ICOMOS

Report on the ICOMOS Upstream Process for Várjjat Siida: 12 000 Years of Indigenous Arctic Heritage (Norway) and Reindeer Hunting Area in Dovrefjell (Norway)

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1. Background to the Upstream Process

The objectives of the Upstream process are to provide support at an early stage for sites which may have the potential to be inscribed on the World Heritage List, in collaboration with the States Parties, and before the nomination dossier is drafted. While the Upstream processes vary, they generally involve activities that aim to clarify whether or not a solid case can be made for the nomination, and if so, to identify the further work that needs to be done to support the advancement of a nomination.

In 2016, Norway requested Upstream advice from ICOMOS concerning a possible nomination proposal for Várjjat Siida: 12 000 Years of Indigenous Arctic Heritage, in northern Norway (Finnmark). An amended proposal has subsequently been prepared by the Sámi Parliament in Norway (Sámediggi). The proposal consists of four sites on the Varanger Peninsula and the land bridge connecting the peninsula to the mainland.

In 2018, Norway formally requested further Upstream advice from ICOMOS for the revised proposal, and the work on the Upstream process commenced in 2019, based on agreed Terms of Reference (Annexe 1). The work carried out in 2019 is the subject of this report. The Upstream process included an Advisory Mission (August 2019), and desk reviews to assist with the further consideration of the potential for Várjjat Siida to meet the requirements of Outstanding Universal Value.

Shortly before the commencement of the ICOMOS Mission, Norway requested that the 'Reindeer Hunting Area' in southern Norway be added to the mission programme, enabling the mission team to visit and review both proposals, and meet key stakeholders in the field. Subsequently, desk reviews to assist with the further consideration of the potential for the property were requested from specialists.

Neither of these proposed areas is currently on the Tentative List for Norway. The Norwegian Ministry of Climate and Environment gave permission to the Riksantikvaren (The Directorate for Cultural Heritage) to invite the mission to give advice on the potential of the both properties to be placed on the Tentative List.

While both proposals share a long history of interaction between humans and reindeer, there are also clear and distinctive differences between them. Accordingly, each of the two proposals has been considered in terms of the possibilities for future World Heritage nomination in this report.

It should be noted that an extension of the Swedish World Heritage property of Laponia (The Laponian Area-Tysfjord, the fjord of Hellem obotn and Rago (extension)) has been on the Norwegian Tentative List since 2002. Although this has not been part of the Upstream work, ICOMOS suggests that the further work on the two proposals should eventually also clarify their relationship with that Tentative List property.
According to its intentions, the Upstream process takes place at an early development of these proposals, when many issues are not yet determined. The purposes of this report are therefore to discuss the possibilities and issues, and to advise the State Party about a range of matters that can be taken into account in determining whether and how to proceed with future World Heritage nominations. It incorporates the observations of the ICOMOS mission and desk reviews. It has been peer reviewed and considered by the ICOMOS World Heritage Panel before being finalised and submitted to the State Party.

2. ICOMOS Advisory Mission

The Advisory mission occurred in August 2019. Annexes 2, 3 and 4 provide the Terms of Reference, the mission programme, and the participants.

In addition to the work outlined in the Terms of Reference, the mission was asked to consider a number of issues for **Várjjat Siida**:

- Availability of evidence that can support the proposed justification of Outstanding Universal Value, and in particular, the cultural criteria that are proposed (as well as any other criteria that are considered potentially relevant);
- The strength and justification of the selection of the four components with a view to their respective contribution to the proposed justification of Outstanding Universal Value;
- The degree to which the archaeological evidence at the four component sites is augmented by evidence drawn from historical and intangible cultural heritage sources, and from interactions with the landscape and natural phenomenon over time;
- Pertinent issues to the evaluation of Authenticity and Integrity of the proposed property;
- Parameters for a Comparative Analysis with other Arctic hunter-fisher-gatherer cultures;
- Potential gaps and priorities for further research, including Comparative Analysis relevant to the proposed justification of Outstanding Universal Value;
- The effectiveness of the governance arrangements for the proposed property that are provided by the Government of Norway, and the Sámi Parliament in Norway (Sámediggi), including legal protection and management;
- The means by which "free, prior and informed consent" of the Sámi people can be confirmed prior to the submission of a World Heritage nomination;
- Any other noted issues that could be relevant to a future World Heritage nomination.

For the **Reindeer Hunting Area** in Oppland County (and others) in Central Norway, the mission was asked to consider and discuss the following issues:

- How are the systems for the protection and management systems oriented at both cultural and natural attributes of the potential Outstanding Universal Value of this area?
- What are the views of the stakeholders, Sámi representatives and State Party representatives about the potential purposes for World Heritage recognition of this area?
- The preliminary work that has been done points to the variation in climatic conditions within this area, as the basis for a variation in trapping systems (including their seasonality). What observations are made on the basis of the visits by the mission?
- How well does the current proposal reflect a 'cultural landscape' approach given the specific areas that are selected as potential components and buffer zones?
- Are there any proposals or issues within the proposed area that could impact on its conservation?
- Do the cultural heritage sites visited exhibit any issues with Authenticity and/or Integrity in relation to the arguments outlined in the materials that have been provided (i.e. as demonstrating the antiquity and variation in types of trapping sites, and the utilisation of different ecological zones by hunters)?
- Given the emphasis placed on the existence in this area of the 'last remnants of a European wild montane reindeer strain' – is the use of cultural criteria alone justified?
- Are the living animals themselves (and the ecosystems that support them) proposed as attributes of the Outstanding Universal Value according to cultural criteria?

- The material provided suggests that the area is vulnerable to climate change impacts and other irreversible changes. Please comment on what you observe about this aspect.
- Any other noted issues that could be relevant to a future World Heritage nomination.

To the greatest extent possible, the observations by the ICOMOS mission have been incorporated into this report, as these are likely to be of value to the State Party and communities involved in each of these proposals. ICOMOS therefore stresses that these should not be understood as evaluations, but rather raise issues and questions that need further detail/clarification, research, consultation or revision by any future work that is undertaken.

3. The Desk Reviews

Desk reviews were provided for both proposals. Reviewers were invited based on their knowledge in relevant fields. The outcomes of the desk reviews have been integrated with the report of the ICOMOS mission team in this report. Because there are overlapping considerations for the Comparative Analysis for the two proposals, desk reviews were requested for each proposal.

Reviewers were able to comment on any aspects of the materials provided by the State Party, but particular questions were highlighted, as follows:

Várjjat Siida

Question 1:

The World Heritage nomination is based on arguments about the cultural and historical importance of the archaeological sites of a very old Arctic hunting and fishing culture, ancestors of the Sámi peoples.

- Please provide comment on the specific significance of the four archaeological sites that are the focus of this proposal.
- To what extent does evidence of more recent historical periods contribute to the potential significance of these sites?
- What are the possible elements of the significance of these sites that could be considered 'attributes' of the potential Outstanding Universal Value?

Question 2:

A brief Comparative Analysis is provided in the Tentative List submission (pp. 37-42).

- Do you consider that the comparisons made in the Tentative List document are sufficient?
- In relation to the focus of the proposal on human interactions with reindeer (and reindeer husbandry), are there other areas in the Arctic or sub-Arctic regions of the world that should be included in the Comparative Analysis?
- Please indicate any additional areas, sites or cultures that you think should be included in the Comparative Analysis that will be undertaken by the State Party.

Question 3:

Based on your specialist knowledge and review of the provided materials:

- Do you think that each of the four archaeological sites in the proposal is specifically needed in order to fully express the potential Outstanding Universal Value of the ancient Arctic hunter-fisher cultures in this landscape?

Question 4:

Please comment on the points made in relation to the potential for the proposal to meet criteria (iii), (v) and (vi) (see p. 34), including:

- Criterion (iii): Can the claim that the sites provide a testimony to the last hunter-gatherer culture of the European mainland be sustained?
- Criterion (iii): Do the four sites in this proposal demonstrate an adaptation to changes in an Arctic border zone?
- Criteria (iii) and (v): Do the four sites in this proposal demonstrate continuity of habitation and religious and ritual practices?

- Criterion (v): To what extent do the four sites in this proposal demonstrate in an exceptional way the interactions between people and reindeer (and reindeer husbandry)?
- Criterion (vi): Do the four archaeological sites in this proposal demonstrate associations with an Indigenous people of the Arctic in an exceptional way?
- Criterion (vi): How do the four proposed sites demonstrate in an exceptional way the traditional knowledge of the Sámi people, and the formation of Sámi culture?

Reindeer Hunting Area

Question 1:

A brief Comparative Analysis has been developed by the State Party (attached). It is based on the comparative context of large mammal hunting in the northern hemisphere, reindeer trapping systems and continuing hunting traditions.

- Based on your knowledge, please comment on the validity of the framing as a basis for consideration of the Outstanding Universal Value of the proposed sites.
- Are there other areas in the Arctic or sub-Arctic regions of the world that should be included in the Comparative Analysis?

Question 2:

Based on your specialist knowledge and review of the provided materials:

- Do you think consider that the sites that have been proposed meet the claims concerning the 'unique density and breadth of variation of [reindeer] trapping systems' within the circumpolar region?
- What 'traditions' of past and present-day society are potentially relevant to this proposal? Do you consider that these are adequately described and included in the proposed justification for Outstanding Universal Value?
- Is modern-day hunting part of these cultural traditions as they are described in the proposal? Please explain your opinion.

Question 3:

If you are familiar with the application of World Heritage criteria, please comment on the points made in relation to the potential for the proposal to meet criteria (iii), (iv) and (v) (see p. 50), including:

- Criterion (iii): Is the claim that the proposed sites demonstrate the greatest variation in reindeer trapping sites established?
- Criterion (iv): Does the focus on the long histories of reindeer hunting accord well with specific/identifiable cultural traditions?
- Criterion (v): What aspects (or attributes) of the landscape are most critical to the potential Outstanding Universal Value?
- Do you consider that there are other criteria that could be further explored with the State Party?
- Do you have comments about the 'cultural landscape' approach illustrated in this document (see also p. 44)?
- Do you consider that there are elements of the 'natural' landscape (including natural processes and attributes) that could be considered attributes of the proposed 'cultural landscape'?

Question 4:

Please provide comment on the claims concerning the importance of the wild reindeer in these areas.

- Are the claims regarding the importance of the wild reindeer and their genetic characteristics in these areas substantiated?
- Do you consider that there are elements of the 'natural' landscape (including natural processes and attributes) that could be considered attributes of the proposed 'cultural landscape'?
- To what extent should the crisis of climate change be considered within the context of the justification for criterion (v) in this case?
- Should the State Party be advised to consider the potential for a mixed nomination, based on the habitat of the wild reindeer and 'ecological authenticity' of the landscape? (see p. 49, part 5)

4. Várjjat Siida: 12 000 Years of Indigenous Arctic Heritage

4.1 Description and Historical Background

Várjjat Siida is located on the Varanger Peninsula in northern Norway. The cultural heritage of the Varanger (*Várjjat* in Sámi) Peninsula is considered important for understanding the human settlement of northern Scandinavia. The area was settled about 12,000 years ago and archaeological evidence demonstrates continual occupation since then, as is shown by the key site of Ceavccageadgi/Mortensnes. There is a history of archaeological research in the area from at least the mid-nineteenth century when Andreas Georg Nordvi, whose family ran a trading post at Mortenses and who was the first person in Norway to have a university education in archaeology, carried out excavations here and at other sites. It is also noted that the occupation site associated with maritime hunting at Ruovdenjunlovta/Gropbakkengen has a central place in archaeological research in northern Scandinavia since excavations in the 1930s.

The Sámi are indigenous peoples with distinctive culture, heritage, language, identity, livelihoods and cultural expressions. Today, Sámi live in parts of Norway, Sweden, Finland and Russia, and are legally recognised as the indigenous people of northern Fennoscandia and the Kola Peninsula (Kent 2018). Transmission of Sámi culture is based on oral traditions, and is linked with environments, livelihoods and relationships with nature. Since the 1970s, Sámi identity has been revitalised and developed in response to new cultural influences and directions. Archaeology has played a role in this, not least because of the campaign arising from the archaeological and cultural impact of the construction of a dam at Alta, to the west of Várjjat in Finnmark (see Steven 2016).

The Sámi Parliament in Norway (Sámediggi) was established in 1989. The Sámi Parliament of Norway is highest political organ of Sámi in Norway. The Norwegian Sámi Parliament has an official mandate to submit the proposal, however involvement of the local communities should also be assured. Since the sites have ongoing habitation and land uses, the proposal would benefit from opinions and views of the local Sámi communities.

The archaeological record of places like Várjjat has a key role to play in understanding the long-term history of the settlement of the region and the emergence of the Sámi and Sámi material culture from around 1000 BC. Adaptation to the Arctic environment involved the organisation of settlement and society on a yearly cycle to utilise different resources. However, the argument that the Sámi and earlier prehistoric peoples made cultural adaptations in light of changing environmental circumstances needs to be more explicitly explained and demonstrated in the context of a possible World Heritage nomination.

Interaction with other peoples led to the dynamic assimilation of influences and changes. Sámi history is marked by a number of pivotal points such as the switch from wild reindeer hunting to domestic reindeer herding in the 17th century. This switch is seen as an important point of transformation, and needs to be more fully elaborated in the continuing work on this proposal. Change occurred alongside continuity in Sámi life, in the face of state intrusion, for example, in the continued use of the *siida* as a socio-economic and territorial unit, and in cosmology and mythology (see Lehtola 2004; Kent 2018). The cultural and socio-economic unit of the *siida* is an important element of the proposal and should be further explained, including the importance of Várjjat in the context of other *siida* in Norway.

Planning for a Sámi museum at Varangerbotn at the head of Varanger fjord began in 1995 and the Várjjat Sámi Musea or Varanger Samiske Museum was opened there in 2000. The museum is an important hub and information point for visitors to the area (Photo 21). The cultural heritage area at Mortensnes is

administered by the museum, and a visitors' centre with exhibition and shop was opened at the site in 2009.

In 2006, much of the Varanger Peninsula was made a National Park to conserve and manage the exceptional Arctic highlands landscape, which is a summer pasture area for reindeer. There is a large number of prehistoric (and later) cultural heritage sites within the National Park. More broadly, survey and targeted excavation by the archaeology/cultural heritage offices of the Sámi Parliament and the county of Finnmark has documented the rich cultural heritage of the area.

Over the last ten years, the Sámi Parliament in Norway has been working on the preparation of a submission to include Várjjat Siida on the Norwegian World Heritage Tentative List. The current proposal has been revised by the Sámi Parliament (Sámediggi), in response to earlier advice by ICOMOS. A formal submission to the Riksantikvaren (Directorate of Cultural Heritage) appears to have been made in 2016. The key documentation for the ICOMOS Upstream process is titled *Várjjat Siida: World Heritage List: A Tentative List Submission*.

The proposal is envisaged as a potential future serial World Heritage nomination, consisting of four components on the Varanger Peninsula and the isthmus connecting the peninsula to the mainland. Ceavccageadgi/Mortensnes is seen as the core site to which the others relate. It is argued that in combination, the components document how settlement, livelihood and religion are interconnected through time and space.

The four sites are:

1. Ceavccageadgi/Mortensnes (in English, Oil Stone/Morten's Headland): a settlement site that has been continuously occupied for 12,000 years and an adjoining burial place used from 1000 BC to 1600 AD.

2. Noidiidcearru/Kjøpmannskjølen (in English, The Shamans' Rock Field/The Merchant's Ridge): a wild reindeer hunting site, including two interconnected corrals with several drivelines, meat caches and bow hunt hides. While some hearths have been dated to 1000/1100 AD, finds from these sites suggests potentially they could be older.

3. Gollevárri (in English, The Golden Mountain): pitfall system dating to 1200-1450 AD, for wild reindeer hunting and autumn hunt settlement site.

4. Ruovdenjunlovta/Gropbakkengen (in English, The Iron Point Cove/The Pit Hill Field): a maritime hunting and fishing site of 89 pit houses from 4000-3000 B.C.

Together it is argued that the four sites are excellent examples of an ancient hunter-gatherer-fisher tradition that has been replaced elsewhere on the European continent by farming and urbanism. The earlier cultural traditions were followed by the emergence of Sámi culture. The Sámi of the north maintained this hunting, fishing and gathering way of life until very recent times, and it is central to Sámi cultural identity.

Before the advisory mission, ICOMOS was notified that the Sámi Parliament had decided to withdraw the fourth component, Ruovdenjunlovta/Gropbakkengen, from the proposal. The reasons for this change have

not been formally communicated to ICOMOS, although some issues were discussed with the ICOMOS mission.

4.2 Comparative Analysis

The Comparative Analysis provided by the State Party is structured to provide comparison with sites on the World Heritage List, sites on Tentative Lists, and other sites in the Arctic region.

Acknowledging that the Upstream process is working with materials that still require further development, ICOMOS considers that the work has made a reasonable start toward a full Comparative Analysis, covering both 'New' and 'Old World' Arctic cultures. However, substantial further work lies ahead, depending on the continued refinement of the orientation of this proposal. The comments made in the remainder of this section summarise areas for further work.

The comparisons regarding the settlements and burial sites are relative strengths in the work that has been done to date, but ICOMOS considers that further work is needed to improve the comparisons and analysis of the human/nature interactions, and the cosmological and religious associations. Changes over time in the rock art production and reindeer domestication and pastoralism in the region seem to be important aspects that further work could improve.

The focus in the Comparative Analysis is on reindeer hunting/herding. ICOMOS notes that reindeer herding and pastoralism occurs across a number of countries in the Arctic and sub-Arctic region (such as Norway, Finland, Sweden, Russia, Greenland/Denmark, Alaska/USA, Mongolia, China and Canada), and that there are more than 30 peoples (most of them indigenous peoples) practicing reindeer hunting. The practices of reindeer herding therefore vary considerably, and the further development of the proposal should include this wider context (including through the detailed Comparative Analysis) to clearly show the distinctiveness of these sites. ICOMOS considers that the Comparative Analysis currently underplays the importance of placing the hunting/herding of reindeer in wider socio-economic and cultural contexts and how these changed over time. Specifically, there is a need to put greater emphasis on the emergence and development of Sámi cultural identity, especially in relation to the arguments made in relation to criterion (vi) (see below).

ICOMOS considers that further development of the Comparative Analysis should include a number of additional directions. These are briefly summarised below.

- Although they are identified in the proposal, more detailed discussion is needed of comparable World Heritage properties: Alta (Norway), Laponia (Sweden) and the Solovetsky Islands (Russia).
- The property of Aasivissuit-Nippisat in Greenland (Denmark) is mentioned as a Tentative List entry, but this could be revised now that it has been inscribed.
- The property of Head-Smashed-in Buffalo Jump (Canada) should be included in the Comparative Analysis.
- Given the potential importance of the *siida* as a culturally established unit of socio-economic and territorial activity, the selection of the sites within Várjjat Siida needs to be more explicitly contextualised in relation to values and heritage of others. This might be apparent at the local level, but should be explained to assist the understanding by an external readership.

- The Comparative Analysis in relation to Sámi identity and spiritual associations will need to extend beyond Norway. Given the emphasis on these aspects in the proposal, additional attention is needed in relation to Sámi sacred sites or landscapes. Ukonsaari is briefly mentioned, but is possibly downplayed; and a more comprehensive overview of areas in Sápmi that demonstrate this interaction is necessary. For example, Enontekiö (Eanodat) offers examples of the continuity from hunting to reindeer herding as demonstrated by hunting pits, hearths, offering sites, dwelling places, and corrals.
- New research findings in relation to rock art are briefly mentioned with regard to the Alta site in Finnmark, and could be extended.
- The Comparative Analysis should more comprehensively include other areas in Fennoscandia with well-documented and radiocarbon dated pit trap systems. Some examples: in northern Sweden, more than 30,000 pit traps are known and one of the largest pit traps systems in Europe is situated in a restricted area close to the small village Vivungi, Kiruna municipality, Sweden (see also Manker 1960, 1961); and the site of Vivallen (Härjedalen County, Sweden) dates to the late Scandinavian Iron Age and Middle Ages and is interpreted as a South Sámi burial site, with at least 21 known earthen burials.
- In addition to the Solovetsky Islands in the Russian Federation, the Oleneostrovski burial ground, on reindeer island (dated between 5500 and 5000 BC), in the north-eastern corner of Lake Onega could be considered. In addition, there are stone earth works and numerous stone constructions to be found on the Kola Peninsula around the Ponoy River and Fisher Island where the small Sámi population have had settlements for millennia. Labyrinths and stone constructions similar to the ones at Ceavccageađgi and, Noiddiidčearru are evident, as are burial and dwelling sites. At these locations, there has been extensive interactions with reindeer for millennia, as the prehistoric rock carvings in the areas show; as well as tools and various ornaments, which have been made from reindeer bone.
- Likewise, comparisons with pre-contact Chukotka could be relevant, given that there are sites with a long history of occupation.
- In relation to human-reindeer interactions, comparisons with reindeer herding Nenets people may be useful. ICOMOS has been advised that some preliminary research indicates that domesticated reindeer came to Fennoscandia from areas with Nenets people in northern Russia.

Finally, the Comparative Analysis also needs to demonstrate and support the rationale for the selection of the components of the serial property (as discussed further below). Why are these sites essential? How and why have they been selected from a larger potential group of sites in the Varanger area?

This is unlikely to be an exhaustive list of additional material and directions for the Comparative Analysis, and it is acknowledged that the Comparative Analysis might need further adjustments in light of the continued work on the justification for Outstanding Universal Value and the arguments that will be further developed for the criteria. The encouragement is to go beyond the prehistoric lens to adopt a more comprehensive cultural perspective. This would serve to situate the proposal and Sámi experience within a relevant global context.

ICOMOS wishes to emphasise that, depending on the criteria that are ultimately applied, the purpose of the Comparative Analysis is not necessarily to demonstrate uniqueness, or to identify that the proposed area is 'better' than others, but is a device to place the proposal within a relevant context, allowing its specific and exceptional characteristics to be understood.

4.3 Potential Significance

The proposal has a focus on the testimony provided by the components to the last hunter-gatherer culture of the European mainland and the development and emergence of Sámi culture. The components are seen as representing an extraordinary Arctic adaptation and spiritual robustness, reflected in the unusual continuity of settlements, subsistence strategies and religious practices. Alongside this continuity, the proposal argues that the sites also demonstrate cultural adaptations.

