

Shortened version



**Culture historical significance on areas
Tasersiaq and Tarsartuup Tasersua in West
Greenland & Suggestions for Salvage
Archaeology and
Documentation in Case of
Damming Lakes**



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Introduction

Archaeological studies were performed by Greenland National Museum in 2007 and 2008 on main impact areas in advance of ALCOA's proposed aluminium smelter. Initially archaeological surveys were undertaken at three areas chosen as water reservoirs for the hydroelectric plants to supply the aluminium smelter with electricity. When plans called off using the middle reservoir, Isuup Tasia (7d), it was excluded from the 2008 studies.

Awareness of the significance of the interior resources exploited by past cultures exists through traditional and historical sources. Some areas of the north reservoir, Tasersiaq (7e) had also been partly surveyed by archaeologists from the National Museum in Denmark in 2002. In spite of knowledge from these sources the amount of new finds both in the north (7e) and south reservoir (6g) areas were astounding. The importance of the caribou hunts in the interior and the use of the big lakes for that activity is now obviously cemented by the amount of mapped cultural remains as regards the Inuit. Samples collected from Saqqaa Culture settlements by Tasersiaq produced ^{14}C dates telling that the very first people of West Greenland from an early period exploited the resources of the interior. Special attention is to be regarded to the complexes of unique and largely undisturbed contiguous cultural landscapes of the interior where traditional knowledge and legends of cultural significance for the Greenlandic population are associated. The type of base camp dwellings found in most Inuit settlements in the Nuuk area (6g) was different in architecture from tent houses usually found in other areas. This type of dwelling is in this paper designated as stone huts, but in tables and diagrams the stone huts are put under the category of tent houses. The two published reports on the archaeological surveys for ALCOA constitutes the backgrounds for this summary. For the elaboration of the culture historical significance of the finds a list of references can be found at the end of the paper.

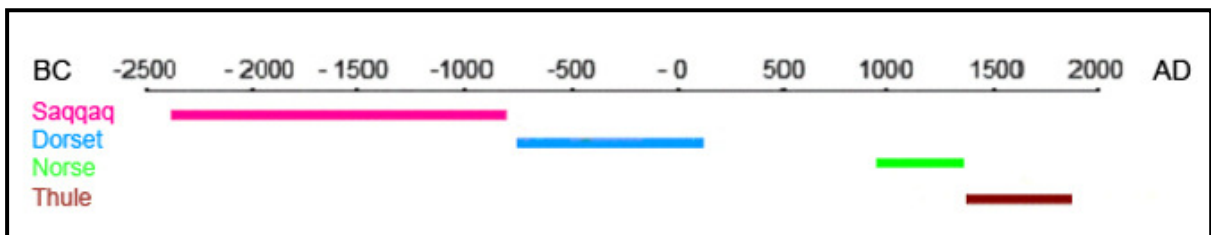
The culture-historical background

West Greenland was for the first time settled by Stone Age hunters approximately by 2400 BC. Remnants from these people are named the Saqqaq Culture. As all following arctic hunters to populate Greenland they were migrants from the arctic North America. Finds from the culture are known from all over West Greenland and way up along the East coast. Large scale excavations at two localities and finds from another place indicate the importance of caribou as resource for the Saqqaq people (Meldgaard, 2004 and Gotfredsen & Møbjerg, 2004).

Whether a cultural transition happened from Saqqaq to Early Dorset is being discussed as the gap with no archaeological finds especially in Sisimiut area is closing. Radiocarbon dates tell of the presence of Greenland Dorset (Early Dorset) in West Greenland in the period 700 BC – 200 AD. Both the Saqqaq and Dorset Cultures are included under the term: Paleo-Eskimo cultures.

The next people to populate part of West Greenland were the Norse that, according to the Sagas, migrated from Iceland around 985 AD. They settled in the Eastern Settlement in South Greenland and in The Western Settlement in the fiords behind Nuuk. The Norse disappeared from the latter area by the middle of the 14th century and totally abandoned Greenland in the middle of 15th century.

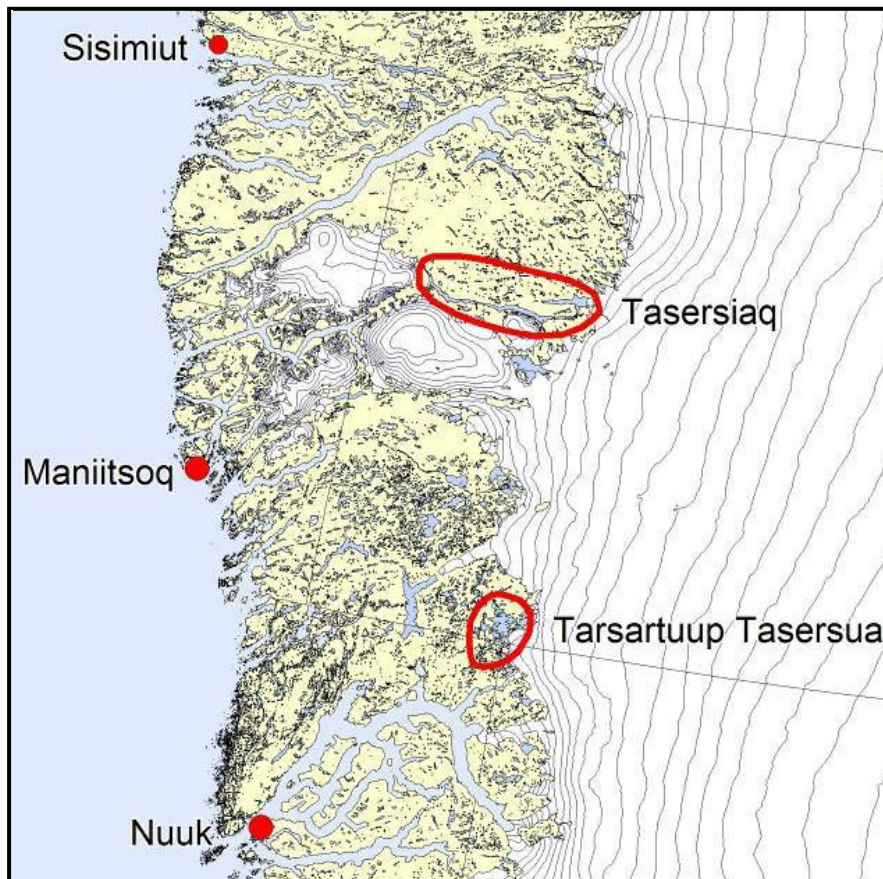
During the 13th century the Inuit – people of the Thule Culture - entered the northern most part of West Greenland and spread out along all coastal areas of the country in the following centuries. Probably the Inuit encountered the Norse, as archaeological finds from the Nuuk area indicate contemporary presence in the area. Like the Inuit from their origin in the North Western part of Alaska hunting large whales was important for their livelihood. As Inuit adapted to the local conditions, especially the cooling of climate in the 16th - 17th century affected their patterns of residence, hunting large whales became limited to few areas on the West Coast. Around 1650 long distance exchange of resources along the west coast were established and trade with European explorers and whalers are known from the 17th century. After the beginning of the gradual Danish-Norwegian colonisation in 1721 AD, approximately by 1800 AD Inuit living on the West Coast became dependent on western goods and was by and large converted to Christianity.



