

# UBAS



University of Bergen Archaeological Series

## Expanding Horizons

Settlement Patterns and Outfield Land Use in the  
Norse North Atlantic

Dawn Elise Mooney, Lísabet Guðmundsdóttir, Barbro Dahl,  
Howell Roberts and Morten Ramstad (eds.)



UNIVERSITY OF BERGEN

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The wood artefacts on the left side are from Borgund, Norway while the artefacts on the right side are from Norse Greenlandic sites.

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# Preface

This volume stems from the Expanding Horizons project, which began in 2018. The project was funded by a Workshop Grant from the Joint Committee for Nordic Research Councils in the Humanities and Social Sciences (NOS-HS), held by Orri Vésteinsson, Ramona Harrison, and Christian Koch Madsen. Funding was awarded for two workshops, as well as a subsequent publication of the material presented. Workshop organisation and grant administration were carried out by Morten Ramstad, Lísabet Guðmundsdóttir, Howell Roberts, Barbro Dahl, Birna Lárusdóttir, and Dawn Elise Mooney. The workshops gave researchers and practitioners from across the North Atlantic region an opportunity to forge new connections with each other, not only through academic presentations but also through shared experiences of archaeological sites, standing Medieval structures and their surrounding landscapes.

The first Expanding Horizons meeting took place in Norway, on June 1<sup>st</sup>–4<sup>th</sup> 2018. The program began in Bergen with a tour of the city's Medieval sites, led by Prof. Gitte Hansen, before travelling to Mo in Modalen for two days of presentations and discussions. The workshop was attended by 36 participants, 27 of whom gave presentations on topics including archaeological survey in mountain regions, driftwood, seaweed, stone, birds and feathers, and fishing and marine mammals. The two-day seminar was followed by an excursion visiting sites including the stave churches at Borgund, Hopperstad and Kaupanger, the Viking trading sites at Kaupanger and Lærdal, and Norway's oldest secular wooden building, Finnesloftet in Voss, built around AD 1300. In between archaeological sites, the excursion also took in the dramatic fjord landscape of western Norway. Here and in Iceland, both the upstanding structures and their surrounding landscape should be seen as key actors in the development of the settlement and subsistence practices discussed in this volume.

Just under a year later, on April 25<sup>th</sup>–28<sup>th</sup> 2019, the Expanding Horizons group met again in Iceland. Forty-one participants gathered in Brjónsstaðir for two more days of talks and discussions. While the first workshop had a main focus on remote wild resources, the second focused on settlement and land-use patterns, agricultural practices, and trade and exchange. Again, the workshop concluded with an excursion to local archaeological sites. Attendees visited the episcopal manor farm and church at Skálholt, the reconstructed Viking Age house at Stöng in Þjórsárdalur, the caves at Ægissíðuhellir, the archaeological site at the manor farm Oddi and the preserved medieval turf-built farm and museum at Keldur. Photographs of the participants of both workshops are presented on the following pages.

Partly due to the ongoing coronavirus pandemic, more time than anticipated has passed between these meetings and the publication of this volume. We thank the authors for their patience, and for their outstanding contributions to the archaeology of western Norway and the Norse North Atlantic diaspora. We are also very grateful to our colleagues who assisted the editors in the peer review of this volume. Lastly, we thank you, the reader, and we hope that you find inspiration in the papers presented here.

Stavanger/Reykjavík/Bergen, Spring 2022

Dawn Elise Mooney, Lísabet Guðmundsdóttir, Barbro Dahl, Howell Roberts and Morten Ramstad





Kristoffer Dahle and Susanne Busengdal

# Living on the edge: patterns of agrarian settlement and land-use in the fjord landscape of Inner Sunnmøre

*In 2005 the Geiranger fjord entered the UNESCO World Heritage List, as a central part of the Western Norwegian Fjord landscape. It represents a marginal agrarian landscape, with small iconic farms situated on ledges and steep mountainsides along the fjord, and a contrast both to central agricultural areas along the coast and the hunting grounds further inland. Yet, our knowledge on the origin and development of these small agrarian settlements is still quite limited, as modern development-led archaeology has not yet encroached into these sparsely populated areas. In 2018 Møre & Romsdal County Council initiated a project to enhance our knowledge on the settlement and land-use in this area, based on archaeological investigations of lynchets and field tillage at the fjord farms. These investigations are viewed in relation to more central farm settlements, on the basis of written sources, grave finds and development-led excavations and surveys, as well as to the numerous traces of hunting and trapping in the mountains beyond. This project has shed new light, not only on the emergence of the marginal farms themselves, but also on long-term relations between centre and periphery, agriculture and hunting, across this liminal landscape.*

## Introduction

In 2005 the Geiranger Fjord was inscribed on the UNESCO World Heritage list, representing the Western Norwegian fjord landscape. This entire landscape comprises not only a natural attraction, with dramatic mountains and iconic waterfalls, but also some of the most marginal agrarian landscapes in Western Norway with its small, deserted fjord farms high up on the steep cliffs. Situated between the more central agricultural areas along the coast and prehistoric hunting grounds in the mountains further inland, this also represents a liminal landscape.

In 2018 Møre & Romsdal County Council launched a small-scale research project in order to enhance our knowledge of these marginal farms. The aim of the *Geiranger Fjord Farm Project* was to study the origin of the fjord farms and their agrarian development through time.

In this article we will discuss the results from this project across a wider landscape, including more central areas, on the basis of written sources, grave material and recent results from development-led archaeology. Our study area comprises the municipalities of Fjord and Stranda in Møre & Romsdal, equivalent to the 17<sup>th</sup> century administrative area of *Dale skipreide* (Eng. Hundred). By examining how this agrarian landscape was organised and structured by various practices and conjunctures in time and space, we aim at obtaining a better understanding of the relations between central and peripheral zones and the changes

in agrarian settlement and land-use in a long-term perspective. We will further discuss the remains of alpine hunting and trapping, and whether these activities formed an integrated part of the same social landscape.

## Terra incognita?

Earlier studies have referred to the inner-fjord settlements as being of a later date, compared to coastal areas, due both to the marginality of the agrarian landscape and to the lack of early prehistoric grave finds (e.g. Solberg 1976, Øye 1994). According to the topographical descriptions by the clergyman Hans Strøm at the end of the 18<sup>th</sup> century, Sunnmøre was one of the poorest farming districts along the western coast. Fiscal records from the 17<sup>th</sup> and 18<sup>th</sup> century imply that the scale of cereal production was much lower in the *Dale skipreide* than in other areas in Sunnmøre (Øye 1994, p. 136). Bergljot Solberg (1984, pp. 92-94) has correlated these poor conditions for cereal production in relation to the lack of graves in the inner parts of Sunnmøre. She argues there was an expansion from the Migration period onwards, as more central areas along the coast had become overpopulated.

