

HNV Link - The UK Learning Area:

Dartmoor, with a focus on common land

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Summary

The farming community on Dartmoor, much of which is of High Nature Value, and especially the farmers who farm the common land, are resilient and have a culture of community engagement. These attributes and the support and encouragement provided by a national park authority and common owners have often combined, not least at times of crisis, to enable ideas to develop into innovations that seek to bring improvements to how the moorland is managed.

The Dartmoor HNV-LINK Innovation Seminar was held on Dartmoor on the 1st August. It followed a series of meetings with individuals or small groups to seek potential issues that may require an innovative solution; this appears to be a more constructive approach for some audiences/participants especially farmers who can fail to contribute in larger meetings. About 20 individuals were invited to the seminar and 16 attended, representing Natural England, Dartmoor National Park Authority, Forestry Commission and farmers. The meeting was divided into two parts; the first to present findings and check if correct and the second part to explore the areas where new innovation may be required. The majority of the information gathered reflected the prepared material, although some new aspects were captured and incorporated into the present final version of the innovation report.

From a longer list, five innovations were chosen to demonstrate a range of efforts that help farmers by providing clearer guidance (the long-term Vision), engagement in the design and trialling of an outcome focused agri-environment scheme (Dartmoor Farming Futures) and two attempts to improve regulation and practice by making them more practical and deliverable, (TB Control Plans and the Fire Management Plans). The last innovation is the Dartmoor Commoners' Council, a farmer-led governance of the common land that is underpinned by a legal framework.

Consultations with the local community have confirmed the need for innovations to continue to develop. The factors likely to influence the success or lack of success of these new innovations were found to include the identification of a clear need, capacity within the users of potential innovations to develop the ideas and external support, including funding.



The HNV Link project

High Nature Value (HNV) farming systems are an important component of European agriculture, not least in terms of cultural landscape, biodiversity, territorial cohesion, quality products and employment. These systems are the results of historical adaptation of agricultural practices and societies to the natural environment and its constraints. Each of them found sustainable (and constantly adapting) ways to use natural resources and shaped, through local knowledge and practices, a range of biodiversity contexts mediated by humans – from the so-called agrobiodiversity of crops and livestock to ‘semi-natural’ vegetation communities dependent on human intervention.

HNV farming systems are aspects of both cultural and natural heritage. But these farming systems are alive and dynamic, notwithstanding the strong economic and social pressures of ‘modernisation’. Abandonment, degradation, economic and social marginalisation are long-standing themes and these systems are still under considerable pressure. Socio-economic marginality brings with it market failure also in innovation and the dissemination of innovation. These systems need special attention, knowledge exchanges and specific innovation support services and devices. It is one of the ways to support improvement of their socio-economic viability while enhancing their environmental efficiency and sustainable use of natural resources.

The overall objective of our project is to network European areas of HNV farming systems for enhancing the various and adapted innovation processes that improve their socio-economic viability, while enhancing their environmental efficiency. The HNV LINK Network is:

- Linking 10 areas with HNV farming systems where appropriate innovations take place to at least some extent, representing a wide range of these systems. There is one “Learning Area” (LA) in each country.
- Identifying, using a common methodology, the agro-ecology, cultural and social characteristics of these LA and investigating the drivers, success, gaps and failures of the innovation processes within the LA that allow us to assess of the innovation process and to compare between the LAs.
- Providing an inventory of the grassroots innovations in each LA divided into four categories:
 - farming techniques and technologies
 - products and markets
 - social organisation and institutions
 - regulatory and support mechanisms and rules
- Disseminating and publicising the innovations.



Our broader objective is for this European Network to raise the profile of HNV farming systems and areas in local, regional and national rural development policies in an innovation context - giving arguments for and examples of innovation for social and territorial development and the sustainable use of resources in systems often regarded as backward or static. And finally, through experimentation in particular, we want to support the constitution of EIP-Agri operational groups.

The context for innovation on Dartmoor

Introduction to Dartmoor

Dartmoor is a compact upland (953 km²) in south west England with a strong identity forged by human exploitation, including farming, for well over 5,000 years¹. The farmers and landowners have the responsibility to manage the natural and historic environments, especially the moorland and its impressive array of public goods and benefits. This same group of people have strong cultural and social capacity, often provided by and enabled by communal farming (commoning).

