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Summary
Cultural heritage is part of the multifunctional agriculture. This report aims at throwing light on the connections between active agriculture and cultural heritage by synthetising existing research based knowledge on the various aspects of this connection. The agricultural landscape has undergone large changes during the last 50 years, and the polarisation processes of intensification and extensification affect cultural heritage. Studies show that 'modern' agricultural landscapes are rated more negative by the public than what is perceived as traditional or 'old fashioned' landscapes. To some extent farmers' view differ from this, having their self identity and legitimacy linked to food production. There are also regional differences both regarding the state of the agricultural landscape and cultural heritage, and regarding attitudes towards preservation and use. In general, the need for a functional system approach is vital to the upkeep of cultural heritage connected to agriculture both in terms of rural viability and social processes in agricultural communities, to secure knowledge on resource use and management in a sustainability perspective, and regarding questions of authenticity.

Entry words
Agriculture, cultural heritage, multifunctionality

Foreword

Cultural heritage is frequently referred to as one of the non-commodity outputs of the multifunctional agriculture. However, the content and meaning of agriculture's cultural heritage remain somewhat unclear. What do we know about the linkage between agriculture and cultural heritage? What is agriculture's contribution to cultural heritage, and what is the importance of active farming for cultural heritage? These are ambitious questions that can not be fully answered in a short report.

The aim of this report is to give an overview of the state of the art concerning research based knowledge on these issues. The project has been made possible by a contribution from the Norwegian Ministry of Agriculture and has been carried out in co-operation by Centre for Rural Research (*Bygdeforskning*, project leader) and Norwegian Institute for Cultural Heritage Research (*NIKU*).

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1. Project background and objectives, structure and content

Cultural heritage and agriculture

Cultural heritage protection and management as a public, professional activity started as an initiative from an elite with economy, time and power to focus on the physical remains of past time, recognising its value as historic documentation in a rapid developing modern, industrial society (Lidén 1991). Focusing on the past was an activity of selection, not all past time and connected remains were interesting. In this process of 'inventing history' the medieval period was seen as the most glorious and interesting epoch. The medieval focus was part of a romantic influence throughout Europe (Lidén 1993, Sørby 1994). As an example, church-restorers during the 19th century were more concerned with reconstructing ideal-monuments in a 19th century notion of a medieval Christian way of thinking, than actually restoring the buildings. The restored buildings thus became a paraphrase of medieval ideals. The church buildings no longer embodied the traces of a long life with additions and changes, dictated by changing times, ideas, needs and abilities.

Today's ideals for landscape and cultural heritage protection are different. Traditionally dominant conservation motives like age, beauty and scientific value have been supplemented with the idea that past time leaves its imprints in our surroundings from prehistory to yesterday; cultural heritage can be ugly and even destructive, and cultural heritage should be protected for recreational reasons, for it's educational potential, for ethical reasons etc. However, despite a wide scope and a 'democratic' approach, cultural heritage ideals and management in practice is still a matter of choice. Our ideals are not more 'valid' than the medieval focus in the 19th century (Daugstad 2000).

Cultural heritage is often associated with an objectified version of history. If we are to explain to each other what history is, we refer to the visual cultural environment in the landscape. That is what we actively acknowledge, and therefore it becomes a part of our common cultural heritage. In our European culture, prehistory is something we need to see as a physical expression (authentic or not) as part of our surroundings. For many people the meeting with prehistoric monuments and the historical landscape structures stimulate two existential needs. On the one hand, the dream of another existence - a contrast to the modern world and its rationale. On the other hand, the need to understand the paths along which we have moved through history. These paths in many ways determine our existence and the framework for today's life (Palludan-Müller 2000). Prehistoric and older historic buildings and monuments do, when they are visible and accessible in today's landscape, represent a definite, non-academic and direct communication from the past to our senses and imagination. Visibility and access to these sources of knowledge and imagination is therefore important for people's possibilities to establish contact with the historical dimension and make it an active part of their self-identification (ibid.).

Cultural heritage is closely tied to agriculture, as we will elaborate in the next chapter, in Europe the farmer is seen as the builder of the nations. For four to five thousand years the farmer has been the prime administrator of historical remains in the landscape. Farmers' consciousness and interest gained in this role have varied through time. For the past 10 years this aspect of farming has gained renewed actuality due to strong pressure to further

restructuring of agriculture, reduced agricultural production support and the need to obtain other types of legitimacy for farming. This is particularly the case in less favoured regions. In this report we are raising the question whether there is a link between active agriculture and the creation and maintaining of important cultural heritage values related both to the physical remains and to the cognitive heritage for society as such. An important issue in this status report is also to shed light on important gaps in this knowledge.

Daniels (1993) claims that the focus on national cultural heritage reflects an insecurity linked to existent national identity and culture. The strong restructuring factors such as globalisation, economic liberalisation, environmental and political threats, contribute to an increased need for a focus on the cultural heritage. Heritage is linked to seeking the past, to nostalgia. A focus on cultural heritage characterises periods with social change. Lowenthal (1996) points out that nostalgia is at its strongest when the present represent anxiety and disappointment. The need for cultural heritage creates a growing market for cultural heritage products or experiences in what is termed "the heritage industry" (Hewison 1987).

Cultural heritage may be seen from within a conservative or from a radical approach, according to Hardy (1988). Within a conservative perspective we seek to maintain the status quo, in which nostalgia and sentimentality is important, and in which the past is an objective in itself. Within a radical perspective on cultural heritage, the past is used in order to teach us something and to make us more able to meet future challenges.

One important aspect of the potential of the cultural heritage is linked to the claim that local and regional development in the future increasingly will become a competition about human resources. Thereby cultural heritage may be important as a positive potential development factor, and thereby agriculture becomes an important actor in this development (Gaukstad 2000).

Gaukstad (2000) points out four major threats that cultural heritage in the agricultural landscape is facing: 1) Intensification of land use, removal of fences, roads, farms, afforestation, deep ploughing etc. 2) Reduced and/or cessation of farming, close down, depopulation and decay within marginal areas. 3) The conversion of agricultural land into town and urban sprawl, roads, other infrastructure etc. 4) Emptying of functions, buildings no longer in use. One may add a fifth point to this list: Loss of knowledge in how to utilise local resources for survival and entertainment: food, clothes, building techniques, music, folklore.

Ethnologists (Gaukstad 2000 , Christensen 2002) as well as biologists (Ihse and Norderhaug 1995, Austad 1998, Moen 1999, Olsson and Rønningen 1999) have stressed that the main characteristic of Norwegian cultural landscapes is the great differences and variety in landscape types, cultural environments and bio-diversity. Differences in production conditions have led to a great variety of ways of combining agriculture with other survival strategies for utilising the resources throughout the country.

Maintenance of biodiversity and reducing pollution is vital in order to preserve the material basis - *the conditions* for human survival. In the same way, maintenance of the cultural heritage contributes to maintenance of the cultural diversity, which must be seen as vital in order to secure our *ability to survive* in terms of maintaining knowledge about how to utilise our natural resources (Gaukstad 2000).

While agriculture may represent a threat to certain cultural heritage values, for example, archaeological remains may be threatened by modern farming in terms of deep ploughing[1], Gaukstad (2000) points out that the main part of the cultural heritage from more recent times is positively dependent upon maintained farming. A number of cultural heritage elements are directly dependent upon the area structure that exist in today's agricultural landscape, and that there is a close connection between the maintenance of a heterogenous area structure, important natural values and a broad spectrum of cultural heritage categories (Dramstad et al. 2001).

Project objectives

This project aims at throwing light on the connections between active agriculture and cultural heritage. This will be done by synthesising existing research based knowledge that touches upon the various aspects of agriculture and cultural heritage. More specifically, what can be extracted from the role of active, "modern" farming and the upholding of various heritage aspects: How can active agriculture develop or manage cultural heritage? How can active agriculture be a threat to cultural heritage? Are some forms of agricultural systems or practises more "cultural heritage friendly" than others? Are some regions more cultural heritage friendly than others? How does the public view the cultural heritage of agriculture? How does the Norwegian case compare to examples from other countries?

The project material is limited to existing or ongoing research. No new empirical material has been collected by the project team. However, the report will draw some conclusions on where research is needed and what possible issues should be raised.

Defining the cultural heritage of agriculture

Since the starting point of the project is to shed light on the very broad and multi-facetted concept of cultural heritage, we need to define and narrow its scope somewhat. In a Norwegian context a broad definition of the concept would include material objects and artefacts from our cultural history, handicrafts, folk traditions, myths and beliefs, and traditional knowledge on farming practises and resource use in general. Not underrating the value of the whole spectrum, we have, for practical reasons, taken our point of departure related to cultural heritage as physical objects and entities, cultural environments and landscapes, and knowledge connected to traditional farming methods and resource use. The concept of cultural environment does, however, also include a cognitive dimension as shall be seen from chapter 3.

Issues on cultural heritage are in principle linked to most types of human activities. Although this project's concern is the primary industries, we will not go into the cultural heritage of forestry, fishery etc., but will limit the study to agriculture. However, it should be mentioned that the various primary industries traditionally have been intertwined. The land ownership structure in Norway to a large extent reflects the shortage of good agricultural land and the need to utilise all surrounding resources. Most farmers own some forest in addition to agricultural land in addition to other types of land use rights, and along the coast farmers have

[1] In an actual case the Heritage Authorities have recommended a switch from potato growing to sheep farming and grazing in order to maintain archeological structures (Skar et al. 2002).

long traditions in combining farming with seasonal fisheries. However, the public debate on the primary industries' role as a provider of public goods and cultural heritage have so far been dominated by a focus on agriculture.

Cultural heritage is in general associated with past time, history, relics and remnants. Our focus is to place the role of cultural heritage in a contemporary setting and also to present some reflections on the age of cultural heritage, in other words how the perceived and actual age or history of a farming practise or cultural landscape affects whether or not it is defined as cultural heritage.

Structure and content of the report

Starting with an introductory chapter, the report continues with a chapter dealing with national identity, the global, the local and green consumerism. Here, the aim is to point out some aspects of the contemporary debate on these issues, concerns being not only in a Norwegian context but commonly held opinions about the importance of agriculture in Europe. Chapter three presents policies and incentives concerning agriculture, cultural heritage and multifunctionality. This chapter gives an overview of Norwegian landscape measures and some international experiences. It also outlines some major points in the multifunctionality debate. Chapter four sheds light on the relation between agriculture and cultural heritage based on studies we have termed “outside” and “inside” views, meaning studies focusing on a tourist or recreational perspective, and studies investigating local inhabitants’, farmers’ or owners’ perspectives. In the fifth and last chapter we conclude on the state of the art on agriculture and cultural heritage, and try to point out some central perspectives.

2. National identity, the global, the local and green consumerism

The Norwegian farmer as a national symbol

Within Norwegian cultural heritage management, agriculture has always played a central role. The farmer is in many terms seen as the founder of the nation, therefore agriculture has had a central position linked to the Norwegian national consciousness. During the early19th century the farmer, mainly from the inland areas, became a symbol of Norwegian autonomy and of authentic Norwegian culture. Politicians, intellectuals and artists created an idealistic picture of the inland farmer based on the idea that the roots of the authentic Norwegian culture were hidden in isolated valleys and mountain areas. Their opinion was that in these rural areas the culture had been undisturbed from impulses from the outside, in contrast to the coastal areas. Therefore, buildings, food culture, music and language represented the authentic Norwegian culture. Further, these farmers were perceived as having courageously stood up against the Danish and later Swedish yoke (Berkaak 1992, Daugstad 2000). In Norway, therefore, the farmer became a gathering symbol during the building of the Norwegian nation. Eriksen (1997) has described how the landscape lent legitimacy to the nation when landscape characteristics were ”transferred” to those inhabiting the landscape; the challenging and dramatic Norwegian landscape made the people strong and independent.

