining**

Greenland has a geology that offers a wide range of valuable raw materials. South Greenland in particular contains material resources of great interest to the mining industry. In the past there have been copper mines, graphite mines, a cryolite mine and, most recently, a gold mine at Nalunaq, near Nanortalik. Currently, many prospecting licences have been issued, which could lead to mining at a number of locations in the municipality. Of these, two projects in particular are at a stage of development where, over the course of a few years, they could be realised in the form of active mines. These are at Narsaq – Kuannersuit (Kvanefjeld), and at Qaqortoq – Killavaat Alannguat

(Kringlerne). Both projects involve the extraction of rare earth elements (REE), and also zink and uranium at Kuannersuit.

No prospecting licences have been issued within the nominated World Heritage property.

### **Objectives**

In 2014, Kujalleq Municipality formulated a mineral resources strategy, which states that:

- Kujalleq Municipality will be the leading municipality for the development of frameworks for the mineral resources sector as a new growth industry. Mineral resources activities must not only support the present, existing need for development, but also the future basis for development and expansion. Exploitation of non-renewable resources must contribute to a general upgrading of the qualifications of the municipality's citizens. The requirement for a sustainable exploitation of the non-renewable resources is to ensure that the cumulative result of the mineral resources activities leaves the local area in a positive position, where economic growth continues in spite of the cessation of mineral-related activities.

### **Possibilities and threats**

Mining is not possible within the nominated World Heritage property. The delimitation of the area has been undertaken in such a way that potential mining outside the area is unlikely to be visible from within the component parts, neither will it affect the area through pollution. Consequently, buffer zones have been incorporated in the nominated property. For example, the mountainside of Illerfissavik (Burfjell), towards Igaliku, is included within the property in order to ensure that it cannot be exploited for mining or other activities that can be unsightly relative to the cultural heritage values in Igaliku.

The two nearest projects, at Kuannersuit and at Killavaat Alannguat, are located 35 and 17 km, respectively, from the nearest component parts (1 and 3) and will not be visible from these. Environmental Impact Assessments (EIA) will be carried for both of these projects, which will document their impact on the environment. Preliminary dust diagrams for the two projects show that significant dust deposition will not be detectable within the World Heritage property.

### **Regulation of mining**

#### **Regulatory status (measures that are already implemented)**

In Greenland, regulation of mining is laid down in the Mineral Resources Act (Greenland Parliament (Inatsisartut) Act no. 7 of 7 December 2009 on Mineral Resources and Mineral Resource Activities, and Greenland Parliament (Inatsisartut) Act no. 16 of 3 June 2015 on Revisions to Greenland Parliament Act no. 7 (attached as annexes)). The act covers two main activities: prospection and extraction. In order to obtain an extraction licence, it is first necessary to undertake prospection, which also requires permission from the Ministry of Mineral Resources. In connection with the formulation of the nomination documents for this World Heritage property, a binding agreement has been entered into with the Ministry of Mineral Resources such that no prospecting licences will be granted within the nominated property and that, accordingly, mining activities cannot be initiated within the component parts.

### **Future initiatives (special measures)**

The steering group for the nominated World Heritage property will routinely monitor developments in mining in the neighbouring areas and be involved in hearings relating to possible prospecting licences and will, in this way, ensure that the interaction between future mineral resources activities in South Greenland and the nominated World Heritage property will be able to proceed smoothly.

#### **7.1.6 Other commercial activities**

Sheep farming is the predominant commercial activity within the nominated World Heritage property, augmented in recent times by tourism. There are, however, also other business opportunities in the area. Fishing from dinghies has been practised to a minor extent—not in the form of actual commercial fishery, but for local consumption. Ammassat (capelin), which is a local delicacy, has also been fished, for use (dried) as animal fodder.

A few years ago, mussel farming was practiced in the fjord close to Qaqortukuloq (Hvalsey), with the mussels being cultivated on ropes suspended in the water. There were no facilities on land associated with this production, which was landed in Qaqortoq. Work has also been undertaken in several places in South Greenland to establish manufacturing of seaweed products by gathering seaweed and drying or processing it prior to resale.

Minor cottage industries, such as the production of handicrafts, are practised on the sheep farms and the products sold primarily to tourists.

Finally, there are a number of possible production forms associated with agriculture and horticulture, such as vegetable production in glasshouses, home slaughterhouses, energy production (mini hydroelectric power stations, windmills) etc.

### **Objectives**

In its 2011 municipal plan, Kujalleq Municipality included the following aims for business development:

Kujalleq Municipality aims to:

- Develop the food production sector by supporting initiatives that promote self-sufficiency and the use of Greenlandic products
- To support the frameworks for sustainable fishery and promote experimental fishery for new species

### **Possibilities and threats**

There is the potential for the development of small-scale production in the settlements of Qassiarsuk and Igaliku. This potential is greatest, however, for start-ups in conjunction with existing farms. Production could take the form of greenhouse products, home slaughterhouses and a wide range of local food products. Similarly, there will be a market for products that can be sold to tourists and other visitors.

The threat in relation to the World Heritage property is that some of this production will require the construction of new buildings which, if granted an inappropriate location, could be unsightly in relation to the cultural values that must be protected.

## **Regulation of other commercial activities**

### **Regulatory status (measures that are already implemented)**

The physical location of new businesses in the World Heritage area can only be approved if this is provided for in the planning foundation contained in the municipal plan. The municipal plan has been formulated with respect to the nominated property such that new businesses cannot be sited in component parts that, on conservation grounds, must be exempted. In the other component parts, the establishment of new businesses must be undertaken such that this is not detrimental to cultural values.

### **Future measures (special initiatives)**

The question of accommodating new businesses in the nominated World Heritage property will be addressed in conjunction with future revisions of the municipal plan. The next four-yearly (quadrennial) revision of the municipal plan will take place in 2016.

### **7.1.7 Waste management**

The Public Works Department of Kujalleq Municipality is responsible for waste management in the nominated World Heritage property. In the settlements of Qassiarsuk and Igaliku there is weekly collection of household waste from individual households. Part of this is combusted at a small incineration plant and the remainder is deposited in an enclosed area. Hazardous waste and scrap iron are collected in depots before being subsequently shipped out.