Dartmoor is celebrated for its international importance for both the natural and historic environments and was designated as a National Park in 1951. It is classified at an international level by the World Conservation Union (IUCN) as a Category V Protected Landscape for “a landscape that has been moulded by centuries of human activity to create a strong sense of place”.

For thousands of years, people have lived in, worked and farmed this upland creating an intimate combination of open moorland and enclosed farmland; today it remains a farmed landscape, but though around 34,000 people live within the National Park boundary, only about 900 individuals make CAP support claims (i.e. they are farmers).

The climate and diversity of habitats across Dartmoor give rise to a great diversity of wildlife including globally-threatened and nationally-rare species. The high moor has large contiguous open expanses of semi-natural blanket bog and upland heathland, intersected by valley mires with springs and flushes feeding rivers leading off the higher slopes. The high moor is connected with the lowland farmland by both unimproved acid grasslands, bracken slopes and enclosed semi-improved pastoral farmland, interspersed by river valleys with fragmented unimproved hay meadows and damp acid pastures. The upland blanket bogs and upland heathlands of the open moor and the upland oak-woods of the river valleys are three habitats of international importance on Dartmoor. The blanket bogs are the most southerly in England and support some of the best areas of this habitat in the UK, including the world’s most southerly populations of breeding dunlin (*Calidris alpina*).

In 2011 it was estimated that HNV vegetation covers about 50% of the wider National Park and almost all of the common land. The proportion of HNVF habitats as part of the total farm area ranged from 10% to 98%, with a high density of HNVF features such as hedgerows and Devon banks due to the small field sizes. HNVF habitats were generally buffered or adjacent to semi-improved or improved permanent pasture.



¹ <http://www.efncp.org/download/dartmoor-case-study.pdf>

Farming (grazing by cattle, sheep and semi-wild ponies) has shaped the upland habitats of Dartmoor; livestock grazing is as important today as it has ever been. The majority of Dartmoor is moorland; exposed rough grassland and heath used for extensive grazing of cattle, sheep and ponies. The common land (36,000ha) is grazed with livestock belonging to farmers with commoning rights linked to land off the common. In addition to the “open moor” there are newtakes - enclosed areas of moorland - adjacent to enclosed land belonging to individual farms. Some of these have been agriculturally ‘improved’, but remain marginal in terms of production. The in-bye land comprises a patchwork of enclosed fields, much of it ‘improved’ grassland and almost entirely dominated by grassland suitable for forage production and grazing. The “free” grazing is still available on the moor, to those that have rights to graze, is today controlled by agri-environment agreements and the costs incurred when the stock is not on the common. Stocking levels are historically low driven in part by the restrictions that require cattle to be removed in winter when the costs of housing, grass rental and feed become significant.

On the majority of farms, the grazing livestock enterprise is subsidised by other enterprises including poultry production, tourism and residential lettings and occasionally farmers undertaking off-farm work to supplement their incomes.

The HNMF management is delivered by the beef rearing and finishing, and sheep systems which predominate. Aside from financial pressures, there is a range of other obstacles to managing HNMF. These included animal health and welfare concerns, the move by some farmers to finishing systems and less hardy breeds, lack of labour, lack of successors, and eligibility for and the commitments involved with agri-environment scheme agreements.

The majority of the 92 common land units, managed by 33 local commons’ associations have had agri-environment agreements throughout this period, usually entered into the higher tiers (if available) to reflect the impressive array of public goods and services that are found on the commons, including;

- 9.2 million tonnes of carbon stored in the peat soils.
- Drinking water for 1.6 million people
- 6% of all the Scheduled Ancient Monuments in England
- Largest area of open public access in southern England (47,000 ha)
- Internationally important habitats, including 120 km² of blanket bog and 115 km² of upland heath.

This study focuses on (but is not confined to) the common land, where need and capacity have often combined to create the right conditions for innovation to develop. Often innovation developed on Dartmoor has then been exported to other areas within the UK.