The importance of hunting and herding of reindeer in this part of Norway and the associated Sámi cultural traditions are seen to produce a strong link between past and present. Reindeer hunting/herding is asserted as part of the Authenticity and Integrity of the proposal, together with Coastal Sámi fishing, gathering and small game hunting. However, it is not clear whether these aspects of Sámi subsistence strategies and resources are exceptional, and the overall picture is currently given too-slight attention. The close relationship to the land and the past is articulated through the Sámi language, place names, traditional knowledge and mythology. ICOMOS understands that this heritage is seen as an important legacy to which today's Sámi population is closely connected, and recommends that these dimensions are more fully documented and presented in the future work on this proposal.

The proposed components are seen as outstanding examples of the rich heritage of prehistoric settlement, burial, hunting and sacred sites on the Varanger Peninsula. The Ceavccageadgi/Mortensnes site, with 12,000 years of habitation visible in the landscape together with a burial area that was in use for 2,500 years and associated sacred sites is significant in the regional archaeological record and is a hub around which the other components fit. Ruovdenjunlovta/Gropbakkengen complements the multi-period character of Mortensnes and is a well-preserved example of a single-period occupation site with evidence of specialised maritime hunting. Gollevárri is described as the largest pitfall system and has an associated settlement component, while Noiddiidcearru/Kjopmannskjolen is the considered to be the best example of a reindeer hunting system based on drive lines and corrals (Photos 22-25).

ICOMOS considers that while the current statement is well-presented and relevant, it does not yet specifically capture the potential Outstanding Universal Value of the proposal. The ICOMOS mission team felt that this was clearly expressed in presentations made during the mission, particularly at the formal introductory session in the Várjjat Sámi Musea. It is therefore recommended that in a revised justification, the following issues could be considered.

- The justification for the selection of components is a critically important requirement of serial nominations, and further work is needed on this aspect of the proposal. While the current justification emphasises that the components have been selected as 'outstanding examples in an area with many other magnificent sites', it is difficult to appreciate how representative or exceptional they are within their regional contexts. Little detail has been provided on the overall character, detail and chronology of the region's archaeological record, or the characteristics of other *siida*. Therefore, it is currently difficult to assess the significance of the components, or appreciate the rationale for their selection. Background mapping, quantification and discussion is required to situate and contextualise the components.
- There is a recognition in the proposed justification regarding the importance of the emergence of Sámi identity, and its adaptation and innovation over time in a challenging environment. However, this needs further articulation and comparative research to be effectively argued.

- While the centrality of Sámi cultural expressions and histories are recognised, at this stage in the development of the justification of the proposal, there are diverse opinions about the relevance and inclusion of the 'older' cultural traditions and archaeological evidence (i.e. those coming before the emergence of Sámi cultural identity). There is debate about the links between these cultures, so the arguments about this need to be more explicit (especially if these are proposed as 'proto-Sámi' or 'Sámi ancestors'). This is a key question, and will have obvious and widespread implications for all facets of a future World Heritage nomination.
- Based on the discussions during the mission, ICOMOS considers that it could be feasible to shift the orientation of the proposal toward a more integrated consideration of the cultural traditions of reindeer hunting (and herding), particularly in relation to Sámi cultural traditions in this landscape. This could possibly better address the current focus on the *siida*, as a basis of the social organisation of family units and their territory. The selected components could then be considered in the context of the history and sociocultural character of Várjjat Siida itself. However, this will have significant implications for the selection of components and the Comparative Analysis.
- The contrasts between reindeer hunting, trapping and herding (and their archaeological and landscape evidence) could be more clearly demonstrated and explained.
- If the emphasis on Sámi cultural traditions is further developed, the components will need to demonstrate the reindeer interactions as a particular aspect of Sámi culture in this area (rather than representing the wider Sámi culture). In this sense, the focus on reindeer interactions over time in this area of Norway seems possible, given that they are protected and the practices are continuing (at least in part).
- In discussions with the ICOMOS mission team, the dynamic role of the past and the archaeological record in sustaining and supporting Sámi identity today and into the future as indigenous peoples and owners of the land was emphasised. This was captured in a Sámi proverb related by the President of the Sámi Parliament during her presentation; 'Time does not pass, it comes'. This sense of the continuing role of Sámi cultural heritage and its recognition as central to Sámi identity is central to the justification of the proposal, but needs closer attention, since it does not necessarily relate to the earlier archaeological evidence.

Regarding the sites selected for the proposal, ICOMOS was advised of the omission of Ruovdenjunlovta/Gropbakkengen. This site was represented in the documentation provided as a key element of the proposal, with distinct characteristics that complement the multi-period, multi-functional site at Mortensnes:

> *…Ruovdenjunlovta/Gropbakkengen stands out as an exceptionally large Stone Age Site settlement site, with 89 clearly visible house pits.…with Rouvdenjunlovta/Gropbakkengen as a spectacular single-period example fossilized by environmental change.*

The ICOMOS desk reviews were requested before the site was withdrawn, and generally supported its inclusion in the serial proposal at this stage. ICOMOS can see several directions in relation to this component. For example, if a decision is taken to focus further work on the proposal on the importance of reindeer hunting and herding to Sámi peoples in the Varanger area, the relevance of Ruovdenjunlovta/Gropbakkengen seems weak (since the sites pre-date the Sámi, and reflect maritime resources). On the other hand, the future development of the proposal could continue to include these much older sites and land use patterns, which invites consideration of the inclusion of Ruovdenjunlovta/Gropbakkengen. Based on the Upstream process to this point, ICOMOS does not rule out

the possibilities for the continued inclusion of this component, but stresses the importance of making this decision within the context of the continued work on the justification of Outstanding Universal Value.

4.4 Potential Criteria

The proposal provides arguments in relation to criteria (iii), (v) and (vi), although each could be further enhanced by inclusion of the modern Sámi perspectives and significance. ICOMOS considers that each of these is potentially relevant, and suggestions for further development are briefly summarised below. Note that the development of a World Heritage nomination necessarily involves non-linear considerations of the justification, criteria, Comparative Analysis and attributes, so it can be expected that the strengths of each criterion will change with continuing work. For this reason, it might be that a future nomination will be presented according to a smaller number of criteria.

According to the discussion above concerning the Ruovdenjunlovta/Gropbakkengen component, at this stage, the responses to the identified criteria below have not taken into account the removal of this component from the overall proposal.[1]

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

The argument put forward by the State Party includes the following points in relation to this criterion:

- *A unique testimony to the last hunter-gatherer culture of the European mainland and the deep tradition it was the outcome of;*
- *A unique testimony to the deep and robust adaptation of a hunting, gathering and fishing society to natural, cultural and social changes in an Arctic border zone;*
- *A unique testimony to indigenous cosmology and religion and how it is interwoven with Arctic nature;*
- *A unique testimony to an exceptional continuity of religious practices linked to death and regeneration.*

ICOMOS considers that this criterion is potentially appropriate for this proposal, and that Ceavccageađgi/Mortensnes, Noiddiidčearru/Kjøpmannskjølen and Gollevárre are directly linked to the culture of the Sámi. As noted in the proposal, the site of Ceavccageađgi is highly significant, and is complemented by the characteristics of the other components.

If the longer timeframe of 12,000 years is to be utilised (as discussed above), all four components taken together could have the potential to demonstrate an adaptation to changes in the Arctic environment and a continuity of habitation. However, ICOMOS considers that the continuity of religious/ritual practices is not as easily established over the longer timeframe.

Further work to develop these aspects of the proposal should include:

- Discussion and evidence of the emergence of Sámi identity as a cultural tradition and how this can be related to longer sequence of occupation and prehistoric settlement in the area (see the

[1] Based on the information available at this stage, ICOMOS considers that this question is particularly critical for the justification of criteria (iii) and (v), and is less significant for criterion (vi).

discussions above on the issue of the 12,000 year time span).

- Review and evidence to underpin each of the arguments presented to support the application of this criterion.
- Greater documentation, particularly of the past and continuing elements of Sámi shamanism in everyday life (such as the 'noaidi' healing tradition, 'seidi' offering and relationships with nature) is required to sustain these elements of arguments presented for criteria (iii) and (vi) (see Rydving 2010).

ICOMOS considers that it would be preferable to rephrase the 'last' hunter-gatherer culture since this need not be a focus of the proposal, and possibly invites unnecessary contestation. Furthermore, ICOMOS considers that the focus should be shifted from the 'unique' to the 'exceptional' character of the evidence supporting this criterion.

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

The argument put forward by the State Party includes the following points in relation to this criterion:

- *An outstanding example of continuity and unbroken habitation through twelve millennia;*
- *An outstanding example of interaction with Arctic nature, manifesting a remarkable sustainability of adaptive strategies based on terrestrial and marine resources;*
- *An outstanding example of the intimate relation between the people and reindeer and how this relationship affected, and was affected by, the natural environment;*
- *An outstanding example of the transitions from hunting and fishing economy to reindeer husbandry and the incorporation of small scale Arctic farming.*

ICOMOS considers that this criterion is potentially appropriate for this proposal. It has the capacity to illustrate the culture/nature inter-relationships that are important for properties inscribed according to criterion (v) . Further work to develop this aspect of the proposal should include:

- Stronger articulation of the detail and character of traditional human settlement systems as well as land and sea use represented in the range of human interactions with the environment and how these changed over time.
- Clear information about the character and impact of the climate crisis on the cultural heritage assets that define the property and the management, and the mitigation measures that are being taken to ameliorate it, need to be defined. For example, what is the impact of permafrost thaw (see Welch 2019)? What is the impact of the climate crisis on present day Sámi lifestyle and culture?
- The intangible heritage dimension of the 'natural' environment should be more clearly articulated in the proposal.

Criterion (vi): *be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.*

The argument put forward by the State Party includes the following points in relation to this criterion:

- *Directly and tangibly associated with the livelihood, dwelling, religion and cosmology of an indigenous people of the Arctic, and thus giving an outstanding and profound insight into these aspects of their life;*
- *Directly and tangibly associated with the rich and unique traditional knowledge of the Varanger Sámi and their tales, myths, joik and place names;*
- *Crucially related to processes that proved decisive for the formation of key features of modern Sámi culture.*

ICOMOS considers that this criterion is potentially appropriate for this proposal, particularly if the focus on the Sámi cultural heritage is strengthened. Traditional knowledge can be expressed through the transformation of Sámi culture over time, as well as traditional practices associated with reindeer herding, burial customs, and offering traditions, demonstrated in archaeological material, art, handicrafts, design of construction, building and decorating drums - as well as myths, place names and *joik* (Sámi songs). Sacred sites and objects (such as sacred stones) are also relevant. Further work to develop this aspect of the proposal should include:

- Stronger articulation of the importance to Sámi identity in areas such as cosmology, beliefs and cultural traditions. How are these being actively drawn upon today?
- Discussion of the relationship of the selected components/sites to 'processes that proved decisive for the formation of key features of modern Sámi culture'. The most important issue is to show how these traditions relate to a comparative context and can be considered to be of Outstanding Universal Value. At this stage, this is not clearly established.

Other comments in relation to criterion (vi):

- Based on the information presented at this point in the development of the proposal, the arguments for this criterion do not appear to be as strong for Ruovdenjunlovta/Gropbakkengen as for the other components (which demonstrate clear associations with the Sámi people). This is an issue that should be addressed in relation to the further thinking about the overall focus of this proposal (as discussed above).
- It seems possible that the Ceavccageađgi/Mortensnes and Noiddiidčearru/Kjøpmannskjølen components have the potential to testify to the interconnectedness of religion and land use in the Sámi culture, but this requires greater documentation and explanation.
- The submission refers to Sámi traditional knowledge and significance of Sámi place names, but these aspects have not been studied in depth in the submission. The proposed components have the capacity to demonstrate connections with various aspects of modern Sámi culture, with Sámi language and Sámi traditional knowledge. Traditional knowledge should be showcased in the further development of the proposal (in relation to the justifications presented for criteria (v) and (vi)). ICOMOS considers that further studies in this direction would benefit the proposal.
- It is important not to over-state the importance of Várjjat Siida in relation to the development and diffusion of practices and knowledge; and, as noted above, it is necessary to situate Várjjat Siida more specifically in relation to the cultural heritage values of the other *siida*.
- It is probable that it will be necessary to incorporate more in-depth analysis of current literature debating the history of Sámi livelihoods, cultural contact and the diffusion of practices, and the

origins of reindeer husbandry.

- Similarly, the role of Várjjat Siida in the development of Sámi ethnicity does not need to be over-stated, since it is not established that Sámi ethnicity or reindeer herding livelihood developed in one region and diffused to all Sámi.

ICOMOS notes the role of the Sámi Parliament in Norway, and the importance of Várjjat Siida in the flourishing of Sámi institutions. Amongst other strengths of this arrangement, it suggests that the proposal can meet the requirements for Free, Prior and Informed consent by indigenous peoples in World Heritage processes. The involvement and consent of local, descendant and family groups might also be required, especially for the burial grounds that have been used well into historical periods.

4.5 Integrity

Integrity is a measure of the wholeness and intactness of the cultural and/or natural heritage and its attributes. The focus in the proposal in terms of Integrity is that the chosen components are 'representative of the immensely rich heritage of habitation, burial, sacrificial and hunting sites on the Varanger Peninsula' and that 'seen together include all the elements need to express their Outstanding Universal Value. They furthermore express chronological and typological variation as well as richness in monument types and thus constitute a remarkable archive for and testimony to the cultural activities of which they were once part'.

ICOMOS considers that there are several issues that need to be addressed to meet the requirements of integrity in the further development of the proposal.

Firstly, there is little detail provided on the overall archaeological and/or cultural heritage record of the Varanger Peninsula and its character, making it difficult to assess how representative the chosen components are.

Secondly, at this stage, the maps provided are insufficient to enable assessment of whether all the elements necessary to express the potential Outstanding Universal Value of each component are included within the boundaries or not; or whether the components are of an adequate size to ensure the complete representation of the features and processes which convey the property's significance. The boundaries of only one component are clearly indicated - for Ceavccageadgi/Mortensnes where the Protected Area was established in 1988 under the Cultural Heritage Act (Photo 26).

The ICOMOS mission team was able to use the illustrations in the documentation provided as a basis for making some observations. On this basis, there are issues with the integrity of the Ceavccageadgi/Mortensnes component, as the illustration on p.12 of the Tentative List proposal suggests that archaeological features continue to the west onto private property beyond the boundary of the protected area. One of these is a feature which provides the site with its Sámi name, Ceavccageadgi, or the Fish Oil Stone (see Photo 27). This is a standing stone with a rich oral history documented by archaeological excavation. The documentation also refers to a related hunting/trapping site to the northeast of Mortensnes that appears to be outside the current Protected Area; and the suggested 'border delimitation' of Mortensnes (p.31) would incorporate a much larger area running west of the E75 Road. There is no discussion of the rationale for this larger area and where exactly the boundary would be drawn. In the

vicinity of Mortensnes, the E75 runs along the north side of Varanger fjord between Varangerbotn and Vadso (and beyond), to the west of the current boundary of the site (Photos 27-28). The E75 is the key transport and visitor route for the area. There is no discussion in the documentation of any possible impact of this road on the Integrity of the site or what mitigation measures are in place to assess the impact of any future development along the road corridor or upgrades to the road infrastructure on the Integrity of the site. These issues should be further addressed through further work on this proposal.

Another possible issue for the Integrity of the proposal is the omission/inclusion of the Ruovdenjunlovta/Gropbakkengen component. The documentation provided to ICOMOS for the Upstream process was based on the inclusion of this component as an integral part of the proposal, and the desk reviews have generally supported the inclusion of all four components to the proposed justification of Outstanding Universal Value. However, as discussed above, the rationale for omitting or retaining this component relies on important work to resolve the justification of the proposal. The ICOMOS mission visited the vicinity of the withdrawn component. It appears that the component might have been withdrawn because a trench to lay a water services pipe was recently dug to the west of the site, impacting on its setting (Photo 29). This development should not have been permitted under the *Plan and Building Act* and the ICOMOS mission team was informed that action is being taken to investigate the incident.
As far as could be determined without a closer visit, the ICOMOS mission team observed that the site of Ruovdenjunlovta/Gropbakkengen appears to be still intact. Depending on the way in which the justification for Outstanding Universal Value is ultimately presented, the removal of this component from the proposal could either weaken or strengthen the overall Integrity.

4.6 Authenticity

Authenticity is the expression of the link between the attributes and potential Outstanding Universal Value. The *Operational Guidelines* (par. 62) state that properties may be understood to meet the conditions of Authenticity if their cultural values are truthfully and credibly expressed through a range of attributes.

In their form and design, materials, substance, use and function the components of Várjjat Siida can be broadly described as a credible, authentic expression of the proposed justification of the proposed areas. This applies particularly to Noddiidcearru/Kjopmannskolen and Gollevárri where the reindeer hunting and trapping facilities are in a very good state of conservation. Limited archaeological excavation appears to have taken place and this was focused on associated settlement components. The mission was not in a position, however, to assess in detail the Ruovdenjunlovta/Gropbakkengen component as it was not visited.

The Ceavccageadgi/Mortensnes component is the only one that is accessible to the public, with access from the E75 Tourist Road. A visitor centre, paths and other facilities are provided. The site is under the management of the Várjjat Sámi Musea (Varanger Sámi Museum). It is well presented, providing in one location the history of settlement of the region from 9,000 BC to the present day with associated features, particularly the cemetery area which was used for over 2,500 years from 1,000 BC – AD 1,700. The human interaction with a dynamic environment is demonstrated by the evidence of different periods of settlement associated with distinct beach lines (Photos 30-32). The authenticity of the features of this site and their presentation are a key consideration in the further development of this proposal. Some observations by the ICOMOS mission team include (Photos 33-35):

- The most extensively distributed contemporary elements accommodating visitation are the paths and interpretation of the site, which is divided into nine focal areas/points. The paths do not appear

to have had impacts on archaeological features and appear to be easily removed/altered if required. However, there are some places where the paths appear to cross archaeological features.

- There is a range of low-level signage on the site. Consideration should be given to whether all of the signage is required and whether less intrusive approaches could be employed across this sensitive landscape.
- It would be useful to clearly distinguish between house and burial sites that have been excavated (and are the basis for the interpretation of the site) and those that have not been excavated (the vast majority).
- There is a toilet block located between areas 3-4 and 6. Given that this location is almost a kilometre from the visitor centre, ICOMOS questions whether it is appropriate (or necessary) to have this modern facility in what is a key part of the site.
- As part of area 5, the westernmost part of the site, there is a reconstruction built in 1990 of a communal turf house or goahti/gamme, based on 19th century forms (Photo 36-37). While this is a useful and informative visitor facility that provides a view of what the interior of such a house with one room for the family and one room for the livestock would have been like to live in, its location immediately adjacent to authentic gamme tofts dating to the last few centuries has the potential to cause confusion as to what is authentic and what is a modern construction. Its relocation to a more suitable location on the site could be considered.

In relation to spirit, feeling and intangible heritage, the ICOMOS mission was able to appreciate the importance of the proposed areas in terms of the emergence of Sámi identity and sustaining that identity today. Ceavccageadgi/Mortenses, in particular, holds a key role in research and understanding of the development of Sámi settlement and cosmology. The physical heritage is imbued with meaning that continues to have relevance and life today as reflected in myths, tales, *joik* and place names.

4.7 Proposed Boundary and Buffer Zone

ICOMOS considers that this is an aspect of the proposal requiring more clarity, recognising that the Upstream process has taken place during a very early stage in the process of developing a future World Heritage nomination. To a considerable extent, issues of boundaries and buffer zones underpin the evaluation of Integrity and protection.

The suggested boundaries of the components are illustrated at a very small scale in the material provided, and the mapping will need to be significantly improved. While maps of the components are included in the documentation most do not show their boundaries; and there is no discussion of the relationship between areas protected under different instruments of Norwegian legislation. These are aspects that require substantial further work.

The Noiddiidcearru/Kjopmannskjolen component is located within Varanger National Park; and Gollevárri is located in a remote landscape area, distant from any modern settlement, with a distinctive lake and boggy lowland surrounded by higher ground. It is on the slopes of the higher ground to the south of this lowland that the pitfall system is located. In the maps provided, it is not clear whether Gollevárri is located within a Protected Landscape and/or Nature Reserve.

During the ICOMOS mission, the issue of boundaries and buffer zones was raised with particular reference

to Ceavccageadgi/Mortensnes (as discussed above). Although the Protected Area is shown on the site map in the documentation (established in 1988 under the *Cultural Heritage Act*), discussions during the ICOMOS mission revealed that much has changed over the last thirty years. The proposal appears to include a significant extension of the property to the west of the E75 road (a National Tourist Route). Logically, this suggests that the current boundaries are not a complete expression of the potential values of the component. However, there is no discussion of the purpose and objective of this extension in the documentation. The only relevant comment that was made in the discussion concerned the significance of the upland setting to the west of the road, the archaeological sites there and the rich Sámi traditional lore with which this area is imbued (Photo 38).

In relation to the current boundaries of the component, it is clear that the archaeological features that are the key attributes continue to the west beyond the current land boundary. However, it is unclear what the character and condition of these features may be, their significance, how extensive they are beyond the current boundary and whether they extend as far west as the E75 and/or beyond it. The past and potential future impact of the E75 on the proposal were discussed during the ICOMOS mission. It is critically important to put in place mitigation measures in the context of the impact of any potential development of the road infrastructure and associated development along the corridor.

ICOMOS considers that an understanding of Mortensnes requires a landscape approach, rather than treating it as a series of discrete or clustered archaeological sites. It is the spread and character of human settlement and related activities across this landscape over the last 10,000 years that makes it such a special place. Accordingly, the landscape character, with its multiple features and chronologically diverse archaeological elements should be protected (Photo 39), possibly through a number of available mechanisms (including the provision of a buffer zone).

A buffer zone is an area surrounding the property, or the component of a serial property which has complementary and/or customary restrictions placed on its use and development to give an additional layer of protection to the property. This should include the immediate setting of the property, important views and other areas or attributes that are functionally important as a support to the property and its protection.

At this stage, there is no discussion of buffer zones in the documentation provided by the State Party, and ICOMOS considers that this should be actively explored. This does not seem to have been contemplated so far, but could assist significantly with the protection and management of the proposed areas and the retention of Integrity.[2]

4.8 Requirements for Protection and Management

Based on the materials provided by the State Party, and the discussions that occurred during the ICOMOS mission, ICOMOS notes that a number of instruments under Norwegian law provide a legal basis for the protection and management of the proposed areas should a World Heritage nomination proceed in the future. These include the *Nature Diversity Act* (National Parks, Protected Landscapes and Adopted Conservation Areas), the *Cultural Heritage Act* (archaeological sites and areas) and the East Finnmark Reindeer Grazing Area (RGA) and the *Plan and Building Act* (mitigation of impact of development).