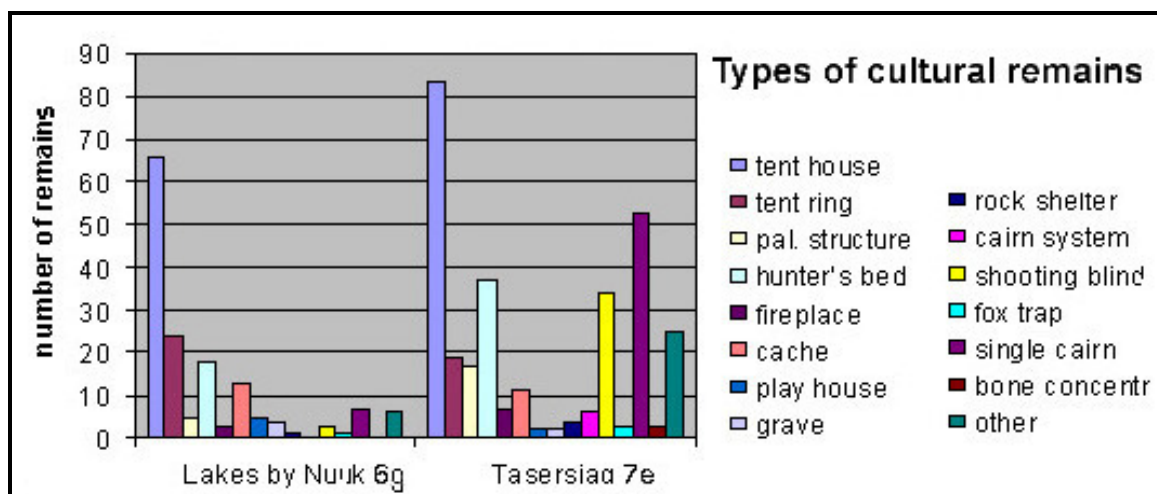
Diag. 1: Presence of past peoples in the research areas.

Results from the surveys

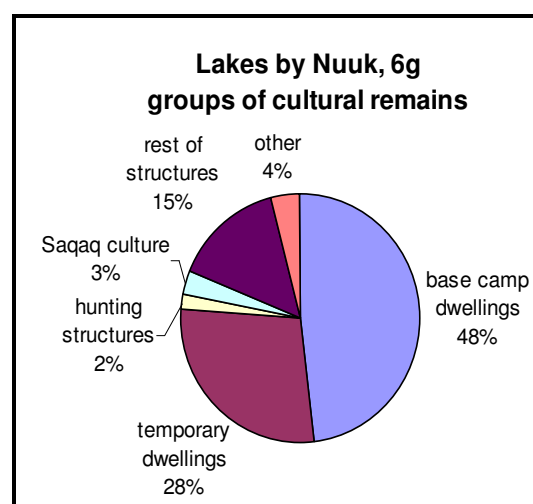
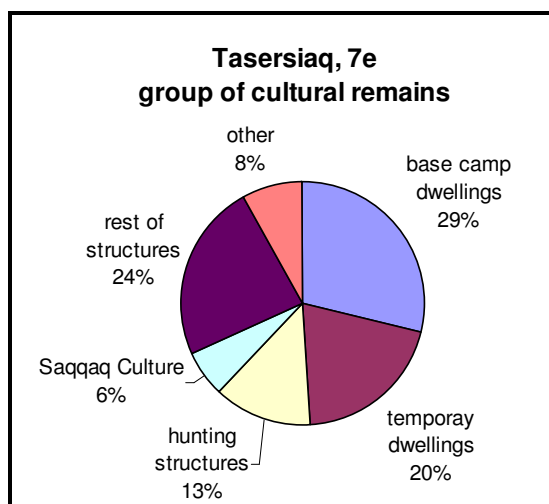
Damming lakes in the interior, close to the ice cap, will create two water reservoirs. The redirected outflows will supply hydroelectric plants to generate power for the aluminium smelter. Damming of Tasersiaq (7e) will raise the waterline by 20 meters. In the southern reservoir lakes will be merged by damming and affect elevation of water lines differently. Tarsartuup Tasersua: 10 m, Qaamasoq; 2 m, an unnamed lake: 5 m and Tussaap Tasia: 15 m.



Map 1: Both reservoir areas are situated at places where Inuit according to historical sources, at least from the 18th century, was summering to hunt caribou. Both areas were renowned to attract people also from distant areas on the West Coast. After long journeys by boat and foot the families stayed in dwellings for several months in the interior. Caribou hunting by Tasersiaq ceased around 1950 and summering by Tarsartuup Tasersua already by 1920. Hunting trips in the latter area continued into the 1970's.