The drivers of innovation

Farming on Dartmoor is marginal, especially for those farmers that exercise their rights to put livestock on the common land. There are few opportunities to change the type of farming from livestock farming and most farms rely on the support provided by CAP funding, including the various agri-environment schemes that have been available to farmers on Dartmoor since 1994. These support payments, today delivered as the Basic Payment Scheme (BPS) and agri-environment payments can, when combined, provide on average 60% of a holding’s Farm Business Income, more for many.



As others have previously noted, it is noteworthy that few if any of the innovations identified were developed as a response to poor incomes or high support payment dependency alone. In most cases, they in fact arose as a result of some acute crisis, albeit one set against the background described.

The essential role of agri-environment payments in the economies of farmers has created problems when the schemes are not suitable or are

poorly designed for common land. This tension has been a driver for several innovations.

The impact of inappropriate regulation and legislation, again rarely designed for common land, is also significant and has required innovation to find local solutions. Regulation must be practical for farmers if it is to deliver its intended objective. On Dartmoor, the greatest threat to cattle grazing is from the regulations put in place to control the spread of and hopefully eradicate bovine tuberculosis (TB), for example.



Due in part to the crisis-led nature of innovation in many fields, we find that while individual farmers do sometimes take the initiative in finding solutions to a particular issue, the role of other actors is often significant. The part played by the Dartmoor National Park Authority (DNPA) in identifying issues, providing facilitation and encouragement and very often funding has been pivotal in the development of some innovations.

The cohesion and capacity, both people and facilities, provided by DNPA is recognised as an important element in the development of some innovations by the majority of the farming community; DNPA's positive engagement with moorland farmers and their issues contrasts markedly with the attitude of some other Park Authorities and is an under-appreciated aspect of the innovation environment on Dartmoor. DNPA's support for the Dartmoor Hill Farm Project is just one example of the Authority identifying a gap in the provision of agricultural advice and facilitating the provision of a solution.

Further support, including contributing funding to initiatives, has been provided by the owners of the common land, especially the Duchy of Cornwall, with its links to charitable trusts.

That the majority of the open moorland is common land is an important factor, but one which has itself in the past caused tensions both within the commoning community and between commoners and the wider public, leading to the creation of the Dartmoor Commoners' Council. The local commons' associations and the statutory Commoners' Council require self-regulation and this has engendered confidence to speak up and challenge; encouraging leaders to emerge from within the farming community. The combination of leaders, support from the National Park Authority, land

owners have all contributed to the development of many of the successful innovations identified in this study. Many of the innovations identified during this study arose out of a perceived need to secure a future for the environment and the HNV farming community.

The HNV Vision for the Learning Area

Almost uniquely in a UK upland context Dartmoor has a long-term Vision for some of its HNV farmland, designed to benefit both those that farm the area and the statutory agencies with responsibilities for its future. The Vision, produced in 2005, provides clarity on what the agencies want Dartmoor's open land to look like in 2030. The process of creating the Vision was designed to improve communication between agencies and between the agencies and the farmers. The Vision maps the principal vegetation on the moorland, including blanket bog, mires, dry heath and wet heath and provides guidance to influence local delivery.

The Vision also maps the distribution of the archaeological features that require to be seen in a landscape. This ensures that management for ecological outcomes does not damage or destroy the vegetation necessary for the archaeology.



The Dartmoor Moorland Vision is an innovation in its own right, now replicated on other upland areas within the UK

The selected innovations

The Dartmoor Moorland Vision²

The process was originally designed to address a specific problem: the farmers perceived a difference in opinion between agencies on how they wanted land to be managed, the demands of the archaeologists often seemed to conflict with those of the ecologists. The solution to overcoming this perceived conflict was to secure the agreement of all agencies on what the priority was for each area of land, addressing public access, archaeology, biodiversity and farming. In addition to providing clarity on the priority for land management the process led to describing the desired vegetation to be delivered by HNV farming on all the moorland. A new way of describing archaeology that requires a landscape setting was developed.

The process of producing the Vision was as valuable as the final product; encouraging cooperation between the agencies and building confidence within the farming community that the various agencies held the same long term vision for Dartmoor's commons – that of a farmed landscape. The Vision describes the vegetation that *all* the agencies want to see in 2030, but the resulting map became The Vision only after it was endorsed by the farming community.



