



## Perceptions of stewardship in Norwegian agricultural landscapes

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### ABSTRACT

The importance of the landscape as a tourism asset is well known, and the significance of perceptions of landscape is increasingly being recognized in policy and planning, in Europe thanks largely to the implementation of the European Landscape Convention. The abandonment of agricultural land is one of the ongoing processes of landscape change that are having a profound impact not only in Norway – the subject of this article – but across Europe. The article presents the findings from a study of perceptions of stewardship in Norwegian agricultural landscapes and the ways in which perceived stewardship is linked to landscape preference. The results of the study show that there are differences between landscape professionals and the general public with regards to the perception of stewardship and cues used for assessing stewardship, and suggests that stewardship is a stronger factor in shaping the general public's preferences. The implications of these results are discussed in relation to the European Landscape Convention and need for methods to assess and monitor landscape change processes.

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## Introduction

### Background

In Norway, agricultural landscape accounts for approximately 3% of the country. Farms have traditionally been small, which historically has forced farmers to diversify their agriculture as well as look to other means of generating income (for example, fishery and forestry) (see [Daugstad et al., 2006](#); [Hetland, 1986](#); [Goodale and Sky, 2001](#)).

In the decade to 2010 the Norwegian agricultural landscape changed ([Statistics Norway, 2011](#)), with a 3% decrease in utilized agricultural land and a 12% decrease in open fields. At the same time there was an increase in hay-meadows and pasture by 2%. Farm structure has also changed, with an increase in average farm size from 14.7 ha in 1999 to 21.6 ha in 2010, resulting in a decrease in the number of farms. The generally acknowledged driving forces behind these changes are technological development, market prices for agricultural products, and national and international agricultural policies ([Dramstad and Sang, 2010](#)); this is a process that is evident across Europe, and is usually explained as resulting from a combination of abandonment (either complete or partial) and intensified land use (see, for example, [Henle et al., 2008](#)). These changes are both quantitative – with a decrease in land

used for agricultural purposes – and qualitative in nature, resulting in a loss of value and functionality (see, for example, [Henle et al., 2008](#)). Another factor believed to influence the pace of abandonment in Norway is the increase in tenancy farming noticeable in certain parts of Norway ([Dramstad and Sang, 2010](#)), with the subsequent decrease in the number of active farm units ([Goodale and Sky, 2001](#)). Tenancy is believed not to promote the same level of landscape management as owner–occupier farming, thereby increasing the risk of abandonment ([Dramstad and Sang, 2010](#)).

The abandonment of agricultural land and subsequent reforestation is a process that has received attention across Europe as well as in Norway (see for instance [Bryn and Debella-Gilo, 2011](#)). Parallel with farm abandonment, there is also a continuing decrease in the level of detail management; a drop often associated with non-residential farmers and changes in traditional agricultural management systems such as grazing and mowing ([Dramstad and Sang, 2010](#)). In Norway the focus has very much been on the possible negative effects these processes have on both tourism and biodiversity ([Dramstad and Sang, 2010](#)).

Across Europe the importance of rural tourism as an income generator for rural areas has grown, and in places tourism has taken over from agriculture as the principal business for rural communities ([Garrod et al., 2006](#)). The importance of the landscape as tourism asset has been widely recognized (see, for example, [Daugstad, 2008](#); [Dramstad and Sang, 2010](#)). Both agricultural policymakers and representatives from the tourism industry are increasingly aware of their common interest in the rural countryside and the processes of landscape change (see, for example,

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Daugstad, 2008). For the agricultural sector, rural tourism could provide a necessary diversification strategy with the potential to generate a substantial income for farmers and thus sustain agricultural practices in the landscape (Daugstad et al., 2006). Norway's landscape and natural environment are her tourism industry's core asset, and the agricultural activities evident in the countryside contribute to the type of heterogeneous landscape much appreciated by tourists. The presence of the farmer, often viewed as a custodian of the landscape's qualities, is an important asset (Daugstad, 2008). With the on-going process of regeneration of forest within the cultural landscape due to abandonment there is also the additional loss of accessibility and visibility of the landscape that is likely to affect key areas for rural tourism in Norway (see for instance Bryn and Debella-Gilo, 2011). The experience of landscape is an important element for the tourism sector, but is also equally important for the quality of life of the people living there.

The importance of people's perceptions of the landscape has been acknowledged by the European Landscape Convention (Council of Europe, 2003). The adoption of the ELC across Europe has further emphasized the need to find methods for incorporating people's perception of landscape into monitoring, planning, and management. Several studies have pointed to the differences in perceptions of agricultural landscapes between groups such as farmers, experts, city dwellers, and conservationists (see, for example, Buijs et al., 2006; Rogge et al., 2007; Tveit, 2009), arguing that this may relate to perceived land stewardship (Tveit, 2009). Identifying how different groups of people perceive land stewardship will increase our understanding of how abandonment processes affect the visual qualities of agricultural landscapes and the possible knock-on effects on tourism and recreation.