In Norway, most archaeology is development-led. Hence, most excavations in the county of Møre & Romsdal have been conducted along the coast and in the vicinity of the three major cities (Figure 1). Only a few archaeological excavations have been undertaken in the study area, and these are concentrated near the more urban parts (Johannesen 1996, Ramstad 1998, Diinhoff 1999, Underhaug and Linge 2016, Hillesland and Diinhoff 2020).

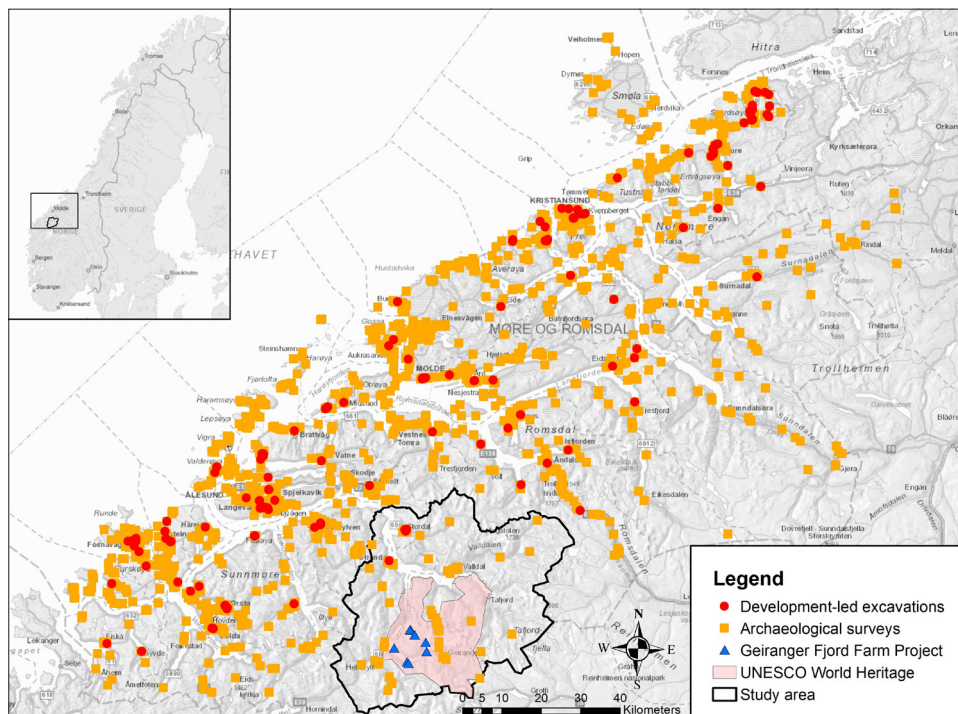


Figure 1. Surveys and excavations across the region, including the Geiranger Fjord Farm Project.

In recent years, there has also been an increasing interest in alpine hunting and trapping, with a particular focus on perennial snow patches (Dahle 2015, Ramstad 2015, Sanden 2016). Our knowledge of agrarian settlement and land-use patterns between the main agricultural centres and the mountains, however, is limited. Yet, due to recent archaeological surveys and small-scale investigations conducted by county archaeologists, a broader part of the landscape has been examined.

## **Structuration of the landscape and concepts of concentricity, cores and peripheries**

Throughout the 20<sup>th</sup> century, the discussion of the origin of historical farms has been subject to much debate within Norwegian archaeology (cf. Øye 2011). The term “farm” has been criticized by several scholars as problematic and biased (e.g. Holm 1998, Pilø 2005) and the question of origins could therefore depend on how the term is defined (cf. Pedersen 1999). In our definition, we will put emphasis on sedentism, agriculture and husbandry, as well as a more or less fixed territorial landscape (cf. Zehetner 2007, pp. 20-22).

Studying long-term patterns of settlement and landscape requires a theoretical framework for understanding time, space, stability and change. According to the work of the French Annales scholar Fernand Braudel (1980), time was divided into three levels of structural duration: *Longue durée*, *conjunctures* and *événements*. Braudel’s long term structures - including agrarian structures - could be both mental and environmental, and could often be imperceptibly determining the course of actions on, and by, humans.

Phenomenologists like Richard Bradley (1984) and Christopher Tilley (1994) have regarded landscapes as social constructs, being both the medium for and outcome of social practice. Tim Ingold’s perspective on ‘dwelling’ also put emphasis on landscape in the sense of the world as it is known for those who dwell therein (Ingold 2000). However, these studies have been criticised for being too focused on human-landscape relations, neglecting the social relations *between* humans in the landscape.

Per Cornell and Fredrik Fahlander (2002) have proposed a micro-archaeological approach, focusing on how social practice is structured in relation to the landscape. Rather than cultures and ethnic groups, they discuss past social entities as *social formations*, being the virtual effects of *structuring practices* (actions and chains of action) and *structuring positivities* (material and immaterial principles permeating social practice). The latter lies close to the concept of *longue durée*, but with a higher potential for social dynamics. Classic examples are gender and labour relations.

We would argue that the concentric perception of the historical landscape both mentally and environmentally represents such a *structuring positivity*. The peasants experienced their surrounding micro-landscape from where they dwelled (Dahle 2009, Øye 2011). In studies of wider social landscapes, terms such as core, semi-periphery and periphery have been employed. The notion of the ‘marginal’ and ‘peripheral’ landscapes have been criticized as being the view of modern, urban academic society (Holm, Stene and Svensson 2009). We would still argue that the concentric perspective - at various levels - was shared by the agrarian society or social formation inhabiting this past landscape, through the materiality of the landscape and the structuring practices of everyday life.

On a macro level, the inner fjord districts of Sunnmøre must be seen as peripheral in contrast to the core areas along the coast (Solberg 1976, Ringstad 1986), yet the outer parts of the study area may be defined as a semi-periphery in a regional context (Figure 2). In this article, however, we will also emphasize the variation within each of these zones. The study area consists of a very varied landscape, comprising both wide, fertile river valleys as well as the marginal farms mentioned above. These natural conditions - including geology, sunlight and climate - all represent structuring positivities that contribute to the social structuration of landscape. Through events and conjunctures, human actions and structuring practices - such as the clearing of land, the gradual construction of field terraces and erection of monuments - these structures can be maintained and changed (cf. Zehetner 2007).

In the following, the terms *core*, *semi-periphery* and *periphery* will be used at the local level, adjusted to topography, whereas the periphery and semi-periphery at the regional level will be referred to as *inner* and *outer* areas respectively.

## The Geiranger Fjord Farm Project and the agro-archaeological methodology

The Geiranger Fjord Farm Project was launched by Møre & Romsdal County Council in 2018, with financial support from The Norwegian Directorate for Cultural Heritage (*Riksantikvaren*) through World Heritage funding. The aim of this project was to determine the origin and the development of the most peripheral agrarian settlements in the inner fjord areas, uncovering changes in agrarian strategies and the relation between the agro-pastoral landscape and the hunting and trapping activities in the mountains (Dahle and Nytnun 2020).