Diag. 2: The diagram shows mapped cultural remains from the two survey areas sorted by functional types. The largest structure being a tent house is a construction of stone walls to be roofed with skins for housing of the hunting family at the base camp. Play houses are miniature of dwellings. The stones forming the tent ring weigh down the skin/canvas to the ground. A frame of stones filled with twigs functioned as an open air bed for a hunting party. Rock shelters hunter's beds were used during hunting trips away from the base camp. Single cairns are markers in the landscape. Cairns systems are for driving caribous in certain directions during the hunt and shootings blinds are made for the hunter's concealment. Use of the latter two types ceased, when hunting with rifle became customary around 1800 AD. Other structures are cultural remains which could not be functionally defined into certain types.



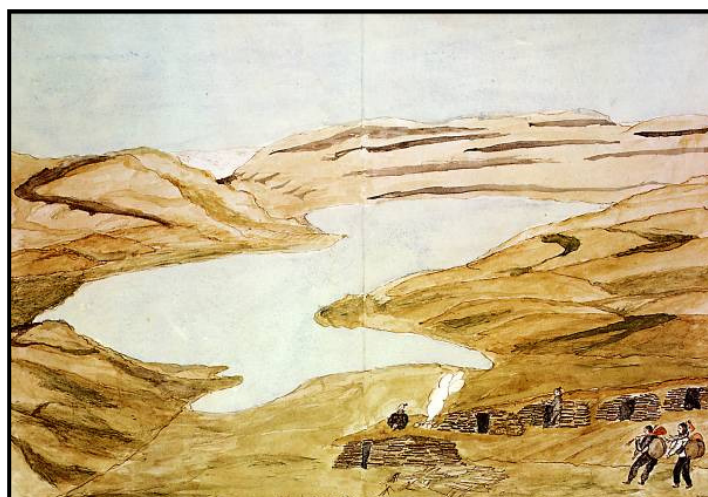
Diag. 3: One has to be cautious not to ascribe too much meaning into the pattern of the finds, as only the finds from the narrow area around the lakes to be flooded have been mapped. From the distribution of the types of grouped cultural remains it is obvious that the base camps and temporary dwelling remains in the Nuuk area comprise a significantly high share of the finds. Probably in this area the hunting grounds are situated some distance from the lakes and the amount of the temporary dwellings are consistent with the latter use of the area.

Finds by lakes in Nuuk area, 6g



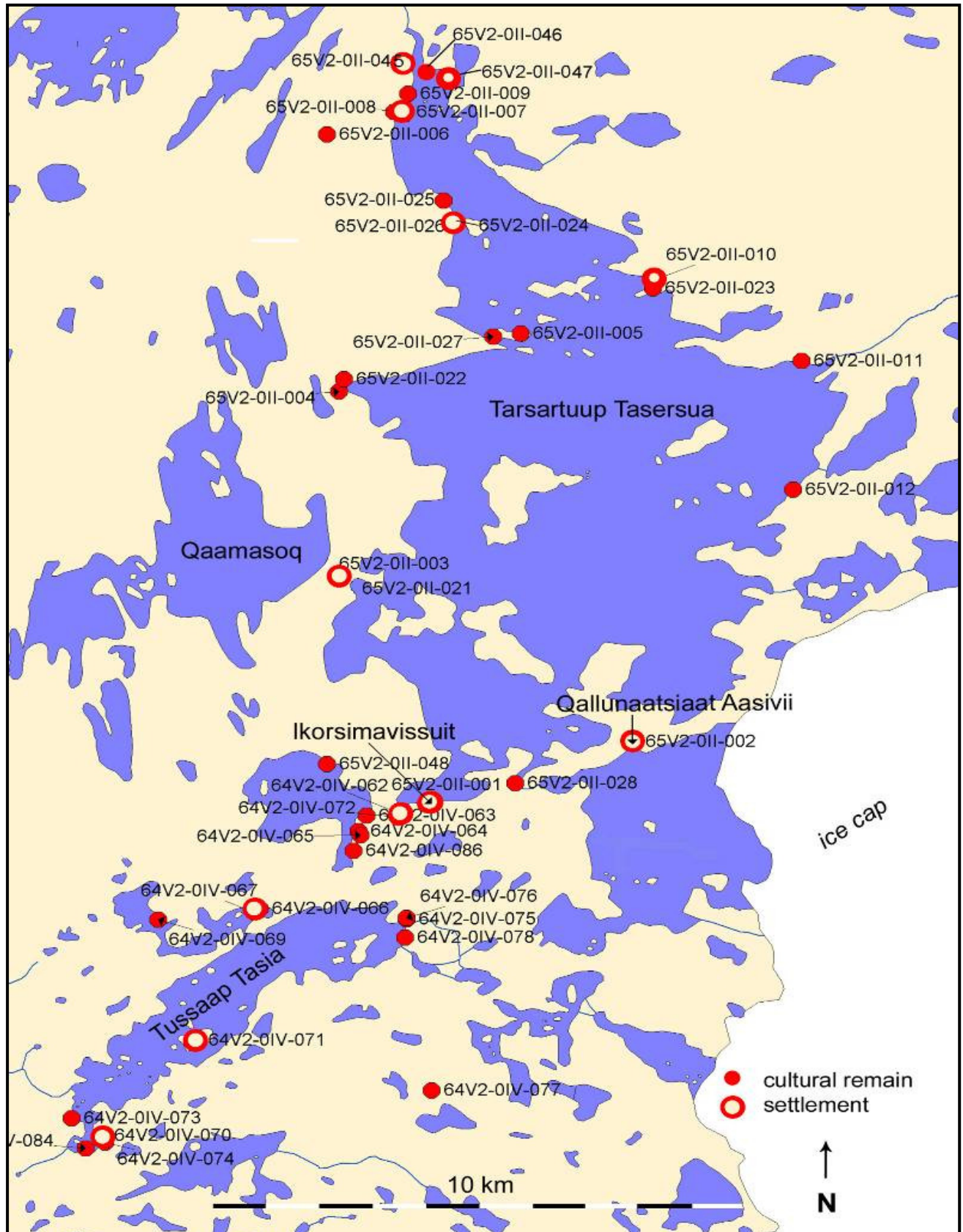
Fig 1: The base camp dwellings in the Nuuk area are different from those at other areas on the West coast, as they are built solely from flat stones and accordingly they are designated as stone huts. It inevitably calls to mind a possible influence from the Norse living in the fjords of Nuuk, when the first Inuit settled in the area. It should also be mentioned that the huts resemble those of the early Thule Culture winter house architecture in Northern Greenland.