[2] For example, if there had been greater awareness of the potential significance and protection of the setting it is possible that the trenching near Rouvdenjunlovta/Gropbakkengen could have been re-located or re-designed.

However, more clarity is required to articulate how these instruments can be effectively combined to provide comprehensive legal protection to the proposed areas in terms of their *cultural heritage* values. Based on the materials provided and discussions during the ICOMOS mission, ICOMOS considers that an effective management structure based on this legislative framework has yet to be fully elaborated. While the individual protection instruments could be the basis for a management system, further work is also needed to ensure integration between the components and key actors in a potential management system.

The management entities on the ground today consist of the Varanger National Park, the Archaeology Office of Finnmark County Council and the Cultural Heritage Office of the Sámi Parliament. As an organisation unique to the Sámi area, the latter has 20-25 staff in 8 regional offices, one of which is located in Varangerbotn.

National Parks (and Protected Landscapes and Nature Reserves) are protected under the *Nature Diversity Act*. National park managers and boards are responsible for the management of these areas and sustaining their character and biodiversity, including working with reindeer herders. The county governor also has a role in the governance of National Parks and Protected Landscapes. The Adopted Conservation Areas appear to be managed by boards composed of local members. The relevant municipalities (Unjárgga/Nesseby and Deatnu/Tana) also work together to actively support the project.

The Várjjat Sámi Musea/Varanger Sámi Museum is funded by the Sámi Parliament and Unjárgga/Nesseby municipality. It is relevant as a component in the management system as it has responsibility for the management of the Ceavccageadgi/Mortensnes site.

The consolidation of county level administration in Norway, and the potential implications for cultural heritage management in Finnmark, was discussed during the ICOMOS mission. The administration of Finnmark and the adjacent county of Tromso to the south are being brought together. The county Archaeology Office is currently in the local town of Vadso. At the time of the ICOMOS mission, it was unclear what the operational effects of the new administrative structure will be and whether there will continue to be an office in Vadso as well as Tromso.

ICOMOS considers that the elements necessary for an effective management system appear to be in place at the local level, working in co-ordination with the Riksantikvaren at national level. However, there is currently no formal co-ordination mechanism in place across the proposed components. ICOMOS notes that this is a requirement of serial proposals. ICOMOS also considers that further work will be needed concerning whether there is a formal project/programme board to promote appropriate management.

Two examples demonstrate gaps in the operation of the current management approach to the management and protection of the components and that there is a need for a co-ordinated framework:

- Firstly, in relation to the Rouvdenjunlovta/Gropbakkengen component, while the site itself is protected under the *Cultural Heritage Act*, the lack of protection/awareness of the setting of the site led to an inappropriate infrastructural intervention within the setting. This proceeded apparently without raising concern/action from either the county Archaeology Office or the Sámi Parliament until disturbance had occurred. This suggests a need for better protection mechanisms, Heritage Impact Assessment (HIA), and communication to be put in place.
- Secondly, the ICOMOS mission was advised about plans for a project at Ceavccageadgi/Mortensnes to re-develop and re-plant the parking area and the surroundings of the visitor centre. This is at an

advanced stage of detailed planning with co-funding from the national tourism authority and the Sámi Parliament. While it was stated that this development would only impact on areas that had been already disturbed, it does not appear that a Heritage Impact Assessment had been carried out, the rationale of the project does not seem clear, and the heritage impact of the new (or existing) facilities has not been determined. The visitor centre and its surroundings work well to provide visitors with an introduction and access to the site (Photo 40). This plan is also directly related to access from the E75 road and emphasises the need to consider the potential of this road to be a catalyst for more significant development in the future.

The question of visitor capacity for all the components was discussed during the ICOMOS mission. Relevant figures were provided, for example, the number of visitors to the Várjjat Sámi Musea is around 9-10,000 per year. The number of visitors to Ceavccageadgi/Mortensnes is around 2,000 per year (although this may be underestimated given that the visitor centre is currently open for only two months in the summer and that it is possible to visit the site without going into the visitor centre). The likelihood of increased visitation may have been one of the drivers for the proposed re-development of the parking and visitor centre area. Increased visitation will have wider and more significant implications for the management and presentation of this site (and the other components) which need careful consideration and incorporation within a Management Plan.

4.9 The Way Forward

Determining the focus for the proposal

At this stage, ICOMOS considers that there is potential for this proposal to be submitted to Norway's Tentative List, but some clarification and re-focusing of the rationale for the potential Outstanding Universal Value is required, as discussed above.

Although the focus on reindeer hunting and herding is acknowledged, ICOMOS considers that the proposal currently over-emphasises an economic/adaptive perspective, and could be further augmented by the inclusion of cultural practices. Although not proposed as a 'cultural landscape', a landscape-based perspective to understanding, managing and presenting these sites is suggested, enabling the individual archaeological sites to be presented within their environmental and cultural contexts.

The documentation provided covers the importance of the site for Sámi cultural heritage and the emergence of Sámi identity. However, this needs to be more clearly articulated and supported by evidence. ICOMOS notes that the submission already provides text that can more clearly articulated and refocus the potential justification. This could begin with the importance of the property to the contemporary Sámi identity, outlining the evidence of the human interaction with a challenging Arctic environment over time.

ICOMOS considers that the important elements are recognised, but that the proposal needs to more clearly address the cultural heritage as reflected in Sámi identity today, and include their relevance to the sustainable development and human interaction with the Arctic environment. This is important as the environment becomes vulnerable under the impact of intensifying climate change.

In relation to the cultural criteria, ICOMOS considers that criteria (iii), (v) and (vi) are appropriate for further

consideration and might be justified through additional research, documentation and elaboration; but that stronger arguments are needed in relation to each of them as discussed above. Furthermore, ICOMOS considers that further work will be needed in relation to a number of critical aspects, including:

- Clearer definition of the key focus of the proposed nomination;
- Comprehensive Comparative Analysis;
- Additional community engagement at the local level;
- Detailed evidence of cultural traditions, traditional knowledge and human/environment interactions;
- The impacts of the climate crisis and the management and mitigation measures that can be taken in response.

Defining the extent of the property components

The selection of Várjjat Siida needs to be justified (as discussed above); and the extent and components of Várjjat Siida need to be more clearly defined. The boundaries of the separate components of the property must be clearly defined in relation to the identified attributes. In addition, it is not clear how they correlate with existing protected areas to provide the legal protection of the property.

The location of Noiddiidcearru/Kjopmannskjolen within Varanger National Park and the establishment of a Protected Area at Ceavccageadgi/Mortensnes under the *Cultural Heritage Act* in 1988 are more clear-cut, but require explicit justification in relation to their cultural heritage. As discussed above, in spite of its location with a Protected Area, defining the extent and boundaries of Ceavccageadgi/Mortensnes is needed, particularly because it is the site that is most publicly accessible and presented to visitors. The current boundaries raise a number of issues that are outlined above, and need to be addressed. Applying a landscape approach to this component, rather than treating it as a number of separate sites may require the boundary to be adjusted to include all the relevant attributes. This is possibly already recognised by the State Party, given that an illustration of the proposed boundaries indicates a larger area. However, this modification of the current boundaries, and the concomitant protections, is not yet directly addressed in the documentation.

The issue of defining the boundaries of the components is exacerbated by the absence of a discussion of the value and role of buffer zones in protecting the components.[3]

Boundaries and buffer zones directly affect the provisions for adequate legal protection. While the Noiddiidcearru/Kjopmannskjolen and Gollevárri components are somewhat protected by their remoteness, and Noiddiidcearru/Kjopmannskjolen is located within a National Park, Ceavccageadgi/Mortensnes and Rouvdenjunlovta/Gropbakkengen are located in or near areas of settlement and are potentially vulnerable. Ceavccageadgi/Mortensnes is located to the east of the village of Nesseby on the east side of the E75. This is a National Tourist Route and the only transport and supply route from Varangerbotn along the north side of Varanger fjord with houses in the immediate vicinity of the site. Rouvdenjunlovta/Gropbakkengen is located to the south of Varangerbotn, on the southern side of Varanger fjord, north of the E6 road with a house immediately to the west and more houses to the south and east of this component. It is important that municipal plans (for Unjárgga/Nesseby and Deatnu/Tana)

[3] As already discussed, in consideration of the settings of the components, the use of buffer zones could have been useful in ensuring that the setting of the Rouvdenjunlovta/Gropbakkengen component was not negatively impacted by the recent digging of a trench for a water pipe.

under the *Plan and Building Act* make provisions for these two components. This applies particularly to buffer zones which need to be clearly defined and integrated into the municipal plans.

State of Conservation

The state of conservation of the archaeological sites visited during the ICOMOS mission in the Ceavccageadgi/Mortensnes**,** Noiddiidcearru/Kjopmannskjolen and Gollevárri components is good/very good. However, it is not clear at present whether active measures are in place to sustain and improve the state of conservation, and it is recommended that regular maintenance and monitoring programmes are established. This is particularly relevant for Ceavccageadgi/Mortensnes, which is publicly accessible and presented to visitors. Issues that were discussed during the ICOMOS mission included the effects of environmental change, such as permafrost thaw and vegetation changes resulting from changing climatic conditions. These will require consideration of the appropriate management approach to sustain the state of conservation of the property.

ICOMOS also considers that an archaeological research framework should be developed for the proposed components. There has been considerable excavation at Ceavccageadgi/Mortensnes and Rouvdenjunlovta/Gropbakkengen, and less at Noiddiidcearru/Kjopmannskjolen and Gollevárri. This is relevant to the long-term conservation because archaeological survey can produce new evidence that needs to be recorded and monitored; and intervention in the form of archaeological excavation can create new needs for conservation. Here, the balance between the knowledge gained from excavation has to be balanced against the potential impact on the state of conservation. In this context there should be a clear articulation of the major research issues to be addressed and the benefit to knowledge of archaeological excavation within the property. The system in Norway is that all finds and documentation from archaeological surveys go to the regional university museum. In this case, it is the University of Tromso museum. It is important as part of the management and interpretation of the property that this material is considered in the context of the Integrity of the proposed components. Archaeological objects are an important element of the research value.

Putting in place adequate protection and management

As indicated above, ICOMOS considers that many of the elements to provide adequate protection and management are in place for the proposed components. What is lacking is the integration and articulation of the elements that are currently in place into a coherent management system, and a coordinated management mechanism. This should be a priority alongside the definition of the extent and boundaries of the components and buffer zones.

A management team could be established for the proposed area, with representation by the various management entities: the Sámi Parliament, Finnmark County Council (Archaeology Office), Várjjat Sámi Musea, Unjárgga/Nesseby and Deatnu/Tana municipalities and Varanger National Park. The system of management needs to clearly indicate how any new arrangements can be integrated with existing management/protection structures. It is clear that there is a system of protection and management for the Varanger National Park; and individual archaeological sites appear to be well protected under the *Cultural Heritage Act*. However, as indicated by the recent negative impact on the setting of Rouvdenjunlovta/Gropbakkengen, a landscape-based system of protection and management is recommended.

Defining the level of sustainable tourism is a key issue that does not appear to have been considered in detail to date. This is particularly pressing for Ceavccageadgi/Mortensnes**.** While the site is only open to the public during the summer months and the current number of visitors is relatively low (2,000 per year),

the impact of any increase in numbers would be concentrated within the window of the short visitor season. As a result, the effect of this visitation may be heightened, for example, on archaeological material exposed on the surface. ICOMOS therefore recommends that a detailed visitor management plan should be prepared as an important and integral aspect of the management system for the property.

Várjjat Sámi Musea has a key role to play in developing a visitor management plan and the quality of the visitor experience, and its role as the information gateway for the proposal can be further developed. It is the responsible authority for the management and presentation of the Ceavccageadgi/Mortensnes component. The museum in Varangerbotn also acts as an information point for the Varanger National Park. Given the remoteness of the Noiddiidcearru/Kjopmannskjolen and Gollevárri components, it is probable that the vast majority of visitors will learn about these parts of the property from interpretative materials in the Várjjat Sámi Musea. The role and location of this museum provides an opportunity to integrate the presentation and interpretation of the proposal in all visitor materials and exhibitions.[4]

[4] ICOMOS notes that there is an ongoing programme of repatriation agreements with Norwegian museums, under the title of *Baastede – Coming Home,* for the return of cultural material owned by the Sámi. The process is seen as an important one for Sámi cultural identity, even though some of this material will remain on loan in their current museum locations.

5. The Reindeer Hunting Area in Dovrefjell

5.1 Description and Historical Background

Norway has the last wild reindeer population in Europe. It is only in the mountains of southern Norway that wild European tundra reindeer can still be found in their original habitat (Photo 1). Conservation of the reindeer and their habitat was a driving force in the establishment of National Parks in this area of Norway, such as Rondane. Reindeer hunting traditions are controlled to assist in the conservation of the reindeer.

Wild reindeer have lived in this area in interaction with people for the last 10,000 years, since the beginning of the Holocene. Utilisation of wild reindeer was based on groups of hunters following the herds as they migrated between geographically separate summer (west) and winter (east) pastures. In this montane landscape, there are a variety of archaeological and historical sites that are directly linked with hunting and trapping, including pitfalls, hides and funnel-shaped traps with associated fences. There are other cultural heritage features associated with reindeer hunting such as settlement sites and shelters, which are informative about early human settlement activity and settlement. Valleys extending into the mountains have long been used for summer dairy farming and are the focus of communication routes linking historic settlements.

The project to develop a World Heritage nomination for the Reindeer Hunting Area in southern Norway was initiated in 2004. It is oriented around the richness, depth and diversity of the archaeological record for hunting, and the presence of wild reindeer and associated traditional hunting methods. The initiative has come from the Oppland County Council and Lesja municipality; and a board was established to facilitate the work. Detailed archaeological and environmental studies have been carried out to provide scientific data to underpin the project.

Based on the observations of the ICOMOS mission, it is apparent that the project has strong local support. Funding has been provided by grants from the County Governors and County Councils of Oppland, Hedmark, Trondelag and More & Romsdal as well as relevant municipalities: Oppland (Lesja, Dovre, Sel, Vaga, Lom, Skjak, Nord-Fron, Sor-Fron and Ringebu), Hedmark (Folidal), Trondelag (Oppdal) and More & Romsdal (Sunndal and Nesset).

This proposal was brought to the attention of ICOMOS during the preparations for the mission to Várjjat Siida. The State Party requested that it be added to the Terms of Reference and itinerary for the Upstream assistance, enabling the ICOMOS mission to visit both proposed areas while in Norway (see Annexes 3 and 4). Accordingly, information about the proposal was provided to ICOMOS, and other materials were provided to the ICOMOS mission team (see Annexe 6). While both proposals involve the archaeological evidence of reindeer hunting and trapping over a long period, there are also significant differences. For that reason, a separate set of desk reviews was considered necessary, and these were commissioned by ICOMOS in September 2019.

The State Party has not yet included the 'Reindeer Hunting Area in Dovrefjell' on its Tentative List, and the World Heritage proposal is currently at a relatively early stage of its development. [5]

[5] Minor editorial suggestions include: avoiding gender-specific language (such as 'man' or 'mankind') when referring generally to people and cultural groups; and considering Indigenous sensitivities to terms such as 'Stone Age' where possible (since these reflect colonial and/or Eurocentric perspectives). The reference to 'Indians' when referring to

5.2 Comparative Analysis

As discussed in section 4.2 (above), the aim of a Comparative Analysis is to determine whether a property, such as the 'Reindeer Hunting Area in Dovrefjell', can be considered an outstanding exemplar or representative expression of Outstanding Universal Value and therefore would be likely to meet the criteria for inscription on the World Heritage List.

Given that the proposal document focuses on hunting of wild reindeer, the preliminary Comparative Analysis takes a relatively narrow approach. It firstly considers properties on the World Heritage List and Tentative Lists, and also considers other sites associated with the hunting of wild reindeer. The work undertaken to date provides a global comparison of landscapes of reindeer hunting, followed more broadly by a comparison of landscapes of 'large mammal hunting'. The report notes that a global comparison of large mammal trapping systems has not been attempted due to the limitations of available published information; however, relevant comparisons should be pursued further.

The World Heritage properties discussed include:

- Natural System of Wrangel Island Reserve (Russian Federation). This is a natural World Heritage property, with little in the way of immediate similarity to the 'Reindeer Hunting Area in Dovrefjell'.
- Laponia Area (Sweden). This mixed World Heritage property lies within the territory of present-day Sámi peoples and is recognised for the Sámi way of life based on seasonal movement of reindeer herds. The Reindeer Hunting Area of southern Norway is argued to differ from the Laponia Area because the former focuses on wild reindeer hunting, while the latter emphasises semi-domesticated reindeer herding. There appear to be similarities and differences in the hunting and settlement structures, as well as material culture items, between the two areas.

The report also considers places that are included on the Tentative List for Canada, including: Ivvavik National Park, Vuntut National Park, and Herschel Island (Qikiqtaruk) Territorial Park. These landscapes are located within the lands of the Inuvialuit and Vuntut Gwitchin, who have hunted, fished, and traded in the region for thousands of years. A key differentiator between the Canadian examples and the Reindeer Hunting Area is argued to be the differences in wild reindeer species, although ICOMOS considers that this is a weak differentiator in relation to the ability of the proposal to meet the cultural criteria for inscription in the World Heritage List, and must be more explicitly tied to cultural phenomena.

The report also considers areas with histories of reindeer hunting that are not included on the World Heritage List or on Tentative Lists, including areas within Canada, Alaska, Siberia, Sweden and Norway. Also mentioned are historic representations of reindeer hunting in deep time European art (e.g. Altimira, Spain; Lascaux, France). While all of the areas discussed contain variations on hunting practices using pitfalls and funnel-shaped traps, the State Party argues that the Reindeer Hunting Area contains the greatest range of and scalar variation in such structures.

Within the World Heritage List, the following suggestions for broadening the analysis demonstrate the

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the First Nations peoples of North America should be avoided. A glossary would be a useful addition to ensure that an international readership can understand the various technical terms.

possibilities for framing the Comparative Analysis for the proposal: [6]

- Head Smashed in Buffalo Jump (Canada) is an example as a property with clear evidence of ancient hunting processes.
- Aasivissuit-Nipisat Inuit Hunting Ground Between Sea and Ice, in Greenland (Denmark) is relevant, due to the importance of Caribou hunting sites and traditions.
- Kujataa: Norse and Inuit Farming at the Edge of the Icecap, Greenland (Denmark) is a cultural landscape based on marine mammal hunting and farming.
- Budj Bim Cultural Landscape (Australia) may be useful as it testifies to an interaction of humanity and nature through extended time.
- The Putorana Plateau Nature Reserve (Russian Federation), is a natural property inscribed in 2010 to protect the Taimyr reindeer herd, for which ICOMOS offered an evaluation of cultural aspects.[7]

The framework established to guide the Comparative Analysis includes the following parameters:

- The complexity, variation, and number of structures in wild reindeer hunting systems as represented by physical structures and objects.
- The time depth and continuity represented by the physical remains of wild reindeer hunting.
- A tradition of hunting wild deer continues in the present.
- The association of reindeer hunting with Europe's last remaining population of wild, tundra reindeer.
- The interaction over time of different ethnic groups (e.g., Norse/Norwegian and Sámi) and institutions (e.g., monarchy and church) in reindeer hunting.

ICOMOS considers that the preliminary Comparative Analysis makes a reasonable start for a future submission to the Tentative List. However, the focus on Europe is not yet justified without a wider analysis that might consider whether hunting in Europe was somehow different from elsewhere, or that the reindeer breeds or sub-species were somehow different in ways that have different cultural expressions. The evidence explored requires considerably more work and expansion in order to examine in greater detail the comparisons made. In this regard, a clearly articulated methodology, evidence-based analysis, and well-supported argument are necessary to further develop this aspect of the project.

ICOMOS notes that the Comparative Analysis emphasises that the tradition of reindeer trapping and hunting is important for humanity, more or less independent of cultural affinity. Since the proposal is oriented toward a potential future *cultural* heritage nomination (rather than one that rests on the application of natural heritage criteria), this is a difficult position to advance.

[6] ICOMOS considers that this demonstrates the need for a Thematic Study on reindeer hunting, given its wide geographic spread and millennia of human interactions. It is unlikely that the sites presently on the World Heritage List and Tentative Lists provide a comprehensive basis for comparison.

[7] The Putorana Reserve is inscribed to protect a large wild reindeer herd of around three quarters of a million animals. ICOMOS wrote an evaluation on this natural site in 2010 in relation to the cultural heritage aspects of Indigenous peoples – this is on the UNESCO site.

Another aspect that could be better explained is the contemporary nature of hunting in the locations compared. Trapping and hunting can involve very different techniques, and the proposal seems to refer to both of these. ICOMOS considers that there is a need to clarify this aspect; and also to draw on ethnographic studies and oral testimonies to compare and contrast the different cultural contexts of contemporary reindeer hunting practices. As it stands, it is unclear 'whose' cultural traditions are referred to in the proposal.

There are aspects of culture discussed in the materials provided by the State Party that indicate that Norse and Sámi cultures are likely to have built the trapping systems. Further investigation of this is recommended (including the intangible cultural heritage such as seasonal rituals, beliefs, ecological knowledge, place names, and so on). Further consideration of the nature-culture links, especially the particular flora and fauna on which the wild reindeer graze could strengthen the proposal.

ICOMOS considers that the Comparative Analysis tends to over-emphasise the distinction between reindeer and caribou (North America) when both reindeer and caribou are regarded as the same species, *Rangifer tarandus*. The wild or mountain reindeer (tundra reindeer group) is one of several sub-species. The intended distinctions could be better explained, but this should be contextualised within arguments made for the *cultural* heritage significance of these areas.

However, as discussed further below, ICOMOS suggests that the project would benefit from a broader scope. It would be useful to develop a more structured and thematic approach to the Comparative Analysis, which would assist with the overall approach and documentation of the potential Outstanding Universal Value of the property.

Finally, the Comparative Analysis is required to justify the selection of the components of a potential World Heritage nomination. As noted elsewhere, the description of the components does not assist this requirement in its current form. It starts with descriptions of the practice of hunting wild reindeer and then moves on to describe aspects of the material culture. It could be improved by starting with an overview of what is present within the archaeological record, and its meanings and significance. Conversely, the natural values are discussed much more coherently throughout the proposal, yet it is not currently being presented as a potential mixed nomination (as discussed below). As a result, the focus has limited the type of sites to only those associated with reindeer hunting, and does not consider other sites associated with the cultural group(s) that relied on the reindeer (e.g. habitation sites, burials, cultic sites, other resource sites).