**Figure 2.** Blomberg, one of the marginal fjord farms examined during the Geiranger Fjord Farm Project (Photo by Arve Nytnun, Møre & Romsdal County).

The investigation area comprised some of the most marginal farms surrounding the Geiranger and Sunnlyven fjords, limited to the UNESCO World Heritage Landscape in the inner part of the study area (Figure 2). By focusing on a representative selection of farms in terms of size, geography and altitude, the fieldwork was based on mapping the fields through maps, LiDAR scans and visual surveys. Landscape terraces and lynchets were located and examined as an indicator of farm settlement. Due to the steep topography, it is very likely that the locations of both the farmsteads and the fields have been very stable through time. Samples for both radiocarbon dating and palaeo-botanics were taken from every cultivation layer. Due to the dry soil conditions, the pollen material was unfortunately sparse, but still gave some indications on variations in land-use through time (Dahle and Nytnun 2020).

Patterns of settlement and land-use can be obscured by prioritising the lowest cultivation layers. This would give us data on the initial use, but not necessarily the establishment of farm settlements, as more fixed entities, nor on their further development. There are also challenges in dating cultivation layers in terms of post-depositional processes (e.g. Iversen 2008, pp. 114-116). Most sections were rather evident and adequately sampled. Still, it is important to note that cultivation layers do not reflect historical actions or *événements*, but rather *conjunctures* and structuring practices.

## **Historical settlements and landscapes as the outcome of prehistoric social practice**

Rather than simply projecting settlement and landscape patterns onto the past, the early historical landscape is regarded as the *outcome* of former social practice. Prehistoric actions and activities, as revealed by archaeological remains, will thus be seen in relation to their historical landscape zones.

In order to define historical cores and peripheries in the study area, however, we need certain criteria. In addition to topographical criteria, the rate of agrarian utilisation and the present-day perception of the various landscape zones, early written sources work as a guideline. We have thus defined three criteria for historical centrality.

### **Administrative and socio-political centrality**

In order to locate historical administrative and socio-political centres, our main sources are the early church and chapel sites (Figure 3). According to *Trondhjems Reformats 1589*, there were churches in Stordal, Stranda (Sløgstad), Norddal (Dale) and Sunnlyven (Korsbrekke). In addition, there were smaller chapels in Valldal (Døving) and Geiranger (Hamre 1983). The 1432 Aslak Bolts's cadastre (AB, pp. 132-134) recorded six parishes; Stordal, Sylte, Stranda, Sløgstad, Sunnlyven and Norddal, yet the latter (AB 130) has been questioned. Thus, two historical church or chapel sites are known in both Stranda (Sløgstad and Opsvik) and Valldal (Sylte and Døving), whereas the sites in Norddal and Geiranger appear to have been established rather late.

Valldal is also duly mentioned in the saga of St. Olav, as the King fled through the valley in 1028. This saga mentions the names of some farms and shielings, as well as the local chieftain, Bruse, at the farm Muri by the fjord. According to the saga Olav also raised a cross at the neighbouring farm Sylte. Snorri also mentioned a shieling at Grønningane, in the upper part of valley, implying that the mountain farm by the same name must have been settled later (Hkr 2, pp. 71-73).

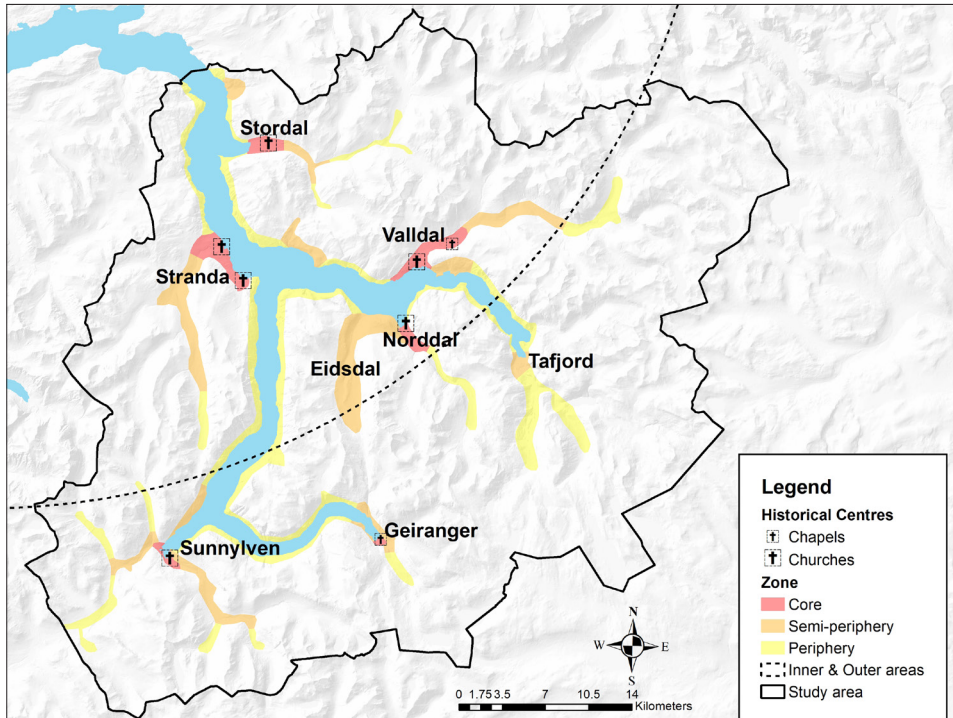


Figure 3. Churches and concentric zones within the study area.

Several men and place names are also mentioned in the *Sunnmørsattleggen* (AM 22b), a transcript from the 17<sup>th</sup> century documenting lineages back to the ancestors buried in the pagan burial mounds (AD 1000-1300). Some of the place names are hard to interpret, but the transcript indicates where important persons and lineages may have been seated (Øvreliid 1994). These seem to support the historical cores indicated by churches and chapels.

### Demographic and economic centrality

In studying historical demography and economic variation, our main criteria are the land rent and number of farms and holdings according to the 17<sup>th</sup> century fiscal cadastres (cf. Imsen and Fladby 1975). Both in terms of land rent and number of tenant farmers, the 1650 cadastre strengthens what we have defined as administrative core areas as demographic and economic centres within the study area. However, we can clearly see the differences between inner and outer parts. The semi-periphery in outer parts, such as the Stranda and Eidsdal valleys, are just as productive as what we have defined as cores in the bottom of the fjords. We can also observe a relatively high land rent at some of the farms in the Sunnylvlen valley, situated along a river plain. The most peripheral fjord and mountain farms, however, such as the ones along the Geiranger fjord, are considerably smaller -both in terms of land rent and the extent of farm division (Figures 4 and 5).