Fig. 2: Aron's water coloured illustrations of stone huts from a caribou hunting camp in the Nuuk area from the 19th century.



Map no. 2: Lakes in the southern reservoir area. Sites 64V2-0IV-071 and 65V20II-002 will remain above the water line after damming of the lakes.

In the area by Nuuk the distribution of cultural remains is not distinctive. From oral sources and archaeological surveys it is known that the areas north and east of Tarsartuup Tasersua are hunting grounds, which seems to confer with the survey results, as only four sites were found



containing a total of four tent houses, two hunter's bed and three tent rings. Along the rest of the shores of the lake eight settlements are distributed, the majority situated on the southern and western shores. As regards Tussaap Tasia it seems reasonable to discern between western and eastern shores. The eastern shore was probably intended for base camps as two large settlements with a total of 22 tent houses are situated on the shore and on an island close to shore. Only one settlement with 3 tent houses is to be found on the western shore together with another site comprising 8 hunter's beds.



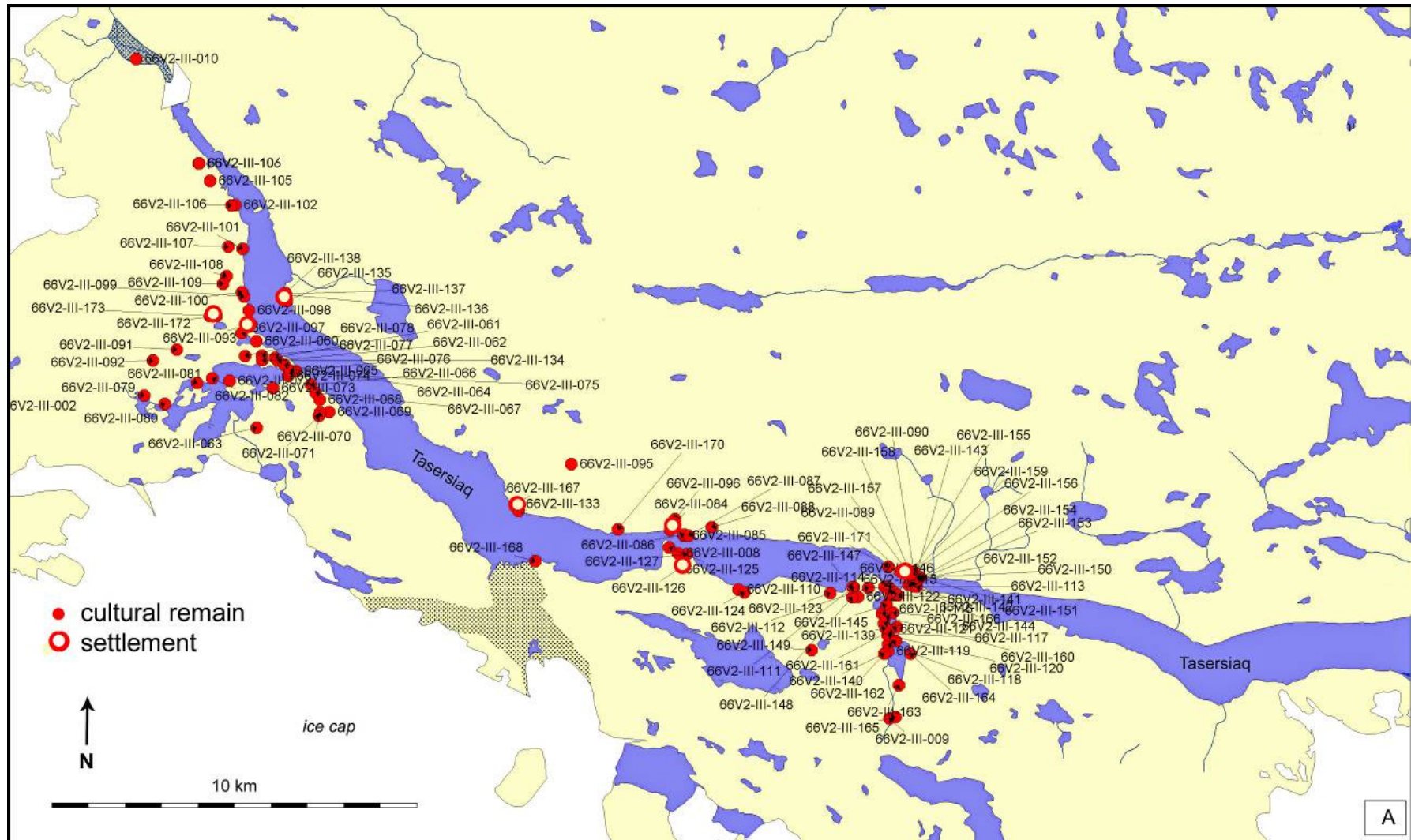
Fig. 3: A new type of structure was discovered in the Nuuk area. A circle of stones containing a big slab inside was recorded at two settlements.

Fig. 4: A shooting blind on the shore in the narrowing before the outflow of Tarsartuup Tasersua. Caribou trails on the shores of the channel indicate a crossing place. Hunters took advantage of the vulnerable situation to kill swimming animals from kayaks. On the promontory visible just above the blind, three hunter's beds were found. Probably they were look outs for crossing animals. Surviving animals were probably taken from the shooting blind as they reached the shore.