Outside the settlements, sheep farmers are responsible for waste management on their individual farms. Household waste that can be composted or incinerated is dealt with locally. Hazardous waste and scrap iron are delivered to a municipal waste and recycling station, for example by shipping this waste from the individual sheep farm to one of the settlements or a larger town.

At locations within the area with many visitors (road junctions, shops and attractions) there are waste bins, which are emptied as necessary by municipal employees.

### **Opportunities**

The World Heritage nomination will give a general “lift”, both in terms of recognition from the outside world and the local population’s awareness of the area’s values and will, as a consequence, place a greater emphasis on how the area is kept clean and waste management is undertaken.

### **Threats**

The increased influx of tourists that is to be expected due to the World Heritage nomination will lead to greater quantities of waste in the area, which must be dealt with on a regular basis.

### **Objectives**

Kujalleq Municipality aims to be green and sustainable. It therefore has a special focus on waste management and the municipality has formulated the following objectives in its municipal plan:

Kujalleq Municipality will strive to:

- Improve the sorting of waste—primarily at source and secondly at waste-handling stations

- Establish differentiated waste treatment through:
  - a) Recycling of waste
  - b) Composting of “green” waste
  - c) Export of hazardous and “valuable” waste
  - d) Incineration of combustible waste
  - e) Deposition under controlled conditions of waste not containing substances that are harmful to the environment

In 2015, measures were taken to develop a waste plan for Kujalleq Municipality, which will address the issue of waste management for the two settlements (Qassiarsuk and Igaliku), the sheep farms and within the nominated property as a whole.

## **Regulation of waste management**

### **Regulatory status (measures that are already implemented)**

The Government of Greenland is responsible for general planning in the waste sector. Together with the municipalities, the government works to optimise solutions for incineration, disposal, sorting and recycling of waste. For a number of years, the government has been developing a general “waste management plan” to target its efforts. Recently, in 2014, the Government of Greenland formulated a waste management plan for the building and construction sector entitled “Anlægssektorplan for Affaldsområdet”.

The management of waste is, however, a municipal responsibility and the municipalities decide independently how to organise their own waste management systems.

The municipality develops new waste regulations as required, which includes rules for waste management and fees for users, both private citizens and businesses. The most recent waste regulations came into force on 1 January 2015.

### **Future initiatives**

Waste management in the two settlements (Qassiarsuk and Igaliku) will be re-assessed in connection with the preparation of the municipal waste management plan in 2015–2016. The two incineration plants are old and worn out, and environmental requirements mean that a better solution for the disposal of household waste must be found. The possibility of transporting waste to a central waste incineration plant is under consideration. The layout and management of the landfill site will also be considered with a view to environmental and aesthetic improvements of conditions. It is also planned to collect scrap iron within the two areas (Qassiarsuk and Igaliku) and ship it out. Finally, a more systematic approach to the management of waste from the sheep farms will be sought.

With an increased tourist influx into the area there will be a need to install waste bins in the most popular locations. Guidelines will therefore be formulated for their design, placing and emptying, in order to avoid defacing the area.

### 7.1.8 Infrastructure

The nominated World Heritage property is part of a modern society in which a number of activities are dependent on traffic, and there are therefore various forms of motorised transport in operation. In and around the two settlements there is, at least by Greenlandic standards, a fairly well developed road system. Transport here is primarily by car, tractor/lorry or quad bike. In winter, weather permitting, there is also a certain amount of transport by snowmobile.

In areas with no roads, the dominant form of transport between the isolated sheep farms is by sea in dinghies and small motorboats. Mooring facilities are a precondition for this transport by water and today there are jetties, pontoons and/or tidal steps at Igaliku, Itilleq, Qassiarsuk, Upernaviarsuk and Qaqortukulooq. There are no mooring facilities at Sissarluttoq.

In addition, there are helicopter links from the two settlements to Narsarsuaq, and helicopters are also used by the health authorities for evacuation in case of accidents and serious illness. Finally, there are private and charter helicopters, and this is a mode of transport that is on the increase.

In summer, Qassiarsuk, Igaliku and Itilleq are serviced by boats connecting Narsaq and Qaqortoq with Narsarsuaq Airport. There are frequent boat connections to Qassiarsuk on a charter basis.

In the event of a greater influx of tourists, it would be necessary to establish regular ferry services.

#### **Opportunities**

Motorised transport forms are to some extent used to carry tourists, thereby providing a supplementary income for the local population. Quad bikes are hired out, sometimes with a local driver. Dinghies and boats are chartered by tourists for transport between the five component parts of the World Heritage property. Dinghies and boats require approval for passenger transport from the Maritime Authority, i.e. “p-approval”, for them to carry fee-paying passengers. The number of p-approved boats today is small, but increased tourism will provide a basis for more of these. Given increased tourism, and a consequent increase in the number of passengers, there could be the potential for regular ferry links of greater frequency and capacity than today.

#### **Threats**

The increased motorised traffic could, if it develops significantly, affect the ancient monuments directly in a physical manner and also disturb the general appearance and atmosphere of the nominated area with noise and air pollution.

#### **Objectives**

In its 2011 municipal plan, Kujalleq Municipality has the following objectives in the transport sector, relative to the World Heritage property:

Kujalleq Municipality aims to:

- Support regular boat links in the area for both passengers and goods—preferably in combination
- Maintain and develop harbour facilities in towns as well as settlements to serve fishing, freight, passenger transport and tourism

- Develop a road system so that Narsaq, Qaqortoq and Narsarsuaq Airport will, in due course, be connected
- Develop roads and tracks so that settlements and sheep farms, where possible, will be linked.

### **Regulation of infrastructure**

Kujalleq Municipality issued a bylaw in 2014, which contains provisions regulating motorised traffic in open country. In principle, motorised traffic can use public roads according to the normal traffic regulations. Off-road transport by snowmobile and similar vehicles is only permitted in winters with sufficient snow cover, and along specially made tracks, as defined in the bylaw's map annexe. In summer, off-road use of motorised vehicles is not permitted. Sheep farmers are exempt from these provisions and can, in connection with their work, drive in open country, both off-road and off-track, but they still have to respect ancient monuments, drinking water resources etc. Transport at sea is subject to normal shipping regulations. Passenger transport is regulated by the Maritime Authority by p-approval of boats and masters.

