

Mansfield, Lois ORCID: <https://orcid.org/0000-0002-0707-2467> (2019) Valuing cultural capital: place-based rural development for hill farming opportunities from Japan. (Unpublished)

Downloaded from: <http://insight.cumbria.ac.uk/id/eprint/5214/>

Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

provided that

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
 - a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

You may not

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing insight@cumbria.ac.uk.

WINSTON
CHURCHILL
MEMORIAL
TRUST



Valuing Cultural Capital: Place-based Rural Development for Hill Farming Opportunities from Japan



Lois Mansfield

Churchill Fellow 2019

Lois.mansfield@cumbria.ac.uk 015934-30304

Copyright © 2019 by LT Mansfield. The moral right of the author has been asserted.

The views and opinions expressed in this report and its content are those of the author and not of the Winston Churchill Memorial Trust or its partners, which have no responsibility or liability for any part of the report.

Acknowledgements

The author would like to take this opportunity to thank the generosity of the Winston Churchill Memorial Trust for supporting this fellowship to Japan in 2019. I would also like to thank the Japanese Government and the people of Japan who made this possible; their ideas, their enthusiasm, their time given, their generosity of spirit and sense of humour. I would like to thank Matsumoto-San for her translation services in and around Yoshino-Kumano National Park. Finally I would like to thank the Vice Chancellor of the University of Cumbria for agreeing to the time away from day to day work.

Sir Winston Churchill's perception that we can, and should learn from other cultures, was correct. I hope what I have learnt will help value the cultural capital of our marginal hill farming communities wherever they are around the world.

About the Author

Lois Mansfield is Professor of Upland Landscape at the Ambleside Campus of the University of Cumbria. She is the Director of Campus and the Director for the research Centre of National Parks & Protected Areas, the latter of which seeks to find transdisciplinary solutions to the challenges facing these designations. Lois has conducted applied research in upland and hill farming for nearly twenty five years. She is passionate about the cultural and social value of hill farming for our society and finding practical ways to support its continuation as the cornerstone of our upland cultural landscapes. She sits on the Rural Sector Panel for Cumbria Local Enterprise Partnership, the Lake District World Heritage Site Technical Advisory Group and the National Park Post-CAP group. Lois is a Fellow of the Royal Geographical Society and the Royal Society of Arts.

CONTENTS

Acknowledgements	3
About the Author	3
Contents	4
List of Figures	6
List of Tables	7
List of Abbreviations	7
Executive summary (English)	8
Executive summary (Japanese)	11
Introduction	15
PART 1 - Background to issue: Hill Farming in Cumbria	19
1.1 Employing Capitals Approach to Farm Businesses	19
1.1.1 Physical & Natural Capital	22
1.1.2 Human, Social & Cultural Capital	25
1.2 Marginality in Hill Farming Systems	31
1.3 Brief review of Hill Farming support until Present	36
1.4 Main issues summary	40
PART 2 - Selection of Destination	42
2.1 Marginal Hill Farming & Cultural Capital in Japan	46
2.1.1 Religion	46
2.1.2 Changing Rural Life	47
2.1.3 Food & Cuisine in Japan	49
2.1.4 Management in Uplands	49
2.2 Recognition & Protection of Cultural Capital in Japan	54
2.3 Rural Development in Japan	55
PART 3 - The Role of Place-based cultural capital: critical analysis	59
3.1 Introduction	59
3.2 Renewed Diversification	60

3.2.1	Farm woodland management	61
3.2.2	Charcoal production	63
3.2.3	Opportunities for Cumbrian Marginal Farming	64
3.3	Diversification: alternative crops	65
3.3.1	Shiitake Mushrooms	66
3.3.2	Wasabi	67
3.3.3	Opportunities for Cumbria Marginal Farming	69
3.4	Diversification: Agri-tourism	69
3.4.1	Experience tourism: making local food	70
3.4.2	Introduction to Japanese cuisine and making a meal	72
3.4.3	Rent-a-Paddy	72
3.4.4	Countryside Stay	73
3.4.5	Opportunities for Cumbrian Marginal Farming	74
3.5	Community Driven Projects	75
3.5.1	Opportunities for Cumbrian Marginal Farming	77
3.6	Catalysing Actors	78
3.6.1	Local Government officials	78
3.6.2	Local Community Development Caravan	80
3.6.3	Local Actors	82
3.6.4	Opportunities for Cumbrian Marginal Farming	83
3.7	Territorial Land Management Systems	84
3.7.1	Globally Important Agricultural Heritage Systems	84
3.7.2	National Important Agricultural Heritage Systems	85
3.7.3	Opportunities for Cumbrian Marginal Farming	88
3.8	Summative Comments	89
PART 4 – Recommendations		92
Reference list		95
Appendices		
	Interviewees in Japan	97
	What is LEADER?	98

List of Figures

1	Cultural capital from Marginal Hill Farming	16
2	Natural Capital & its relationship with other Capitals	20
3	Hill Farming Capitals	22
4	A Typical Upland Farming (cultural) landscape	23
5	Continuum of Habitats within Upland Farming Landscapes	24
6	A Heft within a Cumbrian Common	27
7	Herdwick Sheep	28
8	Belted Galloways	28
9	Stratification System in UK Sheep Industry	29
10	The Relationship between cultural, social and natural capital in Hill Farming	30
11	Pluriactivity on Upland Farms in England, 2009	34
12	On and Off Farm Diversification in English Uplands, 2009	35
13	Images of the Lake District National Park & World Heritage Site	43
14	Shrine in Shiga Prefecture dedicated to a good rice harvest	46
15	Kumano Hayatama Taisha Shrine, Shingu, Nara Prefecture	47
16	The Rural Community of Nosegawa	48
17	Food as a Visual experience	49
18	Satoyama Land Management System	50
19	Rice Terraces of Maruyama Senmaida, Wakayama Prefecture	51
20	Newspaper Article: Satoyama conference organised by Japanese Government	52
21	Dominant Tree Species in Japanese Uplands	53
22	Yamamori Nakahai – Forest Manager Yoshino, Nara Prefecture	54
23	Internationally recognise GIAHS logo	55
24	World Heritage Sites & National Parks of the Kii Peninsula	56
25	The Multifunctional Values of Rice Heritage	57
26	Charcoal as an Ingredient in Foodstuffs	64
27	Growing Shiitake Mushrooms in- and out- doors	66
28	Japanese Wasabi Rhizome: Nosegawa, Nara Prefecture	67
29	Wasabi Cultivation: Nosegawa, Nara Prefecture	68
30	Changing Economic Value of Goods & Services	70
31	Having Lunch as part of Experience Agri-tourism	71
32	'Rent-a-Paddy' paddy renting signage	73
33	Akizuno Garten Green Tourism facility	76
34	Yoshino Timber Diversification	79
35	Rough population structure of Nosegawa, Nara Prefecture, July 2019	81
36	Kenji Oda-San and his Business Card	83
37	GIAHS Relationships	85
38	Minabe-Tanabe Ume System underpinning GIAHS Designation	86
39	GIAHS in Action: charcoal, ume and rice (the key elements of Satoyama)	86
40	The Aragijima Rice Paddies, Wakayama Prefecture July 2019	88
41	Aragijima Viewing Point Interpretation Panel July 2019	89
42	Adoptable and Appropriate: Continuum of Cultural Capital Opportunities	94

List of Tables

1	Upland Landscape Assets	19
2	Ecosystem Services derived from Upland Farming	25
3	Forms of Farm Diversification	33
4	Development of UK Agricultural Policy for Uplands, 1947 to present	37
5	Direct Payments in Hill & mountainous Areas, Japan 2019	56
6	Possible Farm Wood Products	62
7	The Range of LCDC Activities	80
8	Addressing Cumbrian Marginal Hill Farm Issues via Japanese Cultural Capital	90

Acronyms Glossary

AONB	Area of Outstanding Natural Beauty
CAP	Common Agricultural Policy
CIC	Community Interest Company
CLEP	Cumbria Local Economic Partnership
DCMS	Department of Culture, Media and Sport
DEFRA	Department of Environment, Food and Rural Affairs
EU	European Union
FAO	Food & Agriculture Organisation
GIAHS	Globally Important Agricultural Heritage Systems
GVA	Gross Value Added
HNV	High Nature Value
J-NIAHS	Japanese Nationally Important Agricultural Heritage Systems
LCDC	Local Community Development Caravan
LDPNA	Lake District National Park Authority
LDNPP	Lake District National Park Partnership
LEADER	<i>Liaisons Entre Actions de Developpement de L'Economie Rurale</i>
MAFF	(Japanese) Ministry of Agriculture, Fisheries & Food
OUV	Outstanding Universal Value
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHS	World Heritage Site

EXECUTIVE SUMMARY

Background context

Upland farming businesses in the United Kingdom (UK) have been and continued to be some of the most marginal and fragile in terms of financial sustainability and resilience. Having said this, it is widely recognised that these farm systems, beyond food production, provide a range of public goods and ecosystem services as well as underpinning the social and economic fabric in sparsely populated, rural areas (Bonn *et al.*, 2008; Mansfield, 2018). So much so, that upland agriculture receives special mention in the recent DEFRA (2018a) *Health & Harmony* consultation in preparation for the new 2019 Agriculture Bill post Brexit.

If UK society wishes to benefit from these additional values upland farming brings, together with its productive capacity for future food security, then it is imperative to continue to provide appropriate support to ensure business and community viability. The philosophical and pragmatic views to support marginal farming systems are not new in the UK; since the early Twentieth Century these businesses have been provided with structural funds, grants and subsidies to address farm inefficiencies, poor profit margins and ensure food security. Nevertheless, these farming systems have a number of challenges, which affect business viability into the future revolving around: low profit margins; limited enterprise choices; poor recognition of indirect societal benefits; loss of labour and depopulation & rural population restructuring.

In preparation for a post-CAP environment, the English Government has completed a consultation and published draft legislation (Agriculture Bill, 2019). Within this the Government acknowledges the special value of upland farming systems – ‘*The upland way of life, the unique food produced, and the great art that these landscapes have inspired attract visitors from around the world*’ (Defra, 2018a: 34). Particular emphasis has been placed on the shift towards payments for natural capital, public goods and ecosystem services. These changes will see significant shifts in farming practices and the role of farmers within the upland landscape, but are not the panacea for all ills; funds will be limited, not all businesses will fit the criteria. Furthermore, facilitation funds to explore the shape of support has been overly-focused towards environmental land management and overlooked the fundamental issue of how upland farm businesses and their communities will survive *per se*.

Aim of Study

Whilst it is unequivocal that upland farming systems produce copious natural capital (see later; Mansfield; 2011, 2018) they also provide cultural capital, which plays a crucial role in the greater social and cultural fabric of UK uplands. Cultural capital can be divided into two types: tangible structures such as buildings, boundaries and historic monuments; and intangible activities such as farming practices, community events and sense of place. Its sister concept, social capital, describes how people work together, some call it ‘the glue that holds society together’, to create cultural capital. Indeed, upland farming cultural capital underpins the rural economy and society in terms of tourism and recreation, community resilience and the very natural capital the Government and society value (habitats do not manage themselves!). It is also core to many of our National Park landscapes and, in the case of the Lake District, an essential theme of its successful bid to become a World Heritage Site (LDNPA, 2015).

It is within this context, that this Churchill Fellowship was devised within the overarching themes of rural development and cultural capital. The main aims were, using **the regional case study of Japan:**

- To critically evaluate non-Western approaches to place-based cultural capital as a tool for rural development in marginal upland and hill farming communities
- To disseminate good practice to enable greater resilience in upland and hill farming communities
- To support the design and embedding of cultural capital rural development opportunities for upland communities across the UK.

Methods

To answer these aims and objectives data were gathered through a qualitative approach through focus groups and semi structured meetings. Interviewees included farmers, key rural development actors, community leaders, economic development officers, providers of tourism, government officials and academics. These were underpinned with a range of site visits to understand how land management functions in Japan. In total thirty five meetings took place with forty four people. Question format and content depended on the interviewee and the discussion which took place.

Destination Selection

Japan was chosen as the case study for both comparative and contrasting purposes focusing on the Yoshino Kumano National Park, Wakayama Prefecture of the Kii Peninsula and the Lake District National Park and World Heritage Site of Cumbria, northern England. Comparatively speaking, Japan is an archipelago located on the seaboard of a major trading block, resonating with the UK's developing status. Additionally, its developed nation status is based on a capitalist mode of production with governmental intervention to stabilise the economy. Notably, its agricultural production is under threat for a range of socio-economic reasons, with marginal upland farming most exposed, and finally, Japan has a series of protected cultural landscapes similar to the UK.

In contrast, its core philosophy is based on the eastern tradition of Shinto and Buddhism, the relationship of people with their environment, and despite becoming more westernised, this influences how agriculture and rural development are supported. Furthermore, rural Japan is undergoing extremely rapid rural depopulation, and has a growing aging population with an acute regressive population structure. This is rapidly leading to a very small economically active component to the general population, exacerbating land and farm abandonment with upland marginal farming systems suffering the most. The other main contrast is the pattern of upland land use, which is dominated by forest and the legacy of *satoyama*, an historical upland land management system. It is these contrasts, which form the basis of the critical analysis of the value of place based cultural capital for future marginal upland farm resilience in Cumbria.

Synthesis

Several cultural capital opportunities presented themselves as possible solutions to a number of issues upland farming faces in the Lake District. **Renewed diversification** was the first area of interest focusing on **farm wood management** and the **production of charcoal as a food ingredient**. Second, **alternative crops** such as wasabi and shiitake mushroom growing provide diversification potentials. Another area of diversification is **agri-tourism** focused on: food production methods; cuisine; a concept known loosely as 'rent-a-paddy' whereby urbanites rent rice paddies from the local farmer to produce their own rice; and countryside stay, which is fundamentally working farm holidays. Whilst these ideas focus on the farm unit itself, other possibilities revolve around the development of **community projects** such as **government sponsored roadside farm shops** and bottom-up **community driven green tourism ventures**, as well as some form of '**Akizuno Garten**' **style farm diversification training academy**. Another important activity was the role of key **catalysing actors** who galvanised and led their communities. The final area of interest is the application of territorial land management designations. The first is **Globally Important Agricultural Heritage Systems**, an FAO system focused on supporting and celebrating traditional farming systems through high quality branding and diversification. Its five key themes are: food & livelihoods security;

agro-biodiversity; local and traditional knowledge systems; cultures, value & social organisations, and landscapes/seascape features. The second is a **national agricultural heritage scheme**, including the same five themes as GIAHS with the addition of resilience to change, partnership management and adding value to local products.

Whilst some of these ideas are straightforward and relatively achievable, some are aspirational and need more thought and investment. Hill farming has received much support and investment since 1946, and in many ways all this has achieved is the *status quo*. That is the point of a Churchill Fellowship: to aspire to more than we already have accomplished, to find ideas to change the game. Hill farming is part of our cultural heritage and if we want the contemporary societal benefits from it then we must disrupt the *status quo*, place based cultural capital opportunities are one way to do this.

Recommendations

From this analysis, the following recommendations and next steps are planned in collaboration with key stakeholders:

1. Reactivate farm wood management on farms through a peripatetic practical woodland management team.
2. Explore the market of charcoal as a food ingredient and develop demand and supply.
3. Explore the opportunities for agritourism and identify potential suppliers.
4. Apply to the Shared Prosperity Fund via Cumbria LEP for a community farm shop grant scheme.
5. Develop an 'Akizuno Garten' style farm diversification academy in Cumbria
6. Identify catalysing actors in every community and provide training, support and community facilitation.
7. Approach DCMS/DEFRA to support application for GIAHS for upland farming systems.

EXECUTIVE SUMMARY for Japanese Hosts

(to be translated into Japanese)

Background context

Upland farming businesses in the United Kingdom (UK) have been and continue to be some of the most marginal and fragile in terms of financial sustainability and resilience. Having said this, it is widely recognised that these farm systems, beyond food production, provide a wide range of public goods and ecosystem services as well as underpinning the social and economic fabric in sparsely populated, rural areas (Bonn *et al.*, 2008; Mansfield, 2018). So much so, that upland agriculture receives special mention in the recent DEFRA (2018a) *Health & Harmony* consultation in preparation for the new 2019 Agriculture Bill post Brexit.

If UK society wishes to benefit from these additional values upland farming brings, together with its productive capacity for future food security, then it is imperative to continue to provide appropriate support to ensure business and community viability. The philosophical and pragmatic views to support marginal farming systems are not new in the UK; since the early Twentieth Century these businesses have been provided with structural funds, grants and subsidies to address farm inefficiencies, poor profit margins and ensure food security. Nevertheless, these farming systems have a number of challenges, which affect business viability into the future revolving around: low profit margins; limited enterprise choices; poor recognition of indirect societal benefits; loss of labour and depopulation & rural population restructuring.

In preparation for a post-CAP environment, the English Government has completed a consultation and published draft legislation (Agriculture Bill, 2019). Within this the Government acknowledges the special value of upland farming systems – *‘The upland way of life, the unique food produced, and the great art that these landscapes have inspired attract visitors from around the world’* (Defra, 2018a: 34). Particular emphasis has been placed on the shift towards payments for natural capital, public goods and ecosystem services. These changes will see significant shifts in farming practices and the role of farmers within the upland landscape, but are not the panacea for all ills; funds will be limited, not all businesses will fit the criteria. Furthermore, facilitation funds to explore the shape of support has been overly-focused towards environmental land management and overlooked the fundamental issue of how upland farm businesses and their communities will survive *per se*.

Aim of Study

Whilst it is unequivocal that upland farming systems produce copious natural capital (see later; Mansfield; 2011, 2018) they also provide cultural capital, which plays a crucial role in the greater social and cultural fabric of UK uplands. Cultural capital can be divided into two types: tangible structures such as buildings, boundaries and historic monuments; and intangible activities such as farming practices, community events and sense of place. Its sister concept, social capital, describes how people work together, some call it ‘the glue that holds society together’, to create cultural capital. Indeed, upland farming cultural capital underpins the rural economy and society in terms of tourism and recreation, community resilience and the very natural capital the Government and society value (habitats do not manage themselves!). It is also core to many of our National Park landscapes and, in the case of the Lake District, an essential theme of its successful bid to become a World Heritage Site (LDNPA, 2015).

It is within this context, that this Churchill Fellowship was devised within the overarching themes of rural development and cultural capital. The main aims were, using **the regional case study of Japan:**

- To critically evaluate non-Western approaches to place-based cultural capital as a tool for rural development in marginal upland and hill farming communities
- To disseminate good practice to enable greater resilience in upland and hill farming communities
- To support the design and embedding of cultural capital rural development opportunities for upland communities across the UK.

Methods

To answer these aims and objectives data were gathered through a qualitative approach through focus groups and semi structured meetings. Interviewees included farmers, key rural development actors, community leaders, economic development officers, providers of tourism, government officials and academics. These were underpinned with a range of site visits to understand how land management functions in Japan. In total thirty five meetings took place with forty four people. Question format and content depended on the interviewee and the discussion which took place.