Long-term agreed
vision for all parts of
the open moor

Dartmoor Commoners' Council³

A pioneering model of self-governance of common land by the rightsholding farmers, underpinned by unique enabling legislation, which involved the setting up of a single commoners' council. The Council is comprised of commoners (farmers) and has a duty to ensure the commons are well managed and to provide an up to date register of (commoning/grazing) rights.

From the transhumance of the mediaeval period the governance of the commons has evolved to place the responsibility for the correct management of the livestock and vegetation firmly with the local farmers. The Council's members are elected from within the local commoning community and this unique structure run by commoners for the commoners enables the better management of the common land and the livestock (including ponies) that graze it. The Dartmoor Commons Act, the enabling legislation passed into law in 1985.

² <http://www.uklandscapeaward.org/Entryfiles/1281686240A-Vision-for-Dartmoor-2010.pdf>

³ <http://www.dartmoorcommonerscouncil.org.uk/>



Farmers provided with Regulations and powers

Dartmoor Farming Futures⁴

Dartmoor Farming Futures (DFF) is an outcomes-focused approach to delivering an agri-environment scheme. Designed and piloted by farmers on the two commons, the participating farmers have agreed to deliver a number of outcomes whilst enabling the farmers to contribute their local knowledge and experience to secure the outcomes. DFF, which is currently in its fourth year of trials, includes new initiatives by Natural England to provide clearer guidance on SSSI requirements and innovative monitoring of vegetation condition by farmers.



Farmers training to undertake monitoring of their agreements

Fire Management Plans

Partnership working with the Fire Service, initiated by commoners has, through fire control plans, training for farmers and the invention of equipment, reduced the number and extent of wild fires and enabled better control of swaling (controlled burns).

⁴ <http://www.dartmoor.gov.uk/living-and-working/farming/farming-futures>



a new approach to
fighting fires on
commons

Commons Tuberculosis Control Plans

In response to new tuberculosis (TB) control regulations that were considered to be impractical for common land farmers designed and developed an innovative approach to providing the basis for risk assessment on individual commons to reduce the burden from inappropriate regulation whilst retaining the necessary measures to reduce the risk of TB. A small group of farmers worked with the State Veterinary service to provide locally appropriate solutions including licences to avoid pre-movement testing off the common and holding areas to reduce the need for multiple movement tests.



TB Regulations
preventing cattle
returning to the
common

Barriers to innovation

Discussions with individual farmers and other stakeholders have identified a number of barriers that prevent or slow the development of ideas into innovations. These barriers include:

- Lack of sufficient motivation ('crisis') to overcome risk aversion and try something different. Cultural and social self-perception of farmers often dominated by constancy; change is a concern, which discourages some from responding to opportunities to change.
- Lack of a knowledge transfer or similar support infrastructure which channels (and filters/validates) potentially relevant innovations to farmers
- Lack of funding during the development phase (especially for innovations not of interest to commercial researchers) and to enable wider promotion. Funding that recognises a degree of risk and is independent of any one agency would be valuable.
- Lack of time on farmers' side to spend on speculative initiatives.
- Poor communication between agencies and farmers fails to engender mutual respect and trust.
- Skills necessary for development are not always matched with the original ideas.

- Varied levels of engagement by essential partners. This is often exhibited by professionals unwilling to act on ideas originating from “amateurs”, even when those amateurs can demonstrate significant experience and the necessary practical skills to ensure delivery.
- Lack of capacity in government agencies to collaborate (this can also provide opportunities).
- Rapid turnover of staff within organisations often creates a lack of cultural memory and new staff are not informed or made aware of previous progress. This is at odds with a farming community that works to a longer term programme and a consistency of people.
- Peer pressure within farming community not to “rock the boat”.

Innovation gaps

Innovations usually arise to address a specific need. Sometimes that need is obvious to all and at other times only obvious to one or two people. The following gaps in innovations and in the innovation process were identified both in the background research and in discussions with farmers individually, in groups and in the innovation seminar.

There is a notable shift from innovations relating to improving regulation and agri-environment scheme delivery towards **improving the performance of the livestock system** itself, e.g. improving animal productivity, reducing costs associated with meat production, and better marketing of the outcomes. This is directly linked to the UK’s decision to leave the EU and the likely loss of a CAP type support structure for farmers.