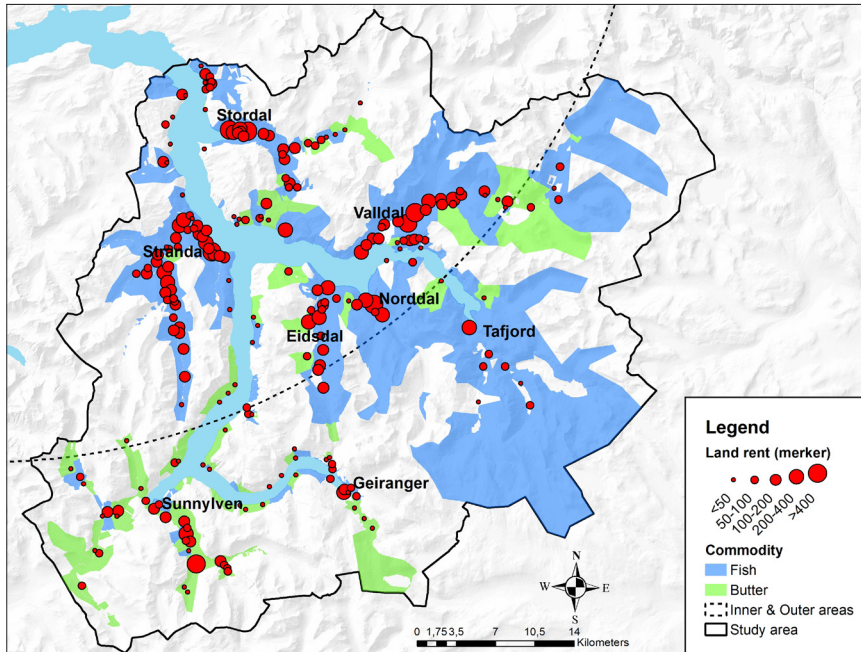


Figure 4. Land rent and commodities in 1650.

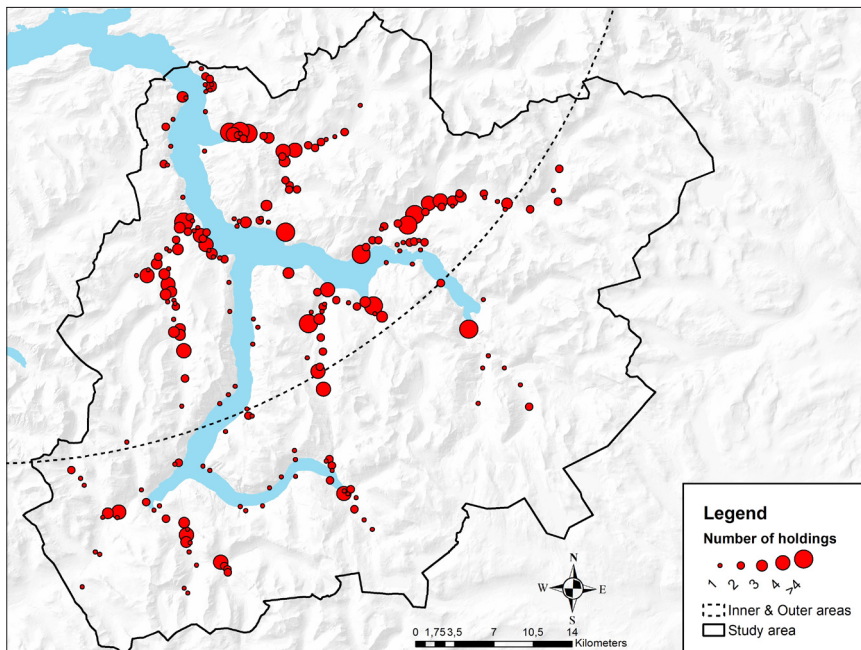
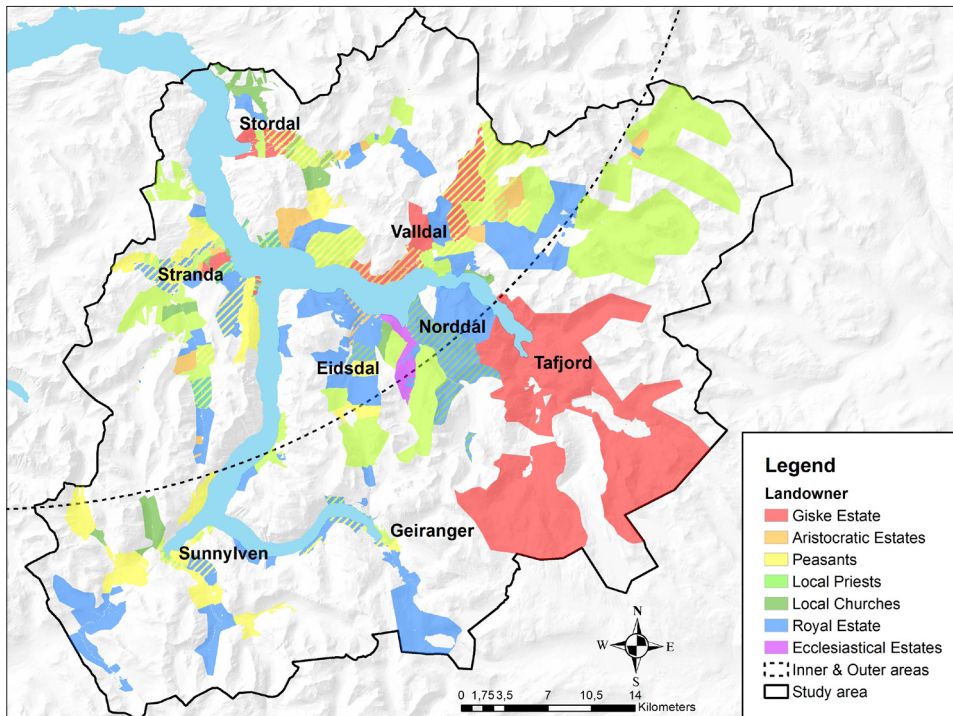


Figure 5. Number of holdings in 1650.

## Territorial and juridical centrality

The fjord landscape of Inner Sunnmøre has traditionally been referred to as an egalitarian landscape, with a high extent of freeholders compared to the rest of the region (Døssland 1990, p. 143). However, by looking at Medieval sources, such as the aforementioned *Sunnmørsatleggen* (AM 22b), we may get a glimpse of a more aristocratic landscape. In addition to pointing out central farms or manors, this transcript also refers to what farms the landlords possessed. Hence, it offers an empirical basis for the existence of local estates in a High Medieval context.

Research has proved the existence of manors and estates as early as in the Viking Age, originating through local settlement development (Skre 1998, Iversen 2008). Based on retrospective use of later written sources, such as cadastres and fiscal sources, Frode Iversen (2008, pp. 60-62) has argued it could be possible to reconstruct the extent of estates surrounding royal and aristocratic manors. His formal criterion was the existence of an area of at least three neighbouring farms fully owned by one institution, mainly the crown or central ecclesiastical institutions. At the same time, however, it is important to view such patterns in a local and regional context, and in relation to archaeological sources.