Destination Selection

Japan was chosen as the case study for both comparative and contrasting purposes focusing on the Yoshino Kumano National Park, Wakayama Prefecture of the Kii Peninsula and the Lake District National Park and World Heritage Site of Cumbria, northern England. Comparatively speaking, Japan is an archipelago located on the seaboard of a major trading block, resonating with the UK's developing status. Additionally, its developed nation status is based on a capitalist mode of production with governmental intervention to stabilise the economy. Notably, its agricultural production is under threat for a range of socio-economic reasons, with marginal upland farming most exposed, and finally, Japan has a series of protected cultural landscapes similar to the UK.

In contrast, its core philosophy is based on the eastern tradition of Shinto and Buddhism, the relationship of people with their environment, and despite becoming more westernised, this influences how agriculture and rural development are supported. Furthermore, rural Japan is undergoing extremely rapid rural depopulation, and has a growing aging population with an acute regressive population structure. This is rapidly leading to a very small economically active component to the general population, exacerbating land and farm abandonment with upland marginal farming systems suffering the most. The other main contrast is the pattern of upland land use, which is dominated by forest and the legacy of *satoyama*, an historical upland land management system. It is these contrasts, which form the basis of the critical analysis of the value of place based cultural capital for future marginal upland farm resilience in Cumbria.

Synthesis

Several cultural capital opportunities presented themselves as possible solutions to a number of issues upland farming faces in the Lake District. **Renewed diversification** was the first area of interest focusing on **farm wood management** and the **production of charcoal as a food ingredient**. Second, **alternative crops** such as wasabi and shiitake mushroom growing provide diversification potentials. Another area of diversification is **agri-tourism** focused on food production methods; cuisine; a concept known loosely as 'rent-a-paddy' whereby urbanites rent rice paddies from the local farmer to produce their own rice, and countryside stay, which is fundamentally working farm holidays. Whilst these ideas focus on the farm unit itself, other possibilities revolve around the development of **community projects** such as **government sponsored roadside farm shops** and bottom-up **community driven green tourism ventures** as well as some form of 'Akizuno Garten' **style farm diversification training academy**. Another important activity was the role of key **catalysing actors** who galvanised and led their communities. The final area of interest is the application of territorial land management designations. The first is **Globally Important Agricultural Heritage Systems**, an FAO system focused on supporting and celebrating traditional farming systems through high quality branding and diversification. Its five key themes are: food & livelihoods security;

agro-biodiversity; local and traditional knowledge systems; cultures, value & social organisations, and landscapes/seascape features. The second is a **national agricultural heritage scheme**, including the same five themes as GIAHS with the addition of resilience to change, partnership management and adding value to local products.

Whilst some of these ideas are straightforward and relatively achievable, some are aspirational and need more thought and investment. Hill farming has received much support and investment since 1946, and in many ways all this has achieved is the *status quo*. That is the point of a Churchill Fellowship: to aspire to more than we already have accomplished, to find ideas to change the game. Hill farming is part of our cultural heritage and if we want the contemporary societal benefits from it then we must disrupt the *status quo*, place based cultural capital opportunities are one way to do this.

Recommendations

From this analysis, the following recommendations are made in collaboration with key stakeholders:

1. Reactivate farm wood management on farms through a peripatetic practical woodland management team.
2. Explore the market of charcoal as a food ingredient and develop demand and supply.
3. Explore the opportunities for agritourism and identify potential suppliers.
4. Apply to the Shared Prosperity Fund via Cumbria LEP for a community farm shop grant scheme.
5. Develop an 'Akizuno Garten' style farm diversification academy in Cumbria
6. Identify catalysing actors in every community and provide training, support and community facilitation.
7. Approach DCMS/DEFRA to support application for GIAHS for upland farming systems.

Observations & Ideas

This section contains a few reflections of the author and some of the interviewees whilst travelling around Japan which may help in some small way with supporting marginal farming communities.

- Farmers would like one point of contact locally for advice as to the grants available. The information on the web is excessive and hard to follow.
- Farmers would like less complex forms and easier paperwork, it is preventing many from applying for support.
- Farmers would like a small grants pot for individual items as previously
- There are issues with wild animals eating crops, which are legally protected, so cannot be trapped or killed. Other approaches to pest control need trialling.
- Encourage more labour immigration to help with depopulation (but not too many!)
- Tourist outlets to cater for larger and taller western tourists, many clothing goods are too small in size.
- Tourists increasingly appreciate 'active experiences' rather than passive observation.
- Increase the range of local goods for sale at *michi no eke* and other outlets that are not food based. Small items are best as they take up little baggage allowance. Eg Yoshino Cedar essential oil
- Interpretation boards to include English, eg Arajima rice fields
- Information boards to include explanations, not just description

- Provide funding to develop mountain biking routes in resilient forest areas
- Government funded Yamamori apprenticeships

INTRODUCTION

Upland farming businesses in the United Kingdom (UK) have been and continue to be some of the most marginal and fragile in terms of financial sustainability and resilience. Having said this, it is widely recognised that these farm systems, beyond food production, provide a wide range of public goods and ecosystem services as well as underpinning the social and economic fabric in sparsely populated, rural areas (Bonn *et al.*, 2008; Mansfield, 2018). So much so, that upland agriculture receives special mention in the recent DEFRA (2018a) *Health & Harmony* consultation in preparation for the new 2019 Agriculture Bill post Brexit.

If UK society wishes to benefit from these additional values upland farming brings, together with its productive capacity for future food security, then it is imperative to continue to provide appropriate support to ensure business and community viability. The philosophical and pragmatic views to support marginal farming systems are not new in the UK; since the early Twentieth Century these businesses have been provided with structural funds, grants and subsidies to address farm inefficiencies, poor profit margins and ensure food security (Attwood & Evans, 1961; Mansfield, 2011). A key feature of support from 1974 was the access to European Union (EU) subsidies for hill and uplands farmers through what is colloquially known as the *Less Favoured Areas Directive*, designed to (Directive 75/268: 3):

- Counteract large-scale depopulation caused by declining farm incomes and poor working conditions
- Ensure the conservation of the countryside in mountainous and other less favoured areas

Unfortunately, these tools, whilst addressing the economics of hill farming, did lead to less desirable side effects such as overgrazing and food surpluses from the early 1980s. Furthermore, there was a continued decline in the upland farming sector in and, as a consequence, loss of wider community benefits so derived (Drew Associates, 1997; Midmore *et al.*, 1998; Wilson *et al.*, 1998; Caskie *et al.*, 2001). To address some of these challenges, no way exclusive to upland farming, but to wider rural areas in general, farm support has shifted in the EU & UK from production to a combination of rural development and environment management, and the current situation is funded through the EU Rural Development Regulation 2013-2020.

With the UK's exit from the EU imminent, there is much uncertainty as to whether hill farming will survive as an industry, severely contract (estimates of between 60 and 95% have been suggested), or continue, but though undesirable restructure (eg intensification leading to environmental catastrophe).

In preparation for a post-CAP environment, the English Government has completed a consultation and published draft legislation (Agriculture Bill, 2019). Within this the Government acknowledges the special value of upland farming systems – *'The upland way of life, the unique food produced, and the great art that these landscapes have inspired attract visitors from around the world'* (Defra, 2018a: 34). Particular emphasis has been placed on the shift towards payments for natural capital, public goods and ecosystem services. These changes will see significant shifts in farming practices and the role of farmers within the upland landscape, but are not the panacea for all ills; funds will be limited, not all businesses will fit the criteria. Furthermore, facilitation funds to explore the shape of support has been overly-focused towards environmental land management and overlooked the fundamental issue of how upland farm businesses and their communities will survive *per se*.

Whilst it is unequivocal that upland farming systems produce copious natural capital (see later; Mansfield; 2011, 2018) they also provide cultural capital, which plays a crucial role in the greater social and cultural fabric of UK uplands (Figure 1). Indeed, upland farming cultural capital underpins the rural economy and society in terms of tourism and recreation, community resilience

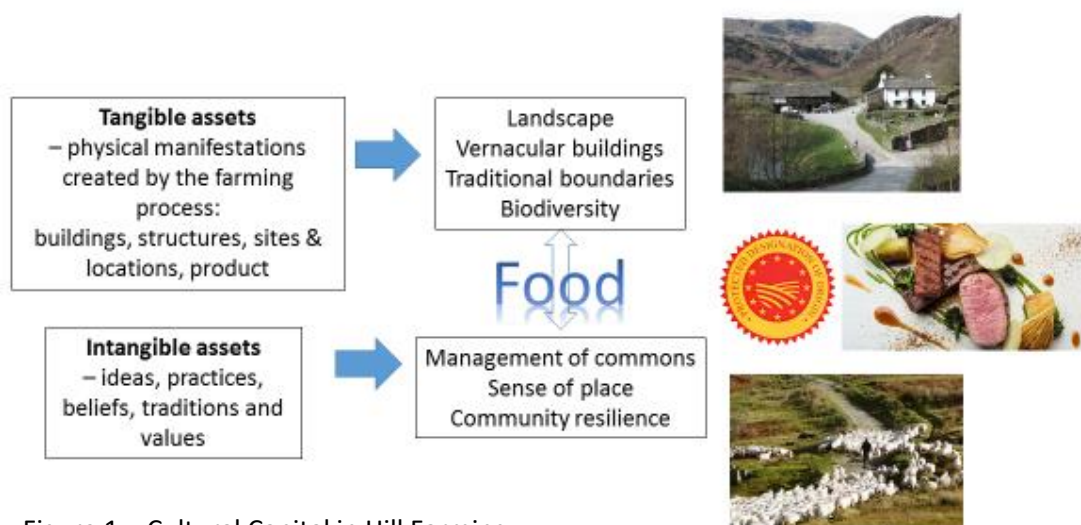


Figure 1 – Cultural Capital in Hill Farming

and the very natural capital the Government and society value (habitats do not manage themselves because the majority are the product of societal processes to create semi-natural habitats!) It is also core to many of our National Park landscapes and, in the case of the Lake District, an essential theme of its successful bid to become a World Heritage Site (LDNPA, 2015).

It is important to acknowledge that here in the UK, we have a long well established, tested and reasonably successful history of supporting the production of natural capital on upland farms (Whitby et al., 1994; Mansfield, 2011). Natural capital is tangible, habitats and species recovery are easy to monitor and evaluate. In contrast, nurturing and measuring social and cultural capital is difficult; much of which they provide is intangible. That does not mean we should neglect to support them, it is what makes farming communities 'tick' and in turn have the capacity to produce natural capital and other ecosystem services from which society benefits (eg flood management and climate change mitigation). Indeed, there have been programmes to support these forms of capital most recently, the highly successful LEADER (Appendix 1), but this is an EU scheme and there seems to be no agenda or real provision to replace this post-Brexit.

It is within this context, that this Churchill Fellowship was devised within the overarching themes of rural development and cultural capital. The main aims are, using a **regional case study**:

- To critically evaluate non-Western approaches to place-based cultural capital as a tool for rural development in marginal upland and hill farming communities
- To disseminate good practice to enable greater resilience in upland and hill farming communities
- To support the design and embedding of cultural capital rural development opportunities for upland communities across the UK.

Specific objectives include:

- Investigate the evolution and contemporary design of rural development in Japan
- Critically compare Japanese and UK rural development from the perspectives of local participants, professional development officers, Ministry Officials and academics

- Identify innovative local and regional practice with respect to upland farming communities within a World Heritage designation of a comparative nature to the Lake District National Park, UK.
- Disseminate and encourage the adoption of innovation/good practice from this Fellowship visit to regional partners through networking and membership
- Influence national policy through the Princes Countryside Trust, RSA and the LDNPA for the benefit of other upland areas in England and the wider UK through the Council for National Parks and the recent outcomes of the Glover Review
- Broaden undergraduate and post-graduate knowledge base with regard to rural development.

Methodology

Information to answer these aims and objectives was gathered through a qualitative approach through focus groups and semi structured meetings with farmers. Other informants included: key rural development actors; economic development officers; providers of tourism; government officials and academics. These were underpinned with a range of site visits to understand how land management functions in Japan. In total thirty five meetings took place with forty four people (list is provided in Appendix 2). Question format and content depended on the interviewee and the discussion which took place.

The critical report was then supplemented by a range of secondary information provided by interviewees and their colleagues, as well as other information from published literature back in the UK.

PART ONE

BACKGROUND TO ISSUE : HILL FARMING IN CUMBRIA

Cumbrian farming directly employs around 12,300 people and supports a range of jobs within up- and down-stream industries (eg. vet services, feed salesmen, food processors and wool products). In totality, Cumbrian farming accounts for 13% of all sheep and lamb stock in England, 10% of the dairy herd and 8% of beef cattle. The total GVA from agriculture is only 2.1% for the county (£250m) (CLEP, 2017), but the disproportionate benefits of the sector must not be underestimated in the way farming produces landscape for tourism, for example. Part of the challenge, has therefore been and continues to be recognising these indirect benefits for society and putting economic value on them to allow the full economic value of hill farming to be recognised.¹



ISSUE 1 : low direct GVA in upland farming



ISSUE 2 : poor recognition of the indirect benefits of hill farming

1.1 Employing Capitals Approach to Farm Businesses

We can investigate value (benefit) in a number of ways in relation to the hill farm system in Cumbria. In line with the aims and objectives of this Churchill Fellowship, we will explore this using a 'capitals' approach. Capital is a term used by economists to explore the assets a business has available either as an input into or, as an output out of, that operation. For example, an upland landscape has physical, ecological and human assets (Table 1). Capital is more contemporary term for these and,

Table 1 – Upland Landscape Assets

Physical	Ecological	Human
Geology	Non woody Vegetation	Individuals
Water	Woodland & forest	Knowledge
Land	Animals – wild & domesticated	Skills
Soil		Labour
Buildings		Entrepreneurialism
		Social capital

¹ The entire debate revolving around the financial (market value) of public goods is fraught with difficulties. The UK Treasury expects goods and services to have £ value as it allows for comparison between different goods when trying to decide which takes precedence in a project, but also because it provides a measure of success. Non market goods, such as public goods, cultural and social capital have yet to evolve equivalency, although many academics, researchers and political commentators feel this is inappropriate.

as such, the concept of **Natural Capital** is increasingly well understood. Natural or environmental capital refers to the tangible resources a landscape can provide and relates to any stock of natural assets that indirectly provides goods and services year after year. The Natural Capital Committee (2014) of the UK Government defines natural capital as:

‘The elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions’ (p5)

In turn, natural capital is recognised as producing ecosystem services and thus benefits for society as a whole (Figure 2). Note how this diagram identifies the role of ‘other capitals’ and their inputs into the system to produce societal benefit.

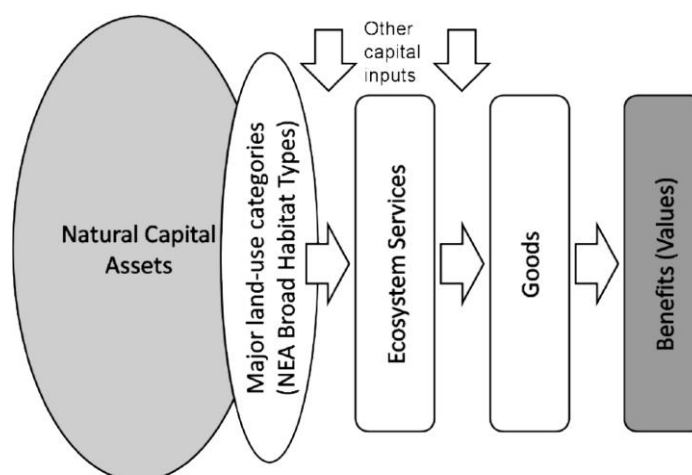


Figure 2 – Natural Capital & its relationship with Other Capitals

Source: Natural Capital Committee (2014:7) reproduced under the UK Government Open Licence Agreement v3.

If we now explore the character of these other capitals, we can see from Figure 3 (over) that there are six (including natural) main capitals hill farming businesses generate:

Physical capital – physical structures, buildings or land that a person has at their disposal

Human capital – the knowledge and skills individuals bring to a situation

Financial capital – money to put into a venture from a variety of sources

Social capital – the 'glue that holds society together'

Cultural capital – tangible and intangible features created by the interaction of people with their environment.

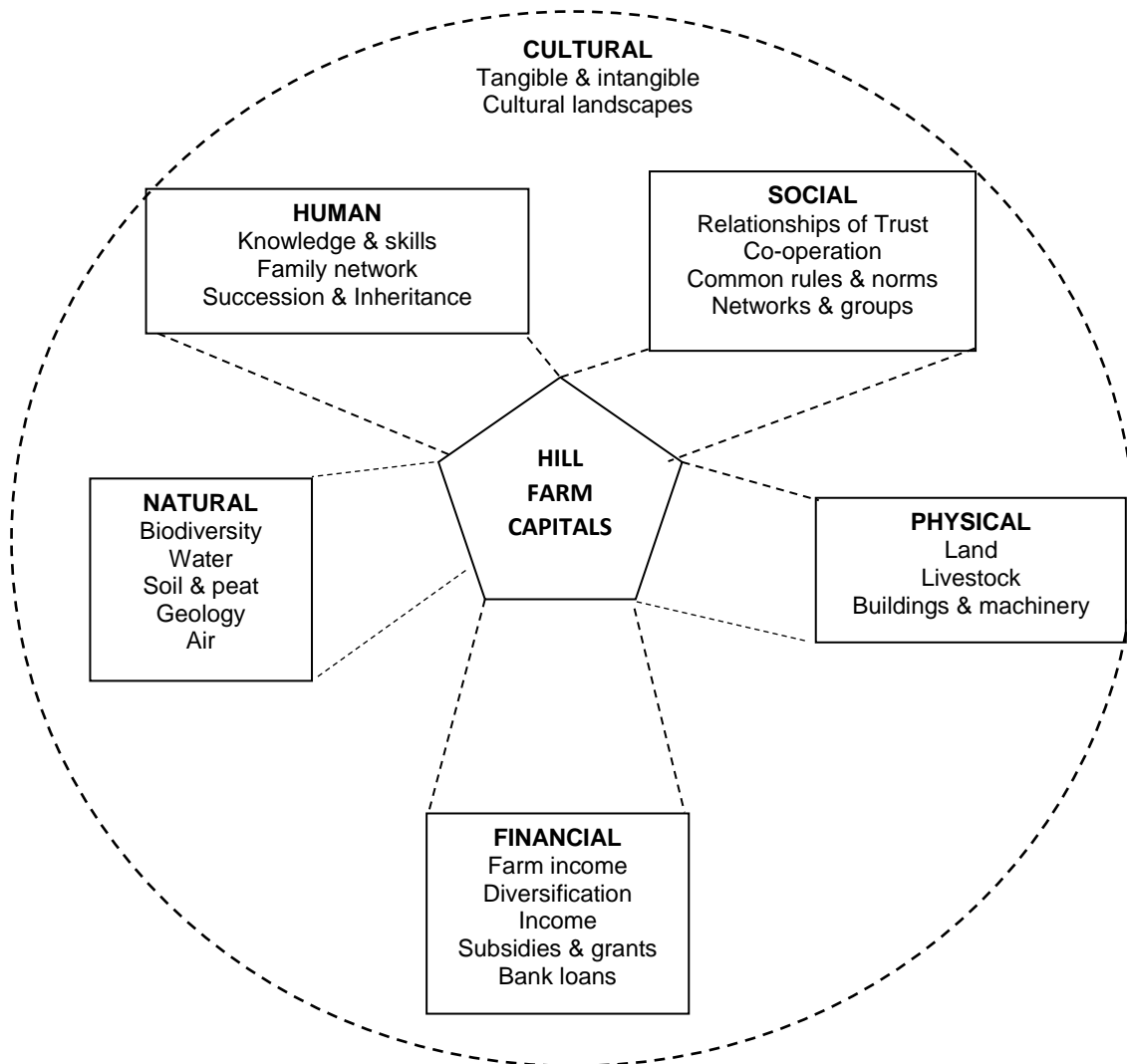


Figure 3 – Hill Farming Capitals

We will use these capitals to understand the character of Cumbrian hill farming and the challenges it faces (it is important to note any upland farming system can produce these capitals in varied quantities and it is not unique to the Cumbrian uplands). It will become apparent it is almost

impossible to split them from one another as they are formed through the interaction of the unique structures and processes operating in a hill farming system, they 'feed off' one another to create a complex upland farming landscape. In other words, the sum is greater than the parts, consequently, destabilisation of one part causes ripple effects across the others, so farm support needs to have holistic consideration, a concept that is rarely adopted due to its complexity and the nature of traditional farm support.