Helicopter transport takes place to and from helicopter landing sites (helistops) in the two settlements (Qassiarsuk and Igaliku) and, in emergencies, wherever necessary in open country.

### **Regulatory status (measures that are already implemented)**

The provisions for motorised transport in open country came into force on 1 November 2014 and these keep motorised transport out of areas with ruins.

### **Future initiatives**

The transport structure in the area is under continuous development and a long-term goal in the municipal plan is to connect Qassiarsuk by road (and bridge) to Narsarsuaq and Narsaq. The link to Narsarsuaq is expected to be established within the 12-year planning period, whereas establishing a road connection to Narsaq will be a considerably more difficult and extensive task. Igaliku can probably not be connected by road to Narsarsuaq, but a road connection to Qaqortoq, which could also service the area at Qaqortukuloq (Hvalsey), is a possibility that is included in the municipal plan.

Ongoing improvements are also being undertaken to mooring facilities for boats in the area. For example, an extension of the breakwater in Qassiarsuk is planned, which will provide better shelter in the harbour. At Itilleq and Igaliku there are plans to improve the tidal stairs and pontoons. At Sissarluttoq a mooring facility is to be established to enable visitors to come ashore. At Upernaviarsuk the jetty is to be upgraded with tidal stairs/a pontoon to improve access.

In Tasikuluulik (Vatnahverfi) there are good mooring facilities at Qanisartuut, but none in the northernmost part of the area at Igaliku Kujalleq. It is planned to establish mooring facilities in conjunction with the expansion of the hydroelectric power station at Qorlortorsuaq. These plans also include considerations about building a road from Igaliku Kujalleq to the dam at Qorlortorsuaq.

During construction of the roads and mooring facilities mentioned above, due consideration will be given to ancient monuments, listed buildings and buildings deemed worthy of conservation.

If there is a substantial increase in motorised traffic on land, special restrictions near the ancient remains will be taken into consideration: It may be necessary to reroute roads, impose speed limits etc. Marine traffic can be regulated by establishing or maintaining mooring facilities, thereby avoiding any inconvenience from motorboats.

As an increase in helicopter traffic is expected, helicopter landing sites, “self-chosen sites”, will be demarcated in the areas where there are no helistops, i.e. at Qaqortukulooq (Hvalsey), Sissarluttoq and in Tasikuluulik (Vatnahverfi).

### **7.1.9 Recreational activities**

South Greenland is—with its relatively mild climate—renowned for numerous outdoor recreational activities. Angling, hiking, camping, kayaking, hunting, boat tours, mountain biking, running etc. are all popular with the local population and visiting tourists. There are no dedicated grounds or facilities for these recreational activities. They take place all across the area—often with one of the three settlements as a point of departure (Narsarsuaq, Qassiarsuk and Igaliku).

#### **Objectives**

Kujalleq Municipality has as its objective in the recreational sector:

- The development of “green culture”—outdoor life and nature guidance in harmony with Greenlandic culture

Hence, the municipality is focusing on developing outdoor recreational activities and providing guidance to users of the natural environment. This also applies to visitors to the nominated property.

#### **Opportunities and threats**

In the event of an increase in tourism and the local population’s increased focus on outdoor recreational activities, an expansion of these activities must be expected in future years. There continues to be great potential in the area for the development of activities such as angling, hiking, camping, kayaking, hunting, boat tours, mountain biking, running etc. without these activities imposing a burden on the natural environment, agriculture or the ancient monuments. However, an increased requirement for regulation and guidance on how to use the natural environment is to be anticipated and will help to avoid conflicts between these different activities in the future.

#### **Future initiatives (special measures)**

Kujalleq Municipality has previously produced information for tourists and other visitors on “how to behave” in relation to the local population and the natural environment. In connection with increased recreational activity in the area, there will be a need for further information and possibly also regulation with respect to where these various activities can take place. As a first initiative, dedicated campsites will be established for the 2016 tourist season at Igaliku, Qassiarsuk and Qanisartuut, so that inappropriate camping near ruins and other ancient monuments is avoided and these activities do not constitute a nuisance to farming. Other outdoor activities will be regularly monitored, and if they reach a level where additional regulation is required, this will be implemented.

### 7.1.10 Settlement development

The nominated World Heritage property includes two settlements, Igaliku and Qassiarsuk. There have been settlements here since the first Norse settlers arrived in the area. Two of the most important sites at that time were:

- Qassiarsuk (Brattahlid), where Erik the Red's farm and church are thought to have been located
- Igaliku (Gardar), with monumental buildings that included the bishop's residence and the cathedral

Both localities were very significant and were re-established as settlements when farming was reintroduced to the areas by sheep farmer Otto Frederiksen and his Greenlandic wife Elisabeth in Qassiarsuk, and sheep farmer Anders Olsen and his Greenlandic wife Tuperna in Igaliku. Sheep farming continues to be the most important source of commercial income in the two settlements.

#### Opportunities

The two settlements are important for the services and the functions required by sheep farmers in the surrounding areas and by the settlements' inhabitants. With nomination as a World Heritage area (component parts 1 and 2), the two settlements will be able to reinforce and develop their functions as service sites for the area. An increased interest in the area, especially from tourists, will mean an enhanced basis for these service functions, both commercial (shops, overnight accommodation, catering etc.) and public (supply of electricity and water, service buildings etc.).

Increased activity in the settlements will therefore have a positive influence on employment. It will enhance the ability of these two settlements to continue to pursue developments that enable more inhabitants to remain living there and perhaps lead to actual growth.

#### Threats

The increased activity associated with the nominated property could result in a requirement for new building works and new use of land in the settlements, which would then have to be undertaken with due consideration of conservation interests. Consequently, the municipal plan for Kujalleq Municipality for 2011–2022 includes plans for the two settlements that stipulate future land use and contain regulations aimed at reducing these threats as far as possible.