**Figure 6.** Landowners and number of holdings in 1650. The property map is based on sheets, made by Tor Myklebust, junctioned by current boundaries.

If we are looking at who owned the land in various parts of the study area in 1650, we can see that a number of farms in the outer core areas, like Stordal, Stranda and Valldal, were owned by the Giske estate (Figure 6). In Stranda we also find the farm name *Giskehaug*. This vast



estate originated from one of the most powerful dynasties in northwestern Norway, perhaps as early as the Viking Age (Sandberg 1986, p. 9). None of the core areas fulfil the criterion proposed by Iversen, as most of the core farms were divided between two or more landowners. However, the Giske estate went through great structural changes in the 16<sup>th</sup> and 17<sup>th</sup> century (Sandberg 1986, Fauske 2004), substantiating the former existence of local estate cores in Valldal and Stordal. In Norddal and Eidsdal, on the other hand, most of the land was owned by the crown or central ecclesiastical institutions, implying a somewhat different prehistory.

In the semi-periphery less land was owned by the same magnates. The same goes for the inner cores. According to a diploma, Giske owned land in Geiranger in the 14<sup>th</sup> century (DN XV 1), but otherwise most land in 1650 was owned by the local churches, priests and farmers. The most peripheral farms on the other hand were mainly owned by the Crown Estate - possibly reflecting the general royal right to common land as declared by Medieval law. Yet, there is an exception in the inner mountain valleys. The Tafjord mountain farms all belonged to the Giske estate, whereas the farms in the upper part of Valldal were owned by a local clergyman at Sylte *in persona* (Imsen and Fladby 1976). Farms in both areas paid their taxes in fish, typical for the Giske estate (Sandberg 1986, pp. 11-12), perhaps indicating that the latter was sold or donated by the same landlord. This could reflect former aristocratic rights or interests in both mountain areas.

Our conclusion based on written sources is that there were significant differences between the zones, in terms of farm size, land rent and property relations, which supports the perspective of a concentric landscape where social status - both locally and regionally - radiated from centre to periphery. Still, there are some internal variations that cannot be explained by this mental and environmental landscape, and must instead be seen as historically constituted and structured by social practice.

## **Long-term patterns of agrarian settlement and land-use in the inner fjord landscape of Sunnmøre**

In the following analysis, we will try to discern social and economic patterns in this landscape within a long-term perspective. By studying physical remains - as revealed by grave finds and more recent archaeological excavations and surveys - in relation to the historical landscape zones as analytical categories, significant spatial variation and temporal changes may be derived.

### **The grave material - revisited**

Traditionally, grave material has played a major role in settlement studies alongside farm names and studies of farm boundaries (e.g. Solberg 1976, Johannessen and Ringstad 2011). In this chapter we will take a closer look at the grave material in the study area, how different types of grave monuments are represented in the various zones, and to what periods these graves are dated.

In order to complete the list, information is gathered from both the Norwegian Cultural Heritage database (Askeladden), the museum collections (Unimus), and other mentions in local written sources (e.g. Fett 1950-1951). As some of the monuments may have been clearance cairns or natural mounds, only definitely secure or highly probable graves are included.

Most of the graves are cairn types, but there are also mounds and graves without any obvious marking. In his study of the large burial mounds in Western Norway, Bjørn Ringstad (1986) did not recognize any major aristocratic centres in our study area, but some of the burial mounds were defined as large (>20 m dia.). We can also find a number of standing stones. Dating the various graves is difficult. Few are excavated, and we have not established a local typology yet. In general, however, we may assume that most of the grave monuments are from the period AD 300-950 (Johannessen and Ringstad 2011, p. 34).

Based on artefacts found in the graves, the Viking Age seems to dominate the material. Yet, it is important to acknowledge that the grave goods dating from the Early Iron Age, are generally scarce and hence less visible in the archaeological record. If we take a look at the spatial distribution of datable graves, the main tendency is that the graves from the Roman Iron Age are concentrated near the cores, mainly in outer areas, gradually spreading across the semi-periphery from the Migration period until the Viking Age. In the peripheral zone, there are just a few graves, all located in outer areas and none located on the marginal farms belonging to the Crown Estate. This could reflect a gradual settling of the landscape, from centre to periphery at various levels - from the Early Iron Age onwards - whereas the most marginal farms represent the last step up the ladder sometime during the Middle Ages.

**Table 1.** The number of graves across the study area, divided in the various zones (number of graves dated to the early/late Iron Age in parentheses).

	Outer areas	Inner areas
Core	106 (6/74)	27 (4/14)
Semi-periphery	23 (0/18)	23 (1/10)
Periphery	3 (0/3)	0 (0/0)

Whereas the existence of graves and grave monuments strongly suggests some kind of nearby settlement, the absence of graves could also be a question of representativeness and dominion rather than absence of settlement. Intensive cultivation and a higher extent of development in core areas may have contributed to the deletion of graves (Iversen 2008, pp. 76-89). Further, being limited to only a fraction of the free population, slaves and tenants on the estate lands surrounding the manor may not have had the rights to establish grave monuments.

Based on his studies in Romerike, in the central part of eastern Norway, Dagfinn Skre (1998) has emphasized the role of slaves and aristocratic dominion in the Early Iron Age settlement expansion. Initially, new farms could have been occupied by slaves or the semi-free descendants of slaves, with legal ties to their landlord. The concentration of Roman Iron Age graves to core areas could thus be due to its aristocratic dominion over adjacent territories. Accordingly, rather than gradual settlement expansion, the increase of graves in the Viking Age could represent changing social realities in the semi-peripheries, where slaves were replaced by free tenants.

Through the lack of grave monuments on farms surrounding aristocratic centres of western Norway, preferably coherent with areas later fully owned by one institution, Iversen (2008) has substantiated the existence and extent of prehistoric estates, mainly in core areas and close to the aristocratic manor. In our study area, such a pattern cannot be discerned. Rather, the graves seem to be widespread across the fertile river valleys (Johannessen and Ringstad 2011,

pp. 34-36). Yet, the spatial distribution of graves seems to follow the gradient from centre to periphery, emphasising stability in the wider social landscape (Table 1).

It is also possible to discern some variation in mortuary practices. Wealthy graves, containing gold and silver and other precious metals, are mainly found in outer areas (Figure 7). This also goes for hoards and other non-ferrous metal finds in other contexts. In inner areas, precious metals are only found in the Sunnylven valley. Nor are there any finds in Norddal. Wealthier graves are found in the neighbouring Eidsdal valley. In accordance with what we concluded from written sources, this core could have been established late - perhaps as an administrative centre. Dale skipreide - the *hundred* constituting the study area - is named by one of its central farms. It is also worth noting, that the only known stirrups in the study area were found in graves at Relling (Fett 1950-1951), the other central farm in Norddal and the only farm in 1650 owned by central ecclesiastical institutions. Stirrups have been seen as a symbol of riders, feudality, and royal administrative and military centres during early state formation (Braathen 1989).