ISSUE 3: Lack of integrated hill farm support for multiple capitals

1.1.2 Physical & Natural Capital

A system of farming has developed in Cumbria to make the best use of the environment by adapting farming practices to fit the harsh climate and rugged terrain. This farm landscape comprises three distinct land types: inbye, intake and fell (Figure 4).

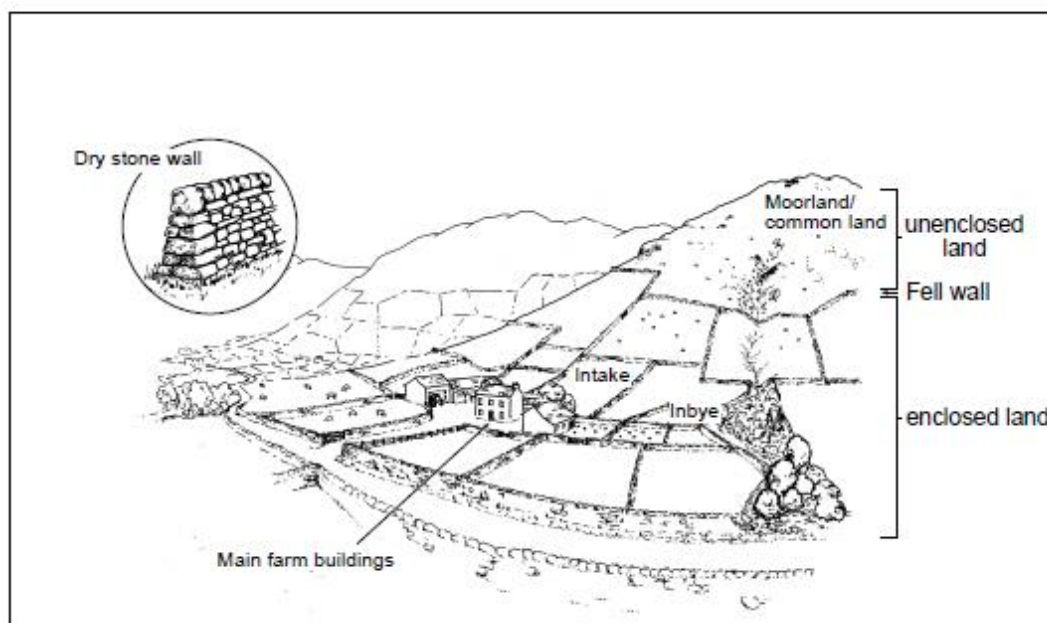


Figure 4 – A typical Upland farming (cultural) landscape (taken from: Mansfield, 2011:7)

Inbye is land made up of grass meadows and some occasional arable fields for the production of forage crops (food for livestock). This land is the best quality on the farm, often improved by drainage and addition of fertilisers and other products, and is therefore the most productive. These fields are either grazed by livestock or cut for hay, silage or haylage for winter feed. Which choice

underpins one of the more controversial discussion points between farmers and nature conservationists. Grazing on inbye occurs at various times of year, usually in winter when the altitudinally highest land is ungrazeable or when stock is brought to the farmstead for health/welfare reasons. The grass crop is allowed then to recover for cutting.

Intake lies between the inbye and fell. It constitutes pieces of common or other land, which has been enclosed from the open fell, literally taken in using physical boundaries. The quality of this land lies somewhere between inbye and open fell. Often partly improved by the use of tile drains, it produces an intermediate quality agricultural pasture of rush beds and some nutritious grasses.

Fell land lies above the last boundary before the land opens out into large expanses of varied property rights and ownership, often common land (see later). These are areas typically of heather (*Calluna*) moorland or rough unimproved grass pasture, highly prized in terms of nature conservation in the UK and Europe (English Nature, 1998; Thompson *et al*, 1995). Thus many habitats shown in Figure 5, over, are a by-product of the upland farming system, without which we would not have them, this is common of many upland areas in Europe (Osterman, 1998); consequently, maintenance of similar farming practices is required for their sustainability, as promoted through the Environmentally Sensitive Areas Scheme (1986- 2013) (Whitby *et al.*, 1994). Whilst ecologically diverse, the DMC² is very low, which is why hefts are so extensive for relatively few sheep, in contrast to lowland situations. In practice, at least three times as much upland is needed for grazing compared with the same number of livestock on lowland.

The system of walls, enclosed fields and fell areas thus give the UK uplands their intrinsic high quality so desired by the public – known collectively as High Nature Value (HNV) landscapes (Ratcliffe, 2002; Hoogeveen *et al.*, 2004). This is referred to increasingly as Natural Capital (Natural Capital Committee, 2014) or more appropriately for Cumbria, a **cultural landscape**, where people and environment interact to produce the product we now see and enjoy (eg. LDNP Partnership Plan, 2015).



ISSUE 4: cultural landscapes in need of management to maintain HNV

² DMC – Dry matter content: the dry matter part of any feed contains the nutritional components of energy, protein, fibre, minerals and vitamins. The higher the DMC the more nutritious the feed should be.

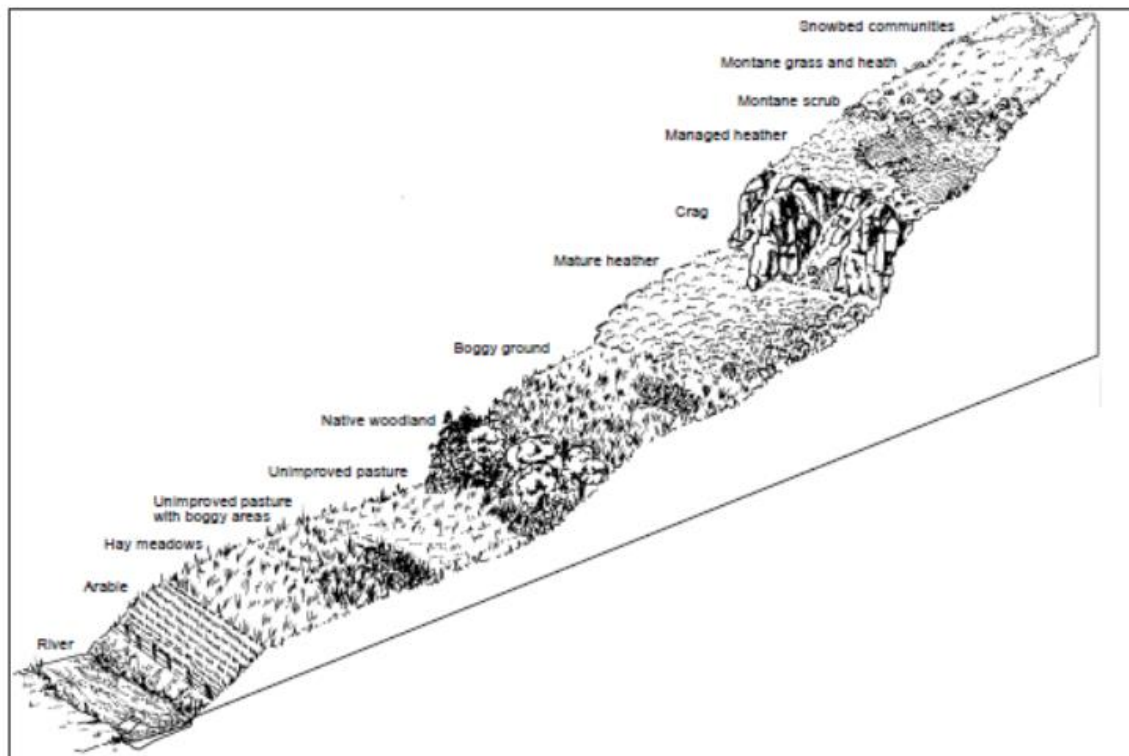


Figure 5 – Continuum of Habitats within Upland Farming Landscapes
(taken from Mansfield, 2011:130)

These upland farming systems also provide a range of ecosystem services through their farm management systems (Table 2).

Table 2 – Ecosystem Services derived from Upland Farming (Mansfield, 2011: 303)

Ecosystem Service	Role of Farming
Provisioning Food Fibre Minerals Energy Provision Fresh water	Continued supply of livestock Sustainable exploitation of quarries and mines Afforestation and woodland maintenance Micro energy generation & turbine location Halt soil erosion and pollution
Regulating Carbon storage & sequestration Air quality Water quality Flood risk prevention Wildfire risk prevention	Maintain active mire complexes Halt soil erosion Appropriate grazing regimes Retain vegetation
Cultural Recreation, tourism and education Field sports and game management Landscape aesthetics Cultural heritage Biodiversity Health Benefits	Maintain access and egress across land Provide appropriate vegetation through sensitive grazing Maintain field structures Continue practice and traditions
Supporting Nutrient cycling Water cycling Soil formation Habitat provision	Appropriate grazing and general farm management Halt soil erosion Limit pollution of water courses

A third term is also used by the Government, to explain these additional values, that of **public goods**. These are a mix of tangible and intangible goods provided by the environment, but is difficult to attach a market value to them; ie. a financial price. Examples are climate mitigation, flood mitigation, healthy soil, pollination, health & wellbeing and cultural heritage. Public goods form the main plank of the English Government's new Agriculture Bill 2019/20 which was progressing its way through Parliament, until recently (see below).

From this landscape, Cumbrian farmers run mainly two enterprises in the core of the uplands - sheep and/or beef on the valley bottoms and upland margins, some environments are sheltered enough to run a dairy herd. Occasionally farms may have a dairy herd and a fell sheep flock, although this is labour intensive. Upland farms, themselves, are divided into two types; true *upland farms* containing inbye, intake and fell and the *hill farm*, which contains intake and fell with little or no inbye. This tends to restrict hill farms to traditionally running just sheep, whereas the true upland farms have historically run sheep flocks and cattle herds in combination.



ISSUE 5: limited enterprise choices on hill farms

1.1.2 *Human, Social & Cultural Capital*

From the farmer's point of view the landscape they have developed has a number of functions. Walls keep livestock from straying, they keep rams away from ewes at the wrong time of year and they allow stock to be grazed in winter on a rotational basis to ensure sustainable grassland management. The fell areas are summer pasturage, when the enclosed land's productivity has been exhausted or allocated for the production of grass and hay crops for winter feed. This grazing system has developed over many generations of farmers, who originally shepherded the sheep keeping them to land to which the farm had common rights³. Over time the sheep get to know the land that they can graze on and gradually the intensive shepherding can be withdrawn so that the flock manage themselves geographically. This instinct of the sheep to keep to a certain land area is known as '*hefting*' or '*heafing*', the operation of which can vary from upland to upland. The ewes pass the knowledge of the area (heft) on to their lambs, who in turn pass it on in turn to their lambs. In this way it is important that the farmer maintains a multi-generational flock; something which was directly threatened in the Foot & Mouth outbreak of 2001. Commoners and farmers pass on this

³ Common rights - 'A person may take some part of the produce of, or property in, the soil owned by another' (Aitchison & Gadsden, 1992, p168).

knowledge of the stock's behaviour in a practical way to the next generation. The flock stays with the farm, even if it changes hands, thus there needs to be 'hand over' as well.

Typically, these upland commons in Cumbria can be many thousands of hectares of land and thus can contain innumerable of hefts isolated from the main farm unit (Figure 6 over). Gradually the *virtual* boundaries between hefts have developed keeping stock from straying into another heft, thus developing a self-policing of grazing pressure. Stock are *gathered* intermittently and brought down to the farm for shearing, worming, winter grazing, sales and lambing. Because hefts are geographically extensive, over difficult terrain, labour requirements for gathering are high (as many as 25 people for a single gather). This is exacerbated by precipitous landscapes that do not lend themselves to modern All-Terrain Vehicles, thus pedestrian access is often the only means of reaching the spread out stock;

'These fells have been shepherded. They're shepherded the way now as they were 200 years ago with a dog and a stick. You know, there's no flying around on motorbikes or whatever on the high fells so they've got to be managed as they were years ago.'

(Farmer 5, Burton *et al.*, 2005)

Teams of farmers and/or commoners therefore typically work together to bring the sheep from a single open fell (many hefts) down to one point where there are split back up into their ownership. Traditionally this was conducted via a 'shepherds meet' many of which no longer perform this function due to low labour availability, but some have morphed into agricultural shows, allowing farming communities to meet as social occasion and also provide a glimpse for wider public and visitors of hill farming.

Enterprises are managed by moving stock from one type of land to the next, fitting the needs of sheep (and cattle if they exist) around each other depending on time of year. A proviso is that, if upland farms do not have enough inbye land or sheds/barns, the size of the cattle herd will be reduced substantially. The sheep enterprise is based on a flock containing a range of ewes of various ages, which act as the breeding stock. Most farms also have one or two rams, usually from different flocks to avoid too much inbreeding. Lambs can be brought on to replace ewes that get too old to breed or can be sold on for fattening up in lowland Britain. Sheep breeds are bred specifically for the local upland environment, to allow survival on semi-natural vegetation, many of which are now rare

or endangered Eg. Herdwicks (Figure 7). Where cattle are kept, upland farms run livestock for beef, using *suckler cows*. The calves are reared by their mothers until they are moved off the farm for

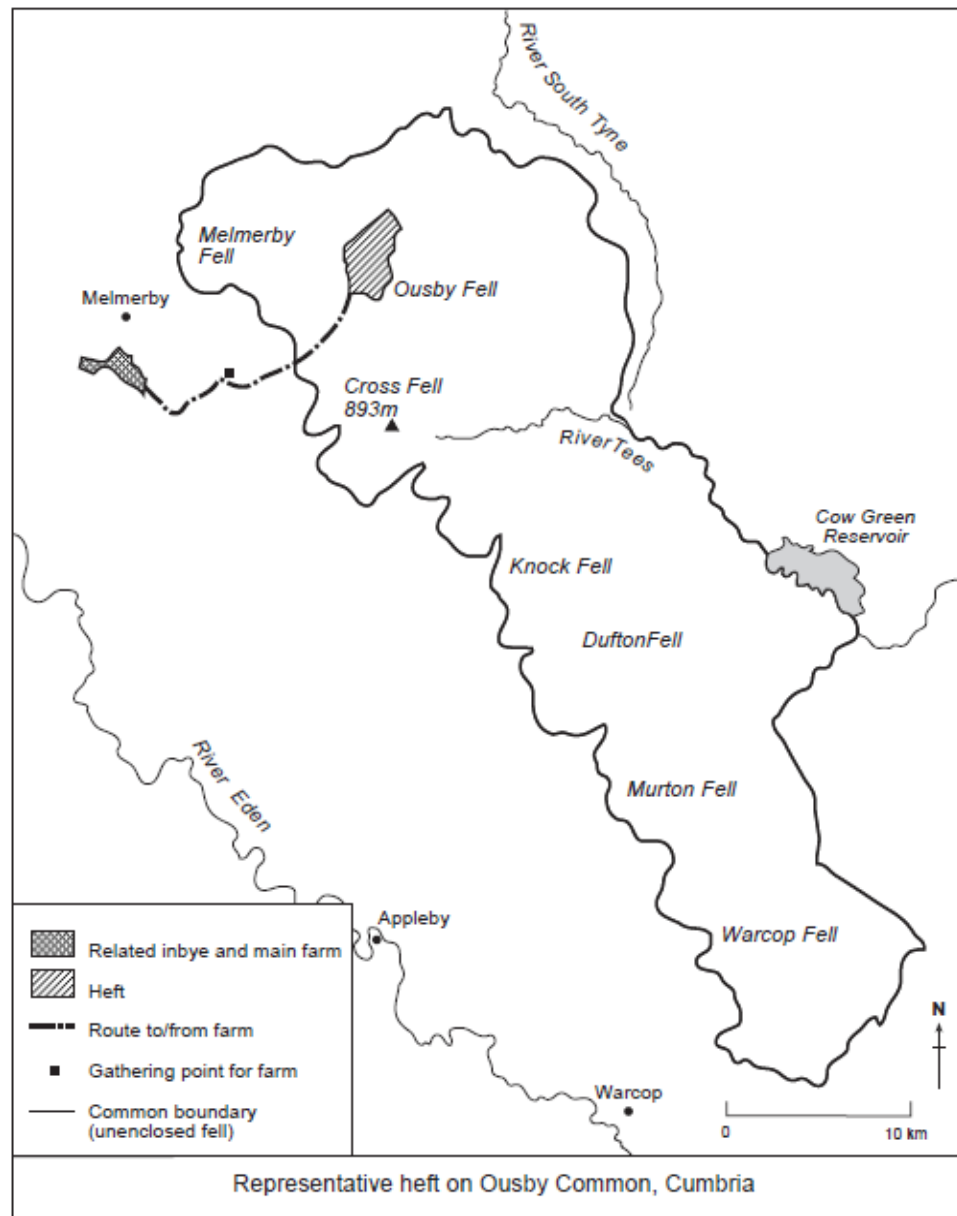


Figure 6 – A Heft within a Cumbrian Common (taken from Mansfield, 2011:23)

fattening in the lowlands. Suckler cows too are eventually slaughtered and enter the beef food chain. Herds comprise one breed, which is sired by certain breeds of bull. Currently, Limousin bulls are particularly popular as sires. Insemination may be either by natural means or through artificial processes. Rare breeds for specific purposes, such as Dexters or Belted Galloways, have become

popular over recent years as farmers seek ways to add a premium to their meat to increase farm incomes (Figure 8). Dairy herds on the upland margins are typically Holsteins, which have replaced Friesians because the Holsteins increase milk yields (Mansfield, 2018).



Figure 7 - Herdwick Sheep



Figure 8 – Belted Galloways

The availability of land types, choice of livestock and the method of forage production therefore are crucial to the farmer to ensure that economic success is underpinned by a sustainable management system. To do this, the upland farmer aims to operate a farm system, which maximises the farm's potential while avoiding deterioration of the available resources. Most farmers reach this point through practical trial and error, their own experience, that shared from the older generation and/or some form of formal training. Central to any of these strategies is to balance the fodder (feed) resource with the size of herd or flock. This can be achieved in a range of ways, such as supplementary feeding stock when there is no natural fodder (financially expensive); switching from hay to silage (ecologically expensive) or employing a process called *stratification*. Stratification allows for the movement of stock from hill to upland, or upland to lowland farms in winter temporarily for fattening (known as overwintering) or as all out sales. So the process can work in both directions to ease the resource pressure (Figure 9 over) with stock flowing 'up' as well as 'down' hill.