The VisuLands framework, the result of a European Commission-funded research project 'Visualization tools for public participation in managing landscape change', offers an approach to describing and analysing the character of the visual landscape in a systematic way (see, for example, Tveit et al., 2006; Ode et al., 2008). Through an extensive literature review, nine key concepts describing visual landscape character were identified as factors in the formation of human landscape preference, namely stewardship, coherence, disturbance, visual scale, historicity, imageability, naturalness, complexity, and ephemera. An important element in the VisuLands framework is the linking of indicators of the landscape's visual character with the aesthetic theory of landscape. The framework identifies a range of available data sources with which to assess landscape change using visual indicators and the ways they complement one another in a comprehensive approach to visual landscape assessment (Ode et al., 2010). An indicator approach such as the VisuLands framework is useful in assessing changes in spatial structure that influence preference and character. In the course of landscape change, the relative importance of the nine aspects of visual expression may change, thus altering the perceived visual quality of the landscape; for example, following abandonment the perceived stewardship may decrease whilst the perceived naturalness increases. Changes in the visual landscape will affect its character and its perceived visual quality. The degree of change in the landscape's visual character and quality will vary between groups of people as well as between landscapes. Although the VisuLands framework (Ode et al., 2008) presents current indicators that are based on landscape aesthetic theory, there is a need for systematic tests to identify the importance of different aspects of landscape character for perceived visual quality and how this may differ between groups.

In the study presented here we have focused on the concept of stewardship, as it would be useful to be able to identify the effects of agricultural practices such as abandonment and the lack of a

farmer's presence in the landscape, two aspects that greatly affect the expression of land stewardship. The study focuses on a specific visual aspect of landscape experience, the perception of stewardship, though we appreciate that landscape experience is more than merely visual.

#### *Stewardship as a key aspect of the visual landscape*

Stewardship is a concept that refers to the experience of care and upkeep of a landscape. Tveit et al. (2006) define the concept of stewardship 'as the presence of order and care, contributing to a perceived accordance to an "ideal" situation. Stewardship reflects human care for the landscape through active and careful management.' This is a much-noted concept in relation to agricultural landscapes and is widely seen as an important contributory factor in the formation of preference (Coeterier, 1996; Nassauer, 1995, 1997; Sevenant and Antrop, 2009; van Mansvelt and Kuiper, 1999; Weinstoerffer and Girardin, 2000).

It was concentration on stewardship that led Nassauer (1997) to develop the aesthetic theory of care, stressing the importance of having 'cues of care' in order to make sense of novel and often messy ecosystems in populated landscapes. While these cues might vary according to the landscape as well as the culture, an underlying principle is that they express care of the landscape. In order to identify such cues, we have to identify which elements are important in assessing whether a landscape appears cared for. Based on a literature review of current indicators, Ode et al. (2008) identify two main groups of cues for the assessment of stewardship:

- (1) The level of management of vegetation. This can be expressed through the extent of abandonment, the presence of weeds, and the management type, frequency, and detail (see, for example, Nassauer, 1995; van Mansvelt and Kuiper, 1999; Weinstoerffer and Girardin, 2000).
- (2) The status and condition of man-made structures in the landscape such as farm buildings and fences (see, for example, Laurie, 1975; Nassauer, 1995; Weinstoerffer and Girardin, 2000).

There have been several studies that have looked at group differences with regard to perceptions of stewardship and its bearing on preference, all of which point to the importance of the concept to a wide range of groups. Natori and Chenoweth (2008) have tested the hypothesis that 'Farmers' landscape preferences differ from naturalists' preferences such that stewardship is more important for farmers, whereas naturalness is more important for naturalists'. Their study shows that stewardship is a significant positive predictor of preference for both farmers and naturalists: for both groups, the marginalization of agriculture lowers the level of stewardship present in the landscape. Sevenant and Antrop's questionnaire-based study (2010), in which the various VISULANDS concepts were used to explore individual differences in a latent class analysis of Flemish landscapes, confirmed the importance of the concept of care/stewardship in determining preference for a number of latent classes of respondents. The studies by Natori and Chenoweth (2008) and Sevenant and Antrop (2010) confirm the importance of stewardship for the formation of preference.

When it comes to the elements that might play a part in the assessment of stewardship by different groups, the study by Rogge et al. (2007) indicates that there might be group differences involved in the assessment of stewardship. In their study of rural landscapes in Flanders they found maintenance to be an important factor in the attractiveness of landscape for three target groups – experts, country-dwellers, and farmers. Their findings show significant differences in the mean rating of attractiveness between groups and the use of different predictors for preference between

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