#### Objectives

The municipal plan for Kujalleq Municipality for 2011–2022 presents development perspectives for the two settlements. It states the following with regard to Igaliku:

*“Igaliku was founded as a sheep farming settlement and will in the future have development potential in the sectors of sheep farming and other agricultural production. There may be further expansion of farmed land and there will obviously be product development in the food production sector.*

*There is also considerable development potential in the tourism and recreational sectors. The main attraction for tourists is the ancient monuments dating from the Norse period and up until the founding of the settlement in the 19th century.*

*There are also a number of historic remains from more recent times of considerable conservation value, including a large number of stone houses deemed worthy of conservation. The intention of the municipal plan is to prevent the construction of new buildings in the immediate vicinity and to hinder major constructional changes to the exteriors.”*

It states the following with regard Qassiarsuk:

*“It is evident that there is still considerable development potential for sheep farming and other agriculture in relation to the expansion of field areas and animal housing, as well as the potential for the processing of food products.*

*Qassiarsuk’s many visible ancient monuments and its favourable location for traffic near Narsarsuaq Airport also mean that there are major opportunities in the tourism sector. This is one of the great priorities relative to having the settlement inscribed on the UNESCO World Heritage List and, in conjunction with this, upgrading tourist facilities in the settlement.*

*Qassiarsuk also has significant development potential for housing, trade and industry and recreational areas. In the present draft municipal plan, sufficient land has been allocated to further housing and commercial building construction for the planning period.”*

### **Regulation of settlement development**

Settlement development is regulated directly in accordance with the municipal plan. This is achieved through a requirement for all building and construction activities to be given an areal allocation (land allotment). The latter must always be consistent with the municipal plan, such that development in the settlements is managed within the framework stipulated by it.

### **Regulatory status (measures that are already implemented)**

Through work in recent years connected to the nominated World Heritage property, the municipal plan has increasingly focused on resolving the conflicts of interest that could potentially arise with respect to preserving the ancient monuments in the component parts. Regulations have therefore been implemented that secure the most important ruin areas in the two settlements. In the case of Igaliku, regulations have also been put in place relative to the entire central core of the settlement, which contains the listed stone houses and stone houses deemed worthy of conservation.

### **Future initiatives**

Supervision of land use and management of the allocated land can always be improved upon. An increased knowledge of the legislation and the regulations for the area will enhance settlement development. Continuing efforts will therefore be made to inform the public about regulations in the area and to undertake the necessary hearings and consultations in this respect.

#### **7.1.11 Health and safety measures**

The Health Service is the responsibility of the Government of Greenland. In the settlements of Igaliku and Qassiarsuk there are settlement health clinics, where a health worker is employed for approximately 12–30 hours a week, combined with an on-call function. In Narsarsuaq there is a permanently-staffed health centre with a full-time nurse. Narsarsuaq functions as a transport hub for patients being moved to the Health Centre in Narsaq, the regional hospital in Qaqortoq or the

national hospital, Queen Ingrid Hospital, in Nuuk. If visitors suffer an accident or fall ill within the nominated World Heritage area, an assessment will be undertaken as to where the necessary treatment should take place. Transport is by boat or helicopter, depending on the severity of the case. First aid can be administered by the settlement health clinics.

In Igaliku and Qassiarsuk there is a local emergency contingency facility in the form of a small “fire station” where fire-fighting equipment is stored. This firehouse has six trained fire and rescue staff. In Narsarsuaq, the Mittarfeqarfiit Airport Authority runs the fire service. There is also a sea rescue service there, which has a life boat that can be dispatched in Tunulliarfik Fjord (Skovfjord in Danish). A marine emergency contingency facility in Igalikup Kangerlua (Igaliku Fjord) operates from the fire station in Qaqortoq (see annexe 11 g).

### **Objectives**

The Greenland Government’s “Health Strategy” includes the following objectives:

- To develop a coherent health service of a high professional quality
- To increase patient security, enhance confidence in service and treatment and ensure optimal use of resources through the development of standardised treatments for illnesses, wherever relevant
- To give citizens a rapid and early diagnosis in the event of life-threatening illnesses
- To focus on the citizen and his/her needs for services within the health service

### **Opportunities and threats**

With increased tourism in the area, it may prove necessary to upgrade capacity and preparedness. The health service and the emergency management described above are both presently considered sufficient. An upgrade would not only improve conditions for visitors, but also for local citizens.

### **Future initiatives (special measures)**

There is currently considerable focus in Greenland on security in relation to cruise ships. If cruise ship activity in the two fjords increases, a dedicated emergency contingency plan for accidents relating to cruise ships will have to be drawn up.

In April 2015, the Greenland Parliament (Inatsisartut) passed a resolution relating to changes in the law with respect to stricter controls on navigation in Greenlandic waters for ships carrying more than 250 passengers. These changes are expected to come into force for cruise season 2016. They include requirements with respect to the ice class, route planning and the use of pilots when navigating in certain areas. This will promote safety and reduce the risk of accidents, and the intention is also to improve the ability to effectively respond to a possible accident within a reasonable timeframe in areas located far from SAR (Search and Rescue) facilities, and where the population density is low.

The International Maritime Organisation (IMO) has, in conjunction with its member states, formulated an international set of rules for navigation in polar waters—the so-called Polar Code. The Polar Code is expected to come into force in January 2017.

The aim of the Polar Code is to elevate safety and environmental requirements on the basis of existing rules. It includes requirements that search and rescue response and contingency facilities in the navigation area should be included in each ship’s route planning.

The Polar Code contains rules for:

- Construction and rescue equipment
- Environment and pollution
- Education and training

The Polar Code applies to:

- Passenger and cargo vessels of more than 500 tonnes in international service
- Foreign ships calling at Greenlandic harbours
- Ships that sail past the Greenlandic coast without calling at Greenlandic harbours

The Polar Code does not regulate in terms of navigation safety with respect to:

- The use of pilots
- Requirements for documented route planning
- Stricter conditions with respect to navigation in areas of particular risk

### **7.1.12 Scientific activities**

Research in Greenland is regulated by Greenland Parliament (Inatsisartut) Act no. 5 of 29 November 2013 on Research Guidance and the Granting of Research Funding. Institutions involved in research in Greenland are regulated by other national legislation and by Danish legislation.