In summary, hill farm systems in Cumbria have created a unique cultural landscape which comprises a range of ecological semi-natural habitats, vernacular architecture in the form of barns and walls, and social processes pivoting round livestock management (Figure 10 – see over). Farmers and commoners work co-operatively at different points in the year to move stock round the landscape, and knowledge is passed on inter-generationally. People often say 'hill farmers are hefted to their land' – like their stock!

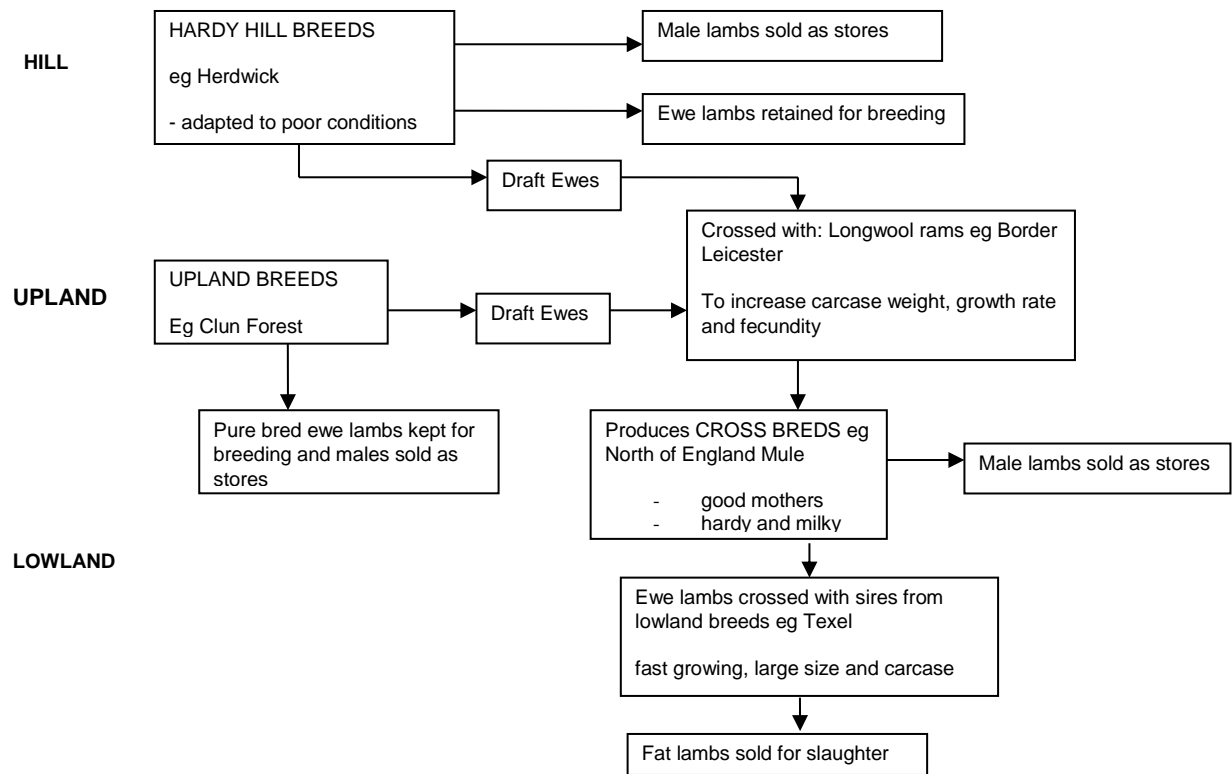


Figure 9 – Stratification system in UK sheep farming

DEFINITIONS

CULTURAL CAPITAL

Culture is a process (Williams; 1981) made up of:

- Processes of intellectual & spiritual development
- A way of life characteristic of particular groups
- Works and practices of intellectual or artistic activity

Cultural capital gives the process economic asset value.

SOCIAL CAPITAL

'Features of social organisation, such as trust, norms and networks that can improve the efficiency of society by facilitated co-ordinated actions' (Putnam, 1993).

DIMENSIONS OF CAPITAL

Tangible assets – physical manifestations created by the farming process buildings, structures, sites & locations (referred to as cultural property)

Intangible assets – ideas, practices, beliefs, traditions and values

Cultural Landscapes - *'the combined products of the interaction of people and nature'* (UNESCO, 2018):

- *defined* - designed and created deliberately by 'man'
- *evolved* - combinations of social, economic, administrative and/or religious factors
- *associative* - response to religious, artistic or cultural associations).

- **Relations of Trust** – how people depend on each other and reduce transaction costs
- **Reciprocity & exchange** – sharing resources and knowledge, creating and maintaining over time forming obligation between people
- **Common rules & norms** – following agreed ways of behaving, rules and sanctions imposed to build group confidence
- **Connectedness, networks & groups** – working together forming bonding (farmer to farmer), bridging (alternative view groups) and linking networks (local network link with external agencies)

PUBLIC GOODS PROVISION

Cultural Heritage – the combined works for tangible, intangible and cultural landscape.

- Traditional farm buildings
- Drystone walls & hedges
- Landscape furniture eg squeezes
- Hefts
- Landscape

Historic monument protection

Biodiversity management :

- Habitat production
- Stocking rate controls
- Seasonal stock movement
- Haymaking & meadows
- Countryside management practices
-

Landscape aesthetics

Commons management & heft operation

Gathering & stock management

Fell knowledge & Sense of place

Wider community functions eg ditch mgt, flood control, snow ploughing

Figure 10 – The Relationship between Cultural, social and natural capital in Hill Farming

Whilst it is evident that upland and hill farming systems operate from, and produce, a wide range of capitals, public goods and ecosystem services of benefit to society, many are not formally recognised and appreciated. Of those that are, natural capital, notably biodiversity, is the most understood and financially supported in Cumbria and nationally. The value of these types of diversification (agri-environmental initiatives) cannot be underestimated for the continuation of hill farming. A recent report for the Lake District National Park Partnership (Wallace & Scott, 2018) demonstrated that only 40% of a farm income is derived from farming itself, another 30% from subsidies and the last 30% from diversification, which includes agri-environment funding. It is evident therefore, that post- CAP, hill and upland farms will lose a substantial component of their income, which is likely to threaten their sustainability. It is to this precarious marginality and its future sustainability as a system we turn to briefly next.



ISSUE 6: lack of cultural and social capital financial support



ISSUE 7: loss of subsidies and grants post Brexit

1.3 Marginality in Upland Farming Systems

Marginality comes in two main forms, physical and economic; the two interplay resulting in a farm system, which struggles to turn profit without intervention. Physical margins of cultivation are determined by climate and soil and as such are generally immutable on a day to day basis; farmers therefore have adapted their systems, this is a form of environmental determinism. It limits the range of enterprises they operate, the breeds of livestock, their reproductive capacity (eg lambing ratio for Herdwicks is 1.9/ewe) and affects diversification into other agricultural activities. Climate change obviously now plays a role and it is modelled that Cumbrian farmers will have to adjust to warmer wetter winters and hotter, drier summers. The snow fall of the winter of 2017 and the ten weeks of no rain summer of 2018 are cases in point for Cumbria.



ISSUE 8: marginal farming system limiting opportunities

Economic margins of cultivation are exceeded where costs of production are more than the prices farmers obtain at market for their goods. Compensating for a harsh physical environment, puts Cumbrian upland farmers at an absolute economic disadvantage to lowland farmers. This manifests

itself in increased costs of supplementary feeding and difficulties in reducing labour any further through technological innovation or mechanisation in order to transcend the cost-price squeeze. Consequently, marginality of their businesses is the reason why upland farming has benefited from successive subsidy support first from national government (1946 to 1972) and then Europe (1972 to 1992). Unfortunately, whilst aiming to solve economic marginality, many of these initiatives have led to over-production on these low carrying capacity landscapes, resulting in less desirable environmental damage (eg Drewitt & Manley, 1997). Agri-environment grants, decoupling and modulation from 1992 have gone some way to addressing these environmental concerns through destocking, but the consequence for farmers has been the destabilisation of their farm management systems, especially on hefts, and declining profit margins (Mansfield, 2011).



ISSUE 9: Destabilisation of farming system through decoupling & modulation

As profits have declined, farmers have had to make some tough decisions as to how they can continue to operate. Upland farmers have three main re-structuring options:

- 1) tighten one's belt and continue with ever decreasing profits
- 2) withdraw from farming altogether
- 3) diversify

If the farmer chooses to continue to farm in a similar way, they must seek mechanisms to reduce costs. Typically, the easiest way to do this has been to reduce the paid labour force on the farm. Many Cumbrian farms now rely solely on the farmer and the partner for labour, with older children helping out when they can. For some hill farmers, they cannot cut the wage bill as they are not married, do not have children or their partner already works off-farm. Whilst cutting labour saves money in the short term, in the long run it can cause problems for certain aspects of the farm management. One particular issue is the lack of people at gathering times to control the behaviour of flocks as they come off the fell (Burton *et al.*, 2005), another being the limitations it places on farm diversification. Isolation, loneliness and suicide are not uncommon amongst farmers. There is also evidence that some farmers may try to 'farm' their way out the post-Brexit environment, which will simply exacerbate many of these issues noted above.

At the other extreme, the farmer can opt to withdraw from farming altogether. A number of farmers have done this, spurred on by the effects of Foot and Mouth in 2001 (Franks *et al.*, 2003).

Some have sold up altogether, others sold off the land only. Either situation has multiplier effects for the wider landscape and community. Those that have sold up altogether have often split the house from the land. The effect is twofold, first is that the household becomes disenfranchised from the farming community and second that the land can be abandoned. If the latter happens on the heft, the associated de-stocking affects surrounding hefts, whose sheep move into the new unclaimed territory, exacerbating gathering costs. Heft abandonment also leads to problems of undergrazing, an environmental challenge (Backshall, 1999). These types of issues are prevalent on the eastern fringe Cumbrian uplands of the Northern Pennines and Howgill Fells where capitalising on diversification is not as lucrative as the central Lake District where visitors amass (Burton *et al.*, 2005; Mansfield, 2018). Currently, there is a suggestion that the removal of Basic Payment Scheme may lead to one-off retirement payments being issued to farmers, the so-called 'Golden Handshake', but figures of £80 to £100K are not sufficient for someone to buy a house elsewhere, if the farm business is to be passed on.



ISSUE 10: loss of labour, farming businesses and related communities

The third option is for the farmer to diversify their enterprise base. Whether to diversify or not is a difficult decision for many uplands farmers primarily due to two main factors. First, the need for additional labour to run new enterprises is essential; but for many this has been the first thing to go to save on production costs (Table 3). Second, lack of financial capital and reticence to take on loans

Table 3 – Forms of Farm Diversification

On farm	Off farm
<i>Unconventional crops</i> - linseed, durum wheat, teasels, triticale, spelt	<i>Contracting</i> – silaging, haymaking, drystone walling, hedgelaying
<i>Unconventional livestock</i> - llamas, alpacas, ostrich, fish, deer	<i>Employment</i> – partner works full or part time off farm in another industry
<i>Organic farming</i> – variety of crops & livestock	
<i>Farm woodland</i> – biofuel, fencing, timber, amenity, recreation	
<i>Added value</i> – cheese, ice cream, farm shop, direct sales, craft goods	
<i>Accommodation</i> – B&B, glamping, bunkhouse, caravans & camping	
<i>Non Farming enterprises</i> – storage, motor sport Wedding barns, barn rental	

or debt play a large role. Whilst there have been many useful grant schemes to help with diversification through various iterations of the rural development regulations and the work of LEADER (Mansfield, 2018); most have been or are matched funding exercises, creating barriers for many of the most economically marginal businesses. Nevertheless, the gradual decoupling of support from production and modulation towards rural development and environmental management has forced many upland farmers to develop diverse income streams in order to simply remain farming. It is into this regime we now move encouraged by the aims of the new Agriculture Bill 2019 to use public money for public goods, but which public goods?

It is evident that some Cumbrian hill and upland farming operations rely on diversification as part of its business model, perhaps more so than other forms of farming system due to its economic and physical marginality. The work by Wallace & Scott (2018) indicates that upland and hill farm businesses derive 30% of their total income from diversification; earlier survey work by DEFRA (2009) showed that only 22% of any Cumbrian farms have some form of diversification (Figure 11), not untypical of any English upland. Furthermore, of those farm businesses operating diversification it is of moderate or significant importance to their farm income (Figures 11a & b). Indeed, over time various Governments have understood and supported diversification as a way of supporting farming incomes, either through rural development or environmental management. It is to this we turn last to complete our understanding of the economic and political environment in which hill farming currently operates and is supported.

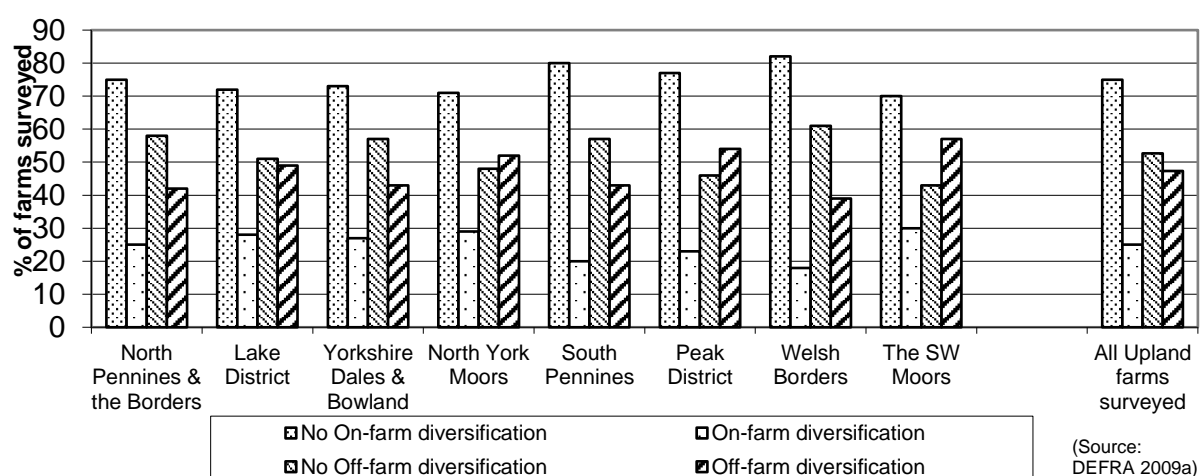


Figure 11 - Pluriactivity on Upland Farms in England, 2009

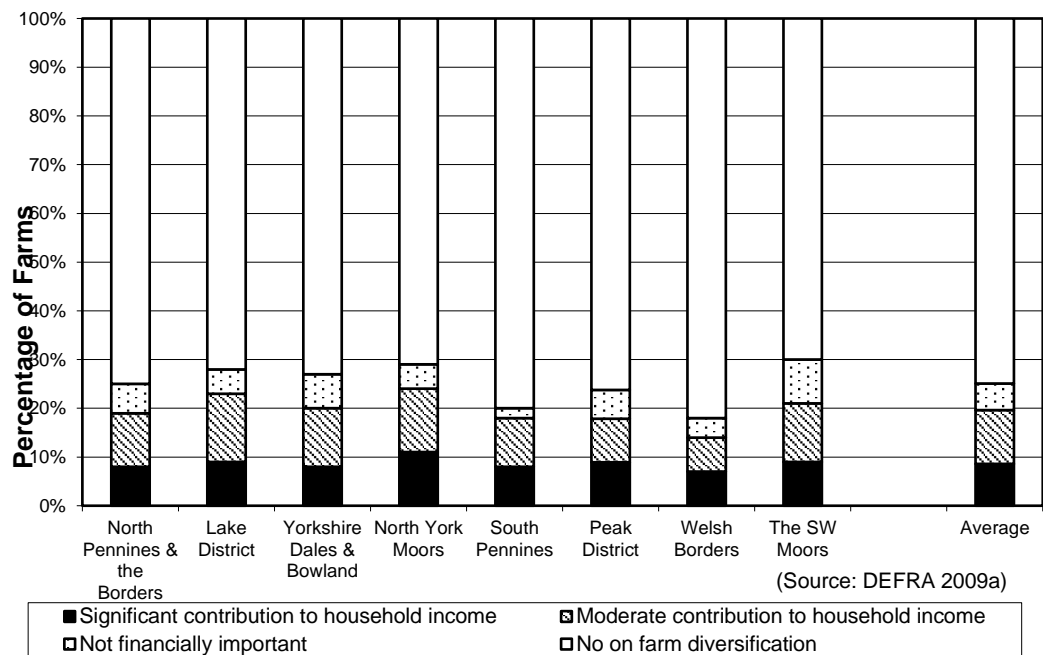


Figure 12a – On Farm Diversification in English Uplands, 2009

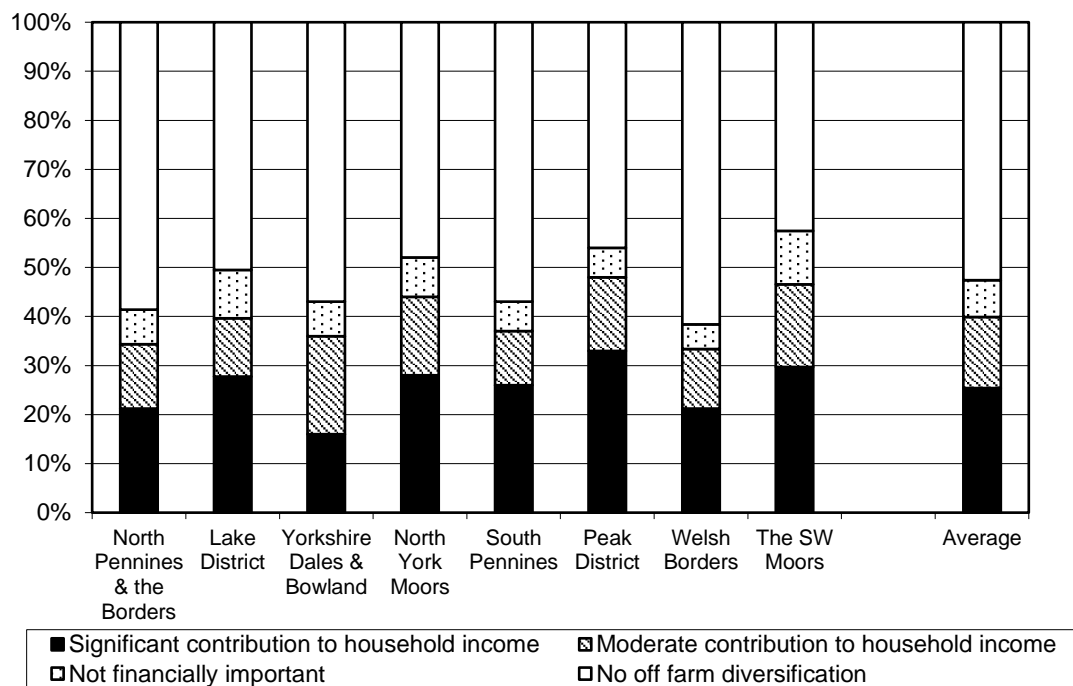


Figure 12b – Off farm Diversification on English Upland Farms, 2009



ISSUE 11 : reliance on diversification to support farm incomes, either grants or additional work/products

1.3 **Brief Review of Upland Farming support to present**

The political history (and its consequences right through to the current day) of upland agriculture really begins during the Agricultural Depression of the nineteenth and early twentieth century (roughly 1875 to 1945) – people conveniently forget how long *the upland problem* has really been brewing (Mansfield, 2018:122). From 1946 onwards successive UK governments acknowledged that a specific *hill farming problem* existed. It was tackled from 1945 to 1984 (from 1972 via the EU Common Agricultural Policy) through a variety of support mechanisms including price support, production control, marketing boards, structural reform and grant aid. Before accession to the EU, the aims of British agricultural policy were to secure a modest standard of living for farmers and to produce an adequate food supply at a moderate cost (Table 4).