5.3 Potential significance

The proposal has a clear focus on the ability to demonstrate a long-established and continuing hunting tradition, and on reindeer-human interactions. It is argued that this is what makes the property potentially distinctive on a global scale. At the same time, it is recognised that within the circumpolar area, reindeer were and continue to be hunted by a number of societies and that similar types of hunting and trapping systems are found in many areas. It is the breadth and diversity present in the proposed areas that are seen as outstanding. In general, further consideration of the inclusion of contemporary community associations, experiences, and knowledge could enhance the proposal. Engagement with Sámi and other community/cultural groups is recommended in this regard.

Based on the materials provided by the State Party, and the discussions that occurred during the ICOMOS mission, it is clear that the potential Outstanding Universal Value of the proposal is seen as residing in a

combination of factors including the archaeological evidence, cultural heritage features, the living hunting tradition with a long time span, and aesthetic beauty. At the same time, the project team recognises the importance and centrality of the wild reindeer and the conservation of this species along with its habitat and the biodiversity that it relies on. However, a number of these dimensions are not immediately relevant for the cultural heritage criteria used to assess nominations to the World Heritage List. Further work will need to more directly address these gaps, demonstrating their ability to be asserted within the available frameworks for cultural heritage (or expanded to include arguments according to natural and cultural heritage criteria, as discussed below).

The State Party has provided five points around which the justification of the potential for Outstanding Universal Value will be further developed. Observations from ICOMOS about these – and the further work needed – are briefly summarised below.

1. The close relationship that has existed since the early postglacial period between humans and wild reindeer.

   ICOMOS considers that this aspect should refer in greater detail to the specific culture(s) and contexts.

2. The evolution in the human utilisation of the wild reindeer as a resource from the end of the Ice Age to the present day.

   In line with the comments made for point 1 (above), ICOMOS considers that the discussion of the broader European history of reindeer herding should be augmented with deepened consideration of the cultural context, and a wider Comparative Analysis that could set European reindeer traditions into a global context.

3. A density and breadth of variation of trapping systems for wild reindeer.

   ICOMOS considers that this is relatively well documented and presented. The ICOMOS mission had opportunities to visit a number of these hunting and trapping systems and to appreciate the range of construction techniques and their variation in scale and complexity (Photos 2-5).

   However, while it is recognised by the project team that these facilities form part of and are components in wider settlement and social systems, the consideration of the hunting and trapping systems as parts of 'technological ensembles' is not yet clearly demonstrated. To fully demonstrate the value of such an approach, it will be important to position the description of hunting systems evolving through time in parallel with and in the context of wider social changes in the region, and how they are distinctive from other hunting/trapping systems.

   Furthermore, because the proposal begins with the locations of wild reindeer today, convincing evidence has not been presented that argues that these four components represent the best examples of wild reindeer *hunting* (or trapping) sites. The selection process has resulted in an area of high cultural heritage density, but it is not clear whether these sites are most representative of the nature and variety of hunting practice. Further work on the Comparative Analysis will assist in resolving this question.

4. The integration of alpine nature and culture into a landscape where a 10,000-year-long tradition has

left clear traces throughout the circumpolar region.

ICOMOS considers that the articulation of this cultural tradition needs further work. The narrative refers to dimensions of intangible heritage, including personal experience and perceptions, based on memories, associations and knowledge. These cultures and cultural traditions should be documented, together with a clarified sense of how these are specifically associated with the proposed areas and sites.

The assertion of 10,000 years of history seems to rely on the known prehistory of the region. However, this has not been firmly established for the sites in the nominated components (for example, no evidence prior to the Iron Age is presented). Further work on this proposal will need to improve the precision on these aspects.

The proposal also discusses ecosystems and the wild reindeer (as an indicator species for 'quality' in the landscape). As discussed for point 5 (below), ICOMOS considers that natural phenomena (including animal species) can be attributes of cultural landscapes. However, the information provided by the State Party requires further work to attach this aspect to the case being developed on the basis of cultural criteria.

With further research, there is an opportunity for considering the inter-relatedness of cultural and natural processes, and the ecological knowledge that cultures associated with this area may retain. In this regard, the proposal could be improved through inclusion of further information on contemporary traditional and indigenous ecological knowledge, as well as ethnographic and ethnohistoric information (in particular, to strengthen support for the assertion of 'exceptional testimony of living cultural traditions'). As it stands, it is not clear to ICOMOS what these traditions are (and who practices them), leading to doubts about their feasibility within a World Heritage nomination.

5. A population of wild reindeer with a unique genetic character that has remained unchanged for more than 10,000 years.

   In the materials provided by the State Party, this is a prominent driver and characteristic of the proposal. As noted above, it is possible for animal species to be relevant as attributes of cultural landscapes, and for the inter-related historical development of nature and culture over time to be central to such proposals. However, based on the development of the proposal to this point, ICOMOS considers this aspect to be of less direct relevance to the development of the cultural heritage or cultural landscape proposal.

   Given the rarity of these particular wild reindeer,[8] and their importance to the proposal (based not only on their continuing presence, but also their genetics), ICOMOS considers that it will be necessary to ascertain whether there is scope to develop this proposal according to both cultural and natural criteria. This will require further consultation with IUCN.

   Considering the centrality of the conservation of a wild species in this proposal, and the focus on areas designated as National Parks, the proposal presents a minimal discussion of natural attributes. This is an aspect which could be easily addressed, although it will be necessary to resolve whether

[8] Given that there are many sub-species of *Rangifer tarandus.*

the proposal will move in the direction of a serial cultural property, a cultural landscape, and/or a mixed nomination (arguing for the application of both cultural and natural criteria).

Either way, inclusion of this dimension of the potential justification within a future World Heritage nomination will require the management system to ensure the protection of this species through integrated natural heritage management strategies. There is also recognition of the need to actively protect and manage very large areas to sustain the migratory patterns of wild reindeer, particularly at a time when the reindeer herds have become fragmented and biologically separate. An integral element is the lichen that is important to reindeer foraging in winter. Management will need to include consideration of future hunting impacts, and impacts from mining, prospecting, transportation, infrastructure developments, wind power, and other actions, such as recreational drone use, on the reindeer. Like other aspects of this proposal, consideration of specific climate change impacts and futures will be essential.

Many over-arching issues were able to be discussed with the project team and key stakeholders during the ICOMOS mission, and are detailed in the sections that follow. At this stage, some general observations concerning the orientation of the proposal prepared by the State Party include:

- While an overall summary description has been provided, based on archaeological, historical, and ecological information, there is insufficient information on the past and current cultural communities in the region and their living traditions associated with reindeer hunting (if any).
- The potential justification and the demonstration of cultural criteria will benefit from more information on questions concerning the engagement with local communities, such as:
    - Who are the present-day inhabitants for the area and its surrounds?
    - What are the 'traditional hunting practices' and 'living traditions' that continue to be practiced? How can these practices be understood as outstanding or exceptional?
    - What segments of the local communities participate in such practices?
- Further studies to deepen the documentation of cultural associations and knowledge are recommended. Naming, seasonal rituals, ecological knowledge, hunting tools, finds from graves, economic and trading customs and traditions of past cultures using the site could be relevant.
- More information about Sámi cultural associations, traditions and knowledge is needed in relation to the proposed areas and the documented material culture elements.

Although the State Party provided a report on an investigation into the identification of Sámi in southern Norway, the proposal makes little reference to the Sámi people or culture. While the link is implied, the association of the southern Norway wild reindeer hunting sites with a cultural group needs to be articulated more precisely.

As it stands, the proposal is primarily focused on the presence of the last wild reindeer herd in northern Europe, and the infrastructure associated with past hunting practices, but these need to be more explicitly linked for the purposes of a potential cultural heritage nomination. The proposal does not adequately explore the cultural practices associated with these sites, what the reindeer meant to the local cultures (Sámi or otherwise), and the influence of reindeer on cultural practices, beliefs, and identity. While the nomination presents the property as an important tradition for humanity, independent of cultural affinity, some effort needs to be made to explore the significance of wild reindeer, and the practice of hunting them, to cultural identity in southern Norway.

5.4 Potential Criteria

Currently the property is proposed for its potential to demonstrate criteria (iii), (iv) and (v). The following observations are based on the ICOMOS mission and desk reviews.

> ***Criterion (iii)***
> *Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.*

The argument put forward by the State Party is as follows:

> *The project believes that Criterion (iii) is fulfilled because the area is able to display the greatest variation in types of trapping sites and can demonstrate a practically unbroken utilisation of wild reindeer as a resource from the time the first people entered the area up to the present day. The landscape has formed the basis for shifting cultures, all of which utilised the same resource. The tradition also has roots further back in time in areas that were then ice free, but no hunting sites have been found there and the traditions associated with reindeer hunting are lost. This means that the traditions and cultural heritage sites in this area acquire an outstanding universal value – a value that is over and above a regional and national one. The traditions are attached to both the present day society and to cultures that have disappeared or are changed.*

ICOMOS understands that the case currently made for the relevance of criterion (iii) relies on the cultural heritage of reindeer hunting, but does not yet provide a detailed consideration of the cultural tradition(s) within which it occurred. This is important because it is clear that there are distinctive cultural traditions within the wider geocultural context of the circumpolar region.

- A more thorough review of North American *Rangifer* hunting sites would be desirable;
- While the density and variation of reindeer hunting sites is well explained, it is important to explain the cultural context and traditions associated with them;

The justification presented for criterion (iii) also highlights questions about the inclusion of the continuity of hunting, since the present wild reindeer hunting regime is obviously carried out on quite a different basis to the trapping sites that were in use until the 17th-18th centuries.[9] Hunting with a rifle is carried out under the provisions of the *Wildlife Act* (1899) with the revisions that have been made to the Act over the last hundred years. It is clear that there is a strong recreational value to modern hunting but not a reliance on hunting for subsistence (Bevanger and Jordhoy 2004: 68-9).

Current hunting and allied practices are mentioned but are not clear. For instance, how is hunting different today and are there retained traditional practices? Is modern day hunting part of these practices? What is the evidence that current practice is part of a lengthy local tradition associated with the traps within the proposed components? There is also no evidence provided that South Sámi, or any Sámi, take part in current hunting, whether or not it is associated with tradition rather than a recreational sport. There is no evidence presented that current hunting practices are undertaken for economic and physical survival.

At this stage, based on the current information available, ICOMOS does not find this aspect – concerning

[9] ICOMOS assumes that trapping is no longer permitted or practiced.

the continuity of hunting – convincing in relation to criterion (iii). Further evidence of contemporary cultural practices is needed if this aspect is to be retained in the proposal. Despite this reservation, ICOMOS considers that criterion (iii) could be relevant in the further work on this proposal if different lines of argument are developed.

Criterion (iv)
Be an outstanding example of a type of building, architectural or technological ensemble or landscape that illustrates (a) significant stage(s) in human history.

The argument put forward by the State Party is as follows:

> *The development in the trapping sites shows how man, in an exceptional manner, has adapted to changing economies under what are, for humanity, marginal conditions. The sites have an exceptional authenticity and bear witness to an enormous work effort in an inhospitable and extreme part of the world. The landscape containing the cultural heritage sites will also be very well suited for demonstrating the transition to market economy or to use a modern concept, an early form of industry. These aspects will, in our opinion, qualify the area for Criterion (iv)*.

ICOMOS considers that this is currently the least well-justified of the three criteria presented. If this criterion is to be further developed, the text will need to specifically address questions such as – what is the typology being proposed (a technological ensemble or a landscape?); what is the significant stage in human history in this case?

Because of the specific focus on reindeer hunting in the material presented by the State Party, the discussion of how the hunting and trapping sites relate to wider technological ensembles and how these have changed over time will need to be more fully developed in order to sustain the application of criterion (iv). At this stage, relevant issues such as the social and economic contexts of hunting activity, the geographical extent and scale of such systems, the demand and utilisation of reindeer meat, fur, bone and antler have not been considered in detail. This detail would be required for the consideration of the property as an outstanding example of a *technological ensemble*.

To justify criterion (iv), ICOMOS considers that further work on this proposal will also need to more directly address how the histories associated with the proposed areas can be understood as illustrating *(a) significant stage(s) in human history.* As it stands, the documentation of the long history of reindeer hunting and the various features that are described do not accord well with specific/identifiable cultural traditions (or particular timeframes). The *significant stage(s) in human history* that these sites are associated with are not clearly explained. Further development of the Comparative Analysis to include areas within the arctic and sub-arctic regions will be needed in order to justify how the selected areas can be understood as an 'outstanding example' within specific cultural and historical contexts.

In relation to the consideration of the property as an outstanding landscape, this is hampered by the focus on the admittedly rich and diverse evidence of hunting and trapping sites. These are considered in a landscape context, but the concept of the property as a cultural landscape is under-developed. Questions remain as to how the trapping and hunting sites relate to settlement, trade routes and their cultural and landscape contexts.

The project team argues that the property corresponds well with the category of an organically evolved cultural landscape. ICOMOS considers that this approach is potentially useful for the further development

of this proposal; but that at present, further work to align with the guidance in the *Operational Guidelines* is required. This issue is discussed further below.

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

The argument put forward by the State Party is as follows:

> *The interaction between man and nature is particularly well covered by Criterion (v). The link between the natural landscape and the cultural heritage sites forms a cultural landscape that is essential for understanding the trapping sites. With respect to this project, the authenticity concept will be partly associated with the cultural heritage sites themselves, partly with the landscape of which they are a part, where the wild reindeer are the foremost single aspect. It is the connection between these that gives the cultural landscape meaning for modern people. The knowledge that reindeer are game that can be hunted and the knowledge associated with being able to read the landscape in such a context has existed in many places, but has mostly been lost, whereas this is one place where it is still preserved.*
>
> *The area is experiencing pressure from non-reversible changes, not least through ongoing climate change, first and foremost global warming. This is also a central theme in UNESCO's World Heritage work.*

According to the material presented by the State Party, ICOMOS notes the potential for the wild reindeer to form a link between the natural landscape and the cultural heritage sites, dating from prehistory to the recent past (see Photo 6). The reindeer - and traditions of hunting - underpin the link between local communities and the landscape today. These aspects are potentially relevant for the demonstration of criterion (v).

ICOMOS acknowledges the vulnerability of this area of Norway to irreversible changes, specifically due to the climate crisis. For example, the increased rate of the summer melt of snow and ice is leading to the discovery of previously covered objects that can demonstrate human activity at high altitudes (see Pilo *et al*. 2018). At the same time, the changing climate has the potential to impact the sustainability of the wild reindeer herds, as changing patterns of snow and ice accumulation can make it more difficult for the reindeer to forage in their wintering areas. Protection and management strategies need to be outlined in relation to these factors. However, overall, this vulnerability alone does not mean that criterion (v) is demonstrated.

ICOMOS considers that criterion (v) could be further developed in relation to this proposal. This will require a stronger articulation of the following aspects:

- The detail and character of traditional human settlement systems representing human interaction with the environment and hunting activity.
- Does the State Party assert that hunting contributes to the sustainability of the reindeer herd? If so, this needs to be more clearly explained.
- The impact of the climate crisis and the management and mitigation measures that are being taken to respond.

- The attributes that sustain the values – including natural and cultural features, both tangible and intangible.
- If the wild reindeer are viewed as the key articulating element in the human environment interaction then natural dimensions of this property need to be taken into account in considering the potential Outstanding Universal Value of the property.

Natural Criteria

The importance placed by the State Party on the presence of the last remaining occurrence of wild reindeer in this area and arguments concerning the aesthetic beauty of the landscapes inevitably raises questions about the potential for this proposal to meet one or more of the natural criteria for inscription in the World Heritage List (criteria vii-x).

Accordingly, ICOMOS has sought the preliminary views of IUCN. At this stage, further work is needed in order for natural criteria to be seriously considered (making this proposal both a cultural landscape and a potential 'mixed' site). Information from the IUCN *Red List* on *Rangifer tarandus* is provided in Annexe 5.

Whether or not the proposal is further developed to address the natural criteria for World Heritage inscription, the proposed values of the cultural landscape are highly dependent on the management of the natural processes and characteristics of the component areas. In this regard, further consideration of the resilience and sustainability of the natural heritage will be essential elements of the management system. Such considerations, particularly the habitat and migrations of reindeer could also require reconsideration of the component boundaries and buffer zones in order to ensure the integrity of the proposed landscape (as discussed further below).

Cultural Landscape

Although not addressed in detail in the materials developed to date, there is an intention to consider the Reindeer Hunting Area for future nomination as an organically evolved/continuing cultural landscape (as per Annex 3 of the Operational Guidelines).

ICOMOS considers that the cultural landscape approach could be appropriate for the Reindeer Hunting Area, but that a greater focus and contextual discussion of the culture(s) that formed, used and managed the site are needed.

Whether the 'continuing' sub-category is applicable will depend on the provision of further information concerning the cultural traditions of hunting, and in relation to Sámi cultural and spiritual associations. If the ecology modified by reindeer hunting is proposed as an attribute of the cultural landscape, as well as modified land formations, this requires clear documentation.

As discussed above, in the available materials, there is little evidence provided about contemporary hunting practices in this area as a cultural tradition. If this is to be retained, this is an important area for further documentation and research, since its resolution will help to determine the direction of a future World Heritage nomination. The ongoing presence of the reindeer in the area is possibly compelling from a natural heritage perspective, but without a robust link to a continuing (contemporary) hunting 'tradition' in relation to these herds, and tangible or intangible evidence to support it, it will be difficult to sustain a future nomination as a 'continuing' cultural landscape. Furthermore, the impacts of climate change raise questions about the intentions and possibilities for retaining 'continuing' hunting traditions. Clearly, this would have implications for the use of criteria as well (as discussed above). At this stage, it remains to be

better understood whether the case might be stronger as an organically evolved (relict) cultural landscape if the cultural continuity and associations with the selected sites are not strongly evidenced.

Depending on the further work to be undertaken on Sámi and/or other cultural associations with this area, the 'associative' cultural landscape designation could also be applicable. The beliefs, stories, traditions and customs relevant to the components should be included.

5.5 Integrity

Integrity is a measure of the wholeness and intactness of the cultural and or natural heritage of a property and its attributes. The levels of documentation provided to date makes it difficult to arrive at an assessment of the Integrity of the proposed areas; however, some observations from the ICOMOS mission are provided to assist the further development of the proposal.

The current focus is on the reindeer hunting facilities as a central attribute. It is argued in the documentation provided that most of the trapping systems fall within the component areas of the proposal. However, it is clear that similar sites also occur outside these areas. For example, during the ICOMOS mission, a pitfall at Vaga to the south of the site and the major and impressive pitfall system at Dovrefjell, described as one of the largest in Europe (Bevanger and Jordhoy 2004, 20), were visited. However, this is in what is currently defined as a buffer zone between the Eikesdalfjella/Snohetta and the Rondane components (Photo 7). The rationale for selecting the components should be more precisely determined.

The proposed areas cover an extremely large area, incorporating the entire area of three National Parks (Dovrefjell-Sunndalsfjella, Dovre and Rondane) and the eastern part of Reinheimen National Park, as well as a number of Protected Landscape Areas adjacent to the National Parks. In itself, the size of the area seems adequate, but of greater importance is the need to demonstrate that all the attributes needed to demonstrate the potential Outstanding Universal Value are included in the boundaries. This is not yet convincingly established and the components, boundaries and buffer zones require better definition (see below).

In relation to the effects of development, some of the hunting and trapping features were removed or damaged by infrastructure developments prior to the recognition of these features as archaeological sites, and there has been some degradation of other sites. The ICOMOS mission noted that in the late-19th century, the use of these facilities became illegal and there was a direction to fill them in, but in most cases this directive was ignored.

Based on the observations of the ICOMOS mission, the overall state of conservation of the hunting and trapping features appears to be good, and they are in a stable condition. There is a good system of protection and systematic avoidance of known sites and mitigation of potential impact under the Norwegian *Cultural Heritage Act* and the *Plan and Building Act*.

5.6 Authenticity

Authenticity is about the link between attributes and potential Outstanding Universal Value. The *Operational Guidelines* (par. 62) state that properties may be understood to meet the conditions of Authenticity if their cultural values are truthfully and credibly expressed through a range of attributes.

In their form and design, materials and substance, and use and function, the hunting and trapping features and systems, which are the current focus of the proposal, can be regarded as authentic. The features demonstrate a variety of construction techniques and approaches, incorporating features dug into the ground alongside a substantial but variable use of stone. Archaeological excavation has demonstrated that environmental and soil conditions have facilitated the survival of wooden components of pit falls and fences in funnel-shaped trapping systems and the survival of other features such as settlements. Snow patch archaeology is also revealing important organic materials, which illustrate the character of human life in this montane landscape in the past.

It is relevant to note that replica hunting and trapping features have been recently constructed at the Hjerkinn Wild Reindeer Visitor Centre to the east of the Dovrefjell-Sundalsfjella National Park to facilitate visitor understanding (Photo 8) and are clearly distinct from the original historic features.

It is clear from pitfall systems visited during the mission at Lordalen and Dovrefjell that these landscape systems for trapping and hunting were created cumulatively and, in some cases, may have been developed and extended over considerable periods of time. By contrast, the funnel-shaped trapping systems, such as that Einsetho and the associated house sites at Toftom in Grimsdalen, indicate intensive hunting linked to the demand in urban centres and early state formation in the Viking Period and Middle Ages (Photo 9).

There is a striking diversity in the location and setting of the hunting and trapping systems as well as recurrent patterns of location; and the specificity of individual hunting and trapping complexes is noted. These characteristics could be further described as they relate to the detailed knowledge that people had of the reindeer and their behaviour, habits and movements; and their ability to exploit reindeer as a resource.

Finally, in relation to spirit, feeling and intangible heritage, the ICOMOS mission was able to observe the importance of the wild reindeer hunt to people of the region today. The annual wild reindeer hunt took place just after the mission (August 20-September 30). One of the project board members obtained his hunting licence during the mission (Photo 10). There was a palpable sense of excitement and connection with the hunt as an autumnal pastime, an opportunity to connect with the landscape and one's neighbours, to obtain wild reindeer meat, to benefit economically from non-local hunters who come to stay in the area, and to assist in the sustainability and conservation of wild reindeer. However, as discussed above, placing this within the context of cultural heritage of Outstanding Universal Value remains a challenge.

5.7 Proposed Boundary and Buffer Zone

While recognising that the proposal is still at an early stage of its development, ICOMOS considers the boundaries and buffer zones require review and clarification.