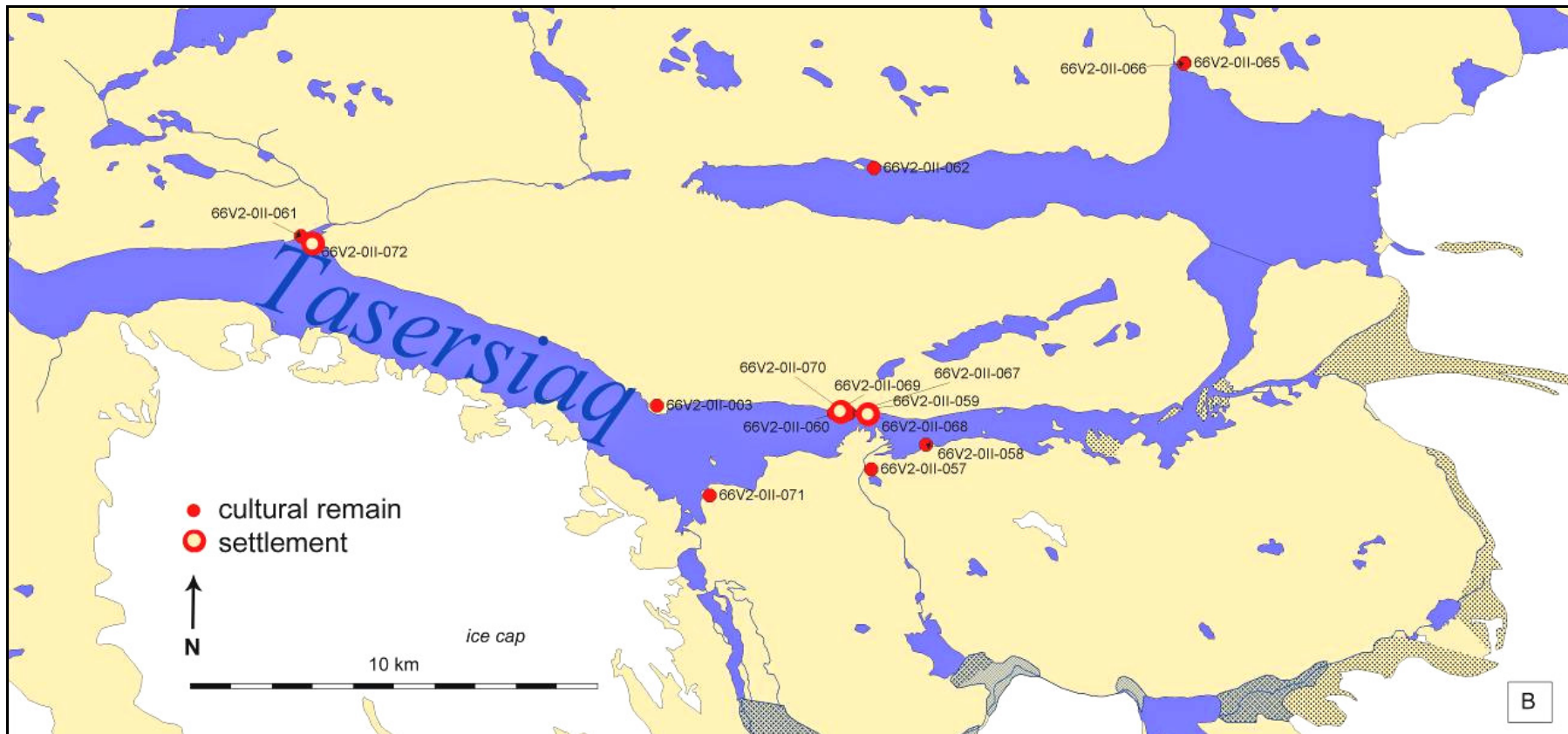


Radiocarbon dates from site 64V2-IV-70 tell of Inuit's activity in the area at least from the 16th century. For detailed information on radiocarbon dates see appendix C.

Localities at by Tasersiaq, 7e

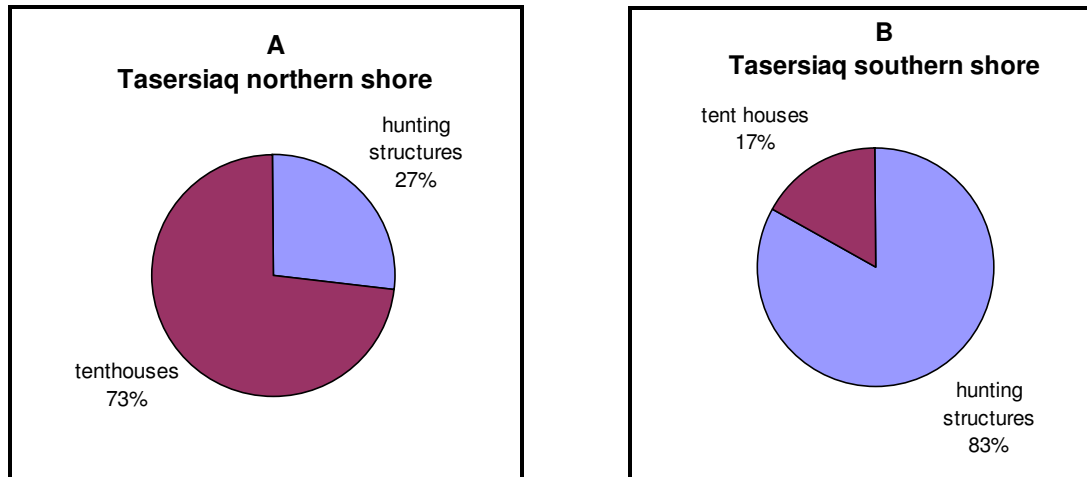


Map 3: The western part of Tasersiaq is protected from cold winds from the ice cap to the east and accordingly more lush and probably more rich in game. May be that is why most sites are to be found here. Notice the aggregation of cultural remains by the constrictions of the lake.