After EU accession, the initial foci until 1984 were-

- To increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour
- To ensure a fair standard of living for the agricultural community in particular increasing the individual earnings of persons engaged in agriculture
- To stabilise markets
- To assure the availability of supply
- To ensure that supplies reach consumers at reasonable prices

These aims were pursued via the European Guidance & Guarantee Fund (EAGGF), which was supported by a series of import levies on non EU goods, re-enforced by guaranteed prices for products and intervention buying of surplus production. This kept prices paid to farmers artificially high, encouraging maximum production. The guidance part of the policy provided grants and incentives for farm businesses to modernise and become more efficient (known as farm restructuring). For upland farmers the rewards came in two parts:

- *Subsidies on production* – guaranteed prices, known in the UK as the Sheep Annual Premium, the Beef *Annual Premium and the Suckler Cow Premium*
- *Headage payments* – deployed via the Guidance part under the Less Favoured Areas Directive, known in the UK as the Hill Livestock Compensatory Allowance

Table 4 – Development of UK Agricultural Policy for Uplands, 1947 to present

Phase	Policy development	Consequences in Uplands
1947–72 – before accession to the European Community, generally a period of national policies encouraging agricultural production	<ul style="list-style-type: none"> • 1945 to 1972 Fertiliser & liming grants • 1945 to 1972 Bracken grants • Hill Farming Act 1946 - Guaranteed prices at point of sale made up with Deficiency payments • Agriculture Act 1947 – to secure a modest standard of living for farmers and to provide an adequate food supply at a moderate cost • 1951 to 1963 – livestock rearing land improvement scheme • 1951 to 1974 Ploughing [up] grant • 1951 to 1972 Hedgerow Removal grant • 1958 to 1970 Small Farm grant • 1963 to 1970 Farm Improvement grant 	<ul style="list-style-type: none"> • Loss of hay meadows & permanent pastures • Increased grazing potential • Increased farm incomes • Conversion of dairy to beef cows • Expansion of national flock in uplands • Mainly buildings, then equipment, advisory services and land improvements • Ploughing of moorland eg Exmoor • Loss of biodiversity
1972–84 – control of agriculture through the Common Agricultural Policy (CAP), which continues to support expansion of production	<p>Driven by Treaty of Rome 1957 through the Common Agricultural Policy</p> <p>Two facets:</p> <p><i>Guidance</i> – structural funds to improve farm efficiency through subsidies & grants via <i>Less Favoured Areas Directive 75/268/EEC</i></p> <p>Hill Livestock Compensatory Allowance</p> <p>Sheep Annual Premium</p> <p>Beef Annual Premium</p> <p>Suckler Cow Premium</p> <p>Headage payments</p> <p><i>Guarantee</i> – import levies, surplus purchase and guaranteed prices for production</p>	<ul style="list-style-type: none"> • SAPs, BAPs and SCPs had no limit on how much could be claimed leading to mass expansion of sheep numbers at expense of cattle • Overall effects were: Overgrazing of the uplands Loss of biodiversity Soil erosion in places • Increased farm incomes • Maintaining farming in upland areas • Maintaining viable farming populations

<p>1984–99 – global markets begin to influence EU policy, so production controls develop; higher profile for environmental conservation of farmland</p>	<ul style="list-style-type: none"> • Expansion of LFA boundaries Directive 84/189 • Rise of Agri-Environment Schemes <ol style="list-style-type: none"> 1. UK Environmentally Sensitive Area adopted throughout rest of EU Regulation 797/85 1986 to 2014 2. Countryside Stewardship Scheme <p>Intervention by World Trade Organisation</p> <ul style="list-style-type: none"> • Introduction of production quotas eg SAPs and BAPs had caps on number of stock per ha. • Single European Act 1987 • Repeal of LFA directive replaced with Regulation 950/97 	<ul style="list-style-type: none"> • More farm businesses benefitted from Guidance funds • Status quo of deterioration of traditional farming landscapes in geographically identified areas • Status quo of deterioration of traditional farming landscapes in wider countryside • Production control, less overgrazing
<p>2000 – 2020 – EU agricultural policy shifts away from production towards rural development and environmental management ie, <i>modulation</i> of financial support from Pillar 1 to Pillar 2 known as <i>decoupling</i></p>	<ul style="list-style-type: none"> • Rural Development Regulation whereby each principality has its own Rural Development Programme. • Introduction of Single Farm Payment Scheme • Principality agri-environment schemes eg Higher level scheme in England, Now in third iteration (2014 to 2020) with adsorption of LEADER into mainstream policy 	<ul style="list-style-type: none"> • Replacement of headage payments by hectareage payments in LFAs no need to overstock as no incentive anymore eg. Hill Farm Allowance in England (Basic Payment scheme) • Some farm diversification • Habitat improvement

Whilst farmers' incomes increased and standards of living rose, overstocking on the uplands developed, leading to environmental impacts such as overgrazing, biodiversity impoverishment and soil erosion. From 1984 the agricultural agenda changed again as the World Trade Organisation put pressure on the EU to eliminate trade barriers with the rest of the world. Since this time production support has gradually disappeared (known as Pillar 1 decoupling) and the funds modulated across to Pillar 2, focused on environmental conservation and other forms of rural development (Table 4). This leaves upland and hill farmers supported by the Basic Payment Scheme. Such a state of affairs

suggests that whilst food production is no longer central to upland farming, other ecosystem services such as cultural ones, for example habitat provision, may now become more central to farm businesses.



ISSUE 12: move away from agricultural production to public goods provision

While upland farming support will continue in Europe under Areas of Natural Constraint (the latest name for the LFAs), with the exit of the UK from the European Union, the UK now enters a period of great uncertainty. Over the years of EU membership, UK farmers have constantly railed against the vagaries of the CAP as it has morphed to adapt to pressure from outside the EU. Current concerns lie with its post-productivist direction of travel, which encourages de-stocking and greater attention to the diversifying activities of Pillar 2. These political changes have pushed upland farmers further from their *raison d'être* than anything else, for they are stockmen, first and foremost. At the same time, the economic impacts of cost-price squeeze have led to fewer people farming the uplands, causing a re-structuring of the general upland demographic. With a greater percentage of the rural population forming a landless proletariat, a disconnect from land management itself has emerged which amplifies cognitive dissonance. In turn, this disconnect is intensified by a largely urban population (90%) who, whilst they visit and recreate in the countryside, fail to see the symbiotic relationship between farming practices and the landscape they admire (eg. McVittie *et al.*, 2005).



ISSUE 13: restructuring of upland farming away from agriculture



ISSUE 14: rural depopulation & rural population restructuring



ISSUE 15: lack of understanding between urban & rural populations

The New Agriculture Bill going through its second reading in Parliament focuses on the value of farming in the production of public goods. The consultative document behind the Bill recognises the specific value of upland farming systems (DEFRA, 2018):

'Agricultural land is rich in a social and cultural relevance beyond just the economic and environmental. Farmland has shaped and continues to shape England's unique natural landscape. The identity of England's natural landscape is locally dependent and is a place where past generations have toiled to shape future ones. *The beauty of the upland farm is often in inverse proportion to the fertility of its soil and the profit margins of their businesses. Hill farmers maintain a panorama of dry stonewalls and grazed moorlands. The upland way*

of life, the unique food produced, and the great art that these landscapes have inspired attract visitors from around the world. (p34; Author's own emphasis).

The current situation is that there is an emphasis on running a series of 'test & trial' in different parts of England to explore the best ways to support environmental and public goods provision through farming. There are 49 of these across England. With regard to upland farming, there are test & trials under way in five national parks (Dartmoor, Exmoor, N. York Moors, White peak of Peak District and Lake District), the National Network of AONBs (Blackdown Hills, Quantocks & Forest of Bowland), Federation of Cumbria Commoners, Foundation for Commonlands and one specific Wildlife Trust. Between them they focus on catchment/ landscape scale or farm scale planning in relation to natural capital (environmental goods). Other sectors of the rural economy are also testing possible scheme ideas that impinge on upland farming businesses; for example, the Forestry Commission have been given money to explore woodland projects related to woodland creation for clean water and whole holding plans (pers. comm., K Jones, 11/01/19).

1.4 Main Issues summary

This short background to the range of challenges facing marginal farming in uplands demonstrates that there are many complex issues:

ISSUE 1: low direct GVA in upland farming

ISSUE 2: poor recognition of the indirect benefits of hill farming

ISSUE 3: lack of integrated hill farm support for multiple capitals

ISSUE 4: cultural landscapes in need of management to maintain HNV

ISSUE 5: limited enterprise choices on hill farms

ISSUE 6: lack of cultural and social capital financial support

ISSUE 7: loss of subsidies and grants post Brexit

ISSUE 8: marginal farming system limiting opportunities

ISSUE 9: destabilisation of farming system through decoupling & modulation

ISSUE 10: loss of labour, farming businesses and related communities

ISSUE 11: reliance on diversification to support farm incomes, either grants or additional work/products

ISSUE 12: move away from agricultural production to public goods provision

ISSUE 13: restructuring of upland farming away from agriculture

ISSUE 14: rural depopulation & rural population restructuring

ISSUE 15: lack of understanding between urban & rural populations

Many are interrelated and as a consequence, it is important to remember that any solutions could alleviate multiple issues, as we shall see. Whilst natural (environmental) capital is the focus of the English Government's agricultural policy post Brexit, the contention here is that the cultural capital of marginal hills farming offers other possibilities for farm businesses that may lack enough to exploit forthcoming mainstream initiatives. Reliance on public support can no longer be guaranteed, and as a result farm businesses need to look more closely at the assets they do have in a multiplicity of ways. Consequently, the subject of this Churchill Fellowship was to explore in more depth opportunities derived from cultural capital to build resilience in hill farming for the future.

Part 2 of this report moves on setting the context by exploring why Japan was chosen as the destination, a brief explanation of the character of Japanese marginal farming in upland areas and various related challenges rural Japan faces. This is followed by a critical review of cultural capital activities, which may provide opportunity for Cumbrian and wider UK hill farming.

PART TWO

Selection of Destination

The destination of this Churchill Fellowship was Japan. There were a number of reasons why this state was chosen to allow comparison with the United Kingdom:

Location – Japan is an archipelago based on the edge of a dominant economic and political power since 1945. The state has had to manage the impact of cheap food imports into their economy. This resonates with the situation the UK will be in when/if Brexit occurs.

Economic profile – Japan is a first world developed nation, like the UK, now operating through a capitalist economic model where economic growth, private entrepreneurialism and, to a lesser extent, neoliberalism is encouraged. It has a well developed sophisticated import-export system with a range of trade agreements with other Pacific nations.

Agricultural situation – agriculture is under threat and in decline due to a range of socio-economic issues. Marginal upland farms are more threatened than lowland farms due to rural depopulation, an aging farming population and more limited enterprise range caused by physical factors (remote markets, thin soils, steep slopes, limited road infrastructure).

Protected Cultural landscapes – Japan operates a comprehensive national parks system, which mirrors UK national parks, by being landscapes derived from the interaction of people with their environment to create cultural landscapes. Within some Japanese national parks there are also cultural World Heritage Sites as defined by UNESCO (see Box 1 over).

These similarities allow for comparative study with the **Lake District National Park/ World Heritage Site** in northern England. The Lake District was designated in 1954 as a national park comprised of uplands rising to 1800m, a series of glaciated valleys with lakes in their bottoms radiating out from the highest peaks in the centre (not unlike spokes in a wheel). The thirteen main valleys have very different characters underpinned by a limited transport infrastructure. It is a living, working landscape with a rural economy focused on marginal upland farming, tourism and forestry. The area provides potable water for a third of the North West of England's domestic water supply and is visited by over 18m visitors a year. The resident population of around 42,000 people form a low wage economy with a high percentage of urban retirees. Overtourism, second home ownership,

environmental deterioration due to a range of issues and a poor transport infrastructure are major concerns.

In 2017, after an abortive attempt in 1986, the Lake District became a World Heritage Site (see Box 1) identifying itself as a cultural landscape (Figure 13). The area was inscribed on the basis of three main attributes, which underpin its statement of Outstanding Universal Value:

1. The agro-pastoral system developed over hundreds if not thousands of years created through a pattern of tangible structures and intangible processes
2. Its role in the birth of the global conservation movement through the work of a range of historical philosophers, philanthropists and literary figures
3. The provision of inspiration for the Picturesque and Romantic art and literature movements

These three attributes combine to create the unique landscape of the iconic English Lake District. The WHS and National Park are managed through a management plan created through consensus by the Lake District National Park Partnership, an affiliation of 24 stakeholder organisations. The current plan for 2020 to 2025 is under construction, which focuses on themes such as climate change, nature recovery and resilience in farming & forestry for the WHS. Other issues such as sustainable transport, prosperous rural economy and a world class visitor experience are also important.



Figure 13 – Images of the Lake District National Park & World Heritage Site

Box 1 – World Heritage Sites

World Heritage Sites are internationally designated under the Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO, 1972), which aims to protect sites that have outstanding universal value in cultural and natural heritage. Within the terms of Article 1 of the convention, cultural heritage is defined as:

Monuments – architectural works, works of monumental sculpture and painting, elements of structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science

Groups of buildings – groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science

Sites – works of man or combined works of nature or of man, and areas including archaeological sites which are of outstanding universal value from the historic, aesthetic, ethnological or anthropological points of view

Cultural landscapes are, therefore, the ‘combined works of nature and man’ which show how society has evolved over time within physical, social and economic constraints or opportunities (UNESCO, 1998). The guidance provided by UNESCO goes on to explain that cultural landscapes must:

1. Be clearly defined in terms of a geo-cultural region
2. Reflect specific techniques of sustainable land use which are determined by the physical landscape in which they reside

From this, three distinct types of cultural landscape can be identified:

- landscapes designed and created intentionally by man, e.g. Kew Gardens in London;
- organically evolved landscapes forming as a result of social, economic, administrative and/or religious factors, which develop further in response to and in association with the natural environment, e.g. rice terraces in Japan;
- associative cultural landscapes which evolve in response to powerful religious, artistic or cultural associations with the natural environment, e.g. Uluru in Australia.

By demonstrating that it matches these criteria and one of the types, a location can be inscribed on the World Heritage List.

There are nevertheless, three main contrasts, which is why Japan was deliberately selected for the study tour element of this Churchill Fellowship:

Contrasting Eastern philosophy – Japan's culture is based on teachings of Shintō and Buddhism. Historically, the Japanese people have had a very close relationship between these religions & the environment, which strongly influenced the production of food and land management. It is, nevertheless, important to appreciate that this has been somewhat eroded since 1945, as Japan has slowly embraced a more westernised outlook to society. Having said this, there is an evident dichotomy between rural areas, which are more 'traditional' and urban areas, which are more 'westernised'. In contrast, the UK's agricultural systems have been influenced by Western political, social, economic and environmental structures and processes.

Rural depopulation - Since 1945 rural areas have suffered from extensive depopulation (82%), labour shortages (71% contraction) and rural land abandonment (69%). This mirrors the types of land management changes that we underwent in the UK, but during the 19th C during the Industrial Revolution. The Japanese Government are extremely concerned that these trends are continuing, exacerbated by a national population with an extreme regressive population structure, leading to an aging population being reliant on a smaller and smaller economically active element (16-65). The problem is more acute in rural areas where the average age of the population is 75. In fact, rural areas are 20 years ahead of the national average, thus are aging faster than urban areas. This creates particularly complex economic and social issues, as well as directly threatening Japan's internal food security through reduced self-sufficiency.

Upland land use – the uplands of Japan are dominated by forest (70%). Agriculture is the secondary land use (about 25%). Around 40% of national agricultural production comes from upland areas. This situation is the product of the historical upland management system of '*Satoyama*' (see later) and the intensive re-afforestation of Japan post 1945.

From these characteristics, three questions will be critically evaluated:

1. How has Japan continued to support its own marginal upland farm systems in light of these challenges?

2. What role has the exploitation of place based cultural capital played in maintaining upland farming systems?
3. What lessons can we in the UK learn from Japan?

2.1 Marginal Upland Farming & Cultural Capital in Japan

To appreciate how the Japanese support their marginal upland farming systems and related rural communities through the lens of cultural capital, it is important to understand a little about the relationship between land management, changing rural life, food/cuisine and religion. Indeed, it is the interconnection between these three that influences how Japan approaches its rural development. This section briefly explores these three topics.

2.1.1 Religion

Japanese religion is an integral part of society, despite the fact that only about 40% of the population officially are religious. Most Japanese will take part on religious cultural festivals which tie communities together particularly in rural areas. The majority of the population follow elements of a combined Shintō -Buddhist faith. Initially in Japanese society, Shintō was the indigenous religion. Shintō has its roots in the environment where trees, rocks, mountains, lakes, the elements etc... are inhabited by spirits or 'kami'; they can be summoned through various rituals and dance to encourage good harvests, fertility, rain at the right time and so on (Figure 14). As a consequence the natural world is sacred and purifying oneself through washing hands is central when visiting a simple shrine.



Figure 14 – Shrine in Shiga Prefecture dedicated to a good Rice harvest.

[Author requesting good luck from the local kami]

In the 6th Century Buddhism entered Japan through envoys from Korea. Rather than overwhelming indigenous Shintōism, the two blended together to create a religion with elements of both. On a pragmatic level, this led to the introduction of more complex buildings into shrines with the surrounding land (Figure 15).



Figure 15 – Kumano Hayatama Taisha Shrine (WHS), Shingu, Nara Prefecture

The significance of this dual religion for agriculture and rural areas physically manifests itself as follows:

- Importance of religious festivals in rural areas particularly in relation to good levels of agricultural production. Whilst the act of worship is less central nowadays, the centrality of festivals to hold rural communities together is crucial.
- The protection of native/ primeval forest areas around shrines. This vegetation cannot be cleared as all life is sacred and thus felling could impact negatively on everyday life. Many shrine forests have formal environmental protection via reserves and other designations.
- Shrines are an essential cultural capital in Japan, thus maintained and protected by national, regional and local government. They form a central plank of WHS designation along with pilgrimage routes to reach them, the most famous of which is the Kumano Kodo on the Kii Peninsula (see Figure 24 later).

2.1.2 Changing rural life

Until about 1860 Japan was essentially an agrarian society, albeit a sophisticated one. Between 1600 and 1860 (the Edo Period) the country was a closed society, foreign visitors were discouraged and travel for the population severely curtailed. The majority of the population lived and worked in rural areas. With the opening up of Japan in 1869, the ruling Meiji elite realised they were at an

international disadvantage resulting in a rapid industrialisation. This began an accelerated shift away from being an agrarian society.