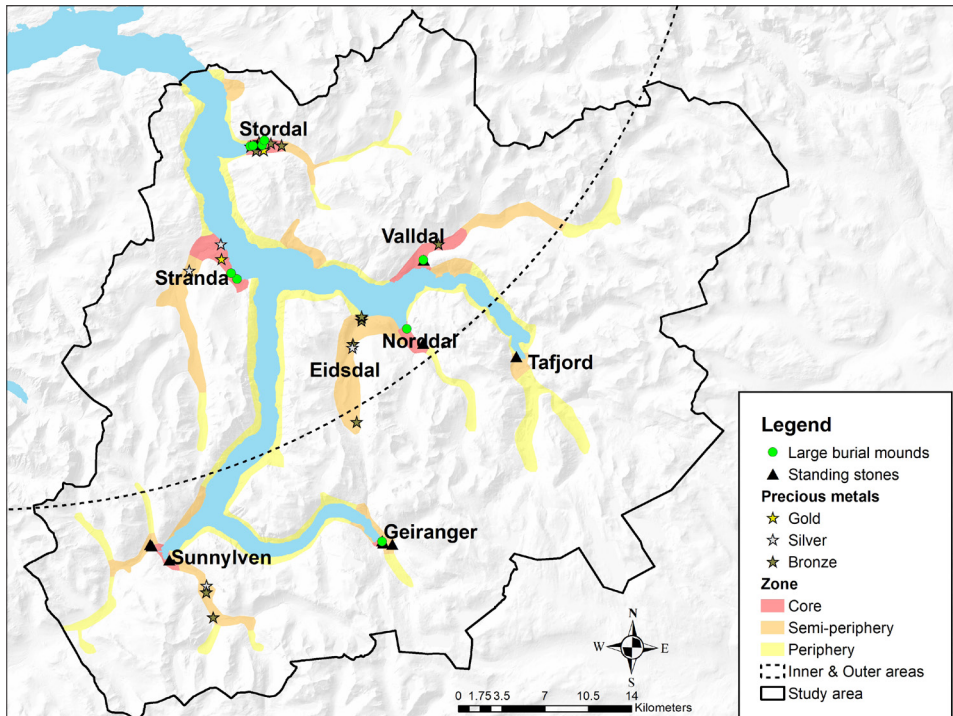


Figure 7. Wealthy and monumental graves in the study area.

The large burial mounds are concentrated in the cores, yet mainly in outer areas and particularly in Stordal. Standing stones on the other hand are mainly found in inner areas. Without excavations, monuments like these are difficult to date. The remains of *Monshaugen* at Hove in Stordal were excavated by Eva Nissen Meyer in 1935, revealing a cremated Viking Age boat grave (Fett 1950). In general, the great boom in the erection of large burial mounds came in the late Roman Iron Age and Migration Period, but with a second boom in the early

Viking Age (Ringstad 1986, 2004). Standing stones also tend to date to the Migration Period or the late Viking Age (Knutzen 2007).

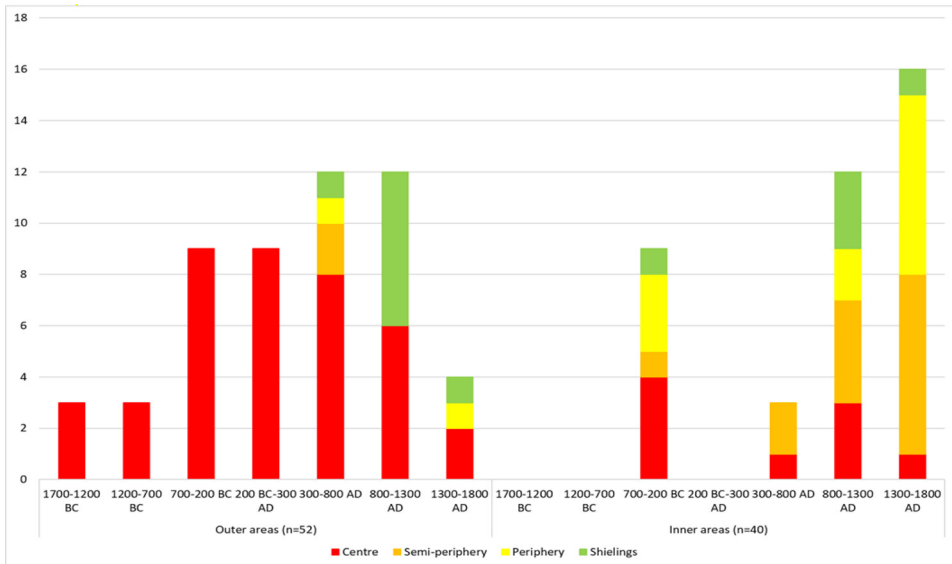
Rather than mere symbols of power, however, both large grave mounds and standing stones should be regarded as *ambitions* of power - reflecting possible watersheds in time and strategic actions in order to restructure the landscape and establish and empower new cores. For further interpretations, however, we need more direct data on prehistoric settlement and land-use.

### **New perspectives from archaeological excavations and surveys**

As mentioned above, few archaeological excavations have been conducted in the study area, and these have concentrated on the cores in outer areas (Johannesen 1996, Ramstad 1998, Underhaug and Linge 2017, Hillesland and Diinhoff 2020). In Stordal, a three-aisled longhouse from the Early Bronze Age was recovered at Melsetbøen (Diinhoff 1999). The overall pattern from these investigations is a more or less continuous settlement from the great *landnám* in the Late Neolithic-Early Bronze Age transition onwards, but structural changes in terms of land-use occur during the late Roman Iron Age (Underhaug & Linge 2017, Hillesland & Diinhoff 2020). Johannessen and Ringstad (2011) have suggested a change from the mobile use of the core territories to more strictly regulated land management. These changes occur at about the same time as the changing grave customs mentioned above and the appearance of large cooking pit sites like the one recently uncovered in Valldal (Busengdal 2020), all of which could imply societal changes, social stratification and restructuration of the core areas.

In addition to these rescue excavations, a great number of hunting and trapping sites have been surveyed in the alpine zone, in collaboration with local volunteers. An impediment to fully understanding the mechanisms and the social and economic relations between the cores in outer areas and the hunting sites in the alpine zone of inner areas, has been the lack of relevant data from the liminal border zone. During the last decade, however, a number of surveys have been undertaken in relation to smaller development projects in the cores and semi-peripheries of both inner and outer areas. In addition, the Geiranger Fjord Farm Project and other small-scale investigations have yielded new data on the most peripheral farms. The material is still scarce and our conclusions could possibly be altered by new investigations. Yet, we believe these investigations jointly provide new and representative data that can shed new light on patterns of settlement and land-use throughout the study area.