Map 4: On the eastern shores of Tasersiaq only few sites were found. Part of the reason for that may be the proximity to the ice cap and the steep mountains on long stretches on the southern shores.

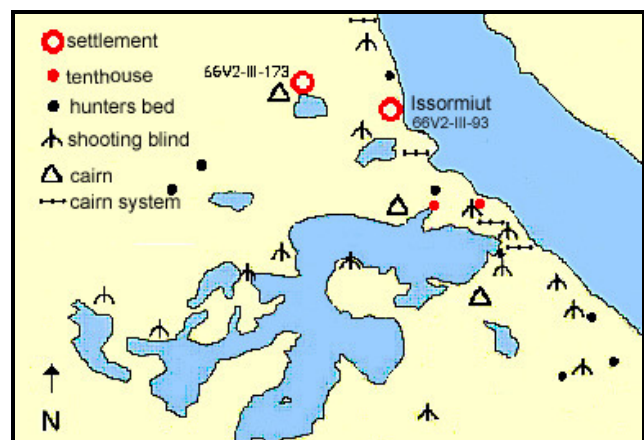
The distribution of types of cultural remains between opposing lake shores by Tasersiaq shows how areas in the landscape are singled out for certain purposes. On the northern shore mainly dwelling structures (73 %) are to be found, whereas on the southern shore it is mainly hunting structures (83%). Probably this is why, as it can be seen from maps 3 and 4, the density of cultural remains are so profound by the constrictions of the lake, where crossing between base camp and hunting areas likely will be more convenient.



Diag. 3A & B: Distribution of types of cultural remains on opposing shores of Tasersiaq



Figure 3: A small cairn system by Tasersiaq. Cairns are marked with white circles.



Map 4: Distribution of cultural remains in part of south-western shore of Tasersiaq.

An example on the use of the landscape by Tasersiaq is illustrated in map 4. Site number 66V2-III-093 (Issormiut) is a base camp comprising five tent houses. The settlement 66V2-III-173 does not have as substantial dwellings, probably because it was used mainly as a temporary camp in a shorter period of time. As can be seen, most of the shooting blinds and all cairn systems are situated by lakes. The complex of settlements and hunting structures are situated in a broad valley where the lake south west of Tasersiaq are in the centre.

Fig. 4: Cultural remains from the settlement, Qoornoq Killeq by Tasersiaq. A is tent ring and B - D are tent house ruins.



Fig. 4: Water coloured painting from mid 18th century by Aron of Kangeq of the stone the old couple, who buried their daughter-in-law alive, when their son died by Tasersiaq.

Fig. 5: Another painting by Aron of Kangeq. Aariassuaq frightens his competitors from his grave on the shore of Tasersiaq



Radiocarbon dates of two caribou bones collected on the surface by Tasersiaq associated with cultural remains dated them to between resp. 1301 – 1398 AD and between 1526 – 1663 AD. Five charcoal samples found in association with five Saqqaq Cultures sites in Tasersiaq had dates between 2139 – 1779 BC.

For detailed information on radiocarbon dates see appendix C.

Culture Historical Significance of the Finds



Fig. 6: View toward west from the easternmost settlement (66V2-0II-067) at Tasersiaq.



Fig. 7: Archaeologists looking for diagnostic tools in a tentring from the Saqqaq Culture at Tasersiaq.

Situated at heights over 600 meters next to the icecap the landscapes in both areas are peculiarly beautiful and hunting activity in the areas way up into the 20th century apparently has not affected the landscape or the cultural remains. The interplay between hunting structures and landscape features are clearly obvious. More detailed studies are needed to get profound knowledge of how prehistoric hunters took advantage of the landscape for their benefit. The coherent complexes of settlements and hunting areas by Tasersiaq make up unparalleled opportunities for the study of prehistoric Inuit's activities in the cultural landscapes as traditional knowledge from historical use of the landscapes are available. In many aspects the conditions at Tasersiaq are comparable to the landscapes of last Ice Age in the northern hemisphere where caribou hunting was of great importance. For these reasons the contiguous landscapes are of great value for the study of prehistoric hunting activity and the interplay between human and nature in general.

It is not until this century that larger areas of the interior of Central West Greenland were surveyed by archaeologists. The finds now challenge the widely held view of the relative low value attributed to the Greenlandic Inuit's use of the interior and its resources. The new knowledge of at least periodically intensive use of the interior indicate more complexity to the Inuit life style where fluctuations in the animal populations probably was an important structuring force for the dynamic of the historical progress.

In general for the study of the history of Inuit in West Greenland the interplay between coastal and interior resources and fluctuations in animal population are fundamental aspects to study and understand. In that respect interior settlement and hunting areas can help to clarify the conditions.

Inuit's combination of coastal and interior resources was rather specialized and complex compared to hunter – gatherers in general, however the affect on their cosmology is poorly studied. Some archaeological studies on Inuit's cultural remains in the Canadian arctic have touched upon the subject and illuminated that the study of cultural remains combined with ethnographic and traditional knowledge can give a more profound understanding of the

esoteric aspects of Inuit life ways. In that respect the cultural landscapes are important sources for the study of the Inuit cosmology.

Archaeological studies and excavations at Aasivissuit - a large caribou hunting camp situated 100 kilometers north of Tasersiaq with associated cairn systems for driving caribou, a fence and shooting blinds - is hitherto the main study of Inuit's hunting in the interior of West Greenland (Grønnow et. al, 1983.) The stratigraphy from the midden reveals horizons with layers of caribou bones of differential thickness. Radiocarbon dating of caribou bones from the midden correlates the thick layers of bone with historical known periods of large caribou populations. This supports the traditional indigenous knowledge about fluctuating caribou herds through times. The amount of cultural remains found on the surveys does indicate an intensive use of the land, which possibly can be related to the highs of caribou populations.