In the documentation provided by the State Party, the property is proposed as a serial property and a cultural landscape. The four component areas are: Eikesdalsfjella, Snohetta, Rondane and Reinheimen. The boundaries of each are outlined in the documentation and a map has been provided. However, in the presentation given during the ICOMOS mission (Hjerkinn Wild Reindeer Visitor Centre, 13 August 2019) and in the *Supplementary Note* dated 23 September 2019, the property was presented as having three components (with Eikesdalfjella/Snohetta combined as one with the incorporation of the 'buffer zone' between them) (see Photo 11).

The proposed components cover a very large area, and it could be that a smaller area or cluster of

components could demonstrate the claimed values, particularly if there is a decision not to progress the nomination in relation to natural heritage criteria.

At this stage, ICOMOS notes that the map provided (with Norwegian titles) and description in the main documentation and the *Supplementary Note* are not sufficiently detailed to assess whether the delineation of the boundaries is effective in including all the elements that are the direct tangible expressions of the proposed basis for World Heritage nomination.

As far as possible, the boundaries of protected areas (protected under different instruments of Norwegian legislation) have been followed to maximise the protection required of a potential World Heritage property. However, the *rationale* for the location of the boundaries requires additional precision to clarify, for example, whether these are drawn on the basis of legal designation of protected areas, or on the basis of the locations of the habitat of wild reindeer.

Two examples illustrate the issues. Firstly, there is no map showing the key cultural heritage features in relation to the proposed boundaries of the property. Secondly, while there are advantages to utilising boundaries of existing protected areas, the types and relationships between the different kinds of designations is not immediately straightforward (ie. National Parks, Protected Landscapes, Nature Reserves and Adopted Conservation Areas). There are some inconsistencies that will need to be addressed (e.g. in relation to the establishment and designation of the Dovre National Park). However, of even greater importance is to clearly establish that these protected areas, their legal underpinnings and boundaries are appropriate for the protection of the cultural heritage of the proposal.

According to the *Operational Guidelines*, buffer zones are areas surrounding the designated components that have complementary and/or customary restrictions on use and development in order to give an added additional layer of protection to the property components. Buffer zones are not required in all cases, but where they are provided the rationale for their location must be clearly explained, along with relevant modes of protection. Buffer zones should include the immediate setting, important views and other areas or attributes that are functionally important for the property and its protection.

It should be noted that no buffer zones are shown in the materials provided by the State Party. However, based on the presentations made during the ICOMOS mission, it would seem that at least one buffer zone is anticipated, located between the Snohetta and Rondane components. It is recognised that this is a key area linking the summer grazing grounds of the wild reindeer to the west (Snohetta) and the winter grazing grounds to the east (Rondane) and includes the location of the major pitfall system at Dovrefjell. This system was located to intercept and trap wild reindeer, particularly in the autumn. Today, this area is also a focus of communications infrastructure, with the E6 road, a railway line and power cables. The central historic importance of this landscape area needs to be reconciled with the current contemporary interventions. This may take the form of relocation of those elements where it is feasible to do so, considering the feasibility and location of all proposed new developments, and placing appropriate restrictions on future interventions. Consideration should be given to including this significant area within the proposal (rather than in the buffer zone).

Similar issues arise with the juxtaposition of modern settlement and infrastructure around the edges of the proposed components, yet there are no other proposed buffer zones. The potential of protected area designations (e.g. Adopted Conservation Areas) as the basis for buffer zones, or plans to provide for the inclusion of buffer zones in municipal plans under the Norwegian *Plan and Building Act* are possibilities, although these have not been discussed in detail during the Upstream process.

5.8 Requirements for Protection and Management

Based on the materials provided by the State Party and the discussions that occurred during the ICOMOS mission, ICOMOS notes that a number of instruments under Norwegian law provide a legal basis for the protection and potentially the management of the proposed areas should a World Heritage nomination be advanced. These include the *Nature Diversity Act* (which establishes National Parks, Protected Landscapes and Adopted Conservation Areas), the *Cultural Heritage Act* (archaeological sites and areas), the *Wildlife Act* (regulating the protection of wild reindeer and the right to hunting and trapping them on state-owned land) and the *Plan and Building Act* (which provide for Regional wild reindeer plans, and mitigation of impact of development).

However, more clarity is required to articulate how these instruments can be effectively combined to provide comprehensive legal protection for the proposal and its potential significance. Based on discussions during the ICOMOS mission, ICOMOS considers that an effective management structure based on this legislative framework has yet to be developed.

World Heritage properties are also required to have an effective management system. In relation to the current proposal, ICOMOS considers that further work is required to ensure an effective integration between the key stakeholders and management agencies.

As noted above, National Parks form the large majority of the components of the proposal. These are protected under the *Nature Diversity Act*. National park managers and boards are responsible for the management of these areas and for sustaining their character and biodiversity, including the wild reindeer herds. There are management hubs for adjacent National Parks at Lom (Jotunheimen, Reinheimen and Breheimen) and Hjerkinn (Dovrefjell-Sunndalsfjella and Dovre/Rondane – see Photo 12). The county governor has a role in the governance of National Parks and Protected Landscapes; and the Adopted Conservation Areas are managed by boards composed of local members.

Across these management structures, there are the elements necessary for an effective management system, but their integration needs to be articulated. It is understood that a Municipalities Forum provides coordination between relevant municipalities; and a Project Board is composed of professional experts and community representatives, although it is not clear whether all key actors are represented. Sámi involvement in the development of the proposal should be increased. For example, it might be of benefit to consider expanding the Project Board to include community representation (including people with knowledge of Sámi cultural traditions).

Visitor capacity as an aspect of the management system was discussed during the ICOMOS mission, and relevant figures were provided. For example, the number of visitors to the Snohetta shelter has risen from 11,000 to 27,000 in the ten years since it opened. However, it would appear that the issue of visitor capacity has not been systematically addressed for the full proposal.

While noting that the proposal is still at an early stage of its development, ICOMOS considers that the effective protection of the property will necessitate an integrated management strategy.

5.9 The Way Forward

The observations in this section of the Upstream report are provided to the State Party to assist in the further consideration of the possibilities for adding the Reindeer Hunting Area to the Tentative List, and

developing a nomination to the World Heritage List.

Determining the focus for the proposal

At this stage, ICOMOS considers that there is potential for this proposal to be submitted to Norway's *Tentative List*, but a significant clarification and re-focusing of the proposal is recommended to demonstrate its potential Outstanding Universal Value.

In relation to the cultural criteria, based on the mission and the information provided, ICOMOS considers that criterion (v) offers the strongest opportunity to further develop this proposal, and that criterion (iii) might also be possible, depending on the direction of further studies and documentation. As discussed above, further work will be needed in relation to a number of critical aspects, including:

- Clearer definition of the key focus of the proposed nomination;
- Comprehensive Comparative Analysis;
- Information concerning the specificity of the culture(s) and cultural traditions associated with the identified sites;
- Community engagement, particularly in relation to the need to fully understand and document the nature and extent of current associations and knowledge of reindeer hunting;
- Detailed evidence concerning the human interactions with the environment, including the ways in which the proposed areas can demonstrate these;
- The impact of the climate crisis and the management and mitigation measures that are been taken to ameliorate it;
- Clarification of how the wild reindeer are understood within a cultural landscape nomination, including consideration of the potential to apply natural criteria to the wild reindeer, in consultation with IUCN (as discussed below).

Wild Reindeer and Cultural Heritage

The central feature of the proposal is the history and sustainability of wild reindeer in the montane landscape setting. The proposal demonstrates that interaction with people has been a part of the history of the wild reindeer, as demonstrated by the variety of hunting and trapping facilities of different dates. Therefore, this should be presented as part of the narrative, rather than using it as a central focus.

Norwegian wild reindeer populations were on the fringe of extinction at the beginning of the 20th century. In the second half of the 20th century, the number of wild reindeer increased because of careful regulations, protection and monitoring of populations. The establishment of National Parks can be linked in part to a specific objective of sustaining wild reindeer (and other species). Rondane became Norway's first National Park in 1970; it was later enlarged, and the Dovre National Park was established in 2003 to form a comprehensive conservation area (Lauritzen 2011).

The history of wild reindeer in Norway is closely related to the history of reindeer herding. One effect has been that domestic and wild reindeer populations have mixed, resulting in genetic admixture of the mountain reindeer. In terms of the value of the property, this mixing was avoided only in the Dovre-Rondane area (see Photo 1). There, the genetic signature indicates that the herds are the direct descendants of the first wild reindeer to populate the area in the early Holocene (Bevanger and Jordhoy 2004, 88-90).

The present distribution of wild reindeer in Norway can be attributed to human activities. Development has fragmented migration areas and created barriers to the movement of reindeer and other wildlife. Today, there are 23 wild reindeer areas in Norway (Norwegian Institute for Natural Research). The Rondane wintering population is about 4,000 animals and there are about 2,000 wintering animals in the Snohetta area (Bevanger and Jordhoy 2004: 98-101). The wild reindeer populations are carefully monitored and managed to keep the population within sustainable limits. In this context, hunting is carefully controlled. National Parks play a key role in the management system and the wild reindeer population in the Snohetta area has been a particular focus of study during the last 35 years.

The presentation delivered during the ICOMOS mission by the Norwegian Institute for Natural Research (NINA) highlighted three crucial issues: the climate crisis, adaptation and fragmentation of the reindeer herd areas. A significant proportion of the wild reindeer habitat disappeared over the course of the 20th century, and current development impacts are still an issue. Climate change and its impact on changing patterns of snow and ice, and the resulting biodiversity loss, pose a significant challenge for the sustainability of wild reindeer.

As noted in the documentation, the distribution of ancient trapping systems, and their design, scale and age, are a key source for understanding the dynamic history of how wild reindeer used their habitat over the millennia.

The property is located within an area referred to as Norway's National Park Region. In this area, there are a number of National Parks designated to protect and manage outstanding montane landscapes. This is also a key recreational area for the population from southern and central Norway as well as international visitors.

A focus of the research within the National Parks is what is referred to as 'snow patch' archaeology. This is focused on areas with permanent snow and ice cover through the year. With climatic warming, the snow and ice is retreating, with 2019 having a markedly quicker rate of retreat compared to previous years. With this retreat, evidence of human activity at earlier, warmer times is revealed, with notable survival of organic materials. The Oppland County Archaeology Office has been running a research programme since 2006 with systematic survey since 2011. This research has produced internationally important results (e.g. Pilo *et al*. 2018) and major finds are on display in the Norwegian Mountain Museum in Lom (Photo 14). Within Reinheimen National Park, one of the ice patches is used as a visitor attraction to provide information about the nature and impact of climate change. This is run by the Norwegian Mountain Museum.

A focus on the wild reindeer can highlight issues of adaptation and sustainability, and human interaction with the environment when it has become vulnerable under the impact of irreversible change. However, as discussed throughout this report, the linkages between the reindeer and specific cultural traditions needs to be specified and deepened if the State Party intends to develop this proposal as a cultural landscape nomination.

An alternative could be to explore the possibilities of presenting this proposal as a 'mixed' property (according to both natural and cultural criteria). Such a recommendation is outside the mandate of ICOMOS alone and requires an engagement with IUCN to determine its feasibility.

Defining the components and their boundaries

The selection of the components and their boundaries needs further work. As discussed above, while the utilisation of the boundaries of National Parks and Protected Landscapes could provide a legal basis of

protection, the relevance of these boundaries is less clear in relation to the central themes of the interactions and sustainability of wild reindeer.

Based on discussions with the ICOMOS mission, it is clear that 20th century infrastructure developments have served to fragment the traditional migration ranges of the wild reindeer. The related trapping and hunting facilities from different periods in the past are also dispersed within these migration ranges (Photo 13).

An integrated view of the migratory territory of the wild reindeer should be adopted as the core theme of this proposal. This would bring clarity to the definition of the size and extent of the property, and the delineation of components and buffer zones, as well as clarifying the potential attributes. Given the importance of the major valleys between National Park/Protected Landscapes as areas where wild reindeer were trapped in the past, and the overlap with today's communication routes, settlements and visitor facilities, it is important to consider appropriate buffer zones to protect the property.

The proposed review of the extent of the components could bring into consideration additional areas – for example, areas within the currently proposed buffer zone where significant sites are located. In this context, it will be of critical importance that provision is made for consideration of the protection of the property in municipal plans under relevant laws, including the *Plan and Building Act*. This applies particularly to buffer zones, which need to be clearly defined and integrated into municipal plans.

State of Conservation

According to the ICOMOS mission, the state of conservation of the hunting and trapping facilities, which are the current focus of the proposal, appears to be good. In addition, the state of conservation of the landscapes within the National Parks and Protected Landscape areas have a very good to excellent state of conservation, although the input of IUCN would obviously be useful on this point.

Active measures are in place to sustain and improve the state of conservation within the proposed components. One example is at the major visitor access point to the Dovrefjell-Sunndalsfjella National Park at Hjerkinn. Here, the parking area is a filled-in former mining area. The Wild Reindeer Centre at Hjerkinn consists of repurposed military buildings, avoiding the need for further building interventions. Another example is west and downslope from the Snohetta viewpoint and east of the boundary of the National Park, where a former military firing range has recently been closed and rehabilitation is actively under way (Photos 15-17).

ICOMOS considers that areas for further improvement include the establishment of regular maintenance and monitoring programmes that are specifically tied to the values of the proposed cultural landscape.

One issue that was discussed was the question of vegetation changes as a result of climatic amelioration, such as forest expansion to higher altitudes. This will need to be incorporated into the management system to sustain the state of conservation of the proposed areas.

During the mission, the question of an archaeological research framework was discussed. Archaeological survey can result in the addition of new sites which need to be recorded and monitored. On the other hand, archaeological intervention in the form of excavation can create a need for the conservation of a site. Here, the balance between the knowledge gained from the excavation has to be balanced against the potential impact on the state of conservation. In this context, there should be a clear articulation of the major research issues to be addressed and the benefit to knowledge of archaeological excavation within

the property. The system in Norway is that all finds and documentation from archaeological surveys, such as the survey programme recording finds from snow/ice patches, go to the regional university museum, in this case the University of Oslo museum. It is important as part of the management and interpretation of the property that this material is considered as an attribute of the Integrity of the site. Archaeological objects are an important element of the research value of any property.

Protection and Management

As indicated above, the mechanisms to provide protection and management are established. What is lacking is the integration and articulation of those elements which are currently in place into a coherent management system that covers areas currently protected/managed in different ways. Ensuring that the systems of protection and management can be specifically tailored to the values and conservation requirements of the cultural landscape needs attention.

It is clear that there is a system of protection and management for the National Parks. The National Park hubs at Lom and Hjerkinn could provide the basis of an overarching management structure for the property.

The relationship of the project's board to the protection and management system requires clarification. Many questions would come to mind should this proposal be further developed as a World Heritage nomination: Is it intended that the board would continue alongside the formal protection and management systems? If it does, will it serve as an expert advisory/research committee? Currently the board provides a role for local political/community input into the property - how will this be maintained in the future? And finally, how will the areas outside those protected under Norwegian legislation be adequately protected and managed?

The issue of defining the level of sustainable tourism is a key area that does not appear to have been addressed in depth to date, although some provisions are in place within the National Park system. For example, in the Norwegian Institute for Natural Research presentation to the ICOMOS mission, reference was made to the use of GPS tracking in surveys to monitor the movement of visitors as a basis for assisting sustainable management. This demonstrates a broad understanding and appreciation of the need to address issues of visitor capacity and control. The impacts of increased visitor numbers on local communities, roads and traffic was discussed, but the management implications were not reviewed. A detailed and sustainable visitor plan should be prepared as an important and integral aspect of the management system for the proposed components.

At all the visitor centres/museums visited during the ICOMOS mission, including the Wild Reindeer Centre at Hjerkinn, the Norwegian Mountain Centre at Lom and the open air museum at Lesja (Photo 18), the staff were knowledgeable and the exhibitions relevant to the interpretation and understanding of the area. This reflects a readiness to accommodate visitation to a future World Heritage property, if a nomination were to be progressed.

A coherent management plan/system needs to be coupled with a clear interpretation and visitor strategy. This should be manifest in the presentation and interpretation in all visitor materials and exhibitions. It is evident that the National Park (and the Wild Reindeer Centre) logo provides a very clear, well recognised and valued brand of quality. It is employed not just within the parks but more widely. For example, this was seen at the Dovre pitfall system on the wild reindeer migration route between the summer (Dovrefjell-Sunndalsfjella National Park) to the west and winter (Rondane National Park) grazing grounds to the east. This is being presented as a visitor walking attraction (Photos 19-20). It would be important that the branding for the property builds on what is already well recognised, valued and trusted by visitors.

Although this is not a key issue at this early stage in the process, the name of the proposal does not reflect its specific character, attributes, and location, and could be further considered as further work progresses.

6. Conclusion

The ICOMOS Upstream process included a mission and desk reviews to provide early advice concerning two potential proposals for Norway's Tentative List: Várjjat Siida: 12 000 Years of Indigenous Arctic Heritage in northern Norway, and the Reindeer Hunting Area in Dovrefjell in Central Norway. Neither is currently on the Tentative List. The Norwegian Ministry of Climate and Environment gave permission to the Riksantikvaren (The Directorate for Cultural Heritage) to invite ICOMOS to give advice on the potential of these properties. The proposals themselves are therefore at early stages of their development (particularly the Reindeer Hunting Area).

While the hunting, trapping and/or herding of reindeer, and the human/reindeer interactions over time within the Arctic environments, is a shared theme on some levels, the two proposals have distinctive narratives and possibilities. ICOMOS considers that the opportunity to examine them together through the Upstream process has been insightful, and recommends that the State Party consider advancing further work on them through a continued dialogue between the two proposals. It is anticipated that there will be a range of shared benefits and solutions, as well as the need to make clear the distinctions that make each case a valid one (including the need for each Comparative Analysis to clearly consider the other). ICOMOS considers that cooperation between the two proposals could assist to address some issues that are common to both, in particular the development of coherent and adequate integrated protection and management systems.

On the basis of the documentation provided, the opportunity to visit the sites and take part in detailed discussions in the field, and the desk reviews, ICOMOS considers that each of these proposals has some potential to be developed into future World Heritage nominations, and to possibly meet one or more of the criteria detailed in the *Operational Guidelines for the Implementation of the World Heritage Convention*. However, in each case, significant further work to sharpen and re-focus the rationale of the proposal is recommended.

Recommendations

Specific recommendations relating to the Várjjat Siida and Reindeer Hunting Area proposals are outlined throughout the relevant sections above.

ICOMOS considers that each of these proposals could be submitted for Norway's Tentative List following the resolution of key matters outlined in this report. ICOMOS understands that an early statement of intent to this effect from the State Party to the Sámi Parliament as the sponsor of the Várjjat Siida proposal, and to the Project Board of the Reindeer Hunting Area, would be appropriate. This statement would affirm the potential of both proposals, and would give recognition to the significant inputs of time, resources and commitment that the teams responsible for the proposals have invested over prolonged periods of time.

For both Várjjat Siida and the Reindeer Hunting Area, further clarity is required in Tentative List proposals on the proposed Outstanding Universal Value, and each poses some significant challenges. Revision of these arguments should then guide the justification for any future nomination process, including the criteria to be used, statements of Integrity and Authenticity, and an outline of the protection and management requirements. Each will require that the recommendations concerning the Comparative Analyses are implemented. However, beyond the requirements of the Tentative List, it should be recognised by everyone involved that the preparation of a World Heritage nomination can be a long-term process. ICOMOS understands that the State Party does not intend to present nominations during its term

as a member of the World Heritage Committee, and that a revision of the Tentative List is planned. Taking the time to improve these proposals now will be very beneficial to the longer-term work.

In the Comparative Analyses provided as part of the documentation for both proposals, reference is made to the other one. This is inevitable given the current focus of both proposals on human/reindeer interaction over time. However, ICOMOS suggests that these proposals need not necessarily be seen as competing with each other, based on recommended revisions to the focus of each proposal to demonstrate their distinctiveness, and supported by deepened comparative analyses, and presentation of relevant attributes, as discussed in the above sections.

ICOMOS acknowledges that the Upstream process is taking place at early stages in the process of developing World Heritage proposals, and commends the State Party for its initiative and commitment to the World Heritage Convention in this regard. ICOMOS notes that sizeable areas of further work are needed (as discussed above) to develop the proposals further – including the selection and delineation of components and buffer zones, demonstration of Integrity and Authenticity, consideration of adequate, integrated protection and management systems, and so on. In this context, discussions in the field were helpful in eliciting details on the current situation within the proposals. ICOMOS has included details arising from the mission in relation to these aspects in order to assist the future processes of developing World Heritage nominations.

ICOMOS notes the inclusion of a detailed section on World Heritage in Norway's Cultural Heritage Policy (Chapter 4.8 World Heritage; White Paper 35 (2012-2013), The Cultural Heritage Policy). Recognising that the Ministry of Climate and Environment, the Norwegian Directorate for Cultural Heritage (Riksantikvaren) and the Norwegian Environment Agency have the main responsibility for the implementation of the World Heritage Convention, the objective in the White Paper is that implementation would actively involve all stakeholders and sectors working together. In discussions during the ICOMOS mission, it was clear that several actions to achieve this objective have been undertaken. These include an Advisory Board for each World Heritage property, an association for the interests of the World Heritage properties (Norges Verdensarv), and a yearly site managers' meeting with the Riksantikvaren. There is also a yearly conference for all stakeholders in the Nordic countries (Norway, Sweden, Finland, Denmark and Iceland), with the Nordic World Heritage Association assisting in the development of common Nordic policies and practice in the management of World Heritage properties.
ICOMOS recognises the constraints and challenges referred to in the White Paper in terms of managing existing World Heritage properties and those on the Tentative List, and the understandable priority given by the Norwegian authorities to protecting already-inscribed World Heritage properties. ICOMOS also notes that there is a commitment in the White Paper that the State Party will ensure that 'Norwegian World Heritage properties have coordinated and holistic management plans'. It is also noted therein that 'work is in progress to develop better and more operative plans and…to ensure that these are more systematic and can be used by all the relevant stakeholders.' These are important directions for both Várjjat Siida and the Reindeer Hunting Area. The State Party might wish to develop guidance for its Tentative List properties concerning the means of developing integrated management systems in the context of Norwegian legislation and national spatial planning policy.