In the post-war period a system of support and regulations was built up around the ideal of the full-time farmer, owner and occupier. In Norway, the working class was too small to make a strong enough basis for the social-democratic Labour Party, which meant that the labour movement was partly dependent on support from the small farmers and tenant farmers. When the Social Democrats came to power in 1935, together with the Farmers' Party (today the Centre Party), they defended the farmers' interests (Almås 1993). In neighbouring social democratic Sweden, the situation was different. Here, a rural nobility survived the Middle Ages, and was a part of the ruling class opposing the labour movement. Swedish Social Democrats have preferred a more liberalist, cheap food policy, and followed a rural depopulation policy, with transfer to the strong urban-based industrial sector: *“the rural underclass of Sweden resigned themselves to their future as urban workers. They left the countryside in great numbers, both physically and mentally”* (Almås 1993:6). However, one should bear in mind that many of the areas were de-populated due to this process, primarily the northern forest areas that had been settled relatively late in economically poor times, and had a very dispersed settlement pattern. Consequently these areas were vulnerable to structural and social change in the society (Rønningen 1999).

Characteristic of Norwegian post-war agricultural policies is the strong social and regional profile. The importance of maintaining a scattered settlement pattern for defense purposes, a need for increased self sufficiency as well as social values related to family farming have been important. The symbolic and actual importance of the Norwegian independent farmer and small-holder in a large country with a scattered population has been essential to legitimising agricultural policy in Norway (Almås 1993, Rønningen 1999).

Since 1979, the MMI Institute has carried out annual surveys concerning Norwegians' opinion towards several aspects related to farming (Dalen 2002). These investigations show that in 2002, 74 percent of the Norwegian population was positive to sustaining agriculture at the present level while the the same investigations in 1979 showed that 84 percent of the population was positive to the same matter. The percentage, however, has fluctuated, most

likely depending on factors like the referendum about EU-membership in 1994 (which was turned down). Despite fluctuations, the MMI concludes that the majority of the Norwegian population still supports agriculture being kept at the same level as today. The investigations also show that there is a broad opinion that views agriculture as an important and necessary factor to uphold employment and settlement in the rural Norway, as 75 percent agreed to that in 2002 (ibid.).

These arguments and perceptions are, however, by no means particular to Norway, but commonly held opinions about the importance of agriculture in Europe and elsewhere, as will be shown in Chapter 3. In the following we will point out some common aspects of the contemporary debate.

Globalisation, regionalisation and new patterns of consumption

"Globalisation" and "*regionalisation"* are catch words describing two central parallel elements of production and economy. At the same time that fusion and integration of multinational companies are important factors, there is also a tendency towards "*vertical disintegration"* (Bonnano 1989). The term "*the Europe of regions"* is an indication that European integration is allowing regions to play a much more active role than earlier within economy, politics and cultural development. Independently of EU policies, there is also a tendency towards an increasing regional "awakening" in many parts of Europe, politically as well as culturally (Sogge and Imset 1993, Lysgård 1993). This is also part of a global trend. The question of raising public awareness and enhancing local cultural identity as a means of achieving sustainability, is referred to in ESDP (European Spatial Development Perspective) "Towards Balanced and Sustainable Development of the Territory of the European Union" (1999: 20): "*wise management of natural and cultural heritage contributes to the preservation and deepening of regional identities and the maintenance of the natural and cultural diversity of the regions and cities in the EU in the age of globalisation"*.

Parallel to the globalisation of culture and consumption, there is a reaction in the direction of regionalism. To some extent this can be seen as a reflection of a more or less post-fordist society, where the demand for standardised mass products decreased from the 1970s, and there was an increased interest for more specialised products. The market has become more segmented (Dale 1994). In the mentioned ESDP (1999:20) the negative effects of intensified and specialised agricultural production on spatial development is pointed out. The negative effects are related to intensification (monotonous landscapes, pollution etc.) as well as extensification (abandonment of traditional farming methods like natural rough pasture). There is a need for a continued focus on a broad perspective on spatial planning and development: "*Attempts have been going on for nearly two decades to integrate agricultural policy with the broader economic and societal context of rural areas. Experience has shown how diversifying farming into activities such as the development and marketing of high-quality products, agricultural tourism and investment projects related to the environment, which have hitherto been marginal, can open up new prospects and opportunities"* (ibid.).

In relation to policy aims and options for the territory of the EU, the document states (ESDP 1999:23*)"Rural areas in Europe are characterised by diverse and indigenous development. They are complex economic, natural and cultural locations which cannot be characterised by one-dimensional criteria such as population density, agriculture and natural resources. Some rural areas have successfully assimilated structural change. This is attributable not only to locational*

factors, such as favourable sites or low wages, but also increasingly to factors such as the quality of the natural and cultural heritage."

The post-modern consumer is increasingly focusing on regional and local features; this also includes the consumption of agricultural products. "Niche production" is becoming a strategy for a part of agriculture. Tovey (2001) claim that focus on *horisontal quality*, seen in relation to preferences of certain groups of consumers, is central for niche development, while *vertical quality* - generally valid criteria for purity, freshness, durability etc. - are no longer enough. *Cultivating the markets* - marketing - has a crucial role, in which quality and local distinctiveness may be key words.

The more similar Europeans become to each other, in particular in terms of consumption, the more important it becomes to mark the differences (Knudsen 1996). Consumption of cultural symbols, rather than of things to mark one's lifestyle and confirm identity, is becoming important for the post-modern consumer. Lifestyle and connected status symbols seem to be connected to economic and social structures differently than previously, and have become more group-specific. Food serves as an important symbol, the national kitchen having taken over the role of folk costumes for marking national identity, according to anthropologist Anne Knudsen (1996).

Regional identity may also be consciously created as a sales argument, typically within the tourism industry (Paasi 1986). However, it is now becoming important in the attempts of developing new markets for agricultural products. Labelling and branding linked to the origins of certain types of food and food names has become an important issue within Europe as a strategy of diversification of agriculture away from bulk production and developing new markets for specialised products, niche products etc., which are being encouraged both by the EU and by national policies. The EU-regulation 2081/92 on Protected Designations of Origin involves *"the name of a region or well defined area … which is used to designate an agricultural product or food originating from that region. ... whose quality or characteristics are essentially or exclusively due to the geographical environment, including natural and human factors…"* (OECD 1999).

Inspired by e.g. the system of appelation d'origine in wine production, and the success of the Swiss Edamer cheese, a number of local and regional brands and products are developing. This must also be seen as an important contribution in maintaining local and regional cultural heritage linked to farming and food traditions. One example is the Regional Nature Parks label in France; each regional nature park has a protected brand name which is exclusive property of the State. It may be applied to various goods, including farmers' produce (OECD 1999). One major concern is, however, further market potential for these products.

Regional and national cultural landscapes - and their "natural" values

Landscapes are central national symbols – they *"picture the nation"* (Daniels 1993:5). Sörlin (1999) underlines how landscapes have been the raw material for images and projections of territorial entities – regions and localities as well as nations or empires – and these landscapes have been culturally produced and mediated. Lowenthal (1994:30) argues that nationalism intensifies landscape feeling, and cultural autonomy sustains island communities: *"Nationhood for most Europeans came when they were still rural, linking peasant emancipation with national sovereignty. Except in England, where agricultural labourers remained landless, rural*

folk tended to welcome the centralized state as a release from ancient inherited provincial and local bondages, a stimulus to peasant proprietorship. That is why Europe's landscapes, however lightly inhabited, remain compelling icons of ***national*** *identity"*.

The increased interest for the conservation and maintenance of the cultural landscape in western Europe may be partly seen as a reaction to increased pressure for integration due to the policy of the European Union, and to globalisation processes in production and economy in general. The various cultural landscape management programmes may partly be a way of protecting some national symbols. The regional aspect could also be important since landscapes reflect distinct regional characteristics. Lowenthal (1994) points out that national landscape symbols may cover over regional conflicts, creating a national identity.

In every people's heritage, landscape traits are felt as being integral to national identity. Each nation treasures particular geographical features and elements of its own. The myths of the idyll, the images of the countryside as depicted through national romantic art are interwoven into the legitimisation of the farming sector. Protection of the cultural landscapes of the countryside means a protection of national identity.

In the present situation, people in eastern Europe are trying to find their way back to national identities, establishing territorial units. The relevance of the cultural landscape concept in the present European situation is clearly illustrated by a conference arranged in Slovakia, October 1997, by the International Association for Landscape Ecology, titled "Culture and the Environment". "*For the future of European regional sustainable development and to preserve our cultural heritage, cultural landscapes are the most effective units to designate regions within Europe. If regions of Europe are taken seriously, then cultural landscapes will be taken seriously and all sectors of society can benefit"* (IALE Bulletin 1997).

Kenneth Olwig (1993) discussed the concepts of nature and landscape and its connection to culture and agriculture. *Nature* derives from Latin *nascere*, which may be translated as "to be born". Humans should realise Nature's potential through cultivating it. *Agriculture* is the cultivation of the land by shaping it into acres (*ager* in Danish, *åker* in Norwegian). Earlier, at least during the Enlightenment, the agricultural landscape was seen as nature, since it represented the "natural" realisation of nature's potential (Olwig 1993).

Landscape (*landskap*) is of German origin (*Landschaft*) - a unity of territory identifiable with a folk. (*Scape* from *schaffen* - shape and create - *skape* in Nordic.) Olwig (1993:104) points out that there is a "*link between the idea of cultivation and the collective cultural identity of the nation or land"*. A dominating understanding of the term landscape originates from the Renaissance, meaning an area depicted in painting. Imported to England, the term came to apply not to a particular area, but to a type of painting, as *scenery*. Olwig (1996) elaborates the Northern European concept of landscape, which is much older. He stresses that "landscape" also contained meanings of great importance to the construction of personal, political and place identity. This view of landscape sees it not simply as territory or as scenery, but as an expression of law and culture, including traditions, customs and local institutions.

In the English language, *"country"* is both a nation, the whole society, or its rural area (Williams 1973). With the industrialisation of society, the dichotomy city - countryside was stressed, not least within arts. Raymond Willams (1973) made a presentation of changing attitudes in English literature since the sixteenth century, relating them to social developments. The rural landscape became a category in contrast to the noisy, dirty, sinful urban life. Rural

landscapes came to symbolise natural innocence - the “natural” - in the nostalgia for an ordered and happy rural past. Literature and paintings contributed to such a longing for the innocent pastoral past - and preference for the shepherd’s landscape. Nature was identified as the agricultural landscape.

During the 19th century there was a gradual change in the perception of “nature”; the focus changed from the cultivated, farming landscape to the wild and untamed landscape. In the 18th century, the nobility visited the picturesque, cultivated farming landscape. It was considered harmonious and beautiful, compared to the wild, untamed, and many times considered ugly, wild nature (Johannisson 1984). The farmers themselves had the same perceptions. It was a landscape of production, and the cultivated plot of land near the farmhouse that were considered to be the safe and known. The wilderness was full of forces and supernatural creatures that could easily threaten the controlled (Christensen and Eriksen1993, Frykman and Löfgren 1994, Daugstad 2000). During the 19th century the perception of the landscape gradually changed, along with the development of industrialism, urbanisation and the growth of the bourgeoisie. The wild and untamed became the ideal, and became loaded with a new type of magic. The mountains became symbols of individuality and character, merits in the culture of the bourgeoisie. Nature became natural – the consumption landscape became the accepted view of landscape (Frykman and Löfgren 1994).