#### **Research Council**

The Research Council is a national, independent administrative body for research consulting. It has a cross-disciplinary composition and is tasked with advising the Government of Greenland on research matters and assisting with the allocation of research funding. The council is represented by five research areas: Natural Sciences, Medical Science, Social Sciences, Humanities and Technology.

Applications for funding for research projects and licences for various activities in the natural sciences must be submitted to the relevant authorities.

#### **The Greenland National Museum and Archives**

The Greenland National Museum and Archives' tasks are, through recording, collecting, classification, conservation, research and communication, to:

- Work to safeguard Greenland's cultural heritage
- Illuminate Greenlandic culture and natural history
- Make the museum's collections accessible to the public
- Make the museum's collections available for research and disseminate the results of this research

#### **The Greenland Institute of Natural Resources and Climate Research Centre**

The goals of the Institute of Natural Resources are:

- To procure the scientific foundation for sustainable exploitation of the biological resources in and around Greenland and to safeguard the environment and biological diversity
- To provide guidance to the Government of Greenland within the institute's field of expertise
- To make public the results of its research

The Climate Research Centre carries out research into the effects of climate change on both nature and society.

### **GEUS (Geological Survey of Denmark and Greenland)**

GEUS advises the Greenlandic authorities on geological and geophysical matters connected with prospection and licence agreements).

In 2015, GEUS undertook fieldwork in South Greenland in selected parts of the Motzfeldt intrusion aimed at studying rare earth elements. GEUS also has stations in South Greenland to monitor the Greenland ice sheet and is a member of the international Greenland Ice Sheet Monitoring Network.

Research is undertaken in several different disciplines:

#### Archaeology:

The nominated World Heritage property in Kujataa has prompted academic interest since the 18th century, when the first field studies of the Norse buildings were conducted. Since then, Danish, Icelandic, Norwegian, German, American and Greenlandic scholars have carried out archaeological investigations in the area. All archaeological activity is coordinated by the Greenland National Museum and Archives as all excavation requires the museum's approval.

In connection with construction works associated with, for example, the mining industry or the utility company Nukissiorfiit, the need often arises for rescue excavations. This requirement is laid down in the Greenland Parliament (Inatsisartut) Act no. 11 of 19 May 2010 on Conservation and Heritage Protection of Cultural Remains, and the developer is responsible for paying the economic costs of the excavation work. These investigations continue to yield new information on the cultural history of Greenland.

#### Building culture:

The Greenland National Museum and Archives is currently undertaking professional building analyses and compiling a record of the building culture within the nominated property. This work will result in a database, which will form the foundation for further research within this field.

#### Nature, environment and climate:

The Greenland Institute of Natural Resources has formulated a strategy plan for the period 2013–2017 under the title “Knowledge, Education and Skills Development in the Future Greenland” with an associated action plan. The institute has four main areas of activity: monitoring, research, consulting and communication.

The Greenland Institute of Natural Resources and the Greenland Climate Research Centre undertake a range of fieldwork activities and surveys in Greenlandic territory, both on land and at sea.

The Ministry of Fisheries, Hunting and Agriculture allocates funding to the Upernaviarsuk Agricultural Research Station via annual performance contracts with the Government of Greenland.

#### Social and medical sciences:

The Research Council for Medical Science of Greenland comes under the auspices of the Ministry of Health. The council administers research funds in support of projects relating to health in Greenland. All research projects are assessed by the Scientific Committee for Health Research.

## 8 Economic resources and implementation

There are economic funds available from the Government of Greenland, Kujalleq Municipality and the Danish Agency for Culture, along with various 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 notion of introducing 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 property in Kujataa is modest in comparison with other Nordic World Heritage properties, 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. Kujalleq Municipality is also undergoing a process of structural and political change, which in the short term provides very limited economic scope in relation to new activities.

However, a significant amount of funds have already been allocated to preserving cultural heritage and agriculture. Each year, the Government of Greenland allocates funds for safeguarding ruins, conducting excavations and other activities relating to the preservation of cultural heritage, some of which takes place in the World Heritage Site in Kujataa. Furthermore, the government funds an agricultural consultancy service that continuously advises the sheep farmers and helps preserve and develop local agriculture. Two full-time consultants, based in South Greenland, have been assigned to this task.

Each year, Kujalleq Municipality allocates funds to business development (agriculture and tourism) and to the overall areal administration (land allocation), including the protection of cultural heritage. In the future, these funds will also be used for supporting the World Heritage Site. In addition, Kujalleq Municipality has signed several short-term and long-term service contracts with Destination South Greenland regarding information, PR, and supervision in the area.

Besides these there are various financial support arrangements for agricultural production.

Below is a list of the most important items of expenditure involved in running the World Heritage area in Kujataa (a number of these expenses will only be needed if the proposed area is added to the World Heritage List).

Kujalleq Municipality funds:

- Part of the salary of a site manager, in conjunction with Destination South Greenland
- Part of the salary of a park ranger as part of the municipality's work in the settlements, co-financed in cooperation with the Government of Greenland
- The costs of maintaining roads, bridges and paths
- Miscellaneous operating costs
- Staff travel expenses etc. associated with meetings, information and monitoring

The Ministry of Culture funds:

- Staff for management of the World Heritage property (spending only a minor part of their working hours on this); the department head also allocates resources to this task
- Evaluation monitoring of the World Heritage property

- Possible joint financing of salary costs for one or more park rangers (subject to approval by the Government of Greenland)
- Staff travel expenses etc. associated with meetings and monitoring

The Greenland National Museum and Archives funds:

- Ruin preservation in the five component parts and guidance with respect to building maintenance
- Further mapping/surveys of ruin groups
- Informational and communication materials placed at the most significant ruin complexes
- Staff travel expenses etc. associated with meetings and monitoring

The Danish Agency for Culture funds:

- A staff member spending two working weeks on the World Heritage property in Kujataa
- Staff travel expenses etc. associated with meetings and the like.

The Ministry of Industry, Labour and Trade funds:

- A member of the steering group for management of the World Heritage property (spending only a minor part of his/her time on this); the department head also allocates resources to this task
- Staff travel expenses etc. associated with meetings and monitoring
- Tourism initiatives

Moreover, there is cooperation with the Ministry of Infrastructure on establishing harbour facilities and pontoons and cooperation with the Ministry of Agriculture on general agricultural regulations.