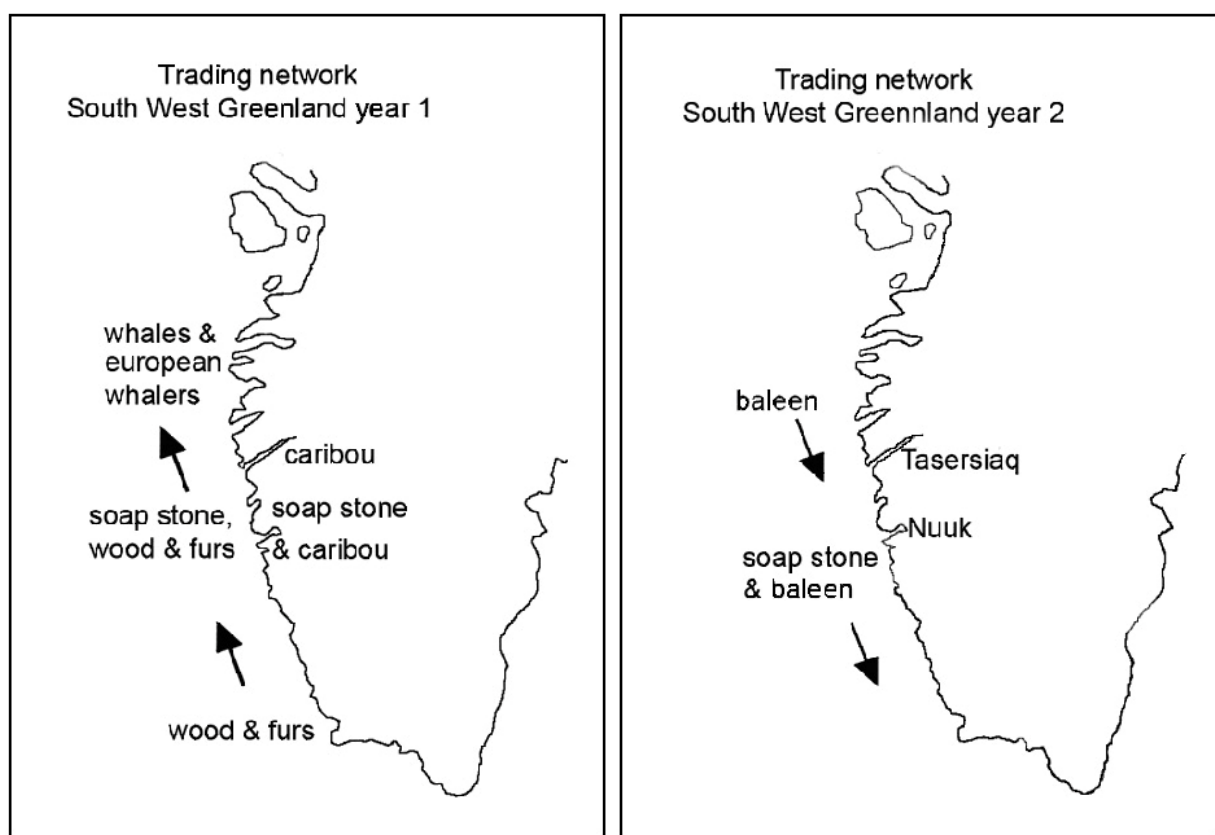


Fig.8: Illustration of the trading network of the Inuit in West Greenland between 1650 – 1750AD. According to historical sources people from South and South East Greenland travelled north to trade for soap stone, baleen and presumably also to trade European goods with the whalers before the establishment of the Danish – Norwegian colonies.

As previously mentioned a trading network along the south western region of Greenland was maintained during the 17th and 18th centuries. The conditions for sustaining the network were due to a combination of circumstances. Soapstone from deep inside the fjords of Nuuk was an important commodity in the network. Baleen from the large whales available by the coast north of Tasersiaq was likewise. The whales were also exploited by European whalers with whom Inuit traded European goods.

The Inuit travellers from south, reported by the first colonists, were considerable in numbers, as they were counted in hundreds, and had to stay for the winter before returning home. The pressure on resources in an already populated area can possibly be met by periods with sufficient resources e.g. whales and caribous, but it is known that Inuit from historic periods regulated access to resources mainly through territoriality. The Southerners' access to whales and caribou was probably solved by suspension of the territories as is widely known to happen among a wide range of traditional societies when resources are plenty and predictable.

This very rich period from the mid 17th to mid 18th century where people from large stretches of the coast intermingled and shared ideas in the central area of West Greenland created a unique situation in the history of Greenland. For the understanding and study of the historic conditions of this important period that had a great cultural impact on Inuit/Greenlanders the Lakes by Nuuk and Tasersiaq constitute an important aspect.



Fig. 9: Hunter's bed and cairn by Tasersiaq.

Suggestion for Preservation of Tasersiaq

Based on the above it must be concluded that the cultural landscapes by the intended water reservoirs are of high cultural value for the Greenlandic people, research in the Greenland past and Inuit anthropology. Especially the complex contiguous landscapes where settlement areas and hunting ground interchange at Tasersiaq is an invaluable testimony to prehistoric and historic lifestyle of Inuit in West Greenland.

As a consequence of the conclusion it is recommended that the cultural landscapes including the cultural remains by Tasersiaq are to be preserved due to following reasons:

Tasersiaq was a considerable hunting area for a sizeable part of the Inuit population of West Greenland. Several folktales are associated with specific localities at Tasersiaq, appearing in sources from i.e. Aron from Kangeq and Jens Kreutzmann and in oral tradition in general.