The trend was exacerbated post 1945 (after WWII) with the rebuilding of the Japanese nation. Key for rural areas was the re-planting of literally millions of hectares of forest in the uplands which had been felled to support the war effort (but not the shrine land areas!).

Furthermore, the accelerated desire to industrialise led to much of the rural population moving into urban areas from the 1960s onwards, where the life style was (and continues to be) perceived as better. This has led to an enhanced rate of rural depopulation affecting agricultural production, rural community stability and creating an aging rural population twenty years ahead of urban society (see earlier). To overcome depopulation in places the Government has merged what were separate settlements to create a critical mass allowing the community to continue to function. This has happened with one of the main areas investigated as part of this field report (Figure 16).

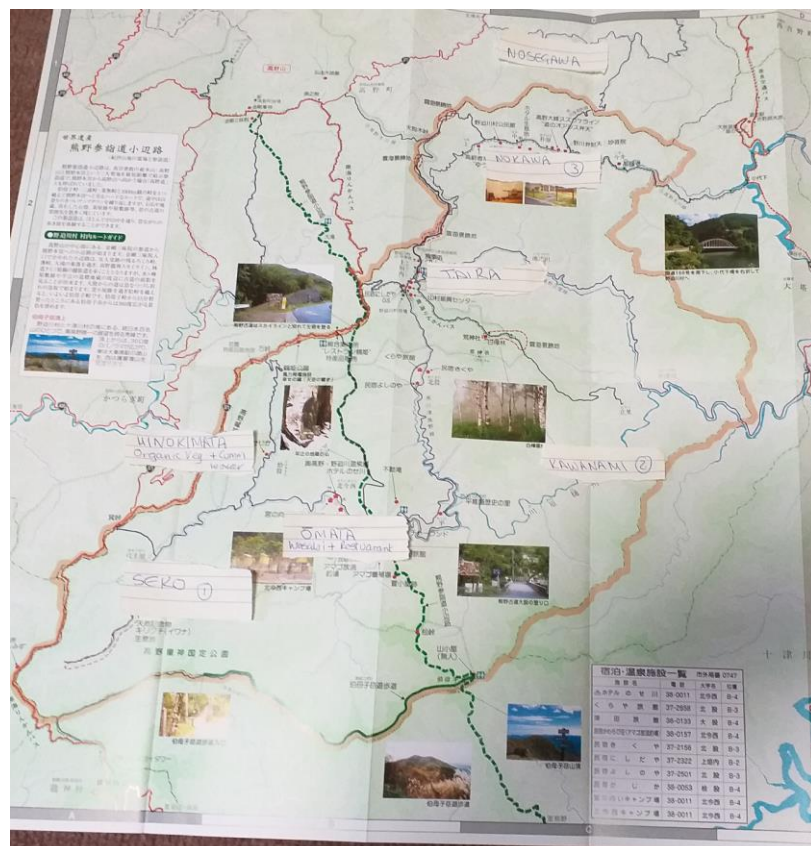


Figure 16 – the Rural Community of Nosegawa

The three settlements of **Nokawa**, **Seko** and **Kawanami** have been merged to create a fully functional unit

2.1.3 Food & Cuisine in Japan

The staple foodstuffs of Japan are rice and fish, which are supplemented by a range of seasonal foods. Seasonality is a key feature of Japanese cuisine and being able to purchase and eat the 'first of X crop' is considered the height of sophistication, adding a premium to sales.

Japanese cuisine is all about the visual experience, flavour is added by means of additional condiments, pickles, relishes and dips. As a consequence, how food is presented at the point of consumption is central. For example, the positioning of different food dishes in front of the eater is also strictly organised. Quality of presentation extends to how it is displayed before sale and with respect to the quality of the packaging when purchased (Figure 17)



Figure 17 – Food as a Visual experience

*Left to Right, TOP: Bento box top and middle layer, classic Japanese meal with 5 dishes,
Left to Right, BOTTOM: themed sweet, sushi, take out railway meal (!)*

2.1.4 Management in Uplands

Seventy three percent of the whole of Japan is classified as uplands, which accounts for 41% of the agricultural area. The uplands support 44% of the farming population and 53% of rural communities. This is substantially greater than England, where only 0.28% of the population are farming families.

The Japanese uplands are viewed as providing multifunctional values for society particularly with respect to land, water resources, the natural environment and the formation of 'good landscape' (not quite sure what he meant by that!). The uplands are also valued for maintaining national cultural traditions (pers. comm. H. Murashita San, 04/07/19).

The traditional management of uplands combined agriculture, forestry and water management. These three operated as an integrated system known as *Satoyama* (Figure 18). Land was divided into roughly three zones, having similarities in ownership and agricultural intensity to UK uplands:

- Mountain tops – open forest which was communally owned and managed
- Mid-slopes – privately owned fruit production in fields
- Lower slopes – rice production in privately owned paddy fields with interconnected water channels.

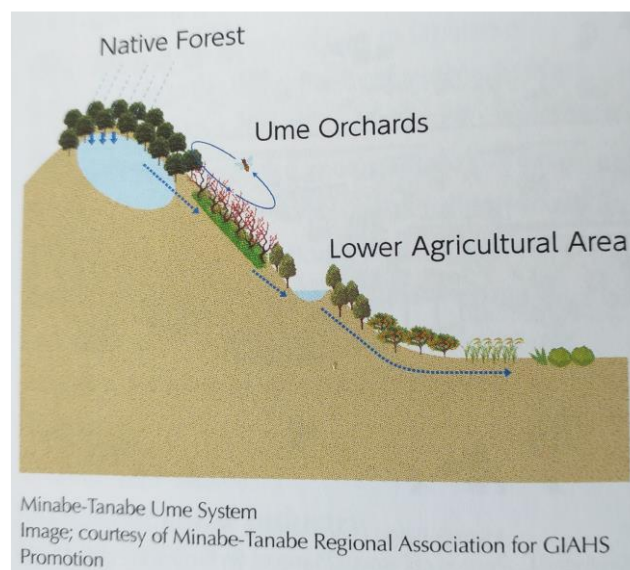


Figure 18 - Satoyama Land Management System

Source: Baule (2018) *Guide to Kumano Kodo*

The lower and middle area enterprises were interchangeable depending on local conditions, for example some areas would concentrate on rice, such as around Maruyama Senmaida in Wakayama prefecture where the paddies were terraced to a high altitude (Figure 19). Vegetables were also grown on the mid and lower slopes and down into the lowlands. The three were connected through the collection and movement of water from upslope to downslope to feed the rice paddies. Hence

the system evolved so that everyone was responsible for ensuring the water supply was unpolluted and infrastructure functional. These responsibilities bound rural communities together.



Figure 19 – Upland Rice Terraces of Maruyama Senmida, Wakayama Prefecture

As a consequence, Satoyama has become a main plank of Japanese rural development in upland areas (Figure 20). Having said this, there is academic critique that the system no longer really functions and the whole idea is a bit of gimmick to boost tourism and rekindle rural re-population.



Figure 20 – Japanese Times Article July 8, 2019

Religion and cultural festivals are tightly bound to the production of rice and fish. Research by the Ministry of Agriculture has demonstrated that current rural depopulation has had a profound effect on these key cultural norms, showing that once a village falls below ten households maintaining cultural traditions becomes almost impossible along with watercourse functionality. In turn, this affects rice paddy viability.

It is worth, at this point, considering a little bit about forest management in Japan, not only because of its role as part of the tradition of *Satoyama*, but also because almost 70% of the nation is covered by forest. More importantly there are lessons to be learnt for upland woodlands in the UK.

There are five main types of forest system in Japan:

- Natural primeval forest generally related to shrines
- Native forest in extremely inaccessible locations or pockets left untouched for various reasons
- Historic plantations dating back to the beginnings of the Edo period (1600 to 1869)
- Post 1945 plantation
- *Satoyama* forest which cuts across the latter three (more a land management system)

Post 1945 forests are used for national timber production, as well as land stabilisation in a country where tectonic activity is daily and landslides common. This forest is dominated by two species of tree:

- Japanese red cedar (*Cryptomeria japonica*) [LHS below]
- Japanese cypress (*Chamaecyparis obtusa*) [RHS below]



Figure 21 – Dominant tree species in Japan

Such a limited species composition has impacted negatively on wildlife, as well as causing an explosion of related allergies amongst the human population.

These forests are a combination of privately and publically owned. They are managed either by private companies working privately owned land, private companies with contracts from the Government or by Government employees. The management of these forests is one of the most contentious environmental issues in Japan today, well beyond the typical conflicts seen in other countries with regard to agriculture and nature conservation. Most of the conflict derives from

unsustainable forest management and poor felling practices and as such are strictly controlled in National Parks (pers. comm, Saito-san, National Park Officer, Yoshino-Kumano, 16/7/19).

The historic plantations are also dominated by these two species of tree, in fact the root of why they were chosen for the national re-afforestation programme post 1945 (Pers. comm. Yamamori Nakahai 21/7/19). The case of the historic plantations, is nevertheless, of interest to this investigation in terms of cultural capital. These 400 year old forests are managed in sustainable way by *Yamamori* (Lit. 'Guardians of the Forest') who are highly skilled forest managers (Figure 22). Trees are felled selectively (ie. one here, another there) not *en masse* ('clear fell') to allow the forest to regenerate, retain landscape stability and limit soil erosion which would impact on water quality for agricultural production and domestic supply.



Figure 22: *Yamamori*
Nakahai – Forest Manager
around Yoshino, Nara
Prefecture and a Community

These plantations were introduced in the Edo period to ensure a steady supply of timber for the construction and re-construction of the Shogunate⁴ palaces. They are common in the Kii Peninsula (where this current field study took place) as this allowed for easy transportation of cut timber to the Japanese national capital, which was in Kyoto eighty miles to the north at the time (moved to Tokyo in 1869).

⁴ Shogunate – the historical method of rule in Japan until 1869 with the arrival of the Meiji period. Shoguns were basically warlords in control of their local territory in every way, the country's land owning elite.

Since 1945 there has been a steady decline in the demand for the timber from Japanese forests.

There are a number of reasons for this, the three key ones being:

- Cheaper imports from SE Asia & China
- The move away from traditional timber based traditional houses to those built from cement and plastic (yes that's true).
- Burgeoning cultural attitude for contemporary housing, resulting in property being acquired, current house knocked down and new house being built on original footprint

Such trends have exacerbated and been accelerated by rural depopulation and land abandonment, as rural labour has declined by 71% since 1945.

2.2 Recognition & Protection of Cultural Capital in Japan

Japan, like many other states, employs a combination of formal designations to protect its cultural capital. There are four key structures employed:

- *National Parks* – a globally recognised designation employed by the Japanese government since 1919.
- *World Heritage Site* – A UNESCO designation specifically designed to recognise cultural landscapes or structures of international importance (see Box 1 earlier).
- *Globally Important Agricultural Heritage Systems* – this is an FAO designation (Food & Agriculture Organisation) designed to recognise and protect traditional agricultural systems threatened by contemporary agricultural processes (Figure 23).



Figure 23 – Internationally recognised GIAHS logo

- *Japanese Nationally Important Agricultural Heritage Systems (J-NIAHS)* – a national designation targeted at specific small scale landscapes with high cultural value not meeting global criteria Eg Aragijima, Wakayama Prefecture

In relation to the study tour element of this Churchill Fellowship, the Kii Peninsula was chosen as a comparator for Cumbria because it contains (Figure 24):

- A marginal upland farming landscape
- The culturally important Yoshino-Kumano National Park (13.6m visitors 2016)
- A number of cultural World Heritage Sites

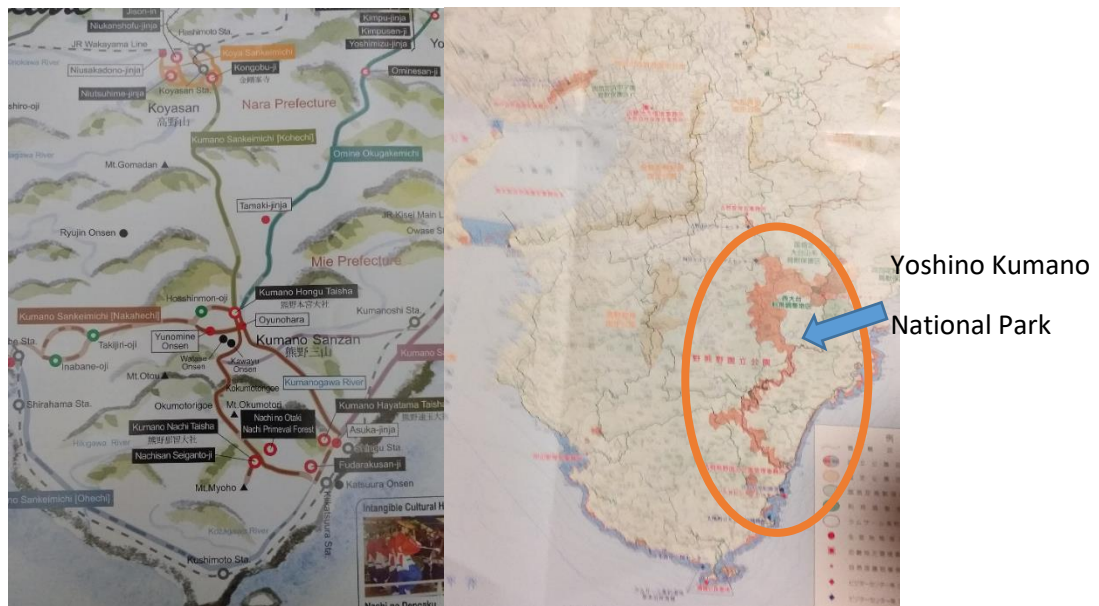


Figure 24 – WHS of the Kii Peninsula (left, coloured lines and circles) and National Parks (right, pink area)
(note how the two do not appear on the same map – different Ministries!)

The existence of GIAHS and J-NIAHS only became apparent during the study tour, the former of which is a recommendation going forward (See later).

2.3 Rural Development in Japan

The cultural relationship between food and agricultural production is far more overt in Japan than in the UK. Indeed, it could be argued that it is one of the last connections of a landless proletariat with their agrarian past. There are a number of reasons for this this, probably the most important being the contemporary nature of rural depopulation which is within living memory of many. Second, the strong connections between religion, food and cuisine. Furthermore, most urban people retain a farming connection, either through parents still farming, ownership of abandoned lands and/or farm units. In contrast, most UK citizens are no longer directly related to agriculture; often two, three or four generations removed. With only 0.7% of the English population directly employed in farming (owners, tenants or labourers), the public is relatively disenfranchised from food production and its

wider benefits (UK Agricultural Census, 2019⁵). It is even more remote in relation to those farming in uplands, where 0.07% of the farming population work (UK Agricultural Census, 2016⁶).

As a consequence, Japanese rural development is the central plank of the Ministry's economic and social policy for rural areas. Key aims are: to retain as much food self-sufficiency as possible; slow or reverse rural depopulation; and to ensure that standard of living & quality of life are as equitable as possible between city and countryside. In order to accomplish these, MAFF (Ministry of Agriculture, Forestry & Fisheries) operate a number of schemes:

- **Direct payment to hill and upland** – this is a 20-year old economic deficiency payment based on an earlier iteration of the EU's CAP. It is paid to the community and NOT the individual farmer. The community then decide how the money is spent to best effect from a list of options, examples of which are shown in Table 5). Additional funds are provided if adjacent communities work together or the community is very small/ has a significantly aging population. It functions through a derivation of the EU LEADER approach (Appendix 3). It is very popular with farmers and communities.

Eligible Agricultural Activities	Land Category	Example Grant Rates/ ha £1 = 130¥ (27/08/19)
Farmland conservation	Paddy field	>15° 210,000¥
		>8° 80,000¥
Road and canal maintenance	Dry field (eg fruit orchard)	>15° 115,000¥
		>8° 35,000¥
National land conservation	Meadow or grazing land	>15° 10,000¥
		>8° 3000¥
Natural ecosystem conservation	In 2016, 661,000 Ha of land was enrolled affecting 595,000 people and 26,000 communities. Evidence suggests farmland abandonment and revitalisation of communities took place.	
Processing & sales of agricultural products		
Securing new farmers		

Table 5 : Direct Payments in Hill & Mountainous areas Japan 2019

(Source: Mr H. Murashita, Public Policy for Uplands, MAFF, Japan, 4/7/19)

- **Rice Heritage programme** – to support as many multifunctional values of rice as possible (see Figure 25). Holistic and integrated in its approach recognising the wide range of linkages with general rural society. Unfortunately, the values are supported by finance

⁵ <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june> Accessed: 27/8/19

⁶ <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june> Accessed: 27/8/19

through different ministries, which is very confusing for applicants to determine who they need to approach.

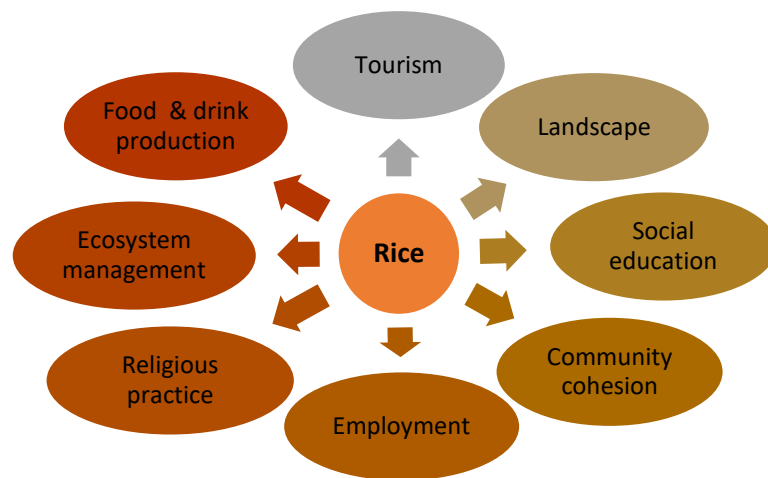


Figure 25 – The Multifunctional Values of Rice Heritage

(Source: Y Onishi- San , Rice Heritage Policy Officer, MAFF, Japan 4/7/19)

This problem has led to a new Agriculture Act this year (2019) to focus on rice by forcing ministries to work together, given the core character of rice in Japan economically and culturally. Once again, the LEADER method has been employed.

- **Sixth Industrialisation programme** – designed to help add value to initial products produced. Its other aims are to stabilise incomes and to maintain employment. This is a popular scheme for community projects, such as setting up of private co-operative to add value to cherries (eg. juice, liquor, parfait). The co-op uses grade 2 cherries, which consumers won't buy as blemished.

[The Japanese were very interested in the concept of 'Wonky Vegetables' now on sale in England]

- **Countryside Stay** – is an agri-tourism 'Nohuka' experience, which links accommodation, food and actual farm work together. Its been designed to reconnect urban and rural people and to support farm businesses through income subsidisation. The target is 500 areas with 465 already operating the system. It has greatly helped with increasing EU and Asian tourism opportunities as well as upgraded tourist facilities eg. WiFi and traditional building renovation. The Japanese government see tourism as central to the revitalisation of their economy in general.

- **Building grants** – these are provided on a case-by-case basis to maintain the housing stock in rural areas. Many people have simply abandoned their premises when finding employment in urban areas. If people are to be encouraged back into the countryside, then there needs to be accommodation available in an inhabitable condition.
- **GIAHS** – please see above and below.