According to Olwig (1993), the national romantic landscape painting and poetry in the 19th century played a critical role in defining the national identity of states like the United Nations and the Nordic countries. However, these states were much less cultivated than those of 18th century England. Urbanisation and industry shaped the development of these countries, agriculture playing a smaller role than before. *“For this reason a new notion of nature as being ideally wild and uncultivated began to compete with the earlier view of nature. (…) It derives, not from an agricultural collectivity, but from a society which sees nature as a source of raw materials for a lineal, rather than cyclical, industrial process which produces products for exchange on urban markets. It is the product of an urban society which sees its natural reflection, not in the cultivation/care of the landscape, but in places which contrast with, and complement, the urban wilderness”* (Olwig 1993:105).

In other words, nature becomes a place to flee to. Christensen (1993) points out that the more dependent our modern society has become on high technology and intensive utilisation of the landscape, the more we turn against this and develop the attitude that man is nature’s worst enemy. Wild, authentic nature has become our ideal, the natural has become identical with the healthy and genuine, in contrast to the man-made. There is an apparently unsolvable conflict between consumption and protection of natural resources. At the same time it seems that man’s increasing distance to the landscape prevents us from solving the real ecological problems (ibid.). Increasingly, nature is perceived as a thing that will be ruined if man interferes. As a parallel, the “traditional” agricultural landscape represents “a better world” than the intensive production landscape. Olwig (1986) showed that the modern landscape view has meant a change from looking upon nature as a process to looking upon it as a static thing. We are moving away from the understanding of the cultural landscape as an ecological system where nature and culture interact (Rønningen 1999).

This "decoupled view" is obviously dominating the multifunctionality debate that attempts to decouple the connections between agricultural production and collective goods - commodities (food and fibre) from non-commodities (environmental goods, food security etc.) For

example turning maintenance of collective goods into an issue of landscape management that may be carried out by NGOs, trusts or even military personnel on contract (Abler 2001).

Olwig criticises aspects of the ideas behind landscape management because they deny what agricultural values actually are: "*When the landscape is viewed as scenery, as an image of the cultivated and the natural, then it becomes possible to view the preservation of the landscape primarily in terms of visual management and 'landscaping'- as the architects call it. (…) There need not to be any relation between the 'natural', reciprocal agricultural values which the scene symbolises'*"(Olwig 1993:96).

According to Olwig, there is an important connection between agriculture and the national cultural identity, and we need to focus attention upon the need to preserve the cultivated landscape (ibid.). He warns against perceiving the agricultural landscape as scenery or as a type of cultural capital, and stresses that we need a living agricultural culture to maintain the agricultural landscape both as a viable economic basis and in order to secure cultural traditions. Active measures are necessary as stimulation.

Similar viewpoints are presented by Messerli (1991). Drawing on studies in the Alps, he concludes that a reproduction of the Alpine cultural landscape cannot be achieved in a meaningful way through specialised landscape management, which is the solution adopted in our labour divided society. On the contrary, this can only happen through a connection between production and reproduction.

The following chapter will describe some of the ongoing attempts of landscape and cultural heritage management through various landscape management incentives, and de-coupling of landscape production from "traditional" food production, both in a Norwegian and international context.

3. Development trends in the agricultural landscape and policies and strategies to meet these

Modernisation of agriculture to a large extent supported by agricultural policies and subsidies, have brought about large changes in European agricultural landscapes over the last 50 years. Major forces driving landscape changes are agricultural intensification, agricultural abandonment, urban expansion and infrastructure development (Stanners and Bordeau 1995). Norway's agricultural development has been further affected by regionalisation policies which favour specialisation in cereal production on the better agricultural areas in the south-east, and dairy production in the west and north. Polarisation of land use is one major aspect of the Norwegian as well as the European development, meaning that central areas undergo further intensification and industrialisation of land use, while more peripheral areas increasingly are being marginalised and abandoned. Changes in land use and agricultural practices are implicated in the decline of biodiversity, the loss of cultural heritage and has also simplified the landscape picture leading to a loss of aesthetic and recreational qualities (Sødal et al. 1990, Potter et al. 1991, Rønningen 1999, Skar et al. 2002).

Although average farm size in Norway remains small by international standards (approximately 14 hectares), field size has increased, with consequent loss of the green structure of small biotopes and cultural monuments. The dynamics of future change will to a large extent depend on national and international agricultural policies.

Agri-environmental policies and strategies

Since the mid-1980s the development in Norway and Europe has in many ways been parallel in terms of developing measures for the agricultural landscape as a part of agricultural policies. The measures have been used as an instrument to reduce overproduction, pollution and loss of landscape values, three major characteristics of Western agriculture in the postwar period. However, they also strongly reflect the societal and cultural importance of agriculture and rural areas in European countries: Cultural landscape preservation and management has become a central issue. Also, this development must be seen as a way of trying to adapt agricultural policies to become more compatible to the ongoing WTO negotiations on liberalistion of the world trade on agricultural goods (Rønningen 1999, Buller et al. 2000).

These measures must be seen as a part of an accommodation strategy, and not as a real change of agricultural policies or production ideology (O'Riordan 1989, Rønningen 1999, Tovey 2001). Within the EU this accommodation strategy is reflected in the "Agri-environmental Regulation" 2078/92, in which member states must implement various packages for landscape and environment in agriculture. Important arguments for, and objectives, of these landscape measures are connected to their cultural heritage, historical values, biological diversity and recreational and aesthetical values. Payments may be linked to measures such as building restoration, traditional farming techniques, maintenance of old hay meadows and restoration of landscapes and biotopes. Many of these landscape schemes are based on annual payments within designated areas for carrying out these measures (Brouwer and Lowe 1998, Rønningen 1999, Buller et al. 2000).

Norwegian measures

54 percent of the agricultural subsidies in 2000 (totally NOK 7000 000 000) are categorised as "direct distributed subsidies", most of these are direct payments. The General Acreage and Cultural Landscape Payments (AC) comprises almost half of this. AC is meant to support income level and income levelling between different types of production, farm sizes and districts within crop production and grass-based livestock production; to take care of the cultural landscape through farming; and to maintain the production capacity of the land. All farmers are eligible, and there are only some relatively general prescriptions and requirements in terms of not to change or deteriorate the landscape (no removal of various landscape elements such as hedges, streams, etc.). A prerequisite is that there is a certain minimum production of "normal crops" on the land in order to qualify. The reason is to prevent passive reception of money and to maintain the production capacity of the land. These payments replaced a previous more production oriented subsidy (Rønningen 2001a, Norwegian ministry of Agriculture 2001), and to a large extent function as income support (Kallbekken 2002), in other words farm survival.

The major effect of the scheme is its strong contribution to maintain farms and farmland farmed, thus a certain level of agricultural and landscape production is being carried out all over the country (Olsson and Rønningen 1999, Rønningen 2001a, b). As the requirements are very general, the scheme does not lead to landscape enhancement.

The most genuine measure in terms of de-linking production of commodities and non-commodities is the scheme for special measures in the cultural landscape - STILK (NOK 105 000 000 in 2001). The scheme is voluntary and farmers may apply for payments for measures such as the cutting of hay meadows, restoration of semi-natural pastures, access/recreation measures, restoration of traditional farm buildings etc. Applicants are encouraged to use these funds together with rural development funds for farm diversification. Typical examples are restoration of buildings to be used for tourism purposes, and restoration of traditional paths and cultural monuments so they become accessible for the enjoyment of the general public, for tourism and recreation.

The STILK scheme is popular and is in general perceived as a valuable contribution to landscape and cultural heritage management. It has contributed to more interest in landscape and cultural heritage issues within the agricultural sector, and has also positive effects for the general public. The interest and effects vary greatly, local embeddedness has proven vital for its success (Flø 2002). A relatively large part of the scheme is used for building restoration. This has lead to an increased demand for knowledge in traditional handicrafts and techniques, and has lead to the establishment of several new carpenter and craftsmen firms (Brandtzæg and Lønning 2001, Flø 2002).

The STILK scheme has been criticised for its uncoordinated approach. Further it has been argued that it should be more targeted and that requirements and quality control should be stricter in order to achieve better quality. As the scheme is funded over the agricultural budgets, in principle, only farms that are carrying out an active agriculture may receive such payments, although exceptions occur.

A major problem in Norway regarding landscape qualities is linked to the "non-active" agricultural areas, as large areas managed in an extensive manner are going out of production.

Major biological diversity and cultural values are dependent on continued management of these areas. Since these farms are not sufficiently farmed, they do not qualify for agricultural support and are no longer defined as within the responsibility of the agricultural sector. There is no sufficient funding nor priority for these areas under the environmental conservation sector. The situation may be illustrated by Northern Norway. In 1989 30 percent of the agricultural land was abandoned. For Southern Norway, barely 5 percent was abandoned (Samuelsen et al. 1998). For a short period it was reported that farmed land was increasing in Norway. A major reason was that due to the acreage and cultural landscape payments (AC) it became profitable to report small fields and odd ends that previously used to be overlooked when farmers were to make their reports. However, recent statistics indicate that farmed land is decreasing (SSB 2000, 2002).

Nordland county, one of three county districts making out Northern Norway, is over-represented in the National Inventory of Valuable Cultural Landscapes (DN 1994), and a substantial part of the listed landscapes are found within such marginalised, abandoned areas (Jones 1997). The agricultural changes in Northern Norway during the last 40 years has decreased grazing pressure both in the outfields and on the infields. Consequently, this has lead to regrowth of herbs, heather, scrubs and successively forest. In addition to active afforestation, this is leading to important changes in the vegetation and in the landscape. Samuelsen et al. (1998) have been documenting in detail some of the ecological effects of such regrowth. The agricultural landscape is loosing species, ecosystems, valuable cultural heritage, possibilites for recreation as well as the diversity of the landscape (Samuelsen et al. 1998, Dramstad et al. 2001, Skar et al. 2002).

Some international experiences

Norwegian agri-environmental strategies may be described as “broad and shallow”, securing commodity and non-commodity production all over the country.

Switzerland has undergone two recent agricultural reforms that to a large extent lead to a decoupling of subsidies and payments[1], with direct payments and cross-compliance as a basic principle linked to various environmentally friendly measures. Tiered additional payments are given for various measures such as integrated production, organic farming, sustainable management of fruit orchards (which is a cherished element of Swiss landscapes and cultural heritage), extensive management of hay meadows, hedge and woodland conservation etc. (Rønningen 1994, 1999, Schmid and Lehmann 2000, Phan-huy et al. 2001).

Also within the EU member states there are more generally area-wide schemes, such as the MEKA in Baden Würtenberg in **Germany** and Öpul in **Austria**. Some of the German schemes may be described as relatively holistic and landscape based, aiming at larger areas, trying to see the landscape as a whole and interdependent system (Buller et al. 2000).

However, most of the schemes are linked to designated areas or landscape types, and may be termed as "deep and narrow". Often, requirements are very detailed and have relatively high administrative costs – often 25-35% of the total costs. Some of the schemes have had rigid and locally poorly adapted prescriptions. Partly, this is met by rejection by farmers, and

[1] Described as "Black Monday" by the Swiss farm lobby, fearing the long term consequences (Schmid and Lehmann 2000)

partly, when the economic terms of the schemes have been favourable and difficult to turn down, the farmers have tried do adapt the farming system to the scheme requirements, with some unintended, negative effects (Rønningen 1999, Crowley 2003).