The large concentration of features indicates that the lakes were very important for hunting, and that interior regions of West Greenland were more important to the livelihood of Inuit than has hitherto been assumed. The archaeological remains relating to Inuit activities by the shores of Tasersiaq include among other 8 base camps, several temporary camps, meat caches, graves, and several undisturbed hunting drive systems consisting of cairns and shooting blinds. The settlement of Qoornoq Kangilleq situated on the northern shore and encompassing more than 40 structures, is particularly important as it is probably the largest caribou hunting camp in Greenland which also was in use 4000 years ago. The settlement is surrounded by hunting territories in all directions, including the areas across the lake to the South. The undisturbed drive hunting systems situated in differing landscapes along the more than 80 kilometre long lake are also clearly important, yet they have still not been examined thoroughly.

Four camp sites relating to the Saqqaa Culture provide new information about the culture, as it is the first time that their remains have been found this far inland.

Because the exploration and interpretation of the prehistory of Greenland has hitherto been conducted solely by Western scientists, it is important to leave these significant archaeological structures and cultural landscapes on the shores of Tasersiaq for study and interpretation by Greenlandic archaeologists in the future.

The ability to combine the exploitation of resources from both coastal and interior regions is one of the central characteristics of Inuit cultures dispersed from the eastern part of Siberia to East Greenland. In that context, Greenland is special because of its narrow strip of unglaciated land between the ice cap and the ocean. Early in prehistory, the dichotomy between coast and interior became reflected in the cosmology of Inuit culture and has been a central part of the culture up to the historic period. The coast-interior duality which marked prehistoric cultures is still not sufficiently explored by archaeologists. As the cultural remains by Tasersiaq are among the most substantial remains relating to interior hunting in the eastern Inuit area, they have a major importance for the understanding of this special aspect of common Inuit prehistory.

Hunting structures situated in the undisturbed landscapes of the southern shores of Tasersiaq yield outstanding possibilities for the study of the hunting methods used by prehistoric hunters of the European Ice Age because traditional knowledge on the historic use of the area that are available. The hunting conditions in the area are analogous to those during that important period in human prehistory. During the Ice Age, caribou hunting had a special importance.

Fluctuations in animal populations had profound effects on prehistoric hunting societies e.g. on organisation of the hunting. The cultural remains by Tasersiaq in combination with remains from the coastal areas can contribute to the study of the affects of fluctuating animal populations in prehistory in general.

Suggestions for Salvage Archaeology and Documentation in Case of Damming of Lakes Tasersiaq, Tarsartuup Tasersua and Tussaap Tasia

For the last 2 years the Greenland National Museum and Archives have undertaken archaeological surveys, interviews and archival research around Lake Tasersiaq, Lake 7e, in order to elucidate the antiquarian interests in the area. Some surveys have been done earlier and now an even more interesting and complex picture has arisen of the cultural-history of the area.

Ca. ten years ago Greenland asked UNESCO that 3 areas in Greenland should be considered World Heritage Sites. UNESCO later approved the Jakobshavn Isfjord as a World Heritage Site and maintained the other two on the Tentative List.

The Aussivissuit – Arnangarnup Qoorua (Sarfartoq) area is one of these areas on the Tentative List. The southern border of the suggested area is just north of Tasersiaq, Lake 7e. The main argument for nominating the area is the impressive representation of Inuit cultures as seen in the landscape from the Inland to the Davis Strait.

Based on a request from the Greenland Home Rule, Dept. of Culture, Research, Education and Church in the fall 2008 the Greenland National Museum recommended that the nomination should be upheld and informed the Department that “based on the information we (i.e. the Museum) have today after two years of survey and mapping, we would have included an area to the south in order to include the area around the largest lake in Greenland: Tasersiaq. The landscape from just north of Kangerlussuaq till south of Lake Tasersiaq holds a fantastic cultural landscape - in a Greenland context - which yields information on social, cultural and natural resources and adaptive strategies, which are unusual among Inuit – at least in the Eastern Arctic.” (letter and e-mail dated November 26, 2008)

If the planned damming of lakes 6g and 7e takes place two important and unique West Greenland inland areas will disappear for ever. The investigations which must be undertaken will reflect that. The list of sites and features to excavate represents what the Greenland National Museum considers essential and a minimum to do.

It should be kept in mind that in all Greenland (with the exception of Peary Land), only a few sites along Kangerluarsunnguup Tasersua, the hydropower lake south of Nuuk, and one prehistoric site in the inland, Aussivissuit, c. 100 km. north of Tasersiaq, have ever been excavated,

That was in the early 1980’ies and 1990’ies and the research questions asked and the array of archaeological tools for retrieving information has been incredibly improved since then. This means that the museum has very little present empirical experience to base our experience upon.

The list of sites and structures in this Report which must be excavated or documented in other ways is based on present knowledge, which however may change when we obtain more empirical information from more field-research.

Some of the methods to be used for documenting the cultural use of the areas are listed below:

The salvage plan will strive towards documenting all sites including their relation to the landscape and to each other as thoroughly as possible, and to retrieve data which can contribute with information on the cultural use of and impact on the areas through times.

The different methods for documenting the cultural use of the areas are listed below:

- All sites must be mapped in detail including their relation to the landscape, and the landscapes surrounding lakes must be documented by satellite photos.
- Excavation of all settlements and selected structures outside the settlement areas are recommended. Settlements must be totally excavated including areas in between the structures. It is likely that some of the cultural remain are sunken into the lakes and the lakes may have been used e.g. as middens. As far as possible lake areas bordering settlements has to be examined in spite of the murky waters. As mentioned in the 2008 survey report some cultural features are sunken into the lake that at times had a lower waterline. In that respect the lake has also been part of the activity area.
- Structures selected for excavation should be representative of all types of structures in their diverse designs through times (a list of types of structures appears from the appendix A). Some features can not be excavated because they are built of stones on rock e.g. fox traps, cairns, some shooting hides, cairn systems, etc.
- Regarding structures from the Paleo-Eskimos all finds will be excavated, as remnants from that period from the interior of West Greenland in general is very sparse and as the number of finds from the surveys are limited.
- Excavation of the sites must be combined with diachronic natural science studies which can help retrieve data on the human impact on the areas and changes in the natural environment.