Japanese rural development policy, therefore, operates at farm, community and landscape level demonstrating the recognised complexity of challenges in rural areas. It also shows that cultural capital is interrelated to other forms of capital on farms and in agricultural landscapes.

The similarities and differences to UK upland agricultural and rural development policy has provided scope to recommend a number of opportunities to support UK hill & upland farming businesses and communities in this report.

PART 3

The Role of Place-based Cultural Capital: Critical Analysis

3.1 Introduction

In the previous section of this report we established the cultural capital is embedded comprehensively within rural life in Japan. We reviewed the status of agriculture, rural land management and rural areas. Second, we explored the approach of the Japanese government to address rural issues through a range of agricultural policies.

The purpose of this section is to explore a range of cultural capital activities operating within the marginal farming communities of the Kii Peninsula. A wide range of possibilities presented themselves from the interviews and site visits conducted. Synthesis of these suggests the following may provide opportunities for marginal hill farming businesses in Cumbria, going forward:

1. *Renewed diversification* – farm woodland management and charcoal production
2. *Diversification : alternative crops* – shiitake mushrooms and wasabi
3. *Diversification: agritourism* – experience tourism, making Japanese cuisine, Rent-a-Paddy, Countryside stay
4. *Community Driven Projects*
5. *Catalysing actors*
6. *Territorial landscape designation* – Globally Important Agricultural Heritage Systems and Nationally Important Agricultural Heritage Systems

The material is organised to focus on different geographical scales of engagement. Options 1, 2 and 3 focus on the farm business level, options 4 and 5 on community engagement and Option 6 on regional or national governance opportunities. The geographical scaling approach of activity demonstrates the importance of interlinkages from farmer to community to region and reverse. Such synergies create additional multipliers making the 'whole greater than the sum of the parts'.

Each opportunity is evaluated in turn, assessing which marginal farming issues it could address and a critique supplied in the context of Cumbrian marginal farming.

3.2 Renewed Diversification

Diversifying farm businesses in the uplands is not new in the UK and our farmers have a long, well established history of identifying and developing new opportunities. The system, opportunities and periodic financial support is extensive and sophisticated. There are many fine examples related to milk, meat and wool:

- Sedbergh Howgill Ice Cream <https://www.sedbergh.org.uk/locations/howgill-fellside-ice-cream/>
- Lakeland Herdwick Lamb Product of Designated Origin <http://www.herdwick-sheep.com/lakeland-herdwick-pdo/>
- Woolfest 2019 <https://www.woolfest.co.uk/>

It is clear that some percentage of Cumbrian farmers and those of other uplands invest in and add value to products through farm diversification (see Figures 12 & 13 earlier). However, the majority of Cumbrian farmers do not conduct any form of diversification (72%). Those that do run diversification activities focus on opportunities which are related closely to adding value to the main agricultural products of the business, using redundant buildings or a member of the family working off farm to create dual income (DEFRA, 2009). The main reasons stated for lack of farm diversification revolve around: no spare labour, no capital for investment and lack of the right knowledge and problems with planning permission (Mansfield, 2011).

More common is the diversification of farm businesses through agri-environment schemes. Whilst often not regarded as strictly diversification by official censuses and surveys, AES still brings substantial financial benefit to upland farming businesses as noted by the Lake District survey by Wallace & Scott (2018). With the change in funding regime away from production support to public goods provision farmers will need to rely more heavily on such opportunities to survive.

Alternative forms of diversification can be used to address the following select issues identified earlier in this report:

ISSUE 1 : low direct GVA in upland farming

ISSUE 2 : poor recognition of the indirect benefits of hill farming

ISSUE 5 : limited enterprise choices on hill farms

ISSUE 7 : loss of subsidies and grants post Brexit

ISSUE 8 : marginal farming system limiting opportunities

ISSUE 12 : move away from agricultural production to public goods provision

ISSUE 13 : restructuring of upland farming away from agriculture

With respect to renewed diversification, there are two activities, which used to take place on a more regular basis but have lapsed due to lack of labour and lack of demand. *Farm woodland management* and *charcoal production* may now be more profitable given the contemporary policy and environmental contexts in which we now find ourselves in 2019.

3.2.1 Farm Woodland Management

Farm woods on UK upland farms have, over the last thirty years, suffered a decline in management and use (Mansfield, 2011). The main reason for this is has been the drop in labour capacity on farms, focusing work to the core businesses of livestock enterprises. Consequently, farm woods are undermanaged and underutilised. The potential for farm wood revitalisation in the UK uplands is considerable, it is a neglected farm asset. According to the UK Agricultural Census 2016⁷ the Lake District National Park contains 4966ha of woods on farms, roughly 3.25% of their total area. In Cumbria the area is about 2.5% of farms (12,576 ha). Even small amounts of wood can produce additional income in a range of ways (Table 6 see over). The general rule of thumb is that softwoods are used for more structural purposes and the hardwoods for a range of other products. Firewood and biofuel can also be added to this list. Firewood in the UK can be of either type, but the hardwoods have a higher calorific value meaning more heat is obtained; the top four being: ash, oak, birch and beech. Woodchip as biofuel tends to be various species of willow grown specifically for the purpose.

In English LFAs in general there are nearly 47,000 ha of farm woods, of which roughly two fifths is in the upper most areas, true hill farming territory (Agricultural Census, 2016). Many of these woods are relatively small blocks of land with reasonable labour requirements, but they have been abandoned for long periods, and are overgrown and under-utilised.

⁷ 2016 – this year is used as this is the year counties have data for them, related to EU census years, the next one is due in 2020 and then after that no UK decision has been made

	Veneer	Sports goods	Tool handles	Furniture	Joinery	Flooring	Kitchen ware	Turnery	Structural	Construction	Boat Building	Telegraph poles	Sleepers	Fencing
Ash	x	x	x	x	x	x								
Beech	x		x	x	x	x	x							
Birch				x		x		x						
Oak	x			x	x	x			x					x
Sycamore	x			x	x	x	x	x						
Alder				x	x	x								
Cherry	x			x	x									
Sweet Chestnut	x			x	x	x								x
Douglas Fir										x				x
Larch										x	x			x
Pine												x	x	x
Spruce										x				x

* other species with distinct uses: lime, walnut, yew, apple, pear, hawthorn, plum, damson, poplar

(Source: Coed Cymru, 2005)

Table 6 – Possible Farm Wood Products

In contrast, Japanese farm woods, as part of the *Satoyama* system, are a key source of income for farmers, their wider communities and other rural businesses. They produce a range of products to sell on into other parts of the land management industry, such as oak for growing shiitake mushrooms or charcoal production, timber for chopsticks or building construction and game hunting. Financial incentive is offered for ecosystem services (eg via the Rice Heritage Scheme and through the Direct Payments for Hill areas), because management of the high mountain forests affects lower slope agricultural production with respect to water management.

Forests are seen as a major source income and for rural revitalisation in Japan. It is nevertheless, important to recognise that the use of domestic timber has reduced somewhat due to cheap imports and the move away from traditional wooden houses. So much so, that municipal

authorities⁸ have directed funds specifically to appoint forest economic development officers (more on Tsubamakimoto –San later!) to reinvigorate the forestry industry in their area.

3.2.2 Charcoal Production

Charcoal production in Japan is a central part of its food economy as cuisine is cooked on charcoal. Whilst cheap imports threaten local production, as in many areas of the Japanese economy, there is strong interest in the quality of charcoal and its direct utilisation in the food sector. Charcoal is essential carbonised wood, the quality (ie. the carbon content) of which is controlled by percentage of carbon present along with few impurities. One of the most sought after charcoals is *Bincyotan* (*Pron. Binchotan*), a very dense metallic like product, which is derived from the carbonisation of the ubamegashi oak (Latin unknown). This is a speciality of charcoal burners around Minabe on the edge of the Yoshino-Kumano National Park and in 1974 was officially designated by the Japanese Government as an **intangible cultural asset**.

Lengths of oak are stacked vertically into a clay kiln and fired with the exclusion of oxygen. After two days, the charcoal burner literally pokes holes in the kiln and lets oxygen in. This drives even more water and impurities out of the charcoal. Around seventy two hours (three days) the charcoal maker, using his skill and judgement, shuts the kiln down and the charcoal is removed. At this point the charcoal is 95% pure carbon. The charcoal is used in many ways, the main ones being fuel for various types of yakatori (skewered meats) and eel broiling. The charcoal cooks the food without the characteristic external burning of many less dense forms. It is also used for water purification, dehumidifiers in rooms and as a soil improver.

The most interesting product of Bincyotan charcoal is in cooking. The charcoal is ground into a fine powder, like flour, and used as an ingredient *in* the foodstuffs. Several key products were found in the Kii Peninsula – biscuits, ice cream, pizza dough and mochi (a processed rice dough) were all produced (Figure 26). Contrary to logic, the foodstuffs do not taste gritty, and are in fact delicious, to which the author can attest. In fact, there are now black charcoal soba noodles for sale in the UK in

⁸ Municipal authorities – Japan's civil administrative system works at four levels: national, prefecture eg Wakayama or Nara in used in this study, municipal eg Hongu, Minabe, Tanabe and Yoshino from this study and rural community eg Nosegawa in this study.

the restaurant chain Wagamamas™ (30/08/19) and charcoal laced cheese made in southern Scotland (Pers. comm., Jamie Lund, 03/09/19).



Figure 26 - Charcoal as an Ingredient in Foodstuffs(*top left* – sweet biscuits with organic ice cream; *top right* – fruit pizza, *bottom left* – cakes, *middle bottom* – ice cream, *bottom right* – mochi)

Consequently, there is opportunity to explore this niche product in marginal English uplands as forests are brought back into management.

3.2.3 Opportunities for Cumbrian Marginal Farming

The main limiting factor with respect to farm wood reinvigoration is the lack of a workforce. To overcome this some form of peripatetic woodland management team in certain geographical areas, may be a viable option. Here the team could manage several woods, bringing them back into initial operation until a low level maintenance regime can be created, manageable for limited farm labour.

There are also opportunities to establish new markets for upland timber and also those to re-establish markets that have lapsed. The fact that charcoal based noodles are already entering the niche food market in the UK suggests this could become a viable income stream.

3.3 Diversification : Alternative Crops

Internationally and nationally there has been a recent shift in the public's perceptions regarding meat production in relation to its role on climate change. Whilst the public has been mis-informed to a certain extent with respect to the varying types of livestock production systems and what they donate to climate change, there is nevertheless a move to reduce livestock production. This is underpinned by the UK Government's realignment of the priorities of farmed land away from production towards public goods management. As a consequence, there will be a need to enable farmers to diversify into other enterprises as the UK uplands are predominantly beef and lamb producing territory.

The issues which alternative crops provide for Cumbrian hill farming can address the following:

ISSUE 1 : low direct GVA in upland farming

ISSUE 5: limited enterprise choices on hill farms

ISSUE 7: loss of subsidies and grants post Brexit

ISSUE 8: marginal farming system limiting opportunities

ISSUE 11: reliance on diversification to support farm incomes, either grants or additional work/products

ISSUE 13: restructuring of upland farming away from agriculture

Alternative crops are not uncommon in upland areas (see earlier in report), just a more limited range than their lowland counterparts due to the physical margins of cultivation (soils, climate and topography limit crop choice). Having said this, the author visited two upland growers who produce crops that could be grown in the current upland climate of the UK. These crops, Shitake mushrooms and Wasabi, will also benefit from change in climate as the UK uplands become warmer and wetter going forward.

3.3.1 Shiitake mushrooms (*Latin: Lentinula edodes*)

Shiitake mushrooms are an edible fungus native to SE Asia. In Japan they are grown on oak logs either indoors or outdoors (Figure 27); indoor being a definite possibility for Cumbria. The temperature range needed is between -5°C and +22°C, with as little humidity as possible. Shiitake are grown in Hokkaido (the northern island of Japan) and different varieties adapt to the cooler conditions locally. [Hokkaido is often compared favourably to the UK climatically]. They are particularly rich in B vitamins, Zinc, Manganese, Phosphorous and Magnesium. They are increasingly popular in cooking in European restaurants and domestic cooking, particularly as Japanese food becomes more commonly appreciated.



Figure 27 – growing Shiitake Mushrooms in- and out- doors

Seeds are planted in plug holes in wood logs once a year. Logs provide a better flavour but are slower growing than shiitake grown on wood chip. Wood chip is popular because harvesting can occur faster, however, the flavour is not as good. The main input are seeds and cordwood (logs of about 10cm/4 inches in diameter). Each log is about a metre (3 feet) in length and they are stacked on racks vertically leaning towards each other but not touching to allow air to circulate around them. Once the caps open they are ready to harvest.

The old logs cannot be reused, but the grower visited uses them to heat his wood boiler, which maintains a constant ambient temperature via underfloor heating in winter months. He produces about 10 tonnes a year, which keeps four people employed all year round. Whilst home cooking has reduced in Japan, the demand for Shiitake outstrips supply. The other issue is that log grown shiitake are quite hard to differentiate from chip grown ones by most diners. Hence for log growers the issue is to ensure marketing and brand promotion are of high quality.

3.3.2 Wasabi (Latin: *Eutrema japonicum* or *Wasabia japonica*)

Wasabi is a high quality condiment used as an accompaniment for Japanese sushi and other dishes. Its popularity in English-speaking countries has run parallel to that of sushi, growing steadily starting in about 1980.

Wasabi paste is made from the rhizomes of a plant belonging to the brassica family (which also includes: mustard and horseradish) (Figure 28). It grows naturally along stream beds in mountain river valleys in Japan. As a complex plant to grow and cultivate in bulk, it is not grown much outside Japan. There is one grower in the UK who has adapted their Hampshire/Dorset watercress beds to produce a crop (<https://www.telegraph.co.uk/gardening/plants/11638355/The-UK-farm-secretly-growing-wasabi-the-worlds-most-costly-veg.html> Accessed: 06/09/2019). Authentic Japanese wasabi commands such a high price that the location of this grower is kept secret! The current wholesale price in Japan is 1000¥ (£7.60) for 80 grams, which sells in supermarkets for 3000¥ (£22.80). In the UK, 100g of UK grown wasabi sells for £22.50 direct from the grower (<https://www.thewasabicompany.co.uk/fresh-wasabi> Accessed: 06/09/19).



Figure 28 - Japanese Wasabi Rhizome: Nosegawa, Nara Prefecture.

The plants are grown in a pseudo-hydroponic system outside on the hill in woodland clearings. The beds are arranged in a terraced system (40 sq.m) allowing water to flow from top to bottom. The plants 'sit' in the water, touching the bottom sediment (sand), with the rhizomes scavenging nutrients from the water itself. From planting to harvest is two years (Figure 29). The plants grow upwards from the terrace floor and over time the water level is gradually increased to a set level, slowly the rhizome rises above the water and turns from green to white.



Figure 29 – Wasabi cultivation: Nosegawa, Nara Prefecture

Wasabi is clearly a niche product, to be grown in small quantities, consequently, there may be potential to grow Wasabi in some uplands areas following initial conversations with a Wasabi grower in Nosegawa. The key needs of the plant are:

- exceptionally clean, almost pristine, water – some artificial terracing with tanks probably.
- a climatic regime similar to the UK uplands.
- Shelter from direct sun light as the plant grows in dappled light cast from trees. This could be created artificially.
- Protection from direct snow fall – the plant is however extremely hardy
- Pest management - deer will commonly eat the shoots and entire crops have been lost through their grazing. This is a consideration as deer are becoming a major concern in the UK.
- Drought management going forward – it can tolerate drought as the sandy bed it rests in acts as a water reservoir.

3.3.3 Opportunities for UK marginal farming

Innovative crops could be one way forward. The economics of such developments will need more detailed analysis, but with a warming climate, crops that were previously not tenable, like Shitake, may become more tenable. There could also be opportunity to re-establish crops once grown in the UK uplands when the climate was warmer, such as Spelt (*Triticum spelta*; *Triticum dicoccum*), which was grown in the SE uplands of Scotland and at other locations in northern England around 12thC. Trials will need to be financially supported and run to explore the possibilities. A parallel example is the growing of navy beans (beans for making baked beans) was not climatically viable twenty years ago, and it now is, in East Anglia.

3.4 Diversification: Agri-tourism

Another possible area of diversification for marginal farms is to engage in agri-tourism. In the UK, this type of activity tends to focus on enjoying products produced on farms, the classic example is a dairy farm having a ice cream parlour. Agri-tourism in Japan is different, the activity is active not passive, ie. The visitor joins in with the practical activities.

These types of diversification could address the following marginal farming issues specifically:

- ISSUE 2 : poor recognition of the indirect benefits of hill farming
- ISSUE 3: Lack of integrated hill farm support for multiple capitals
- ISSUE 4: cultural landscapes in need of management to maintain HNV
- ISSUE 6: lack of cultural and social capital financial support
- ISSUE 10: loss of labour, farming businesses and related communities
- ISSUE 12: move away from agricultural production to public goods provision
- ISSUE 14: rural depopulation & rural population restructuring
- ISSUE 15: lack of understanding between urban & rural populations

There were four examples of this observed in Japan which warrant more exploration for upland farming systems as part of a wider package of diversification; these include: experience tourism, Japanese cuisine lesson, 'Rent a paddy' and 'Countryside Stay'.

There has been a definite shift in what visitors wish to do when they go on holiday. Whilst previously tourists were quite passive and would observe, contemporary holiday makers want to engage directly with the environment and with the people they visit (Figure 30). This is symptomatic of how the economic value placed on products has changed over time (Pine & Gilmore, 1998).



Figure 30 – Changing Economic Value of Goods & Services

For agricultural production the transition to the upper levels of Figure 30 present high levels of added value which go directly (as far as possible) to the farmer and not other intermediaries. For the Japanese Government, tourism as a revitalisation tool for the economy is seen as a central plank of their rural development policy, underpinned by 31 million tourists in 2018. [The visitor numbers to the Lake District were 18.6m in 2018 in comparison, of which about 25% were international visitors].

3.4.1 Experience tourism: making local food

The centrality of rice in the culture of Japan has been explained earlier. The first agri-tourism experience revolved around visiting an agri-tourism tour operator, meeting their managing director (*Tour du Lac Biwa* - <https://www.lacbiwa.com/> Accessed: 20/09/19) and experiencing one of their activities. The day consisted of an introduction to the relationship between religion, rice cultivation and the community, an explanation about the production of rice and then a three hour experience with a rice farmer and his wife making mochi⁹ and enjoying a meal in their home. A guide was provided for the experience with good English to allow free flowing translation back and forth. The

⁹ Mochi – an Japanese delicacy: rice is simmered in water until it is cooked. It is then put into a device like a breadmaker and turned into an elastic dough. The dough is transferred to a granite basin and then pounded with a wooden mallet until it is smooth. Flavours and colouring may then be added at this point. It can be eaten warm, cold or cooked in a pan, savory or sweet. Mochi is very common gift given when visiting people and is often packaged to a high visual specification.

guide was well versed in all aspects of the rural community, agricultural production, the context and issues facing rural Japan.



Figure 31 – having Lunch as part of Experience Tourism

The session was carefully crafted to show the linkages between food, religion and community, building on the interconnections as the activity progressed culminating in visiting a farm for lunch (Figure 30). Groups were small, usually no more than four in order to allow everyone to experience making mochi, but also to not overwhelm the host farm family. Consequently, the cost of the experience was £113, from which the farmer was paid a proportion.