Annexe 1: Terms of Reference – Upstream Process

The objectives of the Upstream Process are to provide support at an early stage for sites which may have the potential to be inscribed on the World Heritage List, in collaboration with the States Parties, and before the nomination dossier is drafted. It therefore involves a feasibility study to ensure whether or not a solid case can be made for the nomination and if so to identify and programme any work that needs to be done to go ahead with the nomination.

The Contractor will undertake the following actions:

1. Appoint an ICOMOS Advisor responsible for the upstream report;

2. Appoint two competent experts to effectuate an advisory mission in 2019 [11-19/20 August 2019], and further refine precise terms of reference for the Advisory Mission;

3. The appointed experts representing the Contractor shall discuss with relevant stakeholders and gather information about the current situation in connection with the potential nominations, and shall assess what is currently being proposed for nomination and the strength of the cases for their potential Outstanding Universal Value (OUV), taking into account the following:
    a) The parameters for the comparative analysis needed to understand more fully the potential for successful nominations;
    b) The extent of necessary survey, further research and documentation (especially to support the comparative study);
    c) The potential attributes of OUV and how these might relate to the requirements of authenticity and integrity;
    d) The logic of the boundaries in the context of the suggested attributes;
    e) Issues relating to the overall protection, conservation and management of the properties, including Indigenous governance approaches (where relevant).

    The advisory mission experts should prepare a mission report on the findings of their visits and the outcomes of meetings and provide recommendations which will be integrated into an Upstream report for the State Party;

4. Appoint specialists to prepare desk reviews;

5. The Advisor shall prepare the Upstream report including recommendations from the advisory mission and contributions from desk reviews. The report will consider whether robust cases for OUV might be made, advise on the next steps to be taken in terms of (a) through (e) above, and possibly also on what types of expertise might be needed to advance these, including the drafting of nomination dossiers.

6. The Contractor shall ensure the Upstream report is reviewed by the ICOMOS World Heritage Panel before it is submitted to the State Party representative.

Annexe 2: ICOMOS Advisory Mission Terms of Reference

The objectives of the Upstream Process are to provide support at an early stage for sites which may have the potential to be inscribed on the World Heritage List, in collaboration with the States Parties, and before the nomination dossier is drafted. It therefore involves a feasibility study to ensure whether or not a solid case can be made for the nomination and if so to identify and programme any work that needs to be done to go ahead with the nomination.

The Advisory Mission is one component of the upstream assistance to Norway on the Tentative List property of Várjjat Siida. At this stage, the proposal has been revised by the Sámi Parliament in Norway (Sámediggi), based on earlier advice by ICOMOS. The proposal consists of four sites on the Varanger Peninsula and the land bridge connecting the Peninsula to the mainland. The four sites are as follows:

1. Ceavccageag i/Mortensnes:
   A settlement site that has been continuously occupied for 12,000 years and an adjoining burial place used from 1000 BC to 1600 AD.

2. Noidiid earru/Kjøpmannskjøle:
   A wild reindeer hunting site, including two interconnected corrals with several drive lines, meat caches and bow hunt hides.

3. Gollevárre:
   Pitfall system for wild reindeer hunting and autumn hunt settlement site.

4. Ruovdenjunlovta/Gropbakkenge:
   Site of 89 pit houses from 4500 B.C.

The focus of the proposal is on the very old Arctic sites of a hunting and fishing culture, the ancestors of the Sámi; and the future nomination would be developed according to World Heritage criteria (iii), (v) and (vi) as follows:

Criterion (iii), *bear a unique or at !least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared,* is fulfilled by the combined sites being a unique testimony to:

- the last hunting culture of the European mainland and the deep tradition it was the outcome of,
- the robust adaptation of hunting and fishing societies to natural, cultural and social changes in an Arctic border zone,
- how indigenous cosmology and religion is interwoven with Arctic nature,
- an exceptional continuity of religious and ritual practices linked to death and regeneration.

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

- interaction with Arctic nature, together with a remarkable sustainability of adaptive strategies and settlement;
- the intimate relation between man and reindeer, both wild and domesticated; and of how this

relationship interacts with nature and landscape;
- the transition from hunting and fishing economy to reindeer husbandry and the incorporation of small scale Arctic farming.

Criterion (vi), *be direct/y or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance,* is fulfilled by the combined sites being

- directly and tangibly associated with the livelihood, dwelling, religion and cosmology of an indigenous people of the Arctic, and thus giving an outstanding and profound insight into these aspects of their life,
- directly and tangibly associated with the rich and unique traditional knowledge of the Varanger Sámi and their tales, myths, joiks and place names,
- crucially related to processes that proved decisive for the formation of key features of Sámi culture.

The mission is to be organised according to the seasonal ability to visit the area and should visit the four components as well as any other relevant sites on the Varanger Peninsula. The mission should also meet with key decision makers, Indigenous community representatives and other cultural and natural heritage experts.

The following issues should be considered and discussed by the mission team:

- Availability of the evidence that can support the proposed justification of Outstanding Universal Value, and in particular, the cultural criteria that are proposed (as well as any other criteria that are considered potentially relevant);
- The strength and justification of the selection of the four components with a view to their respective contribution to the proposed justification of Outstanding Universal Value;
- The degree to which the archaeological evidence at the four component sites is augmented by evidence drawn from historical and intangible cultural heritage sources, and from interactions with the landscape and natural phenomenon over time;
- Pertinent issues to the evaluation of authenticity and integrity of the proposed property;
- Parameters for a comparative analysis with other Arctic hunter-fisher-gatherer cultures (to be undertaken by the State Party);
- Potential gaps and priorities for further research, including comparative analysis relevant to the proposed justification of Outstanding Universal Value;
- The effectiveness of the governance arrangements for the proposed property that are provided by the Government of Norway, and the Sámi Parliament in Norway (Sámediggi), including legal protection and management;
- The means by wish “free, prior and informed consent” of the Sámi people can be confirmed prior to the submission of a World Heritage nomination;
- Any other noted issues that could be relevant to a future World Heritage nomination.

The conduct of the Advisory Mission will be subject to the ICOMOS requirements for World Heritage work and confidentiality.

The report of the Advisory Mission should be forwarded to the ICOMOS International Secretariat by the 20th of September 2019 will be peer reviewed by ICOMOS, and will be incorporated into an upstream report to the State Party, together with other investigations undertaken by ICOMOS.

Annexe 3: ICOMOS Advisory Mission – Programme

	Location	Event/Participants
11. August	Thon hotell Panorama, Rådhusgata 7B, Oslo	Arrival to Oslo - Nancy Pollock Ellwand, Gabriel Cooney
12. August 9-13.15	Riksantikvaren, Dronningensgate 13 • Jostein Bergstøl, archaeologist at Museum of Cultural History • Christoffer Dahle, archaeologist at the County of Møre and Romsdal • Lisbeth Skogstrand, archaeologist at Riksantikvaren • Heidi Vognild, Are Endal Sørensen, the Norwegian Wild Reindeer Centre, North [12-13 August] • Olav Strand, Scientist [12-13 August] • Mai Bakken Director Norwegian Mountain Centre [14 August] • Espen Finstad, County archaeologist [14 August]	Lecture about cultural heritage related to hunting heritage, Norwegian Cultural heritage Management Nancy Pollock Ellwand, Gabriel Cooney, Hilde Løveid Varvin, Elin Dalen, Trond Taugbøl The Wild Reindeer Hunt Board will participate in the programme from the evening of 12 to 16. August • *Per Dag Hole*, Chairman (former Mayor in Lesja municipality) • *Kristin Hille Valla*, Board Member (former County Govenor in Oppland County) • *Egil Mikkelsen*, Board Member (Professor in Archaeology) • *Kristin Prestvold*, Board Member (Senior Adviser Trøndelag County Council) • *John Olsen*, Board Member (Director, the Vest-Agder Museum) • *Raymond Sørensen*, Board Member (CEO; the Norwegian Wild Reindeer Centre North) • *Bengt Fasteraune*, Board Member (Member of Parliament)
14.02 - 18.39	Train from Oslo to Hjerkinn	
19.30	Hotel at Kongsvoll	Dinner with local and regional mayors; board for the project "Wild reindeer hunt and pitfall trapping"
13. August	To Hjerkinn	
09.00-12.00		Presentation
12.00-13.00		lunch
13.00-15.00	Walking to Viewpoint Snøhetta	Presentation - the wild reindeer http://nvs.villrein.no/viewpoint-snhetta/
15.00	Bus to Grimsdalen	Walking in Grimsdalen pitfall and trapping- systems https://www.visitnorway.com/places-to-go/eastern-norway/rondane-national-park/grimsdalen/?lang=uk
19.30	Hotel Gammel-Kleppe	Dinner and staying over night
14. *August*		Tour of the museum, presentation
10.00-12.00	To Lom, The Norwegian Mountain Centre	https://www.norskfjellsenter.no/home
12.00-13.00	Lunch	
13.00-16.00	Slådalen	Excursion pitfall and trapping-systems http://www.norark.no/innsikt/verket-eit-storslege-reinsfangstanlegg-i-lesjafjella/
16.00-18.00	To Lesja Open Air Museum	Dinner https://gudbrandsdalsmusea.no/en/avdelinger/lesja-bygdemuseum
	Dombås Hotel	Staying over night
15. August	Dovre	Excursion, pitfalls
09.00-11.30		http://nasjonalparkstyre.no/Dovrefjell/Verneomrade/
11.30-12.30	To Oppdal	The Vang Burial Site https://www.youtube.com/playlist?list=PLirza8ts5IcudSKl4t0P4PNSPQ5XMQRt2
12.30-13.30	Lunch	Oppdal
15.00-19.33	Train from Oppdal to Gardermoen	Radisson Blu Airport Hotel Dinner
08.00- 11.30	Flight to Vadsø	
12.00-13.00	Lunch at hotel	
13.00-14.00	Driving to Varangerbotn	[16-18 August]
14.00-17.30	Welcome and talks, presentations, exhibition at the Museum	• *Aili Keskitalo*, President, the Sami Parliament • *Andreas Stångberg*, Head of Section Sami Parliament

		• *Thor-Andreas Basso*, Adviser Sami Parliament • *Audhild Schanche*, Senior Adviser Sami Parliament • *Bjørnar Olsen*, Professor at the Artic University of Norway • *Jan Ingolf Kleppe*, Team Manager Finnmark County • *Kjersti Schanche*, Farmer and Judge in The Finnmark Land Tribunal, will attend the excursions. • *Mariann Vollmann Magga*, Director at Varjjat Sami Museum • *Ingvild Bjørnå Pettersen* Museum manager
18.00-19.30	Driving back to Vadsø Dinner	• *Mayor Frank Ingilæ* in Tana Municipality
17. August 09.00-09.30	Driving to Ceavccageađgi/ Mortensnes	
09.30-14.00	Ceavccageađgi/ Mortensnes	Excursions, presentations, lunch
14.00-19.00	To Gollevárri by helicopter Excursion	• *Mayor Frank Ingilæ*, Tana Municipality
19.00- 19.30	To Vadsø	By car
20.00	Dinner in Vadsø	• *Mayor Geir Knutsen* in Båtsfjord Municipality
18. August	Driving to Komagelv,	• County Mayor *Ragnhild Vassvik*
08:00-10:00	By helicopter to Noiddiidčearru	• Mayor *Knut Store,* Nesseby Municipality
10.00-14.00	Excursion, lunch to bring, bon fire	• Mayor *Geir Knutsen,* Båtsfjord Municipality
14.00-16.00	Helicopter transport and by car back to Vadsø	
16.00-17.00	Summing up at Hotel in Vadsø	
18.52- 22.35	Flight to Gardermoen via Kirkenes	
19.00	Dinner for Gabriel, Trond and Elin	
19. August 08.38-12.10	Flight to Gardermoen	Gabriel, Trond, Elin

Annexe 4: Mission Participants

Várjjat Siida

Dato	Klokkeslett	Sted / aktivitet	Deltakere
16. august	14:00 – 18:00	Varanger Samiske Museum. Velkomst og taler, joikeinnslag, presentasjon av Várjjat Siida, diskusjon, omvisning på museet.	Aili Keskitalo, sametingspresident Ragnhild Vassvik, fylkesordfører Knut Store, ordfører i Nesseby Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Geir Mortensen, Tana og Varanger museumssiida Mariann Wollmann Magga, Tana og Varanger museumssiida Ingvild Bjørnå Pettersen, Varanger Samiske Museum Kjersti Schanche, Sametinget Andreas Stångberg, Sametinget Thor-Andreas Basso, Sametinget Audhild Schanche, Sametinget
	18:00	Varanger Samiske Museum. Middag.	Aili Keskitalo, sametingspresident Ragnhild Vassvik, fylkesordfører Knut Store, ordfører i Nesseby Frank Martin Ingilæ, ordfører i Tana Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Geir Mortensen, Tana og Varanger museumssiida Mariann Wollmann Magga, Tana og Varanger museumssiida Ingvild Bjørnå Pettersen, Varanger Samiske Museum Andreas Stångberg, Sametinget Thor-Andreas Basso, Sametinget Audhild Schanche, Sametinget

17. august	09:00-13:30	Ceavccageaðgi/Mortensnes. Omvisning, presentasjon og lunsj.	Aili Keskitalo, sametingspresident Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Geir Mortensen, Tana og Varanger museumssiida Mariann Wollmann Magga, Tana og Varanger museumssiida Ingvild Bjørnå Pettersen, Varanger Samiske Museum Kjersti Schanche, Sametinget Andreas Stångberg, Sametinget Thor-Andreas Basso, Sametinget Audhild Schanche, Sametinget
	13:30 – 19:30	Ceavccageaðgi – Gollevárri, transport m/bil og helikopter, omvisning, kaffebål.	Aili Keskitalo, sametingspresident Frank Martin Ingilæ, ordfører i Tana (går opp til fots) Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Andreas Stångberg, Sametinget Thor-Andreas Basso, Sametinget (går opp til fots) Kjersti Schanche, Sametinget
	20:00	Hotell Scandic, Vadsø. Middag.	Aili Keskitalo, sametingspresident Geir Knutsen, ordfører i Båtsfjord Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantiikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Frank Inge Sivertsen, Varangerhalvøya nasjonalparkstyre Geir Østereng, Fylkesmannen i Finnmark Jan Ingolf Kleppe, Finnmark fylkeskommune Andreas Stångberg, Sametinget Audhild Schanche, Sametinget

18. august søndag	08:00 – 16:00	Noiddiidčearru. Transport, omvisning, medbrakt lunsjpakke.	Aili Keskitalo, Sametingspresident Geir Knutsen, ordfører i Båtsfjord Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Hilde Løveid Varvin, Riksantikvaren Frank Inge Sivertsen, Varangerhalvøya nasjonalparkstyre Geir Østereng, Fylkesmannen i Finnmark Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Kjersti Schanche, Sametinget Andreas Stångberg, Sametinget Audhild Schanche, Sametinget
	16:15	Vadsø hotell. Oppsummering.	Nancy Pollock Ellwand, ICOMOS Gabriel Cooney, ICOMOS Elin Dalen, Riksantikvaren Trond Taugbøl, Riksantikvaren Hilde Løveid Varvin, Riksantikvaren Jan Ingolf Kleppe, Finnmark fylkeskommune Andreas Stångberg, Sametinget Audhild Schanche, Sametinget

Reindeer Hunting Area

Participants

		Date 12.8	13.8	14.8	15.8
ICOMOS	prof. **Nancy Pollock Ellwand** (Canada) prof. **Gabriel Cooney** (Ireland)				
Directory of cultural heritage	**Hilde Løveid Varvin,** section leader **Trond Taugbøl,** senior consultant **Elin Dalen,** senior consultant				
"Reindeerhunting as world heritage" – the board	**Per Dag Hole,** leader **Kristin Hille Valla,** former county governor Oppland **John Olsen,** leader Agder museum **Egil Mikkelsen,** professor emeritus (UiO) **Raymond Sørensen,** leader Norwegian wild reindeer center **Kristin Prestvold,** archaeologist Trøndelag county				
"Reindeerhunting as world heritage" – secretary	**Trond Stensby**				
Guests	**Sigurd Tremoen**, vice county governor Innlandet **Rigmor Brøste**, county governor Møre og Romsdal **Kirsti Welander**, mayor Oppdal **Oddny Garmo**, mayor, Dovre **Mariann Skotte**, mayor Lesja				
Presenters	**Heidi Vognild,** Norwegian wild reindeer center **Are Endal Rognes,** Norwegian wild reindeer center **Olav Strand** researcher NINA / Norwegian wild reindeer center **Mai Bakken, leader** The norwegian mountain museum **Espen Finstad,** archaeologist Oppland county (recorded presentation) **Ingvill Dalsegg,** vice mayor Oppdal **Runar Hole** (archaeologist),				

Annexe 5: IUCN Red List Entry *Rangifer tarandus,* reindeer

The IUCN Red List of Threatened Species™
ISSN 2307-8235 (online)
IUCN 2008: T29742A22167140

Rangifer tarandus, Reindeer

Assessment by: Gunn, A.

View on www.iucnredlist.org

Citation: Gunn, A. 2016. *Rangifer tarandus. The IUCN Red List of Threatened Species 2016*: e.T29742A22167140. http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T29742A22167140.en

Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Cetartiodactyla	Cervidae

Taxon Name: *Rangifer tarandus* (Linnaeus, 1758)

Synonym(s):

- *Cervus tarandus* Linnaeus, 1758

Regional Assessments:

- Europe

Common Name(s):

- English: Reindeer, Caribou, Peary Caribou
- French: Renne
- Spanish: Reno

Taxonomic Notes:

The world's Caribou and Reindeer are classified as a single species *Rangifer tarandus*. Reindeer is the European name for the species while in North America, the species is known as Caribou. Here we use either name or *Rangifer*.

Identification of subspecies has changed over time (Banfield 1961, Geist 2007) and currently, Grubb (2005) lists 14 sub-species of which two are extinct: *eogroenlandicus* and *dawsoni*, however, the latter may have been an island dwarf form (Byun *et al.* 2002). In Russia, the use of subspecies differs from Grubb (2005) as *angustirostris* is recognized but not *buskensis* (I. Mizin pers. comm.). The subspecies are distinguished largely on skeletal and skull measurements, antler architecture and behaviour. The major groupings of subspecies are Boreal forest, continental tundra and high Arctic island. Based on current abundance, continental tundra caribou are the most numerous (56%) relative to mountain (19%), the forest (14%) and Arctic island (11%).

The current diversity of *Rangifer* resulted from local adaptations, which followed large-scale changes in distribution as continental glaciations advanced and retreated during the Pleistocene (Yannic *et al.* 2013). Analyses of mitochondrial and nucleotide DNA reveal that glaciations divided *Rangifer* into two lineages. The ice sheets were more extensive in North Amer*ica.* Thus, the Euro-Beringia lineage was restricted to Alaska while the North American lineage was restricted to south of the ice sheets. The Euro-Beringia lineage is genetically the most varied and is widely distributed from Eurasia to northwestern America also including Greenland, Svalbard and the Canadian Arctic island archipelagos (Yannic *et al.* 2013). The second lineage, the North American lineage (essentially woodland caribou), has less genetic variation and a more restricted distribution limited to Newfoundland/Labrador and eastern Canada. After deglaciation about 10,000 years ago, changing distribution during recolonization, secondary contact between the two lineages occurred in central and western Canada (Weckworth *et al.* 2012, Yannic *et al.* 2013).

Genetic variability is typically high among the larger migratory herds of migratory tundra Caribou (Zittlau

http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T29742A22167140.en

2004) because the effective population size is large and geographic barriers are largely lacking. Elsewhere in the mountains, genetic variation reveals a complex history influenced by events including ancient volcanic eruptions, founder events, geography and changing abundance and distribution of neighbouring herds (Kuhn *et al.* 2010, Serrouya *et al.* 2012). On the arctic islands, genetic variation is reduced because those populations have been through severe reductions in abundance with consequent genetic bottlenecks and genetic drift (Zittlau 2004, Petersen *et al.* 2010).

Dispersal whether innate or environmental is largely unrecorded in *Rangifer* except at the scale of genetic migration. DNA analyses have revealed low rates of male-biased genetic flow between neighbouring and geographically dispersed *Rangifer* (Boulet *et al.* 2005, Roffler *et al.* 2012).

The subspecies designations are based on an outdated taxonomy and are inconsistent with current understanding of evolutionary relationships and ecology (Flagstad and Røed 2003, Zittlau 2005, Røed 2005). However, in the context of conservation and management, recognizable and credible 'conservation units' or 'evolutionary significant units' are essential. In Canada, for example, COSEWIC (2012) assessed all available information to create 12 designatable units to recognize variability in form, ecology and genetics previously combined in four sub-species. We will refer to recognizable conservation units throughout this assessment as these are the basis for estimating abundance. Then we have summed the subspecies or conservation units to assess *Rangifer* at the species level.

Assessment Information

Red List Category & Criteria: Vulnerable A2a ver 3.1

Year Published: 2016

Date Assessed: December 24, 2015

Justification:

In 2015, *Rangifer* tarandus is categorized as Vulnerable A2a due to an observed 40% decline over three generations (about 21-27 years) across the circum-Arctic countries, when *Rangifer* declined from about 4,800,000 to 2,890,410 individuals. Uncertainty is high about the extent of the decline and the underlying mechanisms except at a general level. Extent and causes of the decline vary with region and subspecies. Causes of declines include habitat changes, which do not appear reversible within three generations.

The species is largely migratory and gregarious and is thus susceptible to declines as a result of landscape changes, including the establishment of barriers (related to human activities and infrastructure development), which can disrupt migration routes and destroy seasonal habitat. Unregulated hunting, time lags in management and habitat alteration leading to habitat loss, fragmentation, and changes in predation are mechanisms for declines. Furthermore a warming climate will have complex and interacting effects and concerns are strong about a warmer climate exacerbating effects of disease and parasites including the possibility of epidemics. Additionally, despite monitoring, uncertainty remains about abundance and trends as well as trends in habitat loss which suggests the observed declines in *Rangifer* abundance and habitat may continue over a further three generations.

Previously Published Red List Assessments

2008 – Least Concern (LC) – http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T29742A9528324.en

1996 – Lower Risk/least concern (LR/lc)

1965 – Status inadequately known-survey required or data sought

Geographic Range

Range Description:

Rangifer is widespread occurring between 50 and 81 degrees of latitude around the Arctic in the northwestern U.S., Alaska, Canada, Greenland, Norway, Finland, Russia and Mongolia. The global distribution was expanded by introducing domesticated Reindeer which became feral to Iceland, and to islands in the southern Atlantic Ocean (Kerguelen, Falkland and until recently, South Georgia Island). Greenland, Finland, Mongolia, Norway and Russia also have domesticated Reindeer which have genetically and or demographically contributed to wild Reindeer populations (Røed 2005, Røed *et al.* 2014, C. Cuyler pers. comm. 2015). Those populations which include domesticated Reindeer are not included in this assessment.