Several studies show that the acceptance and uptake of such schemes depend on how farmers assess the long-term reliability of them (Heissenhuber et al. 1994, Rønningen 1999, Buller et al. 2000). As indicated above, Swiss farmers have been sceptical regarding the long term legitimacy of agricultural support fully de-linked from production.

Some general experiences with the various agri-environmental incentives are that cultural heritage maintenance is encouraged through a focus on structures such as hedges, walls, partly also maintenance of traditional farm buildings, cultural monuments, traditional management techniques in certain areas, maintenance of ancient/traditional breeds and species, traditional handicrafts and techniques, support to develop new businesses based on local cultural heritage, and to some extent information/education measures. The latter point is crucial: recent studies indicate that if the farming sector is to carry out landscape and cultural heritage management in a satisfactory way, they need to adapt these ideas, internalise them into their own value system. To achieve this, communication and education is a crucial, yet often neglected aspect (Flø 2002, Rønningen 2003).

It is suggested that these schemes should be coupled to marketing of specialised products (Buller et al. 2000) payments for special measures in the cultural landscape, such as organic food, environmentally friendly produced food, local brands etc. Switzerland has tried to create special markets for regionally specific products and labelling organic products. This has, however, still a way to go (Meister 2001).

Some main conclusions are that the major effects of all schemes are their contribution toward maintaining farm income and thus farming practices in valuable areas, thereby maintaining landscape values. In general, the enhancement effect has been relatively limited, although there are some very good examples of landscape improvement as well (Rønningen 1999, Buller et al. 2000). One major conclusion is the polarisation of land use (Rønningen 1995, 1999). Landscape management measures are implemented in certain designated areas, often at high administrative costs, leaving the rest of the countryside for further intensification or forest regrowth (Rønningen 1999).

Several Asian countries have or are undergoing very rapid changes due to recent industrialisation and economic growth. With a large part of the population having strong rural ties, the landscape and cultural changes are very striking for large groups in these countries.

Oh Sang Kwon (2001) points out in a study from Korea that agricultural land being cultivated is a symbol of affluence and provides landscape values. He argues that cultural heritage may have greater value in developing countries where the speed of urbanisation is very high and more concerns on preserving traditional culture are being raised.

Both in Japan and Korea, incentives have been introduced for maintaining the paddy field landscapes, which are of great aesthetic, cultural and identity importance, in addition to their crucial role for water and soil control (Yoshinaga et al. 1998, OECD 1999, Nakashima 2001, Kwon 2001). Also, they may still be important for employment, especially in mountainous areas (Nakashima 2001). Further, various initiatives have been started to support small villages and communities. One example is the attempts of preserving the Japanese "Tanada"

(rice terraces), that farmers tend to abandon due the their labour-consuming upkeep. Through the "owner system", city dwellers and volunteers may pay a rent to cultivate the Tanada for their own profit, receiving advice from the farmers. Festivals etc are organised to celebrate transplanting, weeding, harvesting and so on (Nakashima 2001).

This clearly reflects the strong ties to, and importance of, what may be termed "traditional agriculture" and rural areas in societies that have or are undergoing strong modernisation processes.

Some major points in the multifunctionality debate

"Multifunctionality refers to the fact that an economic activity may have multiple outputs and, by virtue of this, may contribute to the several societal objectives at once. Multifunctionality is thus an activity-oriented concept that refers to specific properties of the production process and its multiple outputs" (OECD 2001:11).

The term multifunctionality embraces many of the aspects tried implemented into agri-environmental policies, and has especially been focussed upon by European countries and some Asian countries such as Japan and Korea.

Within the multifunctionality context, Vatn (2001) suggests these following outputs from agriculture as having distinct public characteristics:

- Environmental aspects:
    a) Landscape, including biological diversity, recreation, aesthetics
    b) Cultural heritage
    c) Pollution
- Food security (availability in different situations)
- Food safety (quality/phyto-sanitary status)
- Rural concerns,
    a) Rural settlement
    b) Local economic activity

The crucial issue is to what extent these goods are dependent on agricultural practices. Cahill (2001:39) identifies three major issues within the OECD approach to the multifunctionality debate:
"Is the non-commodity output jointly produced with an agricultural commodity and if so, to what degree can its link with commodity production be changed, e.g. by changing farm practices or technology?
- *Is there market failure?*
- *Have non-governmental options such as market creation or voluntary provision been explored as the most efficient strategy?"*

We will here refer to some major points in scientific works and in the more general discussion linked to cultural heritage as one of the multifunctions of agriculture. It must be stressed that this literature treats the cultural heritage issue very superficially. To a large extent, economists have been dominating these studies.

A synthesizing report on multifunctionality concludes that elements of cultural heritage may be preserved in museums, however, there are no non-agricultural alternatives for those social and cultural values that have to do with living on the farm (Abler 2001).

One general conclusion is that the linkage between commodity outputs, non-commodity outputs and negative externalities does not depend on production levels of commodity outputs, but on farming technologies and practices and agricultural structures. For example, grassland gives another landscape than arable, and mechanisation, technology and farm scale have effects on the landscape (van Huylenbroeck 2001). In other words, cultural heritage is a function of the existence of agriculture, not levels of commodity outputs. Yet, biologists stress that there is a linkage between production level and farming structures and practices, especially such as biological diversity and ecological functions (Framstad and Lid 1998). Certain agricultural landscapes may maintain or even increase their environmental value when undergoing changes in farming practices. There will be differences between various areas to what degree changes may or should be carried out.

According to van Huylenbroeck (2001), for many cultural heritage elements, especially the physical aspects, a de-linkage from production is possible. Typical buildings or other constructions can be conserved even if they have no agricultural function. However, Huylenbroeck (ibid.) points out that it is often costly, as total maintenance costs have to be paid, otherwise only the marginal maintenance costs have to be calculated. For some assets the quality is likely to decrease if the assets are no longer functional. Many superficial cultural/social elements (like dances, or harvesting practices etc.) can be maintained by other people (cf open air museums, folkloric groups or those that want to maintain a rural lifestyle), however, for the deeper social/cultural aspects that have to do with living as a farmer and in the countryside and which have formed the countryside, de-linkage is impossible.

Kwon states that *"there is no explicit evidence whether rural amenity and cultural heritage value is linked with production. What the people in Korea want to see, however, are paddy lands being cultivated. People also want to see rural communities where agrarian culture is preserved. Thus it is not likely that a simple maintenance of agricultural resources that are not used for production would provide rural amenity and cultural heritage value"* (2001:13).

An agricultural incentive system based strongly on payments for non-commodities directed towards the most valuable areas, will not be sustainable because of the strong interdependency between the various areas. For recreational and aesthetic purposes alone, such a de-link may to some extent be possible. For the conservation of biological diversity such an approach will not be satisfactory since biological communities often require large areas and/or a set of inter-linked areas in order to be viable. The various landscape values are components of an integrated production system (Olsson and Rønningen 1999). This point is supported by Vatn (2001:3), who states that*: "While some of these values may be produced independently of agriculture, it is difficult to imagine an agricultural system that does not affect all the elements in the above list* [the various multifunctional outputs from agriculture]. *In this sense all the listed goods/bads are dependent on primary production. They are characteristics of the system as a whole. This stems to a large degree from the fact that agricultural production is directly linked with the eco-system it operates within and the space that it occupies"*.

Management of certain cultural elements and monuments may to some extent be carried out through landscape management schemes, while landscape management in the true sense of

the expression cannot be satisfactorily achieved. In other words, conserving biodiversity and protecting the other landscape values on a site-specific basis has some very important limitations. Selman (1994) states that we have to recognise the need for integrated management of cohesive units, in other words; a functional system approach.

Biodiversity and cultural heritage values in the agricultural landscape

Arable landscapes represent a small proportion of the area of Norway, yet these areas are on the best soils and the most temperate climatic zones. Because of this, agricultural land holds the physical remains of more than 10 000 year old cultural history - 5000 years of which are related to the development of agriculture. This include biological species in terms of plants and animals as well as cultural heritage, meaning that as many of the species are developed through and dependent upon certain agricultural practices, they are cultural heritage as well.

The loss of vegetation types and species in the agricultural landscape

Compared to other European countries, Norway has unusually large regional differences and variations in terms of natural vegetation and other natural conditions within very short distances. Also in a global perspective, this variation is unique, leading to a substantial variety in biological diversity (Moen 1998). This has been the basis for a great variety of local adjustments in land use for human survival, and is reflected in the cultural landscape in terms of a variety of landscape, vegetation types and species. The National Atlas of vegetation for Norway documents this great variety (ibid.). A large number of species are dependent on landscape and vegetation types conditioned by culture. Changes in agricultural activities, and especially the reduced use or abandonment of semi-natural grassland, is the major threat towards these species.

One example to illustrate this situation is the sub-alpine birch forest. This vegetation zone has for centuries been vital to the summer farming system. The birch forest has provided pasture, mowing land, fire wood and building material. In the most intensively used areas the actual forest-limit has been suppressed with more than 300 meters due to the cultural impact (Bryn 2000, Bryn et al. 2001). As the summer farming activity dropped dramatically during the last 100 years, the birch forest is re-capturing large subalpine areas. For example, in Grimsdalen the area of birch forest has increased by close to 60% in the period 1930 to 1997 (Bryn 2000). This affects the visual qualities of the landscape as well as the biodiversity. According to Kielland-Lund (1992), about 350 vascular plants have their main distribution in Norway in semi-natural vegetation types. Summer farming activity has increased biological diversity in subalpine areas, and correspondingly the diversity diminishes as the cultural impact is reduced (Bryn et al. 2001).

Landscape structure and cultural heritage interests

The management of agricultural landscapes is of crucial importance for the conservation and management of cultural heritage. Concerning the oldest history related to the agricultural landscape, recent research indicates that only about 20 percent of archaeological sites are visible as monuments in the landscape, the remaining 80 percent are not visible except for the trained eye, or have not been located (Helliksen, Skar and Sollund 1999). Archaeological sites are automatically protected through the Cultural Heritage Act whether they are recognised or not, because of their significance as the only source of narrating the history of the past. The cultural heritage of the agricultural landscape also holds the later physical remains of agriculture itself, the most dominant and important being the farmhouses and outhouses that

form the farmyard. These structures are in themselves telling references to province, local historical adaptation and technological development. Many individual buildings related to past technological needs like for example summer farms (*seters*) or the characteristic Norwegian large red barns are "everyday heroes". It does not create large public discussions when they fall down or when they are removed as individual buildings, but after a while it is realised that these buildings have an important impact on the character and the story telling values of the landscape and that our surroundings have become poorer by their disappearance. These facts represent a challenging dichotomy in the relationship between modern agriculture and the preservation of the physical cultural heritage remains. For the preservation of visible cultural heritage sites like gravemounds or outhouses management and preservation of the monuments in the context of a cultivated landscape is very important in order to secure visibility and readability of landscape history. For the hidden sites, that may well be located just next to and functionally attached to the visible sites (for example a settlement site lying next to a gravefield), cultivation and ploughing of the fields may be a conflict as the ploughing decimates invaluable source material in the ground.