In the following section, the implementation of the measures and initiatives is presented in table form for clarity:

Table 9.0 Table of proposed activities and timeframes

<b>Task</b>	<b>Timeframe</b>	<b>Responsibility</b>	<b>Funding</b>
Launch of preliminary monitoring plan	2016	Kujalleq Municipality + Greenland National Museum and Archives (NKA)	ca. 2 person-years
Clearing of dumps at Igaliku and Qassiarsuk	2016	Kujalleq Municipality Technical Services Department	400,000 DKK (in total)
Collection of scrap iron	2016	Kujalleq Municipality Technical Services Department	200,000 DKK
Info boards at the five ruin complexes	2016	Greenland National Museum and Archives	Part of salary
Formulation of detailed monitoring plan	2017 (immediately after inscription on World Heritage List)	Site manager	Part of salary
Ground marking of campsites in the four areas	2017	Kujalleq Municipality Public Works Department	Part of salary
Temporary information centres in Narsarsuaq, Qassiarsuk and Igaliku	2017–18	Destination South Greenland	Part of service contract
Extension of path network in Igaliku and Qassiarsuk	2018	Kujalleq Municipality Public Works Department	Part of salary
Mapping/surveying ruin groups	2016–	Greenland National Museum and Archives	Part of salary
Improved access at Sissarluttoq	2017	Kujalleq Municipality	Construction costs
Development of information and communication materials	2016–	Greenland National Museum and Archives and Kujalleq Municipality	Foundation grants
Website	2017–18	Greenland National Museum and Archives and Kujalleq Municipality	Foundation grants
App	2017–18	Greenland National Museum and Archives and Kujalleq Municipality	Foundation grants
Visitor centre	ca. 2020	Steering group	Foundation grants

## 9 Monitoring

Regular monitoring of the status of the area, and the activities taking place within it, is an essential tool for managers of the nominated World Heritage property.

In conjunction with the application for the nomination of the World Heritage property Kujataa, monitoring of the five component parts will be introduced already in 2016 to generate reference data prior to possible inscription of the area as a World Heritage Site.

The monitoring has the following general objectives:

- To document the values of the property, according to which it is inscribed, and subsequently to maintain these
- To constitute a basis for the ongoing management of the area
- To provide data for periodic reports to UNESCO

Furthermore, UNESCO recommends that the monitoring parameters selected should be:

- Significant, i.e. indicators will register changes of considerable significance for the area
- Sensitive, i.e. indicators will swiftly register changes in status
- Repeatable, i.e. observation and quantification of the indicators is executable in the same way year after year
- Readily quantifiable, i.e. measurements will be executable by people without specialist training using basic equipment and techniques
- Economical, both in terms of time and equipment

Monitoring can be divided into two main aspects: monitoring of physical conditions (nature and culture) and monitoring of human activities (visitors etc.).

### **Monitoring on physical conditions (nature and culture)**

#### Ancient monuments

The Greenland National Museum and Archives has overall responsibility for the ancient monuments and their present supervision. This stewardship will be further intensified with nomination for, and possible inscription on, the World Heritage List. In cooperation with the local site management, a dedicated monitoring programme will be developed for the ancient monuments using photo documentation and descriptions of changes and potential threats. The same applies to buildings, both the listed buildings in Qassiarsuk and Tasikuluulik (Vatnahverfi), and the designated buildings in Igaliku.

#### The agricultural landscape

As farming is a principal element in the nominated World Heritage property, regular monitoring of agricultural developments must be undertaken—partly in relation to changes in the landscape involving either the creation or abandonment of fields, and partly in relation to the use of individual fields. There must also be monitoring of the production (number of animals, slaughtering, hay and silage production, vegetables, cultivation of potatoes and so on) and use of labour in the area. This will both document the current farming culture and form the basis for potential measures in relation to farming developments in the area. Monitoring will take place in close cooperation with the Sheep Farmers' Association SPS, the Agricultural Consulting Services and the municipality's Business and Labour Department.

## Nature

The natural landscape within the area demarcated for nomination for World Heritage inscription is important in relation to the overall appearance and impression of the area. This will therefore also be monitored, with a focus on wear and erosion, in the case of increased tourism, and in relation to climate change. A monitoring programme will be developed in cooperation between the local site management and the Ministry of the Environment and Nature.

### Monitoring human activities (visitors etc.)

The number of visitors to the area is an indication of its attractiveness, yet it also represents a threat to its values in the form of erosion and damage. The number and behaviour of visitors is also of significance for the local population both as a threat and a potential source of income. Hence, routine monitoring of relations between the local population and visitors to the area is necessary and will be undertaken.

Data from this monitoring will be used to facilitate the development of tourism products within the area and to identify possible capacity problems, for example in relation to the interaction with the local population. Monitoring will therefore take place in close cooperation with Destination South Greenland, Visit Greenland and the Business and Employment Department of Kujalleq Municipality.

Monitoring of visitors will cover the following general parameters:

- Number of visitors to each of the five component parts (age, nationality, segment etc.)
- Number of overnight stays in the actual component parts in youth hostels, sheep farms, settlement hotels and campsites (economy, number of days, accommodation)
- Turnover in shops and with sheep farmers (souvenirs etc.)
- The qualitative experiences of visitors (history, objects/artefacts, the big picture, service)
- The number of passengers on boats and helicopters travelling to the area (locals, visitors)
- Cruise ships docking in the area (visitors)
- The local population's experiences of visitors (interviews)

## Responsibility

One of the site manager's tasks will be to coordinate the monitoring as specified above. This means that the site manager will involve the aforementioned parties in the work and be responsible for reporting the collated results to the steering group and, ultimately, to UNESCO.