The geographic range has contracted and become fragmented during the previous hundred years mostly due to hunting and landscape changes with increased settlement, agriculture, forestry and the introduction of Reindeer herding. Analyses of current and historic distribution are available at national scales for some countries. By the early 1900s, forest Reindeer had disappeared from Finland (http://www.suomenpeura.fi/en) although in the 1950s, a small area was re-colonized from neighbouring Russia. In Norway, the cumulative ranges have contracted to about half the size of the historic range (Lund 2004). Russian Reindeer distribution has contracted to the north and west and become fragmented over 85% its range (Syroechkovski 2000).

The Canadian geographic ranges of mountain and Boreal Caribou have contracted: over the last 150 years, Boreal Caribou have been extirpated from about half of their former range: approximately 60% in Alberta, 50% in Ontario, and 40% in British Columbia (Hummel and Ray 2008, COSEWIC 2014). In eastern Canada, the current Atlantic-Gaspésie population is the remnant of a larger distribution that included much of northeastern Canada and USA but which disappeared by the early 1900s (COSEWIC 2014). For mountain Caribou in BC, by 2002, 40% of their annual range had shrunk (COSEWIC 2014).

Less information has been compiled regarding changes in the current historic distribution for continental tundra Caribou, and is complicated by the 40-60 year cycles of abundance with contractions and expansions of distribution. Historic declines in Alaska of the Fortymile herd between the 1920s and 1970s, led to a contraction of range size of 25%. The risk is that contraction of the historic range is relatively poorly documented and consequently the current distribution is considered ‘normal’, this could be considered an example of a shifting baseline (Pauly 1995).

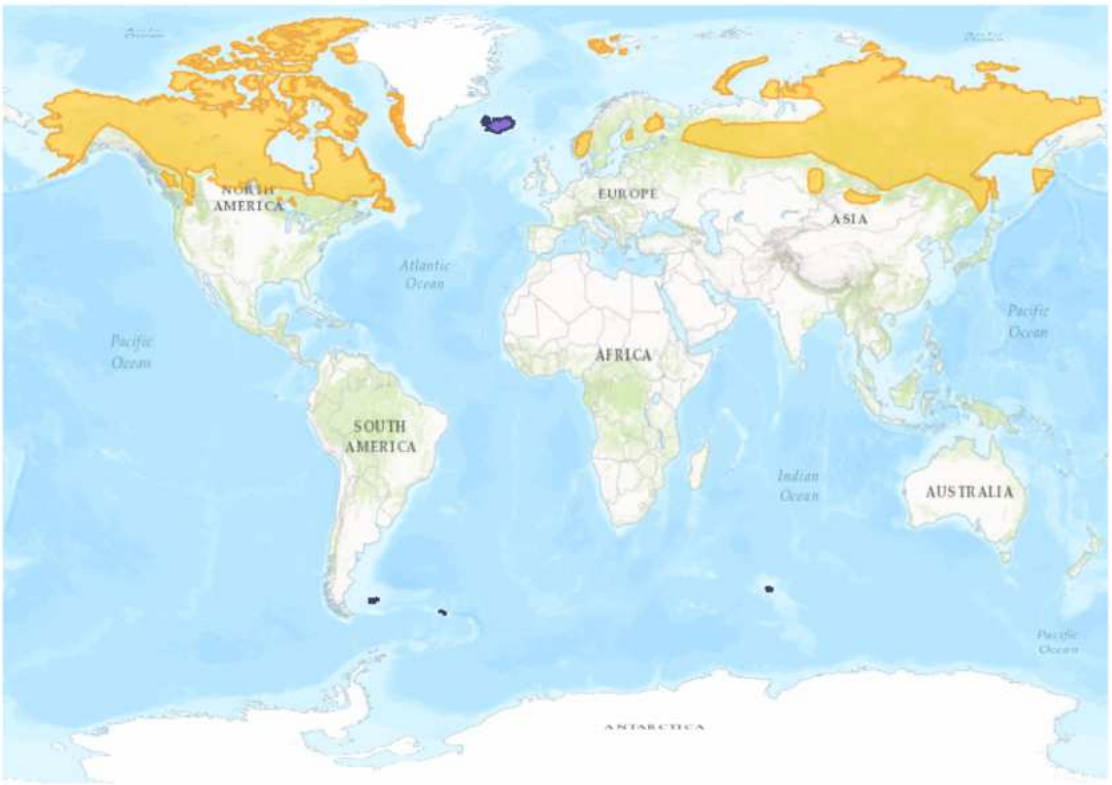
Country Occurrence:

Native: Canada; Finland; Greenland; Mongolia; Norway; Russian Federation; United States

Introduced: Falkland Islands (Malvinas); Iceland; South Georgia and the South Sandwich Islands

Distribution Map

Rangifer tarandus



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kilometer

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

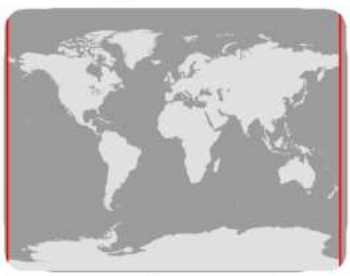
Range

Extant (resident)

Introduced

Compiled by:
IUCN (International Union for Conservation of Nature)

NE DD LC NT VU VULNERABLE EN CR EW EX



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T29742A22167140.en

Population

Overall across the circum-arctic countries, the trend is an inferred 40% decline over the previous 10-25 years, when *Rangifer* declined from about 4,800,000 to 2,890,410. There are national, but no global, databases to assess conservation status, although the Circum-Arctic Rangifer Assessment Monitoring and Assessment (CARMA) network tracks trends in migratory tundra *Rangifer*. For this IUCN assessment, we used data from journal publications, web sites, published and unpublished reports and expert knowledge. We did not use in-filling methods to bring estimates to the same reporting period as survey methodologies varied from expert opinion to ground and aerial survey-based estimates. Consequently, abundance estimates have variable measurement error (as described by, for example Baskin 2005, Cuyler 2007, Bjerketvedt *et al.* 2014). Estimates of abundance vary as to whether adults only are reported. Estimating population size is often infrequent which influences describing trends over 3 generations (21-27 years) and we were occasionally limited to assessing trend over 10 years. Generation time is estimated at 7-9 years based on barren-ground Caribou adult survival and fecundity as input to the IUCN generation length calculation which uses mean survival values (generation length = (1/mortality rate) + age at first reproduction). For subpopulations with adult survival data, a similar range of values is calculated. However, calculation of generation time is complicated (Hernandez-Suarez 2011), as it depends on the population age structure and average age.

As well as the 40% overall decline during the past 10-30 years, the abundance of wild Reindeer and Caribou has declined since historic times (Bergerud 1974, Syroechkovski 2000, Festa-Bianchet *et al.* 2011) especially for forest and mountain *Rangifer*. In Russia, in the late 1800s, there may have been 5 million Caribou which rapidly declined to about 600,000 by about 1900 and 250,000 by the 1960s before recovering to peak in the 1990s (T. Sipko pers. comm. 2015). For the continental tundra *Rangifer*, any question of historic declines is complicated by the longer-term (decadal) cycles in abundance (Meldgaard 1986, Zalatan *et al.* 2006, Joly *et al.* 2011). Generally, many continental tundra herds peaked in the 1990s then declined. The current declines are less than historic minimums for several Canadian continental tundra populations despite management actions such as hunting restrictions. In Norway, abundance has recovered since hunting caused historic declines until hunting was halted in 1902-06. However, it is uncertain if the current declines are less or similar to the historic levels.

Typically, declining abundance and distribution can fragment populations. However, trends in numbers of *Rangifer* populations are complicated as their definitions are not standardized. While populations (herds) are relatively easily recognized from calving and post-calving to rut movements for continental tundra and mountain Caribou, terminology is more problematic for forest Reindeer and boreal Caribou. Additionally, fragmentation and introductions have altered population numbers so any relationship between overall declines and numbers of populations is unclear. Three examples reveal the complexity. Firstly, in Norway, the two or three large historic sub-populations of mountain reindeer historically declined by the early 1900s and recovered but into a landscape increasingly fragmented by roads, railways, energy production plants and tourist resorts. The developments blocked ancient migration routes (Panzacchi *et al.* 2013a) and the former two or three populations became fragmented.

The second example of complexity in interpretation for trends in populations is on Canada's island of Newfoundland, 12 natural populations were the basis for an additional 20 introduced populations (COSEWIC 2014). The third example, is in Alaska, during peak numbers, two small mountain herds 'disappeared' when a larger and increasing neighboring herd expanded their range and overlapped the

smaller herd's range (Harper 2013). The larger migratory tundra populations mostly persist for decades, even as their abundances increases and decreases (Gunn *et al.* 2012).

Alaska: Overall, the total number in 27 herds for coastal tundra and mountain Caribou (Harper 2013) have declined about 40% in abundance from approximately 1.1 million Caribou at the peak of herd sizes (1994±2.3SE) to 660,000 (2010±0.03SE). Currently, most (20) herds are 2,500 Caribou or less while the other 7 herds are 30,000 or more. Six of the smaller herds may have increased but uncertainty remains about the earlier estimates, three of the larger mountain herds have increased (with predator and hunting management) while three of four coastal tundra herds are declining. Most monitoring is annual for survival and productivity and frequent estimates of herd size for the larger herds.

Canada: Overall, Caribou have declined in abundance over three generations by an average of 52% to the current (2015) estimated 1.3 million Caribou. The decline is unevenly distributed among the different types of Caribou. Monitoring boreal Caribou is mostly dependent on monitoring mortality and productivity while population abundance is directly estimated for mountain and migratory tundra caribou from sample counts during calving, post-calving or fall. However, the frequency of monitoring varies considerably.

Boreal Caribou have continued to decline since 2002 despite conservation efforts to mitigate the cumulative impacts of oil and gas development, forestry, and other land use activities. For 37 of 52 boreal subpopulations where trend data are available, 81% are in decline. Population surveys prior to 2002 estimated that there are 33,000 forest-dwelling caribou in the boreal population and in 2014, an ongoing decline of >30% of the boreal Caribou is inferred.

Caribou on the island of Newfoundland declined by 68% since 2002 for the 15 natural and 22 introduced local populations. A remnant of the former southern extent of Caribou in Canada's southeast, the Gaspésie Caribou declined further since 1950 to about 120 adults despite being in a national park and predator removal.

Overall for mountain Caribou, status is uncertain as trend is measured for 18 of 45 sub-populations over the last 5 years representing approximately 54% of the current population, 9 are declining and only two are increasing. Of concern is that 26 herds are <500 individuals, 13 are <250 and two have disappeared (COSEWIC 2014).

On Canada's arctic islands, the overall trend for Peary Caribou, *R. t. pearyi*, is a decline to about 14,000 individuals by 2014 from 22,000 estimated in 1987. Historically, Peary Caribou abundance was higher being an estimated 25,845 for the High Arctic Islands in 1961 and about 18,000 for the mid-arctic islands in 1973-1980 but infrequent monitoring impedes assessing total numbers (COSEWIC 2004, SARC 2012). Peary Caribou occur as 4 populations (island groupings) one of which has essentially disappeared since the 1980s, one has declined and stabilized at low numbers while the north-western island grouping has been through two sharp declines followed by recovery. The trend for the northeastern and southeastern populations is uncertain given a low frequency of abundance estimates. An additional type of Caribou is Dolphin and Union (*R.t. groenlandicus* x *pearyi*) on the large mid-arctic island of Victoria. The population has not recovered to the abundance recorded in the early 1900s. Currently the population is stable or declining at 27,000 between 1997 and 2007 (SARC 2013, Dumond and Lee 2013).

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Sixty percent of Canadian Caribou are barren-ground Caribou which in 2013, numbered an estimated 729,000 individuals in possibly 11 subpopulations. Six populations are regularly monitored. Since the peak in the mid-1990s, the overall decline has been approximately 45-50%, with six subpopulations having declined by 70-98% from peak populations in the mid-1990s. Caribou on Baffin Island declined from over 100,000 to about 5,000 and for the Bathurst herd in the central Arctic Canada, the decline was from 460,000 in 1986 to about 20,000 in 2015 with the decline accelerating in the later stages (SARC 2013, CBC 2015) Two of the largest herds of migratory Caribou are the woodland Caribou sub-species although they are strongly migratory with aggregated calving. The George River declined from a peak abundance of 776,000 in 1993 to 14,200 in 2014 while the Leaf River peaked at 638,000 in 2001 and had declined 32% to 430,000 by 2011 (S. Coté pers. comm. 2014)

Greenland:
The overall trend for Caribou on Greenland's west coast for 2004-2015 is an approximate 30% decline and, conservatively, the total number of Caribou in 2015 is about 73,430 excluding three populations with feral Reindeer mixed with the Caribou (Cuyler 2004, 2015). Caribou abundance is cyclic with two cycles since 1721 with short-lived peak abundance, rapid decline and extended periods of scarcity that may last a century or more before numbers recover (Cuyler *et al.* 2011). The most recent peak may have occurred in the late 1990s but changes in census techniques obscure trends (Cuyler *et al.* 2011, Cuyler unpublished). Possible causes of the previous abrupt declines include severe weather involving the entire coast in combination with overgrazed ranges, and possibly, hunting (C. Cuyler pers. comm.). Although only the four largest populations are monitored for abundance through aerial surveys, all 11 sub-populations have annual harvest monitoring (Cuyler 2015).

Norway: There are approximately 6,000 wild Reindeer in four populations restricted to the mountains of southern Norway (Strand *et al.* 2012, O. Strand pers. comm.). Their numbers over three generations are relatively stable based on 3 of the 4 populations which are regularly monitored through minimum counts. Also in the mountains of Norway are another 8 populations which were previously mixed with semi-domesticated reindeer and 11 populations which originated from releases of semi-domesticated reindeer (Reimers 2007, Røed 2005, Røed *et al.* 2014). The behavior and reproduction performance of the reindeer is influenced by the semi-domesticated reindeer (Reimers *et al.* 2005, 2014). Overall, the trend for all 23 populations is increasing to stable under a regulated hunting regime. In 2002, the estimated total number for all populations was 22,000-29,000 and in 2015, 33,560-34,360 (O. Strand pers. comm., Strand *et al.* 2012). However, the populations that have been mixed with semi-domesticated reindeer and which originated from the release of semi-domesticated reindeer have not been included in the calculations of population size (nationally or globally) for this re-assessment.

Svalbard Reindeer *R. t. platyrynchus* numbered 10,100 individuals in 2009 (Sysselmannen på Svalbard 2009), an increase since the early 1900s. The Reindeer were hunted for 100s of years but the introduction of firearms and commercial hunting in the 1860s led to reduced numbers and local extinctions. Hunting was halted in 1925. The extent that current abundance and distribution have returned to historic levels is not reported. Recent trends are available for three of the 13 populations (Adventdalen, Reindalen ,Brøggerhalvøya) as their distribution is restricted by glaciers to peninsulas and coastal lowlands. The trend is a 65% increase in the three populations from 1,217 in 1985 to 1,871 in 2012. A fourth herd, Edgeøya (northeastern Svalbard) was last counted in 2006 (Reimers 2012) and was considered stable or decreasing (Aanes *et al.* 2003, Reimers 2012).

Finland: Forest Reindeer are remnant of their former numbers and distribution as the Reindeer disappeared from across central and southern Finland in the early 1900s, but re-colonized from neighboring Russia in the 1940s (http://www.suomenpeura.fi/en). Numbers increased from 1992-2001 when 1,700 forest Reindeer were counted in Kainuu, eastern Finland but subsequently declined to 800 individuals by 2014. A second Finnish population started in 1984, when 10 forest Reindeer from Kainuu were released at Suomenselkä, central Finland and increased to about 1,100 in 2014 (Miettunen 2015). The decline in Kainuu's wild forest Reindeer since 2001 seems to have been caused by higher calf mortality from increasing numbers of wolves (Kojola *et al.* 2004), traffic accidents and movements into Russia.

Russia: Overall, abundance in Russia has declined 21% since 1990 compared to 2015 and the recorded abundance declined from 1,050,600 to 831,500 (I. Mitzin and T. Sipko pers. comm. 2015). The situation is quite different from North America as there are high numbers of domesticated Reindeer. The effect of domesticated Reindeer includes increased predator control as well as poaching and loss of the domesticated Reindeer to the wild Reindeer herds (Baskin 2005, Klokov 2004, Syroechkovski 2000).

Historically, wild Reindeer decreased since the mid-1800s to the early 1900s from as many as 5 million to less than 1 million. Abundance fluctuated during the 20th century with a peak in the early 1990s, then abundance declined. The declines in Reindeer number were mainly connected with social and economic changes in Russia. Regional status is variable and 23 populations or regions are listed in regional red books between 2001 and 2015 as being reduced to low numbers or declining (I. Mizin pers. comm. 2015).

Russia has a high diversity of wild Reindeer sub-species and recent declines are especially apparent for island, forest and mountain Reindeer. One population (Nizhny Novgorod) has disappeared and 19 populations are ranked as Endangered, Vulnerable or Near Threatened. Currently forest and mountain Reindeer in the Russian Plains (Karelia, Arkhangelsk, Komi and Nenets Autonomous District) are all listed in the Red Books and have declined 64% in 1991-2015 from 35,400 to 12,800 individuals while their distribution is highly fragmented and reduced.

The sub-species *R. tarandus pearsoni* restricted to Novaya Zemlya Island has declined 30% to 5,000 individuals but Reindeer on the other Arctic islands have declined at a higher rate (73%) from 41,000 to 11,000 individuals between 1991 and 2015 (I. Mitzin and T. Sipko pers. comm. 2015). In eastern Russia, *R. tarandus phylarchus* in the forests on the Kamchatka Peninsula have declined since the 1950s (Mosolov 1996) and more recently, declined about 50% from 4,500 to 2,300 (1991-2015). In the Russian Far East and Pacific coast, mountain-tundra Reindeer are stable in trend but with a risk of fragmentation into small isolated populations. In southeastern Russia, *R. tarandus angustirostris* (transbaikal slender-snouted Reindeer) is a forest Reindeer and difficult to survey, but apparently reduced to several hundred animals.

The most numerous sub-species are the migratory tundra Reindeer (*R. t. sibiricus*) currently numbering 626,000 individuals (North Yukutia, Yamal, and Taimyr) which have declined. The western Siberian tundra Reindeer (Yamal) have declined from 3,000 to 2,000 between 1991 and 2015 on ranges impacted by industrial development (I. Mitzin and T. Sipko pers. comm. 2015). Uboni *et al.* (2015) report that Taimyr and North Yakutia (Yana-Indirka, and Sundrun) tundra Reindeer had peaked in the 1990s and then subsequently had declined 25% to 624,000 individuals, while the Lena-Olenek herd increased from

55,000 in 1985 to 90,000 in 2001. The population is heavily harvested at about 9,500-12,000 individuals per year (T. Sipko pers. comm. 2015). With the collapse of the domesticated reindeer industry in Chukotka in the 1980s and 1990s, the wild Reindeer in Chukotka increased rapidly from 33,000 in 1991 to 93,700 by 2015 (Klokov 2004, I. Mitzin and T. Sipko pers. comm. 2015)

Mongolia: Trends in abundance are unreported (Clark *et al.* 2006) for *R. t. valentinae* in northern Mongolia. The limited assessments indicate fewer than 1,000 wild reindeer (Clark *et al.* 2006).
Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Rangifer occupy a number of habitats from continental coastal plains to mountain ranges and Arctic islands, spanning high Arctic to Boreal forest. The Arctic island tundra habitats include high Arctic polar desert to semi-moist dwarf shrub tundra. The low-lying coastal plains on continental North America and Russia vary from narrow coastal strips of tundra to large low-lying extent of tussock and non-tussock graminoid tundra. The tree line transition zone also varies in width depending on elevation and climate and separates the tundra from the Boreal forests. In mountainous regions, elevation determines the level of the tree line and the transition between coniferous forest and montane tundra. Along the rugged southwestern coast of Greenland, the tundra is a relatively narrow vegetated band separated by deep fiords or glaciers reaching the coast.

Rangifer is a generalist herbivore with a diet dominated by lichens, forbs, sedges, grasses and shrubs. Foraging is seasonally selective and focused on individual plant species and selecting flower buds and unfolding leaves to maximize nutritional value (Russell *et al.* 1993). Winter diet is often largely lichens, which may occur as thick mats in many boreal coniferous forests. *Rangifer* is unusual among large-bodied herbivores as it can exploit lichens which, although high in digestible carbohydrates, are low in protein (Russell *et al.* 1993). Lichens are slow-growing and are periodically unavailable for decades after fires sweep through the forests. Caribou tend to avoid burnt areas preferring the forests 150 to 250 years after fires (Thomas *et al.* 1998).

Life History

Adult survival is typically high (80-90%), while calf survival is annually variable. The annual life-cycle starts with the cows being bred in the fall rut (September-October) and then calving in June after a gestation averaging 225–235 days (Bergerud 1975). The cow's autumn body condition determines the age of first pregnancy and the annual likelihood that a cow will conceive. Barren-ground Caribou usually calve at 3 years of age and usually calve annually but reproductive pauses occur if a cow has not regained sufficient fat and protein reserves by the rut and thus does not conceive (Cameron 1994, Thomas and Kiliaan 1998). The climate across *Rangifer* distribution is highly seasonal, is characterized by a short snow-free plant growing season and a long winter when snow often adds to the energetic costs of moving and foraging. Climate is strongly regional and trends in climate differ across the regions (Whitfield and Russell 2005). Correspondingly, *Rangifer* have a strongly seasonal cycle of accumulating fat and protein reserves which are high prior to the rut and lowest during calving (females) and after the rut (males).

Caribou are relatively long-lived, with females living as long as 12–16 years, and males for a few years less (Thomas and Killiaan 1998). Single births are usual (Thomas and Killiaan 1998). The calf is able to

stand within a few minutes of birth and in two to three days can keep pace with the maternal cow. Generation time, used in species assessments, is estimated at 8-9 years based on barren-ground Caribou adult survival and fecundity.