The lack of innovation relevant to Dartmoor systems and to ways of disseminating that which does exist is a frequently-expressed concern. A lack of research is compounded by the almost total absence of advice from any government agency on hill farming and the particular problems of extensive grazing. It may be possible to increase the capacity of the Dartmoor Hill Farm Project to enable it to provide this service but other solutions may still need to be found.

Tried and tested improvements to **animal health, biosecurity** safeguards and to **animal welfare**, are desperately sought. Grazing livestock are essential to the management and core to the HNV farming dominant on the moorland. The lack of research into animal health and productivity relating to hill breeds is preventing the development of new approaches to hill farming. For example there is no UK research into breeding sheep resistant to parasitic worms, such sheep could have significant benefits to the environment and costs of keeping the sheep from the reduction in drug dependency.

Recent changes to TB Control Regulations have prevented cattle from returning to the commons and increased the burden of testing and its associated costs. But at the same time, almost 200 grazing livestock (sheep, ponies and cattle) a year (2016 data) are being killed on the roads that cross the common land. Innovative solutions to both impractical regulations and to reduce road casualties are urgently required.

Another issue, unique to the UK, is the uncertainty over the future of UK agriculture and environmental policies following the decision to leave the EU. It is likely that some support for hill farmers will continue and be provided by some form of agri-environment payment. Many farmers interviewed want this to be an opportunity to develop the innovative approach to an outcome focused agreement based on the trials underway on Dartmoor (Dartmoor Farming Futures). However the indecision observed within government appears to be dampening efforts to find innovative solutions to the problems that face HNV farmers.

Conclusions

The successful innovations reveal a range of characteristics, some or all of which contribute to their success:

- A clear identified need and analysis to understand exactly what needs to be addressed.
- Good communication skills to articulate what needs to be done.
- Capacity within the potential beneficiaries to design potential solutions and then promote these to others with the necessary skills to develop.
- Financial support that enables the development of ideas.
- Risk taking within all sectors.
- Trust between sectors, encouraging those with experience to contribute and secure changes.
- Time – sufficient time to enable progress that does not exclude certain participants.
- Inclusive engagement, ensure the right people participate and in the right manner. Appropriate size of meetings for different objectives – large meetings are rarely constructive but do enable cascading of information.
- Independent facilitation has been valuable during the development of some innovations.
- Access to relevant expertise.
- Leaders within the various sectors willing and able to recognise opportunities and promote solutions. The right people in the right place at the right time.
- A regulatory/support environment which is at very least permissive of change and at best actively promotes appropriate innovation within a wider agreed framework of objectives

We have also learned things about the context of innovation which have potentially profound implications for policy:

- There is a market failure to carry out innovation-generating research, evaluation and dissemination in many aspects of upland farming in a way which is consistent with the HNV Link vision of increased socio-economic viability while maintaining or enhancing nature value.
- There is a lack of ownership of some innovations by a sector that was excluded from the development phase, leading to negativity and a lack of support for the innovation. Can also arise from a change in key staff leading to a lack of continuation in the initial support and understanding of the reasons why the innovation was required in the first place.
- Innovation is often linked to crisis; outwith this context, take up of some innovations has been slower than might have been anticipated, with farmers being risk averse and having recourse to little or no independent outside support to evaluate, validate and disseminate new approaches which could compromise or threaten existing income or future opportunities.

Responding adequately and timeously to an innovation implementation pattern closely linked to unpredictable crises requires an inordinately high degree of capacity in those bodies which might be called upon to deliver support. It would be much less risky for both farmers and public policy goals were there to be a greater willingness to take up innovative approaches in non-crisis times. Yet the current dearth of appropriate (i.e. of necessity largely publicly-funded) research and development and knowledge transfer institutions means that innovations are both difficult to hear about and potentially high risk, encouraging farmers (whose systems are not providing high returns which justify speculative investment) to stick to what they know.

EU Regulations provide a menu of potentially useful mechanisms, from LEADER to EIP to LIFE+, which could have been used to support the initiation of innovative techniques and innovative approaches, but these have not been used on Dartmoor. Horizon 2020 research funds so far seem largely irrelevant and distant from Dartmoor commoners. But what is needed is a long-term approach which sees the public policy benefits of investing in helping farmers adjust to change and deliver better viability for their businesses and better outcomes for the wider public.