The earliest traces of agrarian settlement in the region are dated to the Late Neolithic, with some early pioneers even in inner areas. In the course of the Bronze Age, farm settlements appear to be established in outer core areas (Ramstad 1998, Diinhoff 1999, Underhaug and Linge 2016). By the Bronze Age-Early Iron age transition, the settlements expanded. From surveys in central parts of Geiranger, farm settlement in inner core areas is substantiated by lynchets and rather massive layers of cultivation (Busengdal 2019). Parallel to the intensification in these inner core areas, we also see an expansion in terms of an extensive agrarian land-use, reaching a climax in the early Pre-Roman Iron Age, covering all zones. This expansion was even visible at one of the shieling sites in Oaldsbygda (Dahle and Nytnun 2020). These remains simply consist of thin lenses of charcoal or charcoal rich soil, and pollen analyses mainly indicate some kind of clearing for pastures. There is no evidence for cultivation and no obvious indication that these extensive clearings represent farms, as defined above, with continuous use and settlement, until historical times.



**Figure 8.** *<sup>14</sup>C-datings from surveys in agrarian contexts in the study area. The number of datings from the periphery in outer areas is still low, whereas the diagram from inner areas is more representative. The low number of late dating results from the core areas could both be due to poorer preservation and the priority of bottom samples.*

From about 200 BC, there seems to be a contraction in the settlement pattern, predating the structural changes in core areas (Figure 8). In contrast to the extensive land-use in the previous period, settlement in the middle of the Early Iron Age once again seems to be confined to outer core areas. This could be due to a limited number of <sup>14</sup>C-samples, but the break is also indicated by hiatuses in documented sections, as in Geiranger (Busengdal 2019). New settlement in this core area seems to have started by the end of the Early Iron Age (Svendsen 2013).

There may be a similar pattern at Korsbrekke in Sunnlyven, the other interior core area. Here, we have only documented extensive clearings from the Pre-Roman Iron Age. As our investigations here were development-led, we find it likely that farm settlements and more intensively cultivated fields existed at central locations outside our planning area. We can, however, notice the same gap in the section between the initial and later clearings (Busengdal 2018).

In semi-peripheral areas, there are similar traces of clearings from the Bronze Age-Pre Roman Iron Age (Narmo 1994, Sanden 2014), but still no direct traces of farm settlement. As with the inner core areas, a new expansion seems to have started by the end of the Early Iron Age. In outer areas, such as the Stranda and Eidsdal valleys, the archaeological remains could now suggest farm settlements (Narmo 1994, Mokkelbost 2010). In inner areas on the other hand, the activities in the semi-periphery still have an extensive character (Dahle 2018, 2020) and farm settlement is not substantiated before the Late iron Age and Early Middle Ages (Busengdal 2018, Dahle 2021, Smørholm 2021). Hence, there is still no evidence of settlement prior to the Iron Age graves, which would suggest aristocratic dominion and the use of slave labour.

As expected, the Geiranger Fjord Farm Project showed rather late settlement at the most peripheral of the farms, but by the end of the Middle Ages most of the historical farms were settled, combining cereal production and animal husbandry.

The contraction prior to the Roman Iron Age clearly demonstrates the non-linear development in prehistoric settlement and land-use, and could also have laid the foundation for the societal changes in the end of the period. In the following expansion, however, the patterns indicated by agro-archaeological investigations are quite similar to the patterns shown by the grave material. New cores were established in inner areas - possibly manifested by standing stones and monumental graves - and from the Migration Period until the High Middle Ages the settlement expanded, culminating in the peripheral fjord and mountain farm settlements in Late- and Post Medieval Period. Hence, we have not been able to discern any great impact of the 6<sup>th</sup> and 14<sup>th</sup> century crises on the land-use. The structural changes may already have taken place and the focus on animal husbandry could rather have been enhanced by these climatic and demographical changes (Øye 1994, p. 136).

We can also see an increased use of shielings in the outfields. This was probably part of the same agro-pastoral strategy, but could have been further driven by the growing demand for wool and milk products as a regional economic *conjuncture* in the late Viking Age or Early Middle Ages. From the earliest site, Klovset, in the vicinity of Valldal, dated to the Merovingian Period (Dahle 2016a), we can see a general expansion of shielings across the study area in the 10<sup>th</sup> and 11<sup>th</sup> century (e.g. Dahle 2016b, 2019, 2020), and continued use all the way up to the 19<sup>th</sup> century (Figure 8).

### **Hunting and herding - changing practices in a border zone landscape**

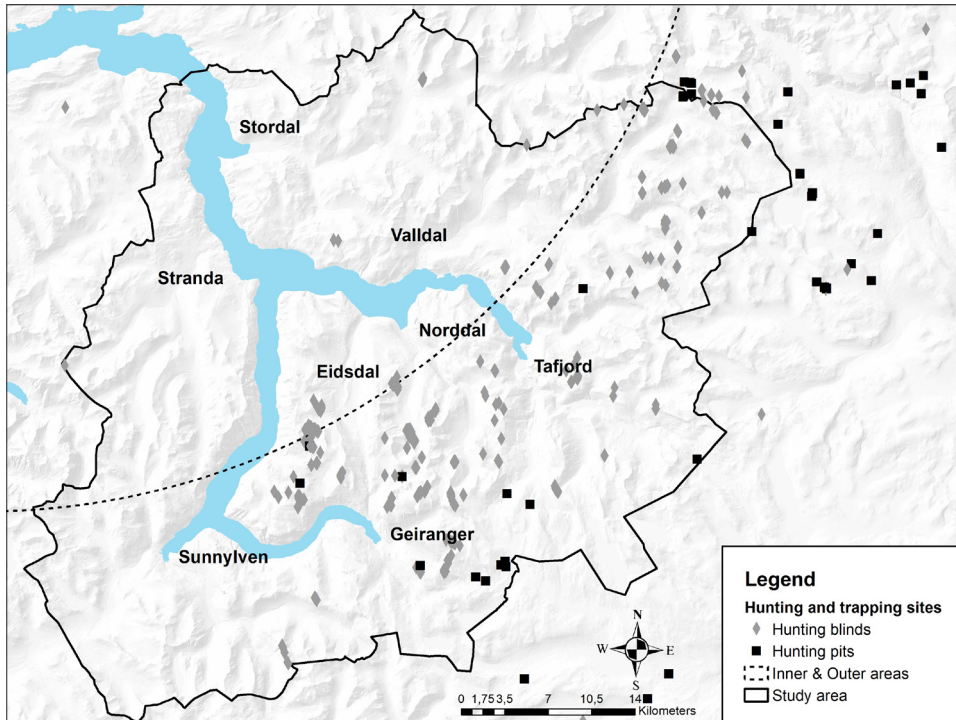
The last topic to discuss is how the changes in settlement and land-use relate to alpine hunting and trapping - as indicated by the numerous sites in the alpine zone and further inland. As hunting and herding could have been conflicting activities, we have to take closer look at these changing practices and how they have contributed in structuring the landscape.