During the last 80-100 years many thousands of cultural monuments have been removed illegally from the Norwegian agricultural landscape. In areas with high density of monuments, as many as 80% of the known and visible monuments have been removed (Direktoratet for naturforvaltning et al. 1996). The protected sites that cannot be seen by the naked eye, like settlement sites from the stone age and up to medieval times that are to a large degree located on infields, have most likely been affected even more heavily. Albeit not having a quantified measure, Cultural Heritage Authorities expect that a number of site types are being systematically although unintentionally removed from the most intensively cultivated landscape types (Skar et al. 2002).

A national monitoring programme for cultural landscape (3Q)[2] sets out to calculate statistically the status on environmental sustainability in the agricultural production for the whole country every five years. The chosen indices (houses, house-sites, roads, fences, clearance cairns, burial cairns, burial mounds) are in general important indicator for the cultural heritage as indices of the relevant historical dimension in the landscape. The project has shown that in the cereal cultivating rural districts of Østfold, Vestfold and Akershus most of the cultural monuments found in cultivated land are removed. With the exception of houses, the clearance cairns, stone fences and burial cairns etc. are usually found in wooded areas. In other parts of the country, with different traditions of cultivating, it is assumed that a larger percentage of cultural monuments will be preserved on cultivated land. The analysis shows among other things, how many listed buildings that have been removed during the last years. For example 404 were registered on 69 fields in the SEFRAK inventory (recorded during the 1980ies). From the aerial photos it could be established that there were 51 fewer buildings left in 1998. This represents a loss of 13 percent during the last 10 to 15 years. If these figures are representative for the country as such approximately 1 percent of the buildings are demolished every year.

Intensification and extensification/marginalisation in agriculture affects preservation of cultural heritage in different ways: Intensification, leading to larger entities in central areas of Norway, often result in removal of stone walls and other boundaries between fields, and new cultivation or ditching, draining and closing of watercourses represent common changes in landscape structure. These trends are also greatest threats to the preservation of archaeological

[2] The project is carried out by NIJOS and NIKU for the Ministry of Agriculture and the Ministry of Environment (*"System for tilstandsovervåking og resultatkontroll av jordbrukets kulturlandskap"* 3Q).

sites. The acreage and cultural landscape scheme (AC) have lead to a decrease of such removals. Ploughing and erosion are other factors that have important implications for sites located in arable fields (most likely representing 80 percent of all protected sites).

Extensification taking place in more remote areas, is leading to abandonment of farms resulting in delapidation of buildings and farmhouses as well as overgrowing. The history telling elements of the landscape are removed or hidden by overgrowth (Kulturmiljøvård 1994, Direktoratet for naturforvaltning et al. 1996).

On the basis of statistical analysis one can now justify a hypothesis that says that there is a systematic connection between where some of the cultural heritage sites are located and where there is interesting biological diversity. There is also a close connection between degree of heterogeneity and presence of cultural heritage in the landscape. These factors are again closely linked to soil consistency and of course agricultural practice. Cultural heritage interests are linked to landscape structure through the importance of farm buildings and the historical boundaries between farm ownership, between field systems and between cultivated and wooded areas. These types of areas are often linked to prehistoric sites like grave-fields and fossil agricultural remains (Skar et al. 2002). Particular for Norway are the various production systems that through time have left traces in the landscape that give a special quality, where historical depth can still be "read" from the landscape structure.

Conclusions

The totality is more than the sum of its individual parts. This is important to have in mind when facing suggestions about maintaining agricultural environmental and cultural values in museums, by NGOs or by military forces (Abler 2001). Non-commodities need to be seen on a landscape level and within its ecological context, not on a single-farm level or a site level.

The degree of jointness varies according to level of intensity, farming structure etc. Within areas of very intensive production and high level of pollution, a reduction of production intensity or a change in farming methods would increase the environmental non-commodity output, especially linked to biodiversity, pollution, land conservation in terms of maintaining soil quality, and recreational interests (Olsson and Rønningen 1999). One can also imagine that in the case of heavy pollution, a close-down of farming would be beneficial. This would however, only be in extreme cases.

A prerequisite for the maintenance of environmental qualities is the presence of people in the landscape. Viable rural communities are thus a precondition. Farmers need a social environment to be able or willing to stay on their farms. Thus, decreasing number of farmers is a significant problem (Fjeldavli 1999). According to OECD (1992) standards, 99% of the Norwegian area is considered rural, 60 percent of the population living in rural areas. Even if the farm household economy has become more dominated by off-farm incomes, caused by this change in conjugal allocation of work, it is pointed out that farming is important to keep these families in rural municipalities (Blekesaune 1999).

Recreational and to a certain degree also aesthetical aspects may not necessarily be direct linked to commodity production, although the knowledge of being in a farmed landscape is a vital part of what may be termed "the authentic countryside experience". However, the links between commodities and non-commodities may easily become somewhat loosened. Gjølberg

(1996) has concluded that payments for agricultural non-commodities should be canalised to central areas for the benefit of as many people as possible (most enjoyment per Norwegian krone spent). Such an approach would only include recreational, and partly also aesthetical non-commodities, and leave out other non-commodities such as scientific values, biodiversity, and cultural and historical heritage values of the diverse agricultural landscapes across the country. Various landscape management payments may contribute in keeping land open, however, a non-commodity such as cultural heritage is linked to farm buildings and other structures in the landscape, that are dependent on people living and working in the landscape.

An important conclusion of a study on optimal measures for the multifunctional agriculture (Romstad et al. 2000) is that although it may be more cost-effective to directly subsidise single non-commodities, there is probably no cheaper or more cost-efficient alternative than subsidising agriculture in order to achieve all the above defined non-commodities from Norwegian agriculture. They argue as follows: Both jointness and complementarity influence the costs of producing different goods. This implies that one cannot compare the cost of producing each public good in isolation. Even though other sectors might supply each secondary good at lower costs when separately delivered, agriculture may be the least costly solution when several goods are considered together. In general, if goods can be jointly produced, there is a potential for cost savings. This is often overlooked in the academic literature where partial relations are most frequently analysed. Given that agriculture already produces some public goods, the extra cost of adding others to the list may be low. The validity of this conclusion seems to depend heavily on cost structures and the type of production methods used (Romstad et al. 2000).

4. Agriculture and cultural heritage – viewed from the "outside" and "inside"

Perceptions of landscapes and landscape qualities depend on who perceives the landscape - "beauty is in the eyes of the beholder". A distinction may be made between inside, participatory knowledge of the landscape, and the panoramic view of landscape on the part of the outsider, the first encompassing the observer, and the latter involving a physical distance between the observer and the object (Steinsholt 1992, Jones 1995, Daugstad 2001, Setten 2002). The distinction between an outside and inside perspective can serve as an analytical category or structure in order to analyse and understand landscape perceptions. For example Krogh (1995), links landscape and social identity and shows how different social groups not only perceive the landscape in different ways, but through their perceptions, actions and participation in the life of an area actively become part of the landscape. On a practical level, management based on strict conservation principles may easily come into conflict with the users of the landscape since the aim is to protect the landscape from those most actively taking part in and creating the landscape – for better and for worse.

In the following we will present a number of studies on landscape perceived and evaluated from an outside and inside perspective. The outside view is derived from studies with a recreational or tourist perspective, or general surveys on attitudes towards landscape, agricultural activity etc. Hence, the inside view will cover studies investigating attitudes and landscape perception from locals towards their own environment as well as farmers and owners attitudes. However, it is important to underline the fact that perceptions are not necessarily strictly from either an outside or inside perspective. A person can be an outsider and insider in the same landscape dependent on whether he/she is asked to do the evaluation as an inhabitant, farmer, hiker or planner. Defining insiders and outsiders is also an unclear task in many situations; for example the length of time you have been living in an area will probably influence the degree of "insideness", or moving back to your childhood landscape after 40 years – does that make you an insider or outsider?

When discussing the relation between agriculture and cultural heritage, inside/outside seems like a relevant perspective for analysing and presenting the state of the art regarding research based knowledge in this field. Also important tensions and conflicts can be illuminated by an inside/outside perspective, for example farmers' attitudes towards agricultural managers or politicians, national interests versus interests in the world trade market etc.

Landscape preference studies – an outside view

Recent Danish studies show that for 70 pecent of the foreign tourists visiting Denmark, the landscape is an important attraction (Kaae and Højring 2000). Experiences and activities linked to nature and scenery are the major attractions for tourists visiting Norway (Dybedal 1998). A large survey undertaken by the Norwegain Tourist Council amongst tourists visiting Norway in 2000 shows that a growing preference trend is directed towards culture as well as nature. The marketing strategy will be *"nature as a background on a scene where people, modernity, history, art and culture are in the centre"* (Ovesen 2001). In a comparative analysis on tourism between a number of European countries, Norway is given the highest possible score related to landscape beauty (Haahti 1986). Many Norwegian communities put an effort into expressing and defending their distinctiveness. The impression expressed by

many foreign visitors to Norway indicates that this effort has borne fruit. For example, many French tourists point to Norway as being much more varied than Sweden when villages and landscapes are characterised as monotonous and very similar (Jacobsen 1991).

There is a relatively rich literature on the importance of agricultural landscapes for recreation, and various perception studies. In general, the scientific and educational value of such landscapes are well understood. Most studies are, however, related to more or less "old fashioned" agricultural landscapes. These are landscapes dominated by farming methods that result in small scale landscape mosaic, heterogeneity in species, land use and topography. Fewer studies document attitudes towards modern landscapes dominated by monocultures, large areas and homogeneity. A study undertaken in Asuka village in Nara Prefecture, Japan, reported that, according to a field study on the rice-growing in the area, more than 60% of visiting tourists felt that suspending rice production by abandoning cultivation or converting to other forms of land use would reduce the attractiveness of the landscape (Fujimoto 1998).

According to Klepp (1994ab, 1995), tourists hiking in traditional agricultural landscapes in Norway (dominated by marginal agricultural activity and abandoned farms) value cultural landscapes and cultural heritage because it is seen as a part of a national heritage, they serve as a critique of our modern society and life style, they tell us something about how life was before and they are aesthetically pleasing. Skår and Tordson (1997) show that tourist hikers in the mountains have very positive feelings for imprints of earlier agricultural activity in the landscape like old pastures, ruins or summer mountain farms.

Skår and Tordson (1997) also found that tourists with higher education that work in public affairs are more interested in cultural heritage sites than visitors with no education. And generally, women are more positive than men, favouring people over the age of 50 who clearly have a more positive attitude. The same view is reflected in a survey done by the MMI ordered by The Directorate for Cultural Heritage. This analysis concerns the Norwegian population's attitudes towards cultural heritage preservation (Flaatten et al. 1996). A large percentage (79%) of the Norwegian population is positive to preservation. Women are more positive than men, and elder women are the most positive. 76 percent of those asked have an opinion on cultural heritage. Inhabitants from the capital city and inhabitants from the other large cities have less knowledge of cultural heritage than other citizens. The concept of cultural heritage was related to older buildings, archaeological remains, monasteries and churches as well as cultural landscape. The prime interest was for churches and churchyards, secondly for old city-areas and archaeological sites as well as old ships. Farms and summer mountain farms (*seters*) were ranked as number five, while cultural landscapes were ranked seven. 67 percent of those asked thought that it was important that Norway took care of its cultural heritage as a basis for experience today and in the future (ibid).