Table 9.1 Monitoring schema for the various categories

Focus	Indicator	Method	Evaluation	Frequency	Responsible
<b>Norse Greenlandic sites and ruins</b>	Number of sites and ruins	Visual inspection and recording number of sites and ruins	Comparison of site/ruin numbers with previous records	Every four years for each component part*	Greenland National Museum and Archives
<b>Norse site/ruin preservation</b>	Qualitative assessment of the state of sites/ruins	Visual inspection, photo documentation, digital survey etc.	Comparison of sites/ruins preservation with previous archival imagery, restoration of ruins if necessary	Every four years for each component part	Greenland National Museum and Archives, park ranger

<b>Site visibility and presentation</b>	Are the sites/ruins clearly visible and accessible?	Visual inspection and clearing of possible vegetation and obstacles that obstruct/impair site/ruin view/impression	Assessment of the individual sites/ruins to ensure their unimpaired visibility and accessibility	Every four years for each component part	Greenland National Museum and Archives, park ranger
<b>Focus</b>	<b>Indicator</b>	<b>Method</b>	<b>Evaluation</b>	<b>Frequency</b>	<b>Responsible</b>
<b>Cultural landscape</b> (Norse ruins, Inuit archaeology, historical archaeology and farming)	Preservation and state of the cultural landscape  Potential conflicts between cultural heritage, tourism, farming, industry etc.	Visual inspection of sites/farming areas to ensure that the cultural landscapes are not being degraded by tourism, farming or other activities  Local actors (park ranger, farmers, tourism operators) are encouraged to continually report any conflicts.  Potential conflicts are resolved through site/ruin restoration, management or marking, education or enforcing of existing national heritage legislation.	Qualitative comparison with previous records (archival, visual etc.) on the preservation of the cultural landscapes  Communication with local caretakers, stakeholders and farmers to ensure that heritage site protection and legislation is observed  Comparison with existing records of cultural landscape preservation.	Every five years for each component part  Ongoing	Greenland National Museum and Archives, park ranger
<b>Number of buildings in need of restoration</b>  Numbers: 19	Provides a general picture of the site and whether the overall condition is improving or worsening	State of conservation value analysis	Follow-up on Action Plan for each building	Every four years	Greenland National Museum and Archives
<b>Number of restored buildings</b>  Numbers: 11 renovated but not restored	Provides a picture of ongoing efforts to enhance the state of the site	Reviewing the list of protected buildings in the nominated area	Updating list of protected buildings in the nominated area	Every four years	Greenland National Museum and Archives
<b>Changes to the buildings (architectural whole)</b>  Current number: 11	Provides a picture of the site whether the architectural whole is changing	Review of recent condition registration of the building	Conservation value analysis (review of the buildings and registration)	Every four years	Greenland National Museum and Archives
<b>Number of buildings that have an</b>	Monitoring that building operation and	Municipal operating and maintenance plan	Reviewing the latest updated operating and	Every four years	Greenland National Museum and

<b>operating and maintenance plan</b>  Number: 57, there are guidelines for maintenance. Action Plan is to be made	maintenance are systematic		maintenance plan		Archives
<b>Focus</b>	<b>Indicator</b>	<b>Method</b>	<b>Evaluation</b>	<b>Frequency</b>	<b>Responsible</b>
<b>Number of empty buildings within the nominated area</b>  Numbers: 0	Monitors whether buildings are at risk of interruption for a longer time	Review of ownership in the municipality population register	Updating building ownership register	Annually	Greenland National Museum and Archives/ Kujalleq Municipality
<b>Number of privately owned buildings</b>  Numbers: 47	Forms the basis for assessing whether privately owned buildings are decline	Reviewing the list of protected buildings in the nominated area	Updating list of protected buildings and ownership in the nominated area	Every four years	Greenland National Museum and Archives/ Kujalleq Municipality
<b>Number of municipality owned buildings</b>  Numbers: 10	Forms the basis for assessing whether municipally-owned buildings are in decline or in the increase	Reviewing the list of municipally- owned buildings in the nominated area	Updating list of municipally-owned buildings in the nominated area	Every four years	Greenland National Museum and Archives/ Kujalleq Municipality
<b>Number of residents within the nominated area</b>	Monitors settlement increase or decrease	Review of statistics on population numbers in the nominated area	Updating list of number of occupants in the nominated area	Annually	Greenland National Museum and Archives/ Kujalleq Municipality
<b>Nature and environment</b>	Climate records  Erosion from increased tourism  Climate changes	Collection of climate records from Narsarsuaq Airports and Qaqortoq  Comparison of vegetation development of tourist sites  Growth of exotic trees as an indicator for climate change	Climatic data is available for 50 years back for both Narsarsuaq and Qaqortoq  The grazing monitoring programme, ongoing since the 1980's, will be a reference for the vegetation development of tourist sites.	Ongoing for climate data, and every 3–5 years for vegetation analysis.	Kujalleq Municipality Greenland Government (Dept. of Nature & Environment)

<b>Farming</b> Development of contemporary farming	No. and names of existing farms  No. of farm animals (sheep, horses, cattle)  Fields for fodder production, no. of hectares  Areas planted with trees (name of plantations), no. of hectares  No. of slaughtered sheep and lambs/year  No. of slaughtered heads of cattle/year  Average slaughter weight of lambs within the farms, kg/lamb  Winter fodder production (silage, hay), as Scandinavian fodder units/hectare  No. of heavy machinery on the farms (tractors and ditch diggers etc.)	Already available statistics to be used.  Numbers will be obtained by the Greenland Agricultural Advisory Service/Nunalerinermut Siunnersorteqarfik, as a part of their annual statistical compilations	The obtained numbers will be compared with a year-by-year analysis, having a long record of numbers stretching back +50 years.	Annually	Greenland Agricultural Advisory Service
<b>Focus</b>	<b>Indicator</b>	<b>Method</b>	<b>Evaluation</b>	<b>Frequency</b>	<b>Responsible</b>
<b>Tourism</b> Development in tourism	No. of visitors to each of the five areas of the property (age, nationality, market	Collection of statistics from relevant persons and companies	Compare tourism development tendencies within the properties	Annually	Destination South Greenland (DSG)

	segment)  No. of overnight stays within the property, at hostels, hotels and camping grounds  Turnover in shops and farms (souvenirs etc.)  No. of passengers on boats and helicopters, (locals and visitors)  Cruise calls within the property (no. of ships and pax)  Experiences of visitors, (the story, objects, coherence, service)  Experiences of locals with visitors (interviews)				
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\* Excavations are also conducted in connection with specific scientific projects and the development of farming or industry.