Looking at the spatial distribution of the alpine sites, there is a belt of so-called hunting blinds in the north-western part of the study area - following the border between the inner and outer area (Figure 9). Further inland the sites are dominated by hunting pits. This spatial pattern could be due to varying topography and hunting strategies, but it could also reflect chronological patterns (Dahle 2015, Sanden 2016). Once again, Sunnlyven differs from other interior areas. Whereas the agrarian landscape may have been prosperous, there are just a few traces of hunting and trapping.

One of the main challenges when dealing with alpine sites is the lack of datable material. Through the last decade, however, a number of arrows, scaring sticks and other related artefacts have been uncovered by melting snow patches in the vicinity of these trapping sites. Some of the sites go all the way back to the Mesolithic-Neolithic transition, showing continuous use until it intensifies in the Roman Iron Age-Migration period (Dahle 2015). Hunting continues in the Late Iron Age, but it seems to decrease and contract to eastern areas (cf. Hofset 1980), and it diminishes in the Middle Ages.

The material is still sparse, varied and possibly obscured by climatological variation. Based on the existing material, however, this *conjuncture* seems to predate the general agro-pastoral

expansion in inner areas. Hence, there is no apparent chronological and functional relation between the marginal and peripheral settlements and the alpine hunting sites. Rather, the hunting and trapping sites seem to fill the gap between the two agro-pastoral expansions mentioned above.



**Figure 9.** Hunting and trapping sites in the study area (Askeladden 27.05.2020).

The main questions remain: Who were these hunters, where did they live, and what was their relation to the agrarian settlement? Were they Norse pioneers or specialists, exploiting an uninhabited landscape? Or could they also represent other social formations, such as the Saami people, with other perceptions of the landscape? Investigations further inland have documented Saami presence in Southern Norway at the time (Bergstøl and Reitan 2008; Gjerde 2009), and there is also a valley called *Finndalen* - possibly denoting a Saami valley - further east and on the other side of Reinheimen mountains.

We may have found some traces of these hunters in a rock shelter by the county border with a great view over the migration routes and hunting pits below (Dahle 2016c). The rock shelter was dated to the Viking Age-Middle Ages transition, yet we are lacking markers to determine the identity of the hunters. The same goes for the artefacts uncovered by the melting ice. However, the missing relation to nearby agrarian settlements weakens the idea of hunting as part of a combined subsistence strategy in these peripheral landscapes. The apparent continuity from pre-agricultural Stone Age contexts rather indicate some kind of cultural dualism.

Without concluding on their ethnic or cultural identity, it is possible to view the increased activity from the Roman Iron Age onwards in relation to the contraction and societal changes

in the core areas - possibly resulting in social stratification and a more aristocratic society being able to exploit the alpine resources through specialist hunters and trappers. Following the agro-pastoral expansion in the Late Iron Age and Middle Ages, however, hunting gradually lost its role. As mentioned above, these could have been conflicting activities, and the hunters could gradually have been suppressed to hunting areas further east (cf. Hofset 1980).

Further assessments can be made against the background of property relations, as we have shown above. Throughout the region, the Giske estate covered strategic and important areas. In our study area this included parts of the outer core areas, but also some of the most peripheral farms in the Tafjord mountains. They also possessed similar mountain farms at Lesja (Kjelland 1987, p. 34) and Skjåk (Hosar 1994, p. 260) on the other side of the Reinheimen mountains. Without further investigations we don't know the origins of these mountain farms, but our hypothesis is that territorial rights in these alpine mountain valleys were based on aristocratic control and exploitation of hunting and trapping, prior to farm settlement.

## **A socially structured landscape - living on the edge**

In this article we have examined patterns of settlement and land-use in inner Sunnmøre - one of the most marginal agrarian landscapes in the region. We argue that the landscape was concentrically organised and perceived, forming a *longue durée*. By dividing the historical landscape into zones, from centre to periphery, we have a flexible and analytical framework for studying prehistoric activity in various landscape contexts, including variation in time and space, and how these structuring practises and their physical remains have contributed to the long-term social structuration of landscape.

From the initial colonization in the Late Neolithic/Early Bronze Age we can see a great spread in terms of land clearance by the Bronze Age-Iron Age transition. Extensive land-use seems to have covered all landscape zones, even in inner areas. In the middle of the Early Iron Age, however, there is a great contraction in land-use, with no traces of settlement outside the cores in outer areas. This coincides with structural changes within these cores, in terms of more intensive land-use as well as social stratification, as documented by monumental graves and archaeological excavations.

From the Late Roman Iron Age/Migration period onwards we can see a new spread, possibly as a result of intensive exploitation of the cores. Large burial mounds and standing stones in inner areas could thus be seen as the empowerment of new cores. Through the Late Iron Age and Middle Ages we can see an agro-pastoral expansion from core to periphery, culminating in the settlement of the marginal fjord farms. Still, we have not documented farm settlement in any of these areas prior to the erection of grave monuments, which would indicate aristocratic dominion and initial occupation by slaves or semi-free settlers. The natural conditions in a marginal landscape like inner Sunnmøre may have provided limited possibilities of maintaining strong control over agrarian production outside the cores, hence promoting other social relations between centre and periphery.

The late settlement of the peripheral fjord and mountain farms implies that they had no apparent chronological and functional relation to the intensive hunting and trapping in the mountains above and further inland. Rather than being part of the same diverse subsistence economy, these strategies represent various *conjunctures* and *social practices*. The incipient intensification in the alpine zone in the Roman Iron Age coincides with the contraction in



the agrarian settlement and land-use, reaching a peak in the Migration period. Following the agro-pastoral expansion in the Late Iron Age and Middle Ages, however, the hunting and trapping activities seem to contract to inner areas and diminish.

Two explanations have been suggested; the hunting and trapping could have been conducted by other *social formations*, such as the Saami people, filling the gap and not necessarily being structured by the same social landscape. The other perspective is that a more intensive and organised exploitation of the alpine zone may have been conditioned by the restructuration and social stratification in core areas. These perspectives need not be mutually exclusive.

In order to shed new light on these - still hypothetical - processes, we still need more dates from both agro-pastoral and alpine contexts. It would also be possible to look at the same spatial and chronological patterns in a wider geographical context, but it is important to include an understanding of the local landscapes - and its structuring practices and positivities - in the social structuration of space.

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From the 9<sup>th</sup> century AD onwards, Norse migration resulted in the spread across the North Atlantic of cultural traits originating in Norway. The challenging landscapes of this region rewarded resilience and adaptability, evidenced by complex subsistence strategies incorporating the exploitation of a variety of outfield resources. However, differing methodologies and approaches across the region have limited the extent to which the connections between western Norway and the North Atlantic have been explored in archaeological research. The Expanding Horizons project brought together junior and senior practitioners in archaeology and related fields, from both within and outside of academia, to address this. The papers in this volume present case studies of outfield resource use and its impact on settlement patterns, placed in the wider context of Norse settlement and subsistence across the North Atlantic.