A survey amongst inhabitants in Hedmark and Sogn og Fjordane counties (Strumse 2002), shows how various arguments related to the agricultural landscape are rated. On the whole, traditional landscape elements are perceived as valuable and people have positive attitudes towards agrarian landscapes in general. A majority of the persons asked agree with state subsidies aimed at preserving cultural landscapes. Further, it is seen as important to preserve cultural heritage, specific species of plants and animals as well as untouched natural areas. However, the survey shows that protection of agrarian landscapes in general are seen as less important. As many as 30 percent of the participants agree that modern farming contributes to the destruction of landscapes, although relatively few agree that farming per se represents an environmental threat.

Another study by Strumse (1996, 1998) documents attitudes and value judgements by contrasting modern and traditional agrarian landscapes in Western Norway. In a study where students were asked to rate landscape photos, the general trend was a much higher rate for traditional than modern landscapes. Most preferred were landscapes with old man-made structures (stone fences, stone bridges, wooden houses) and hay meadows with a rich flora. Lowest rated were elements like silos and other modern agricultural buildings, forestry machines and drainage canals. A related study investigating people's willingness to pay for various environmental goods, show the same tendency: Bergland (1994, 1998) investigated people's willingness to pay for various landscape elements in a relatively intensively farmed arable area. Manipulated photos of the same landscape were presented to various groups of people. The landscape elements that were manipulated were zone vegetation, stream/ditch, fence, path, wooded land etc. Zone vegetation along with open streams and paths in combination, were seen as the most important landscape elements.

Landscape preference studies based on photos and studies of payment willingness have limitations. They are valid for one investigation at one given place and time, and thus difficult to generalise. For the cultural landscape and other local environmental goods, the payment willingness will be determined by the context of the environmental good, the access to other environmental goods, and by local conditions (Bergland 1998). There are also methodological weaknesses related to test groups and the limitations of using pictures selected by researchers. The pictures only represent a selected part of the landscape, and one that is neither "objective" nor neutral. However, there seem to be certain general aspects of people's preferences within the agricultural landscape. People seem to prefer varied agricultural landscapes characterised by traditional buildings, visible archaeological remains, natural landscape elements, and traditional farming structures. Such qualities also coincide with what ecologists identify as a desired design of the agricultural landscape (Jones 1998), in terms of what is positive for maintaining a high biological diversity.

Agriculture and cultural heritage – an inside view

Several studies document a general tendency of a positive attitude towards preservation of cultural heritage (Klepp 1995, Skår and Tordson 1997, Kaltenborn, Vistad and Daugstad 2001, Bertelsen et al. 2001). This is a tendency in national surveys as well as studies undertaken in selected study areas.

The positive attitude is, as mentioned, strongly expressed towards cultural heritage in general. The picture shifts to a certain degree when people are asked to evaluate cultural heritage in their own community or even on their own property. This can be labelled insiders' view of their own surroundings: "Protection of cultural heritage? Yes, but not in my back yard", may serve as an illustrative statement.

Attitudes to cultural heritage and agriculture in a local context

An interesting issue is to look into what people say about reasons for cultural heritage protection. A study undertaken amongst inhabitants in some municipalities in Northern Norway show that between 80 and 90 percent are in favour of protection of cultural heritage. They were also asked what makes cultural heritage valuable. Motives that traditionally have been stressed from the public cultural heritage sector such as age, national value and aesthetic

qualities, are given low rating at the local level. From the local level cultural heritage is seen as traces or documentation on how people lived before, traces of ancestors, traces that can be associated with a specific historically event. In other words, people value knowledge, ancestral roots and historic well known events (Krogh 1999, Pramli 1999, Bertelsen et al. 2001). The cultural heritage referred to in this study includes Sami heritage as well as Norwegian, and heritage that covers a broad spectrum like house ruins, churches and roads. However, all objects are old and some are archaeological.

Berkaak (1992) and Klepp (1995) see the local, genealogical history as the most important to most modern people. The various analyse of opinions towards heritage represent a change from an organic view of history to a genealogical view. The organic view is represented by the previously mentioned focus on the founding of the nation and national identity during the 19th and the beginning of the 20th century. Where the Nation "rose up from the ground" while the genealogical view relates meaning and identity to local roots and knowledge.

Can the same tendency be found in studies that especially refer to agricultural heritage? In general, preferences and value statements related to agriculturally dominated surroundings from the local level are tied to confirmation of identity, "roots", and traditions on how to use the landscape. An abandoned agricultural landscape is viewed as less attractive than a landscape in use (Klepp 1995). Studies in national parks that per se are clearly nature dominated show that for local people with traditions in using the land for fishing, hunting, pasture, mowing of the outfields etc., a distinction between culture and nature is not relevant. *"Locals see the cultural qualities and the land use history as interwoven with the natural qualities"* (Vistad 1999:539). In other words, knowledge of agricultural history and other forms of culture clearly affects how the landscape is perceived and evaluated.

Landscape preference studies in general show that people prefer nature dominated landscapes more than built areas or areas influenced by human activity in any form. However, imprints of human use are rated positively if the human activity that created them is perceived as being in balance with nature (Kaplan and Kaplan 1989, Bourassa 1990). For this reason, cultural landscapes perceived as old seem to be more "natural" than modern cultural landscapes (Strumse 1998, Daugstad 2000, Setten 2001, Kaltenborn, Vistad and Daugstad 2001, Daugstad et al. 2002). Modern agricultural landscapes are perceived as being in conflict with nature and are seen as exploitation of vulnerable natural resources.

One methodological problem is that most studies aimed at saying something about people's attitudes towards cultural landscapes are recreational or leisure based. This means that people are asked to value landscapes in terms of beauty, personal meaning, recreation, history etc. not in terms of economical potential or output (Kaltenborn, Vistad and Daugstad 2001). That is also a bias on many preference studies labelled cultural heritage or cultural landscape – these terms are often perceived as positive and often associated with a non-economic context. Several international studies focus on "the landscape of power" (for example Duncan 1990, Mitchell 1994). Some Norwegian examples are Bertelsen et al. (2001) and Lillehammer and Prøsch-Danielsen (2001). They are applying a critical approach uncovering motives related to cultural suppression as well as economic motives related to landscape and cultural heritage preservation.

Attitudes of farmers and owners

A number of studies have been undertaken that focus on farmers' attitudes to farming, agricultural policies etc., as well as to the farmed land and land use in general. These are not landscape preference studies as such.

Regarding attitudes towards the built heritage, a survey initiated by the Directorate for Cultural Heritage on "Knowledge and attitude to cultural heritage sites among owners of listed property" (Resvoll et al. 1996) shows that owners are generally very well informed, have a positive attitude to general protection, particularly related to keeping sites as a tourist asset. Still there is a significant indication in the investigation that farmers value cultural heritage monuments to a lesser degree than other professionals. There seems then to still be a general attitude among farmers that cultural heritage values are obstacles rather than a benefit to their property.

Stenseke (2001) states that a common argument from researchers as well as politicians dealing with agriculture is that farmers' major concern is economic maximisation. Several studies show a more diverse picture where the farmer's role as a manager is stressed. Based on a study of farmers' attitudes in southern Sweden, Stenseke (1997, 2001) has identified four different management perspectives: 1) To manage an economic capital – this has been the dominating perspective and force for changing the land. The main concern is to make profit and to develop an agricultural system and practise which makes this possible. 2) To manage a heritage – your forefathers' and –mothers' work can be "read" out of the land, their imprints should be managed and developed with respect. 3) To manage an environment – the farmer is a manager of natural as well as culturally dominated environments. Managing the land is done as a benefit for the society. 4) To manage one's own livelihood or environment – the farm is a source of income and place of work as well as a place to live, which is a strong incentive to make the property look aesthetically pleasing. A farmer or land owner can commit to several perspectives. How one weights the one or the other can vary through time, and stressing one value perspective can undermine another. Land use can easily become a topic for personal conflicts.

A central and relevant question is whether attitudes to farming vary due to full-time versus part-time farming. There is not much evidence to support or disclaim the importance of such differences. However, Lowe et al. (1992:47), based on studies in UK, state that *"convincing evidence is lacking that part-time farmers are likely to be better conservators of the farmed landscape. The issue depends very largely on the objectives of the occupier. If part-time farming is conceived as a strategy for accumulating capital, then it will result in a similar impact on the farmed landscape to that of full-time farms. Hobby farmers earning an incidental proportion of household income from farming may, however, be more likely to manage their land in a way that protects and enhances the farmed landscape"*.

Several Norwegian studies point out great local and regional variations concerning farmers' attitudes towards their role as administrators of cultural landscape and cultural heritage. The production ethos may differ within various areas due to various framework conditions, the status of agriculture in the area compared to other economic activities, presence of tourism in the area, the economic situation of the household, age, level of education, and type of part-time job also influence actual possibilities of carrying out cultural heritage management and the attitudes farmers express that they behold (Andersen 1999, Rønningen 1999, Rustad 2000, Flø 2002, Rønningen 2003,). However, in general the economic situation will be determining for the actions of individual farmers.

Management perspectives or value perspectives vary geographically. In Stenseke's study (1997, 2001) the farmers in the flat, intensively run and homogeneous agricultural areas of the plains in Bösarp are used to adapation to a market, and they differ from farmers in Färingtofta where the landscape has a more varied topography, land use mosaic and the farms are smaller. The farmer on the plains can be characterised as an economic rational actor who runs the farm as an enterprise adapted to shifts in the market economy. The life form of the Färingtofta farmer is more rational, meaning the farmer sees the land not only as an economic asset but as a means of living a rural life and taking care of one self and the land. In both cases living agriculture - using the land - is crucial.

A regional pattern can be found in Norwegian studies from Rogaland. This is a region with intensively run farms in terms of level of industrialisation and output - especially the Jæren area. The agricultural ethos may be described as very productivist – here the myth about the productive Rogaland farmer was established (Thu 1996, Andersen 1999, Rustad 2000, Frøyen 2001, Setten 2001). The farming traditions in this area are intensive land use, innovation and development. Rustad (2000) states that instead of deeming the farmers as insensitive to environmental considerations and cultural heritage one should acknowledge them as bearers of a tradition which values rationality and efficiency. Thu (1996) claims that modern farmers in an active agricultural region like Jæren are related to being "enterprising". Progress is related to change and this is central to these farmers cultural tradition. Such attitudes are obviously in conflict with the idea of preservation. However, there are great variations and many farmers are proud of having cultural monuments or sites on their farm (Andersen 1999).

The dominating nationalistic ideal of a farmer and hence the type of cultural landscape produced has, as mentioned, been tied to the inland farmer (see chapter 2). The Jæren farmer does not identify with this inland ideal. This lack of identification has its clear effects on attitudes towards cultural heritage preservation among farmers. In contrast to the inland areas, like the valley of Sirdal east of Rogaland, where tradition is closely connected to preserving parts of the cultural heritage for the future generations, the Rogaland-farmer feels the obligation to produce efficiently to prepare the farm for future generations. Such practise has lead to many conflicts between cultural heritage authorities and farmers in Rogaland (Lillehammer and Prösch Danielsen 2001).

The historically rooted geographical or "type" selective focus may contribute towards explaining why the coastal landscape and coastal culture has been weakly represented in the Norwegian cultural heritage, in spite of the coast's immense importance economically as well as historically. The results of two studies at the Centre for Rural Research (Fjeldavli 2002, Rønningen 2003) demonstrate this very clearly. The awareness of cultural landscape issues and the uptake of landscape payments such as STILK is much lower in coastal areas than in most inland areas. Here, farmers as well as farmers' organisations and the agricultural bureaucracy have difficulties identifying themselves and their landscape with the ideas they connect to cultural landscape values. The differences in attitude may be governed by the continued upholding of the national myth, the inland areas being the ones most linked to historical tradition .