Breeding Strategy

The sexes differ in body size, breeding pelage and antler size. *Rangifer* is polygynous (a male mates with more than one female) and the breeding system is thought to be a harem system. Cows have several oestrus cycles of 10-12 days (Ropstad 2000) and conceptions are highly synchronous within a herd during the four- to five-week mating season (Dauphiné and McClure 1974). Less information is recorded about the rut strategies of the forest-dwelling *Rangifer* (caribou and valentinae). Female reproductive strategies are relatively flexible with the cows trading off their survival against reproductive investment during conception, foetal growth (birth mass) or lactation. The strategy is an adaption to annual variations in energetic costs and the availability of forage.

Movement Patterns

Rangifer characteristically is a constant migrant, the migrations from winter to calving and post-calving ranges and then from fall to winter ranges are a striking global phenomena. Migratory behavior is associated with gregariousness. Although the highly gregarious nature of the tundra herds is conspicuous, forest Reindeer is also gregarious although the numbers are less. In Finland, forest Reindeer during calving are dispersed but the Reindeer is gregarious during the rut and into winter (Miettunen 2014).

Abundance influences the scale of seasonal movements: when abundance is high, migration distances can be long (thousands of kms) from wintering deep in the boreal forests to calving and summering on the tundra. For some herds, calving and summer range is an Arctic island and the winter range is the neighboring continental mainland (Poole *et al.* 2010, Baskin 2005). Geographic fidelity to calving and summer ranges tends to be high both in migratory tundra Caribou and forest Reindeer (Pulliainen *et al.* 1986). When abundance is low, fall and winter ranges most often contract toward the calving and summer ranges and the length of the migration pathways is correspondingly reduced, often by hundreds of kilometres. On the arctic islands, when abundance is low, Caribou are dispersed in individual home ranges, as abundance increases, seasonal migrations increase in distance and the degree of gregariousness (Gunn *et al.* 2014).

Mountain Caribou rely on migrating between lowland winter ranges to high elevation calving and summer ranges on the alpine tundra. Forest (and woodland Caribou) Reindeer are dispersed at low densities and undertake relatively small-scale seasonal migrations with selecting calving areas in boggy areas on small islands in lakes. In Greenland with its narrow coastal strip of ice-free land that is dominated by fiords and mountains, movement is restricted and generally oriented on an east-west axis.

Systems: Terrestrial

Use and Trade

Local meat consumption and hide use; some commercial use antlers.

Threats **(see Appendix for additional information)**

For mountain and forest *Rangifer*, landscape changes from forestry and industrial developments especially roads and seismic lines lead to changes in vegetation and vulnerability to predation (Leblond *et al.* 2013, Johnson *et al.* 2015). However, despite knowing the relationship between landscape changes and predation, management is not yet effective, as declines of boreal Caribou have continued (COSEWIC 2014, Johnson *et al.* 2015). Landscape changes, especially transportation infrastructures, energy production plants and tourist resorts, often represent barriers for migrations, and are responsible for Reindeer population fragmentation in Norway (Panzacchi *et al.* 2013a,b; 2015). Some landscape changes, include mining about which concerns are locally strong, include dust and cumulative effects. Less is known about population versus individual responses to industrial development. An exception is the Central Arctic Herd in Alaska. The western part of the calving ground has been intensively developed as oilfields with networks of roads, pipelines and drill pads. Calf body mass and survival was affected by this development (Arthur and Del Vecchio 2009), but initially the herd increased partly as a result of a trade-off between development costs in better regulated hunting.

Unregulated hunting and competition with domesticated Reindeer are documented threats for continental tundra Reindeer (Baskin 2005). However, mechanisms underlying widespread declines are incompletely understood, especially the role of predation, nutrition, disease and parasite interactions. *Rangifer* have been harvested for thousands of years and harvest is a part of the life and culture of northern aboriginal people. But, technology has changed hunting effort which is often uncoupled from *Rangifer* abundance leading to delays in detecting effects of unsustainable hunting. The conditions when, and if, harvesting becomes a threat are complex and although *Rangifer* is subject to management planning, the realities are that management responses are frequently hampered by mistrust of scientific data, disagreements about causes of declines, and time lags in institutional responses to implement management actions (Kolpaschikov *et al.* 2015).

Climate change is rapid in the Arctic and its effects will be complex as relative and absolute forage availability changes, the timing of snow melt, ice freeze-up and break-up changes. A detrimental effect that can change the context of other threats is changes in the frequency of rain-on-snow or other icing events (Hansen *et al.* 2011, 2014) especially on the Arctic islands. Icing events can cause widespread changes in movements and deaths especially of calves and adult bulls. A warmer climate will have complex effects on parasites (Kutz *et al.* 2014) as some are adapted to a cool climate and their development may be reduced in warmer temperatures (Hoar *et al.* 2012). Warmer temperatures will change the distribution of intermediate hosts and vectors such as mosquitoes. In Finland, recent warmer summers increased mosquito activity leading to outbreaks of Setaria in Finnish Reindeer, causing many deaths (Laaksonen *et al.* 2010).

Conservation Actions **(see Appendix for additional information)**

Most *Rangifer* herds are within management or conservation plans, and the conservation status of most subspecies and populations are nationally assessed. The ratings for conservation status (nationally rated as endangered, threatened or special concern) based on designated units (Canada) or oblasts (regions in Russia) emphasize the vulnerability of woodland and mountain *Rangifer*. Only 4% of continental tundra *Rangifer* and 12% of Arctic Island are included in conservation categories compared to 84% of mountain and forest Caribou. In Russia, wild Reindeer are assessed and listed by conservation status in regional Red Books. The national Committee On the Endangered Wildlife In Canada (COSEWIC) has assessed or re-assessed almost all Caribou for their conservation status using similar criteria as the IUCN's (COSEWIC 2014). The assessments lead to either recovery or special management planning which includes

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identification and protection of critical habitat.

Unlike many migratory species, *Rangifer* is not a recognized species within the Convention of Migratory Species probably because few migrations cross international boundaries. Two *Rangifer* populations annually range over international boundaries between Canada and the US (Selkirk Mountain Caribou and the Porcupine herd) and international cooperation is through agreements. In Finland, forest Reindeer are listed as Near Threatened under Appendix III (Protected fauna species) of the 1979 Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats). The forest Reindeer in Finland seasonally move across the border with Russia and the degree of monitoring and cooperation is high (Miettunen 2015). In Norway, the 23 populations of Reindeer were collectively assessed as Least Concern in 2015 (http://data.artsdatabanken.no/Rodliste). The US assigns Threatened status to the Selkirk Mountain Caribou although the herd is reduced to a few individuals.

Management systems are summarized in Klein (2005) and typically, their emphasis is on tracking population trends and vital rates and adjusting hunting for migratory tundra and mountain *Rangifer*. Although many herds are monitored, lags in management actions lead to accelerated declines especially where hunting effort through technological advances is uncoupled from trends in abundance (Kolpaschikov *et al.* 2015, Bjerketvedt *et al.* 2014, Strand *et al.* 2012). In Russia, socio-political factors have a greater effect than decadal climate patterns in shaping trends in abundance (Uboni *et al.* 2015). In Norway where the Reindeer ranges are increasingly modified, landscape management is becoming more important than reliance on harvest management (Kaltenborn *et al.* 2014).

Landscape management includes special use and protected areas and experience with their effectiveness varies. Despite progress, conservation planning has not reversed or even stemmed the landscape causes of declines (Johnson *et al.* 2015, Ray *et al.* 2015). In some areas, hunting restrictions, population augmentation and predator management have taken precedence in areas where industrial land use changes continued unabated and this can lead to controversy (Brook *et al.* 2015). Protected areas such as national parks are not a complete answer to *Rangifer* conservation if they are accompanied by increasing tourism and recreational activities.

Rangifer includes some of the globe's largest and longest migrations with tens of thousands animals moving 100s of kilometres. Thus the effectiveness of protected areas in conservation will depend on planning a network of protection for annual ranges (Runge *et al.* 2015). However, current protected areas are at the scale of seasonal ranges rather than a network of land management or adequate protected areas to integrate conservation of seasonal ranges (Gunn *et al.* 2014). Emphasis for migratory tundra caribou has been on protecting calving grounds as in Canada where three national parks provide year-round protection for part of the calving grounds of five herds. In Russia, the Taimyrski zapovednik established a nature reserve in 1979 which covers about 6% of the Taimyr herd's calving areas.

Credits

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External Resources

For Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.1. Forest - Boreal	-	Suitable	Yes
4. Grassland -> 4.1. Grassland - Tundra	-	Suitable	Yes

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.1. Nomadic grazing	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
3. Energy production & mining -> 3.2. Mining & quarrying	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.2. Species disturbance		
8. Invasive and other problematic species, genes & diseases -> 8.3. Introduced genetic material	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.3. Indirect species effects -> 2.3.1. Hybridisation		

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over entire range

Conservation Actions in Place
Occur in at least one PA: Yes
In-Place Species Management
Successfully reintroduced or introduced beningly: Yes
Subject to ex-situ conservation: Yes
In-Place Education
Included in international legislation: Yes
Subject to any international management/trade controls: No

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions Needed
1. Land/water protection -> 1.1. Site/area protection
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.3. Habitat & natural process restoration
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-national level

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution
Lower elevation limit (m): 0
Upper elevation limit (m): 2000

Population
Number of mature individuals: 2890400
Extreme fluctuations: Unknown
Population severely fragmented: No
Habitats and Ecology
Generation Length (years): 8-9
Movement patterns: Full Migrant

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: BirdLife International; Botanic Gardens Conservation International; Conservation International; Microsoft; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; Wildscreen; and Zoological Society of London.

Annexe 6: Materials Provided by the State Party

Cultural Heritage Policy (White Paper 35) 2012-13. This document sets out the policy of the State Party in relation to World Heritage.

World Heritage List: A Tentative List Submission – Várjjat Siida.

Reindeer Hunting as World Heritage: A proposal for the World Heritage List 2019. This was supplemented by three related documents:

- *South Sámi history in the mountains of Central Southern Norway: Reindeer Hunting as World Heritage 2019*
- *Comparative Analysis and overall conclusion: Reindeer Hunting as World Heritage 2019* [provided to the Mission, August 2019]
- *South Sámi History in the Mountains of Central Southern Norway: Reindeer Hunting as World Heritage*, Mikkelsen, Egil (n.d.).

Reindeer Hunting as World Heritage. Short report from the ICOMOS/IUCN inspection 12-15 August 2019. Prepared by The Secretary, Reindeer Hunting as World Heritage, 19 August 2019[10]

[10] Note that this report incorrectly identifies this as a joint IUCN/ICOMOS Mission. IUCN has not been formally involved.

Annexe 7: Select Bibliography

In addition to the resources provided by the State Party (and referenced in the material provided to ICOMOS), the following resources were consulted and/or recommended by ICOMOS experts during the Upstream Process.

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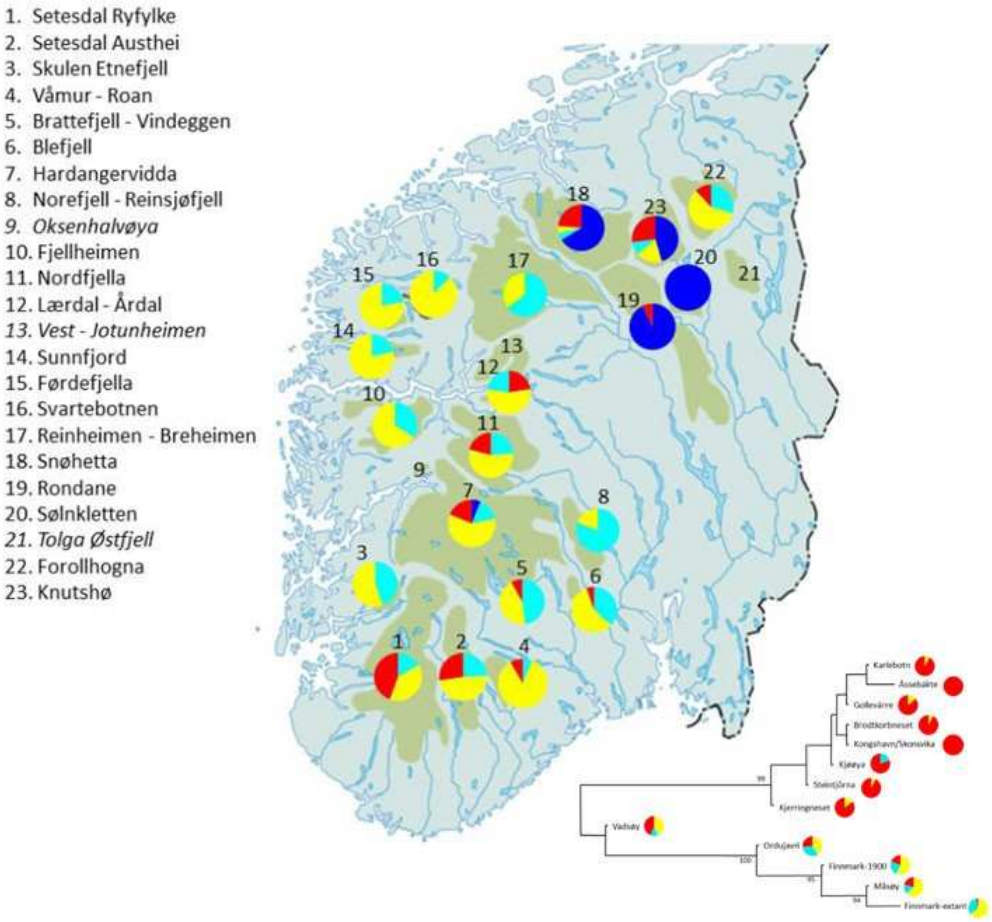
Annexe 8: Photographs

Photographs taken during the Advisory Mission that illustrate points raised in the text are provided in this Annexe.



Photograph 1: The genetic signature of modern wild reindeer herds in southern and central Norway (Roed et al. 2018). Blue indicates direct ancestry from the original, founding wild reindeer population.

Photograph 2: Pitfall forming part of the Dovre pitfall system. Note the patches of lichen (lighter colour ground vegetation which is critical winter feed for the reindeer).

Photograph 3: Buried stone-built pitfall forming part of the system at Lordalen.

Photograph 4: Markers indicating postholes that form part of the funnel element of the Einsetho mass trapping system.

Photograph 5: Posts indicating postholes that form part of the terminal element of the Verket mass trapping system.

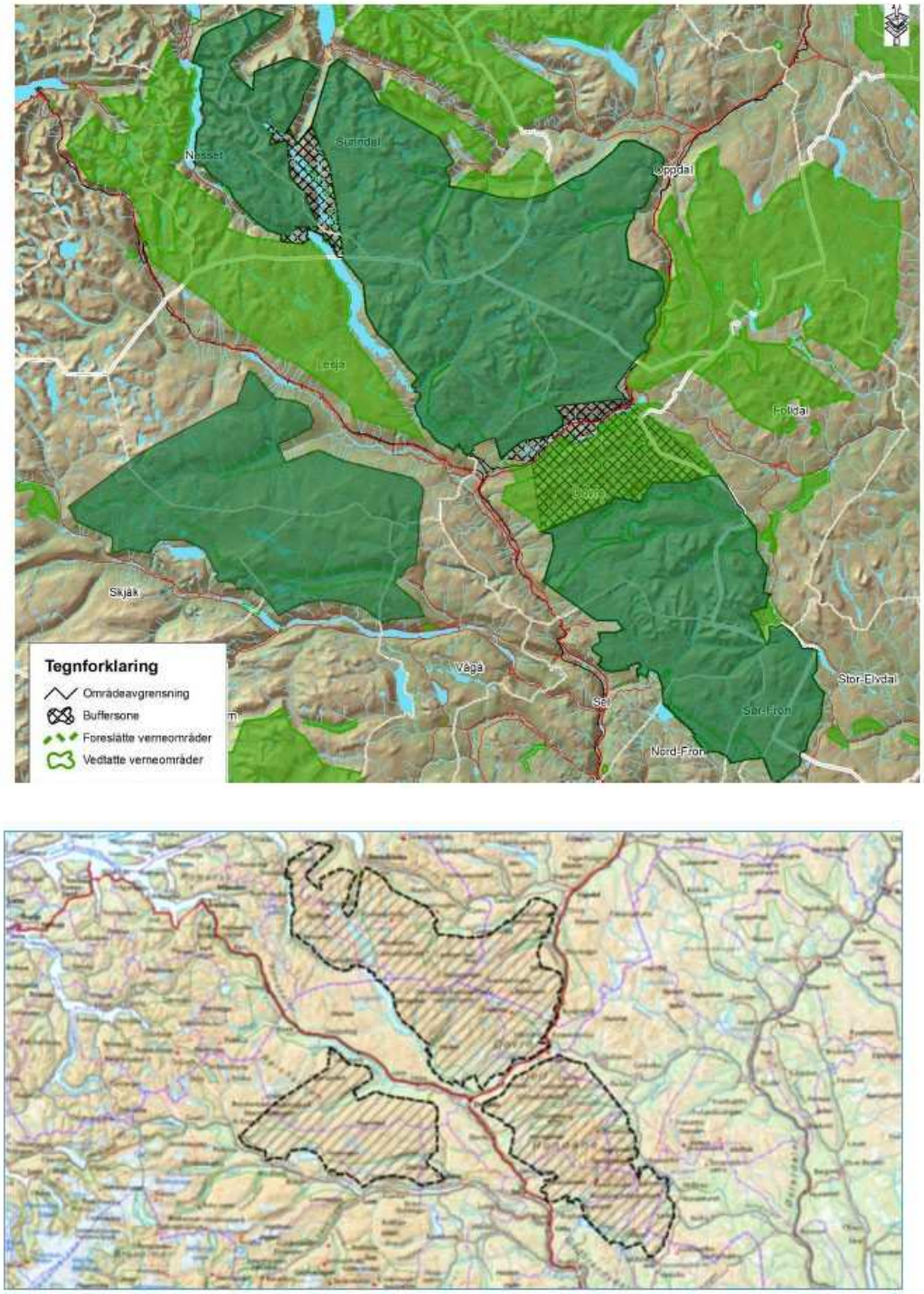
Photograph 6: Snohetta visitor shelter overlooking grazing grounds of the Snohetta wild reindeer herd.

Photograph 7: Map of the Dovre pitfall system indicating position of the pitfall in background. Note correspondence of the location of the system with major modern roads (red lines).

Photograph 8: The replica hunting and trapping features at the Hjerkinn Wild Reindeer Centre.

Photograph 9: The location and hearth stones of the excavated house at Toftom associated with the mass trapping system at Einsetho.

Photograph 10: Trond Stensby, secretary of the project board with his hunting licence for the 2019 season.



Photograph 11: Maps indicating proposed components and boundaries of the property as shown in the original documentation and the Supplementary Note (September 2019).

Photograph 12: The National Park management hub at Lom. This includes the Norwegian Mountain Museum.

Photograph 13a: Looking east from the eastern edge of Snohetta National Park to the visitor carpark for access to National Park. Beyond this the route of the E6 national road is visible. Dovre and Rondane National Parks in the background.

Photograph 13b: Looking west from the Lordalen valley with a pitfall system to the highest mountains (with snow patches) in the Reinheimen National Park.

Photograph 14: Exhibition of finds from snow patch surveys, Norwegian Mountain Museum, Lom.

Photograph 15: Information kiosk adapting a transport container, visitor car park for Snohetta National Park. Car park is built over former mine.

Photograph 16: The Wild Reindeer Centre (and National Park management hub) at Hjerkinn, repurposed former military buildings.

Photograph 17: Former military firing range in the centre of the photo, now closed and being rehabilitated. Snohetta National Park in the background.

Photograph 18: Museum at Lesja, exhibition on wild reindeer.

Photograph 19: The Wild Reindeer Centre logo, associated with the National Parks.

Photograph 20: National Park branded information plaque indicating visitor access to Dovre pitfall system.

Photograph 21a: Várjjat Sámi Musea/ Varanger Samiske Museum.

Photograph 21b: Presenting the exhibition of Sámi culture and life in the Várjjat Sámi Musea.

Photograph 22: Ceavccageadgi/Mortensnes: Looking from southwest to later prehistoric house and shoreline in the foreground to higher, earlier shoreline and associated houses in the background.

Photograph 23: NoidiidcearrU/Kjopmannskjolen: Hunt hide forming part of the wild reindeer hunting site complex.

Photograph 24: Gollevárri, pitfall forming part of pitfall system.

Photograph 25: Ruovdenjunlovta/Gropbakkengen: The prehistoric pit house complex (photo: Lisbeth Skogstrand/Svein Solhaug)

Photograph 26: The Protected Area (dotted blue line) of the Ceavccageadgi/Mortenses site as illustrated on an interpretative panel at the site.

Photograph 27: The Fish Oil Stone at Ceavccageadgi/Mortenses from the east. The boundary of the Protected Area runs from the eastern edge of the small coastal inlet to the rock outcrop. The route of the E75 road can be seen in background.

Photograph 28: The major road junction in Varanger from the south, the E75 to Vadso runs to the west of Ceavccageadgi/Mortenses (see Photo 26).

Photograph 29: Ruovdenjunlovta/Gropbakkengen from the northwest with the recently excavated service trench visible to the west of the site.

Photograph 30: An excavated Early Stone Age tent or windbreak (c. 7000 BC) at Ceavccageadgi/Mortenses , 45m above modern sea level.

Photograph 31: An excavated Late Stone Age house (c. 2000 BC) at Ceavccageadgi/Mortenses, about 15m above modern sea level.

Photograph 32: Burial chamber with viewing platform, part of the burial ground (c. 1000 BC – 1600 AD) at Ceavccageadgi/Mortenses.

Photograph 33: Path, Area 3, Ceavccageadgi/Mortenses.

Photograph 34: Path, Area 2, Ceavccageadgi/Mortenses.

Photograph 35: Ceavccageadgi/Mortenses: Path, at junction of Areas 2, 3 and 6.

Photograph 36: Ceavccageadgi/Mortenses: Reconstructed communal gamme, Area 5, from the southeast. Authentic gamme features immediately north and east of the reconstruction.

Photograph 37: Ceavccageadgi/Mortenses: Interior of the reconstructed gamme, house section.

Photograph 38: Ceavccageadgi/Mortenses: Area 1, view from the east to the escarpment west of the site. The fence line running north south in the centre of the photograph forms the edge of the Protected Area.

Photograph 39: Ceavccageadgi/Mortenses: At the northern end of the burial ground on top of Ciesti/Bird Cliff is the Bear Stone/Guovzageadgi. The bear is a sacred animal in Sámi religion.

Photograph 40: Ceavccageadgi/Mortenses: The exterior of the visitors' centre at, from the southwest.

Photograph 41: Ceavccageadgi/Mortenses: Looking south across the site from the visitors' centre.