The numbers will continually be updated by Kujalleq Municipality.

Should the area be granted World Heritage status, it will be the site manager's responsibility to develop and coordinate the schema.

## 10 Communication

### Proposals for communication initiatives:

1. Website at [www.kujataa.gl](http://www.kujataa.gl) – text, sound, photos and films
2. Digital communication in various languages – dedicated app for the nominated World Heritage property Kujataa – downloadable free of charge!
3. Publication: *Kujataa – a subarctic farming landscape in Greenland*
4. Annual cultural heritage days with the theme “World Heritage”, in early spring, before lambing
5. Communication agreement with the media: regular spots on TV and radio programmes
6. Digital educational materials aimed at GUX (college education) and primary and secondary schools, focus on cultural heritage
7. Signs in several languages for each World Heritage component part
8. Guidelines for cruise ships
9. Informational film (by World Heritage offices)
10. World Heritage routes in the landscape (map)
11. Exhibitions

### By World Heritage offices:

1. Permanent and themed exhibitions, shop (web shop) and café
2. Opening hours, annually/seasonally adjusted
3. Future arrangements (guest speakers)
4. Special arrangements for children and young people

### Draft communication plan—further ideas

The most important entry port to the World Heritage property is the airport at Narsarsuaq. When a visitor arrives on a plane from Europe, Iceland or Nuuk, they are already almost within the nominated World Heritage property. An information board providing an introduction to the World Heritage area will be displayed in the airport.

Information boards that introduce visitors to the nominated World Heritage area will also be erected in the towns of Narsaq and Qaqortoq. The coastal ferry from Nuuk calls at these towns and brings tourists and visitors from other parts of the country.

In each of the five component parts, information boards will be placed by the ports of call, providing an introduction to the individual component part.

**Component part 1:** Here the information board will be placed in the small harbour area at Qassiarsuk.

**Component part 2:** Information boards will be placed at both ports of call in the component part: Itilleq in the northern part and in the small harbour in the settlement of Igaliku.

**Component part 3:** There is currently no jetty here. It has been proposed that an information board be placed on the slope facing Igaliku Fjord.

**Component part 4:** Information boards for the area will be displayed near the moorings in Igaliku Kujalleq by the small quay in Qanisartuut.

**Component part 5:** It has been proposed that information boards be displayed at Qaqortukuloq (focusing on the well preserved Norse ruins) and at Upernaviarsuk (focusing on the Agricultural Research and Training Centre and modern Greenlandic sheep farming). Upernaviarsuk will also include information about the World Heritage property in its education of sheep farmers, including how, as a sheep farmer, to cultivate an awareness of ancient monuments and historic remains and treat them with due respect. At Upernaviarsuk there will also be informational materials (posters) conveying key facts about the World Heritage area.

### **Information centres**

#### **Component part 1:**

A small information centre will be housed in “Otto Frederiksen’s House”, i.e. in the listed building that was built in 1934 by the first Greenlandic sheep farming family, which settled here in 1924. In one of the rooms the Norse history of the site will be told in an exhibition displaying original artefacts found during the archaeological excavation in 1932. Another room will tell the story of the settlement and the area after 1924.

#### **Component part 2:**

In the former schoolroom, situated in the settlement’s small church, a temporary exhibition will be set up, providing information on the history of the Norse episcopal residence and the history of the settlement since Tuperna and Anders Olsen settled here in 1783. Over the long term, the plan is to remodel a former sheep barn in the eastern part of the settlement and transform it into an information centre. This will provide space for an exhibition of original artefacts from the archaeological excavations at the site and findings relating to its more recent history.

#### **Component part 4:**

In Igaliku Kujalleq, in the northern part of the area, a small information centre will be established in one of the buildings dating from the period when as many as 30–40 people lived in the settlement. Several of these buildings stand unused. Information will be provided on the history of Tasikuluulik and Igaliku Kujalleq during the Norse period, as well as during the period after 1934, when the first move from Igaliku to Igaliku Kujalleq took place. In the south-western part, in Qanisartuut, it is possible to visit a well maintained sheep farm housed in a listed building, once inhabited by Cecilie and Henning Lund, who were pioneers in this part of Tasikuluulik in the late 1940s. Today, descendants of the couple live in a modern sheep farm located next to the listed sheep farm.

#### **Component part 5:**

The Upernaviarsuk Agricultural Research Station plays an important role in educating the general public about the nominated World Heritage property. In its teaching of agriculture students, the research station will focus on how good farming practices can be combined with protecting the cultural heritage.

At Upernaviarsuk it is possible for visitors to visit the research station’s nursery with its various beds, cold frames and greenhouses. They can also visit the old sheep barns from the 1950s and gain insights into the design and layout of modern structures for sheltering sheep.

Efforts will also be made at Upernaviarsuk to make the ruins of Anders Olsen's house accessible to visitors, including the erection of an information board.

**Communication and presentation via the use of apps**

Apps will be developed for the archaeological and key historic sites and used as guides on location at Qassiarsuk (Component part 1), Igaliku (Component part 2), Sissarluttoq (Component part 3), Tasikuluulik (Component part 4) as well as Qaqortukuloq and Upernaviarsuk (Component part 5).

These apps will contain overviews and detailed plans for the most significant Norse ruin groups and provide information on each individual ruin. It will be possible to view selected photos from the early excavations of important sites and a selection of photos of the artefacts excavated from the individual ruins.

## 11 Annexes

- a) Legislative base (laws, executive orders etc.)
  - i. The Heritage Protection Act
  - ii. The Museum act
  - iii. Executive order on cultural heritage protection
  - iv. The Planning act
- b) Municipal plan for Igaliku and municipal plan for Qassiarsuk
- c) Action plan for the preservation and maintenance of the ruins at key sites
- d) List of historic buildings and their owners
- e) Action plan for listing of buildings and other cultural heritage protection
  - i. Action plan for Igaliku houses, Area D1
  - ii. Action plan for Otto Frederiksens house B-316 and his two farrowing barns
  - iii. Action plan for Henning and Cecilie Lund's house B-345 in Qanisartuut
- f) Tourism strategy (Kujalleq Municipality)
- g) Contact information