In general, studies show that farmers see themselves as stewards of a heritage brought to them from their forefathers, and many feel a deep responsibility in carrying it further in a better condition than it was when they took over. However, "in a better condition" may have several interpretations. Most farmers perceive this within a productivist understanding - more

production, more land, more volume. However, many are also very concerned with maintaining buildings and structures, also because these are evidence of the work that has been laid down through generations. Studies that confirm farmers "multi-motivation" for keeping up an agricultural activity include, for example, Westholm (1992) who has documented that for farmers in Dalarna in mid western Sweden symbolic values (for example feeling of identity and integration in a local community, keep up farming is respecting your ancestors) are just as important as economic values (Frykman and Löfgren 1994).

Given the fact that most farmers have a productivist orientation, a major point is to change the definition of what a good farmer is from quantity to new notions of quality. It is also important to take into consideration the mutual relation between what is proclaimed as ideals or values from national agricultural authorities and politicians and what farmers through generations confess to – both in practise and in a more ideological sense. However, there is no doubt that there is an increasing understanding for and interest in the issues linked to the multifunctionality of agriculture.

Conclusions

The general picture drawn from several landscape preference studies is that people have a positive attitude towards cultural heritage and protection of such. Regarding agricultural landscapes, the studies show a clear tendency of high preference for traditional, small scale and "old fashioned" landscapes.

However, there are few surveys made in relation to modern active agricultural areas. We know very little in Norway about people's attitude towards the landscape of the modern agricultural areas; most studies are based on marginal agricultural areas. The Jæren area, being an exception, is well studied, but in many ways an extreme case. There is a possibility that farmers and other people have different views on history. One question is if there is a basis for distinguishing between a static and romantic view of the urbanist versus a productivist view of the farmer, or if there are more nuances to the issue?

The surveys do not go into depth in the farmer's everyday situation or on issues related to the knowledge related to traditional keeping of landscape and other crafts-related types of knowledge. The issues of the farmers identity and self-respect have not been touched upon either.

5. Conclusions and perspectives - do we need farmers?

In this chapter we will point out some major aspects related to the complex connections between agriculture and cultural heritage. Within the framework of a time limited project we draw some conclusions based on existent research based knowledge and try to point out some central perspectives.

Form, function, authenticity, legitimacy and practical concerns

Gaukstad (1988) points out the functional connections between cultural heritage elements and cultural landscapes. If we are to take the issue of authenticity and cultural values seriously, landscape production for its own sake is problematic (Olsson and Rønningen 1999). This can be illustrated by looking at Sulheim farm in central southern Norway, located 600 m above sea level. It has been farmed for 1200 years, and the buildings are several hundred years old. The owner states: *"My main hope is that Sulheim can remain a living farm, not a museum. To me Sulheim is not cultural heritage if we do not maintain farming"* (Aftenposten August 10 2002). Do his personal opinion and feelings have any broader relevance or truth? Or may we find better and more rational ways of maintaining agriculture's cultural heritage?

One major threat to Norwegian agricultural landcapes and its connected cultural heritage and biological diversity is abandonment and forest succession. Not only are the nature and cultural heritage conservation interests concerned, but also the tourist sector has warned for some time about the effects of re-growth, decay and closing down of farms, especially along the western coast ("mountain and fjord country") where the landscape is the main tourist product. Maintaining the landscape is thus one basic challenge. To meet the primary need of keeping the landscape open, grazing and to some extent haying are the only realistic alternative in large parts of Norway (Olsson and Rønningen 1999). It is difficult to see how such a large scale management can be carried out through non-farming activities.

A number of studies have been done, mainly carried out by economists, on whether the multifunctions of agriculture may be de-coupled from food production. One often quoted, but equally often criticised study is by Brunstad et al. (1995) on agriculture as a provider of public goods. The study concludes that the public goods aspect of agriculture can be provided at a considerable lower cost to the society than is the case today. Using various model simulations, one result is that employment and land use in Norwegian agriculture may be reduced by 22 and 30 percent respectively and still upholding a production of public goods. This approach seems to mainly include recreation and partly also aesthetics as non-commodities, and to a certain extent some of these individual non-commodities may be separated from farming as such. However, the costs of maintaining such values may become very expensive. Further, there are strong indications that long term management may be very difficult to uphold. Vatn (2001:15) concludes that *"Picking the least costly solution for each public good in isolation (if physically possible to isolate), will most probably not produce the cheapest total solution"*.

WTO has pointed out the potential of NGOs in maintaining environmental goods. NGOs are of great importance in many areas, also in Norway, although in a limited scale. One excellent example is the Friends of Storfjord (*Storfjordens Venner*), a local organisation that has carried out an invaluable effort in terms of restoring some unique mountain-fjord farms. However, this has taken place on a limited site basis. In Switzerland and Germany there are examples that ownership and management of protected areas have been transferred to conservation

organisations. The experiences are varied, and in several cases the long term effects have been poor management due to lack of resources (knowledge, money, labour) and interest on the part of organisation members (Rønningen 1994, Phan-huy et al. 2001).

Another aspect that is more of an issue regarding fundamental principles is the relationship between the organisations and the state. In Britain, for example, NGOs are playing a central role in conservation work in the countryside co-operating closely with state institutions. It has been claimed that one consequence is that the NGOs risk their position as independent critical voices in society as they become accommodators of the established system in which they themselves have received positions and benefits (Buller et al. 2000).

Central European policy documents indicate that rural viability is seen as an important pillar in maintaining some degree of cultural and regional integrity in a time of globalisation (ESDP 1999). EU's relationship with the newly associated states, that all of which are largely farming economies, encourages collaboration in the cultural activities, enhancement of cultural heritage and local and regional exchange (Council resolution 4. April 1995).

In a modern holistic research-based perspective non-agricultural management of cultural heritage in agriculture would be considered unacceptable. Within cultural environment research it is assumed that we are not indifferent to whether the landscape is a dead scenery or a living space for human beings. This school of research would agree with the Sulheim farmer's statement. The cultural environments research sees “place” as an important focal point for cultural construction of meaning and identity. This research would claim that there is a cognitive coherence between man and landscape (Tuan 1977, Sack 1992, Tilley 1994, Skar et al. 2002). Places in the landscape are socially defined, which implies that a place is not only geographically located but also belongs within a social system, where people's perceptions of the landscape and its places are coloured by personal experiences, historical incidents, the physical shape or a combination of other similar circumstances. “Place”, in this school of research, is essential to our understanding of ourselves as individuals, something that is expressed in concepts like “home”, “domicile” or “native soil”, which are places that one relates to, and that have meaning and value. The deep cultural conflict between national governments and the Sami may illustrate this; While national authorities have wanted to develop technical installations in landscapes they see as pure nature, the Sami consider the same areas as important cultural landscapes loaded with physical traces of their activities as well as important religious sites. The cultural environment perspective, however, needs further methodological development also related to the modern farmer as upholder of cultural heritage.

A crucial issue is related to agriculture's immaterial cultural heritage in terms of the maintenance of knowledge and competence. The STILK landscape management scheme includes funding for building restoration, and has revealed the lack of - and increased the need for - competence in traditional building techniques and handicrafts. Specialised competence is now being maintained and developed further due to the increased demand caused by the STILK scheme, although it has become clear that valuable knowledge already has been lost. However, the many-sided competence related to utilising the landscape resources, to produce food, maintain land and buildings, and also the more household related activities can probably not be isolated from farming and rural communities. Many aspects of what is considered national immaterial cultural heritage are in fact today living traditions such as folk music, production of national costumes, applied arts such as wood carving and traditional decorative painting. These activities and the knowledge related to these crafts have

developed in rural communities, and will most likely also in the future be closely linked to the viability of these communities.

Motivation and legitimacy for farming

From a situation in which inheriting farms[1] gave high social and often also economic status, the restructuring processes in society and agriculture has led to a situation in which farming has become a lonely profession, often heavily criticised by many groups for costly subsidies[2]. Surveys show that recruitment to farming is decreasing, and an increasing number of farmers do not have successors that will be taking over. Lack of legitimacy in society is one major demotivating factor among farmers [3]. In a scenario where food production is no longer central and non-commodity production make up the majority of income and work hours, we know too little about the farmers' own motivation for maintaining their work.

We know that there are certain regional differences in attitudes among farmers within Norway and that these attitudes to some extent can be explained by cultural-historical and socio-economic factors. Further, we know that local differences may be dependent on individual and personal factors, and that communication and information to some extent may change attitudes. However, we do not know the long term consequences of farmers' attitudes within such a scenario.

An open question is what the maintainance of active agriculture will mean to a population that successively becomes more and more urban. The family ties to farming that most Norwegians have had are becoming more distant. Will the increase in time back to farming generations affect the general attitude towards active farming in Norway in a negative way? Or is it possible that new bonds to the agricultural landscape will be established and the agricultural landscape will increase its importance as a recreational area for the population in the cities, in a time where, for example, vacation time increases (Myrdal 2001)?

A prerequisite for the maintenance of landscape values is the presence of people in the landscape. Thus, viable rural communities are crucial. Farmers need a social environment to be able to or be willing to stay on their farms. As has been seen in many marginal Norwegian communities threatened by depopulation, there are important interdependent threshold factors to take into consideration. Some regions have had an alarming demographic development in terms of a decreasing share of young people, especially women, and are literally dying. When communities lose their infrastructure and communication, such as schools and bus services, social and cultural activities, and a minimum of trade and service industries, they also lose their attractiveness for all groups. Blekesaune (1999) has shown that in spite of agriculture's limited contribution to total GNP and employment, it is still of major importance to economic activity in many rural communities.

[1] The majority of farm transactions in Norway are within the family.
[2] Although also criticised for overproduction and pollution, these aspects have been less important in the Norwegian actual situation and debate than in many other European countries.
[3] Based on an unpublished datamaterial among Norwegian farmers from a large trend survey carried out at Centre for Rural Research, as well as Flø (2002) and Fjeldavli (2002).

A system approach

Cultural heritage is a by-product of agricultural activities. Although it may be seen also as a precondition for farming, we will here again return to the issue of de-coupling the production of cultural heritage as a non-commodity from commodity (agricultural) production. One major problem for such de-coupling is that *"we are facing agricultural functional systems where the different components are essential for the overall functions of the system"* (Olsson and Rønningen 1999:45).

The summer farms may serve as a good example illustrating many of the problems connected to landscape management disconnected from a farming system: A management of mountain summer farming may easily come under various future landscape management schemes, if they are to be introduced as a replacement for agricultural support. Mountain summer farms in active use are high priority areas for conservation, both in terms of biological diversity and cultural heritage, and their symbolic and identity value, as well as their attractiveness for recreational purposes are unquestionable (Daugstad 2000). However, the summer farm is part of a system of outfields, pastures and hay meadows, as well as buildings and fences etc. Further, the summer farm is an integral part of a system with the permanent farm often located in the lowland valley (Olsson et al. 1998, Olsson and Rønningen1999).

A landscape management scheme would realistically be aimed at the summer farm including the buildings, fenced-in area and probably the nearest hay meadows and pastures. However, when the summer farm is taken out of its context, it becomes a “landscape element”, and we are dealing with conservation of cultural monuments and not conservation of the full landscape values (see above) which was the original intention. If areas around the summer farm itself are not maintained, other values like aesthetic and recreational qualities will also deteriorate. The landscape will be subject to overgrowth, and the openness much appreciated in the summer farm landscape will end up as an “either/or-landscape” where the buildings with a surrounding meadow will be small open spots in a developing dense forest landscape (Gaukstad 2000, Daugstad 2002).

Another threatening scenario would occur if the economic situation for agriculture were to make the permanent farm areas not viable; the summer farm would also lose its function. The 1600 summer mountain farms still in use in Norway are run because the functional ties between the permanent farm and the summer mountain farm as a satellite resource base in the outfield area is still in function. Without a permanent farm – no summer mountain farm, and vice versa (Daugstad 2002). Unless other economic activities are found, it may be realistic for a few to maintain the summer farm for tourism and recreation, and maintain a certain number of grazing animals. If not, abandonment and woodland succession is realistic.

The skills and knowledge developed for utilising the landscape and its resources for survival represent a source of great importance, not only seen in a cultural and historical perspective, but also as a source with a potential related to the development of more sustainable agricultural systems in which "traditional knowledge" may become crucial. Natural and cultural heritage may to a certain extent be preserved by museums and seed banks. However, these storage forms are much more vulnerable to damage than real, activated competence and functional ecological systems.

One basic argument for nature and cultural heritage preservation is linked to the precautionary principle. Maintaining knowledge and functional systems may be seen as a major strategy for risk avoidance. The extent to which this is to be linked to policies for maintaining active

farming is dependent on society's risk perception. Such perceptions may vary through time, related to major crises such as wartime, economy, drought and other climatic changes etc. The recent food scandals and animal diseases in Europe along with the fear that has been expressed linked to biotechnology represent what may be termed a food crisis which has come to symbolise one of the major "modern risks". It may be argued, then, that traditional farming systems, including locally developed species may have qualities that make them resistent to several of the "modern risks".

Variety on different scales

The Norwegian landscape influenced by agriculture shows great variety. Studies show there are considerable regional and local variations both in terms of the amount of cultural heritage linked to agricultural areas, the conditions of preservation for such sites, and again a linkage to attitudes towards preservation of sites among farmers. Monitoring programs have been developed to provide a knowledge base on changes in the agricultural landscapes, such as biodiversity and cultural heritage. The established set of data from the 3Q program represents an important basis for further studies into regionality related to farmers and the changing role of farming for the preservation of cultural heritage.

The official policy of the environmental and agricultural sectors regarding cultural heritage has traditionally been the designation of areas or sites. The cultural heritage sector has moved from static preservation focussing upon single objects and sites, towards focussing on larger environments. Important principles for today's cultural heritage management is to maintain a holistic approach and to maintain the cultural heritage elements within their original environment. As we cannot protect everything, we are faced with the problem of selection and priorities (Jones 1997, Daugstad 2000), a problem in many ways complicated by the wider and much more holistic scope of cultural heritage protection and management which has developed through the last 10-15 years. Dissemination of knowledge about and access to cultural heritage is becoming increasingly important (Daugstad 2000). Increasingly, the cultural heritage sector aims at conservation/preservation of aspects that reflect the variety of possibilities: *"The major task of the cultural heritage conservation becomes to maintain the repertoire of options"* (Hygen 1996:51, quoted in Daugstad 2000:111).

Measures directed towards the cultural heritage and other environmental qualities of the agricultural landscape are based to a great extent on area or landscape type designations, usually of relatively small areas. This approach may be termed "deep and narrow" and a piecemeal approach to environmental planning (Rønningen 1999, 2001ab). It contributes to the overall polarisation of rural areas into further industrialisation of farming in central areas, abandonment in more marginal areas, while certain areas are designated for management measures, often combined with rural development measures, incentives for tourism etc.

Recently, some countries have been trying to implement a more holistic approach, with more area based payments. These may have some resemblance to the Norwegian system of general acreage and cultural landscape payments (AC - "broad and shallow"), however with emphasis on different levels of payments (tiering) for various environmental services. The very general approach has led to some maintenance of landscape qualities, but not to landscape enhancement.

The process of choosing criteria and indicators will always be problematic (Hanssen 1999, Daugstad 2000). Various initiatives have been taken to identify and register existing values in the landscape. At the end of the 1980s, the Nordic Ministeral Council took steps to define criteria, develop management techniques and identify threats and make proposals for preservation of the most valuable cultural landscape sites in the Nordic countries. In Norway, the National Inventory of Valuable Cultural Landscapes in Norway (DN 1994) instigated a debate regarding criteria and selection, and it was claimed that there was an over-emphasis on biological diversity criteria. Yet, the inventory was important, as it was the first attempt to make an evaluation and priority of valuable landscapes in Norway, and it increased the awareness of this issue. This registration is being used as a basis for prioritizing landscape measures to some extent.

Following this emphasis on registration, three international trends may be identified: 1) There has been an increased emphasis on defining indicators for cultural landscape monitoring, databases and GIS based systems for mapping etc. with a very strong focus on biological diversity. 2) A strong focus on agricultural economy studies attempting to develop models to calculate the possibilities and consequences of decoupling environmental goods (non-commodities) from food production. 3) Landscape preference studies among various groups, often tourists/visitors. These trends may be seen as a continuation of existing traditions within the agricultural and conservation bureaucracy, which are based on natural sciences and engineering approaches.

To a large extent the agri-environmental measures around Europe, and the registrations and analyses they are built on, have focused on the cultural landscape as morphology - or material form - rather than on the immaterial process which they are a part of. They have focused on form rather than function. This approach is dominated by definition and classification, and thus changes in the study object - the landscape - threaten such a classificatory edifice. It is important to recognise that the methods of classification are usually presented as “objective” and “scientific”. However, they often prove to be arbitrary and partly pre-determined. One example is the problems connected to defining borders of landscape management scheme areas. Criteria for biodiversity, are not more objective than those of cultural landscapes, and likewise, tend to be subjective and situational (Rønningen 1999).

This tradition or mode of thought plays an important role in defining the landscape problem as essentially a morphological issue, tending to reducing it to a question of preserving certain kinds of biotopes (e.g. hay meadows or salt marshes characterised by a particular combination of wild flowers). This mode of thought then defines the solutions (such as landscape management agreements) to the problems which it has defined (loss of floristic diversity and aesthetic qualities). While this approach is necessary to some extent, it is a conservationist tradition. It does not solve the basic problems related to agricultural production and restructuring (Rønningen 1999). We may end up with a situation parallel to that of the church restorations in the 19th century, resulting in the protection of a few landscape sceneries that resemble photos from the 1950s or the 1960s.

Diversification and tourism - the rural saviour?

We have sufficient evidence to state that cultural heritage and cultural landscape and environments are not indifferent to us - whether we are the public, tourists, hikers or farmers. Landscape preference studies show that there is a general preference for "old-fashioned" or traditional farming landscapes with "traditional", old buildings etc.

The issue of landscape preferences is often connected to tourism. In an EU context, diversification of farm resources has been pointed out as a major strategy to increase income in farm households. Niche products, environmentally friendly products and labelling are important aspects. A major focus has been on farm tourism and rural tourism, and there is no doubt an important potential within tourism.

During the last 10 years, measures towards rural heritage involving restoration of buildings and re-use for tourism purposes is encouraged regionally. However, these activities have not been evaluated from either an economical perspective or from a heritage preservation perspective. Further knowledge is needed internationally.

Also in Norway, state authorities have been eager to point out the potential of tourism linked to farm based resources. Cultural landscape payments (STILK) encourage the restoration of buildings that may later be utilised for tourism or other commercial purposes. To some extent there has been a co-ordination between agricultural and rural development authorities in order to promote this type of development (Brandtzæg and Lønning 2001, Rønningen 2003). Increasingly, cultural heritage authorities are in favour of a development in which buildings and cultural heritage in general are taken into use. In addition to cultural heritage dissemination, this provides some economic benefits; the possibility for maintenance and conservation increases for buildings that otherwise would have been lost to decay (Daugstad and Grytli 1998).

However, there are many dilemmas and contradictions related to such use. Heritage authorities often do not apply a clear strategy when deciding what changes should be allowed, and to what extent wear is accepted. Establishing an equilibrium in maintaining older buildings through re-use for new purposes like tourism, is a challenging task for the heritage authorities. For the tourist, a great part of the attractiveness of such environments is what they offer in terms of feeling of authenticity and story-telling. One example is the use of summer farms for tourism. If the tourism activity exceeds that of summer farming, and one finally gives up milk production, harvesting etc., then the summer farm buildings only become a frame and a place for accommodation - a specialised tourist product and not a part of diversification. The balance between the various activities is a central issue in relation to authenticity and to conservation (Daugstad and Grytli 1998).

Diversification and pluriactivity has always been central to Norwegian farmers, as they have combined farming with other types of relevant land and resource use - fishing, forestry, reindeer herding, handicrafts, berry picking etc. (Blekesaune 1999, Gaukstad 2000).

Diversification based on farm resources (apart from jobs outside the farm) are to a large extent linked to tourism and recreation. Further, in many European countries, and to some extent in Norway, landscape management and conservation activities have become an option in certain areas, contributing substantially to farm income. However, several studies have shown very clearly that although many farmers may accept carrying out landscape management activities, the majority strongly resist the idea of having their major income and their identity as a farmer linked to landscape management payments. To some extent this may be seen as a humiliation of a strong identity as a producer of the basis for human survival. Further, it is also linked to a conscious consideration and risk perception of the long term consequences of linking the legitimacy of agriculture, agricultural policies and subsidies to landscape management (Rønningen 1994, 1999, Schmid and Lehmann 2000). A support system based on landscape management is perceived as much more vulnerable to shifting

political winds, public opinions and economic conjunctures. Food production is the “natural” production, but it is also seen as the most robust strategy for securing the farming future.

One Swiss example illustrates the first part of this argument: In spite of major difficulties during blockade and war-time in neighbouring countries, Swiss farmers were after the war celebrated for having managed to provide the population with the basic foodstuff, and prevent a food crisis. Through two recent Swiss agricultural policy reforms that almost led to a full de-coupling between agricultural support and production, the feeling of pride as a food producer was seen as seriously attacked. Most of the subsidies are now being linked to environmental contributions. Tourism is often presented as a substitute for falling income and employment in agriculture (Rønningen 1994, Schmid and Lehmann 2000).

Studies show that although rural agriculturally based tourism has a certain potential, large effects remains to be seen. For example, for one of the most successful rural tourism municipalities in Finland, figures show that as the number of employees in agriculture, forestry and fishing fell from 805 to 157 persons from 1950 to 1996, the parallel figures for tourism had only an increase from 31 to 56 persons (Andersson and Eklund 2000). In spite of a high percentage increase, this shows that tourism so far cannot replace lost jobs in the primary sector. Granberg (2002) documents the same effect – or lack of effect – in Baltic countries like Estonia and Latvia. According to Granberg this does not mean that tourism has no effect or impact on local development, but impacts are hard to measure and easy to exaggerate.

In Norway, the pluriactivity of farmers has been the norm, specialisation within farming is a relatively new phenomenon. In general, farmers have not had specialised competence, but rather specialised competence on being pluriactive, utilising the farm based resources. Rural tourism has been criticised for its lack of economic success, and this has been related to the smallscale and lack of specialised competence within tourism businesses. This may be correct. However, the recent experience from Britain on the BSE and the mass slaughtering of cattle due to foot and mouth disease, ban on countryside recreation etc., has shown that the tourism sector was hit much worse than farming itself (ECOS 2001/1). Not being specialised may mean a more robust and sustainable way of utilising the landscape resources, however, in the current situation not economically very profitable.

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