Whilst the offer is well planned, conceived and managed there are a number of challenges to overcome with regards to agri-tourism directly onto farms:

- 1) *Access to farms* – onto a livestock farm there would be various limitations with regards to animal welfare and disease control.
- 2) *Availability of farmers* – in Japan this was a particular issue due to the age profile and that the tour operator had to very aware of not ‘tiring’ farm families out with increased demand. She was struggling to engage more farmers as it was seen as a burden rather than a financial income stream for the business. The other challenge is to find farmers who have the desire to invite guests onto their farm and have the skills to engage.
- 3) *Lack of start up grants* - to support this type of business development in Japan, many were too complex to apply for and didn’t directly support the administration. The complexity also deterred the community to apply for funds to develop agri-tourism.

3.4.2 Introduction to Japanese Cuisine and Making a Meal

The second activity took place in Tokyo at a Japanese Cuisine school (<https://www.asakusa-tokyokitchen.com/#> Accessed: 20/09/19). This one focused on introducing the four participants to the culture behind Japanese food, the role of seasonality, key elements of a meal (texture, colour, seasonings and nutrient balance), how food is served, chopstick use and protocol, and then the construction of an entire meal. The lunch meal consisted of: miso soup, condiments, rice and three types of sushi. The session lasted two hours so was quite intensive.

It was clearly evident the experience is geared towards a certain type of international visitor to Japan who completes the classic grand tour of cities! (Tokyo, Kyoto, Osaka and Hiroshima). Consequently, the experience is somewhat removed from any contact with rural areas, any context of the issues faced by these communities and immersion (however short) with food production. Having said this, it does provide a good grounding in the etiquette of food consumption, which is so central to Japanese culture and more important to grasp for travelling in rural areas than urban zones, as the latter becomes more westernised.

3.4.3 *Rent-a-Paddy*

The third example is perhaps one of the most interesting for marginal upland farming in the UK. It is best described loosely as 'Rent-a-Paddy' whereby an urban family rents a paddy terrace from a farmer to produce rice for them for the year. The family engage on a practical level by helping plant the crop, harvest it and take part in various rice festivals (cultural heritage). The farmer tends the crop in the interim and organises its processing. The family then use their own rice at home in the urban area.

The whole concept has become very fashionable in Japan and the terraces visited by the author included: paddies rented by the MAFF-Japan (obviously for entertaining foreign guests and as gifts); TV celebrities; prefectural governors and municipal mayors. Paddies are labelled so visitors can see who is renting what (Figure 32). For many Japanese who have left rural areas in living memory, this

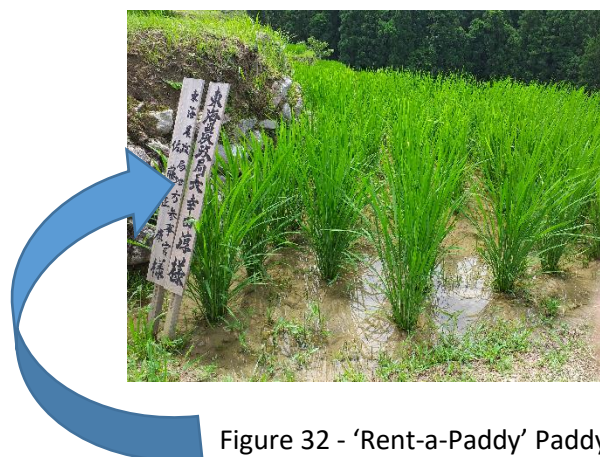


Figure 32 - 'Rent-a-Paddy' Paddy Renting Signage

provides a continued link with either their own land or the production of food from the area from which they originate.

In return, the farmer either charges a rent or is paying a small rent back to the family if the land belongs to the family initially. A premium can be added, if the terraces are famous, such as those at Maruyama Senmaida in Nara prefecture or those at Aragijima in neighbouring Wakayama prefecture. Premiums are also added for those who rent at the top of the terraces as the water quality entering the rice terrace system is the most pristine and believed to produce the best quality rice.

3.4.4 Countryside Stay

Countryside Stay is a three-fold experience of accommodation, food and farm work. The Japanese government has a target of 500 areas operating this visitor activity by 2020, with 465 already enrolled. The main aims are to support and subsidize agricultural production, promote various areas to EU and Asian tourists and improve the related facilities of these areas (eg. provision of Wifi). It has also addressed the deterioration of the rural housing stock by encouraging families and communities to renovate traditional houses, which are almost non-existent in urban Japan today.

A number of the upland farmers visited by the author were involved in this scheme, picking fruit or vegetables was a common activity. For very small upland marginal farms the income from this was key, roughly 500 to 1100¥ a week, with jam making part of the experience to add value. The visitors also get to take some of the produce home. Such an operation has allowed a number of the women

in the local community to buy a new field between them and cultivate a shared blueberry crop. The existence of the women's group had also helped the farmers deal more positively with rural isolation.

3.4.5 *Opportunities for Cumbrian marginal farming*

For UK uplands, the central challenge we have increasingly is the proletarianisation of food production. In other words, there has been a gradual dis-attachment of the population from direct hands-on experience of farming. English people are now six generations removed from farming, in Wales its only one generation. The gap between those who produce food and those who consume it is getting larger, which has led to an increasing lack of understanding as to how farming functions and its wider benefits. Some form of rental scheme for urban dwellers may provide reconnection, as well as access to fresher food and health and welfare benefits. Whilst there is an increasing movement to re-establish this relationship between people and food, it tends to be urbano-centric, which ignores the reality of mass rural food production for the majority of people and focuses on an urban or environmental elite who can engage in these agendas.

3.5 Community driven projects

A second major area, which has been identified from this Churchill Fellowship, is the importance of community-based projects in Japanese rural development. It is evident that these are much more common than in the UK; this is probably due to two main reasons; first, because of a greater percentage of the population engaged in agriculture, and second probably due to the community basis on which *Satoyama* functions. As a consequence, the Japanese government filter financial support through community councils rather than to individuals. In contrast, farming is much more of a separate occupation in UK uplands, with perhaps 5 to 10% of the population of a community directly engaged, and the rest of the rural community employed in other occupations. Funds are generally directed to individual farm businesses unless common land is involved, in which case complex environmental management agreements between a number of commoners have been set up (eg. Caldbeck Common, northern Lake District). Furthermore, many rural people live in villages but now work in nearby towns or cities, not on the land.

These type of community projects specifically help address the following hill farming issues:

- ISSUE 6: lack of cultural and social capital financial support
- ISSUE 10: loss of labour, farming businesses and related communities
- ISSUE 11: reliance on diversification to support farm incomes, either grants or additional work/products
- ISSUE 13: restructuring of upland farming away from agriculture
- ISSUE 14: rural depopulation & rural population restructuring
- ISSUE 15: lack of understanding between urban & rural populations

Community based projects in England do exist, they are generally supported by Action with Communities in Rural England, (ACRE) which acts as the umbrella organisation for the 38 Rural Community councils. In Cumbria, this role is taken on by ACT (ACTion with Communities in Cumbria), The Farmer Network and the Rural Womens Network. The types of project supported tend to be social in nature, such as village halls, transport systems, flood resilience, offgrid energy efficiency, community engagement & empowerment, community planning and so on.

Nevertheless, there are useful lessons we can learn from the Japanese approach to community driven projects related to cultural capital and marginal farming. The underlying thesis is that by financially supporting communities in which farmers make up a significant percentage, there is a trickle down effect to indirectly help support farming. For example, the setting up of a community *michi no eke* (wayside farm shop and café) is a government-sponsored rest area found along roads and highways in Japan. As well as providing places for travellers to rest, they are intended to promote local tourism and trade. Shops sell local produce, snacks, souvenirs, and other goods. All provide 24-hour access to parking, public toilets and facilities for sharing information. The quality of these varies, some are enormous such as the one in Hongu, Wakayama Prefecture (due to its central WHS location), whereby coach loads of visitors arrive; others are just one room.

Other communities have set up green tourism centres such as *Akizuno Garten*, outside Tanabe, Wakayama Prefecture (<https://agarten.jp/garteninfo/egaiyou.html> Accessed: 19/09/19). Here Tanabe community leaders realised agricultural production was not enough to retain the rural

population, so they bought an old school as a merged community project in 2002. The Agriculture group of the community council brought together (Figure 33) :

- Farmers market
- Orange juicing facility
- Sweet making workshop
- Café & restaurant
- Microbusiness IT facilities
- Accommodation
- Farm stay & rural area working holidays
- Training new farmers
- Utilisation of abandoned agricultural land
- Regional rural development training (also includes international groups)



Figure 33 – *Akizuno Garten*: Green Tourism Facility

This project was only one strand of several developed by the local community, with others focusing on other aspects of the local economy such as welfare, youth group, women's committee, and a friendship association. The governance is via a public interest incorporated association (a bit like a CIC in England). Projects such as these are driven from the community (known as bottom up), and in order to make it happen, a mixture of private and public investment is combined where appropriate. The revenue generated from the businesses is then directly ploughed back into the community negating reliance on the public purse.

3.5.1 **Opportunities for Cumbrian marginal farming**

Three key lessons can be taken from community farm projects in Japan: the importance of developing a mixed base economy both on a farm and within the broader community to buffer the impacts of policy change, socio-economic downturn or environmental catastrophe. Second, a mix of private and public money needs to be injected. The latter provide pump priming and the former ensures continuity. Finally, integration across sectors supports the individual components (in this case agriculture).

Community driven projects in the UK are almost non-existent in agriculture. We could argue that the nearest parallel is the process of commoning on English common land. The difference is that the land in England has one land owner with others having right of common upon it. In Japan land is owned by the community collectively, a hangover of the *Satoyama* system. The practicalities of the variation in property rights between the two systems creates very different agricultural development situations. For England, the landlord controls agricultural land use change as long as 'rights' are not usurped. In Japan, a change in the nature of the asset needs consensus from the farmers and the wider extended community. Which is most effective of these, is a bit of 'six and two threes'.

Designed and implementing community driven projects in agriculture is complex. Examples do exist in Cumbria, such as the Ullswater CIC (<https://www.ucmcic.com>), but this is focused on natural capital and not cultural capital. A second, closer equivalent to *Akizuno Garten* is the farm experience developing at Ings (<https://www.lakelandfarmvisitorcentre.co.uk>), but this is a family venture rather than one driven by the community. Opportunity exists, therefore, to explore some form community venture perhaps using an old school or village hall in a less developed lakeland valley where little other non-farm business exists. This should be a funding strand from the forthcoming Shared Prosperity Fund.

3.6 Catalysing Actors

Closely related to agricultural community development is the existence of key actors in the local population. These people can either be inserted through an official project or can be home grown in the local community, where an individual decides to step up and take control and lead the community. In Japan both top-down and bottom-up catalysing actors were evident. Catalysing actors can benefit specifically Cumbrian hill farming systems in relation to the following issues:

- ISSUE 2 : poor recognition of the indirect benefits of hill farming
- ISSUE 10: loss of labour, farming businesses and related communities
- ISSUE 11: reliance on diversification to support farm incomes, either grants or additional work/products
- ISSUE 12: move away from agricultural production to public goods provision
- ISSUE 13: restructuring of upland farming away from agriculture
- ISSUE 14: rural depopulation & rural population restructuring
- ISSUE 15: lack of understanding between urban & rural populations

3.6.1 Local Government Officials

The author met both types of catalysing actors whilst on tour in Japan. Interestingly, the top-down development officers are of two types. First there were those who are similar to economic development officers in the UK, whereby a need is observed by a local authority, a job created and someone employed to achieve a set of pre-identified goals. The three the author met include:

- *Murakami San in Tanabe* – the local Ministry of Agriculture development officer in charge of supporting agricultural businesses and diversification
- *Nakahaya San in Minabe* – local government officer responsible for ume (plum) development (30% of national Japanese production comes from this area).
- *Tsubakimoto San in Yoshino* – Wood product development manager appointed by Yoshino Municipality (a town of around 20,000 just off the northern edge of Yoshino-Kumano National Park in Nara prefecture).

Taking Tsubakimoto San as an example, his role allows him to draw together the various stages of the timber supply chain and add value. The Yoshino forestry industry currently employs 300 people

and 30 companies, it is the main employer in the area with tourism coming second. Whilst the price of timber has stayed the same, inflation has caused problems, consequently the timber sector around Yoshino is looking for alternative streams of income. The other issue is lack of labour and encouraging youngsters to enter the industry. Tsubakimoto-san's job is to bring all the interested parties together (growers, processors and markets) to help re-invigorate the timber industry through product diversification development. Five examples stood out (Figure 34):

1. *Building an Air BnB from local timber* – used for visitors interested in learning about sustainable forestry around Yoshino (see earlier) and timber diversification, also generates income for the project
2. *Sake barrel manufacture* – a return to wooden barrels from glass lined metal as this provides subtlety of flavour rather than lack of character and distinctiveness, commanding higher price.
3. *Chopstick production from waste* – using the wood from around the structural timber taken from the four segments (cut off by the chords). The Japanese chopstick industry is being undermined by cheap imports from China (the classic issue of 'buy your own country's product first')
4. *Making school desks* – secondary school children make their own wooden desks on entry and take the desk with them as they go from one year to the next, then have it as a graduation present. Whilst they build them the related curriculum looks at forest ecology, sustainable timber production, the tradition of *yamamori* (guardians of the forest) etc.. this reconnects the children with their cultural heritage
5. *Cedar oil products* – essential oil and insect repellent.



Figure 34 – Yoshino Timber diversification
Left to Right: Cedar oil products, school desk production, Air BnB, chopsticks

3.6.2 Local Community Development Caravan

The other type of top-down community development officers the author met were those who were part of a national scheme known as the *Local Community Development Caravan*. These people were more like facilitators of ideas, they are typically the urban young (average age 33) who were interested in experiencing living in rural areas. The programme is administered by the Ministry of Internal Affairs & Communication and is designed to revitalise local rural communities. The scheme is aimed at young people who are interested in living and working in rural areas, with the hope that they will settle down, get married and become permanent in the community (71% are unmarried according to Ministry statistics!). Local government decide what they would like them to do for the community in consultation, of which the range is wide (Table 7).

Table 7 – The Range of LCDC Activities

Promoting Events
Supporting traditional crafts & industries
Developing local brands & products
Promotion & marketing
Revitalising shops
Connecting rural communities with urban areas
Educational programmes
Systems to encourage new people to settle
Environmental protection
Water source protection
Supporting local people eg elderly
Taking children to school
Cultural property management

Source: Min. of Internal Affairs website (translated from Japanese) Accessed: 29/7/19

The scheme started in 2010 with 89 participants, by 2013 there were 978 and now there are over 5300 living and working in rural communities. Seventy four percent are carrying out rural development activities with 50% focusing on local specialities and products. The central government has injected 2m¥ into each scheme (2.5m¥ for very remote rural areas) and this is matched by the local municipality. Half the money is wages and the other half is for development activity. People start by doing one year and then apply to do two more if both parties agree.

The author met two Local Community Development officers from this scheme. Aoki-san worked for Minabe town and focused on the Minabe-Tanabe GIAHS (see later), with a particular interest in a ume (plum) schools project, sea turtle conservation, and to make more of the local Bincyotan charcoal production & the local charcoal museum. He was interested to develop the latter as a tourist offer and we spent time discussing European models of charcoal production to add to this development.

In contrast, Sano-San lives and works in Nosegawa (see earlier). With a population of 380, lack of labour was becoming an issue along with a severely skewed population structure (Figure 35). Her job is to develop alternative streams of income in collaboration with the local communities (if the reader recalls Nosegawa is actually three settlements merged into one functional unit). One of the biggest events she supports is the annual Nose District festival and farmers market, which draws people from outside the area.

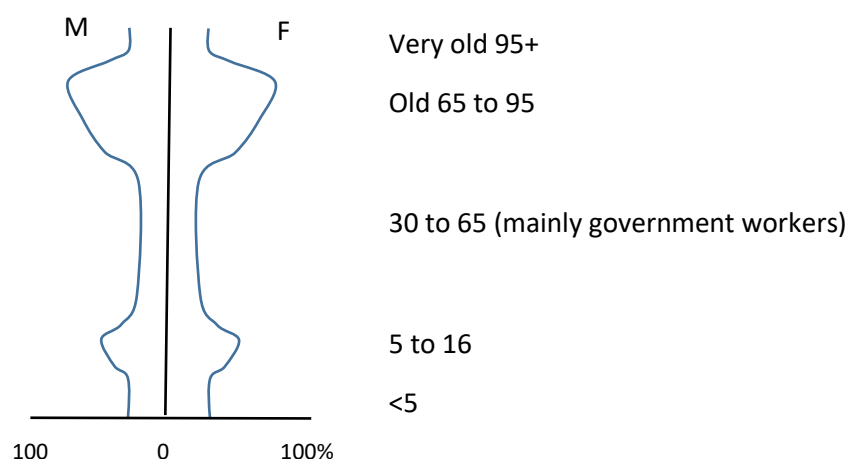


Figure 35 – Rough population structure of Nosegawa, Nara Prefecture July 2019

(source: various Nosegawa villagers)

Sano-san has also been given an abandoned rice paddy by the community, where she has started a market garden with the aim of becoming financially independent from the LCDC. To do this she needs a greenhouse. The produce is sold locally and at the Nosegawa Tourist Information Centre, which doubles as a hotel, restaurant and craft shop. Part of her job has been to support and encourage other small farmers to go organic in order to add a premium to their products. Related to this is a WOOF project for Nosegawa, which they are developing. WOOF (Willing workers on Organic Farms) is designed to provide a labour source where it is lacking. In order to make this happen,

Nosegawa have converted part of their old school into rental accommodation, this provides a temporary home without the commitment of purchase for a young person (often out of their financial reach). Given the amount of abandoned houses in rural Japan, such a situation seems almost paradoxical. The problem is that abandonment does not lead to sale, lease or rental; Japanese people remain attached to their rural roots and the house or land provide that connection. Many are so dilapidated they are not fit for habitation.

3.6.4 Local Actors

Working with Sano-San is Tsuda-san who came to live in the village when she married her husband. Tsuda-San is the *de facto* community leader, which she became on the unexpected death of her husband a year ago, a function he fulfilled as the Nara Prefecture Officer. Tsuda-San farms wasabi (see earlier) and runs a forest harvesting business. Speaking to Tsuda-san and other community members demonstrated how important these community leaders are in relation to social capital. It was evident that with the loss of her husband the community was still coming to grips with how to re-engage and move forward, even after a year. They felt rudderless.

A contrasting situation was Oda-San, who lives and works in Minabe. Oda-san is an electrician by trade, however, he is one of the most active community leaders the author came across during this study tour with ten roles beyond his day job (Figure 36). Many people mentioned his name and to ask if I'd met him, before the author arrived in Japan, whilst I was there and afterwards. His drive, enthusiasm and sheer 'bloodymindedness' demonstrated how effective a single person can be in pulling a community together, making a difference and focusing activity where it is needed. He is an excellent example of a bottom-up catalysing actor.



Figure 36 – Kenji Oda-San and his business card (he can only just get it all on!)

3.6.5 Opportunities for Cumbrian marginal farming

It is evident that catalysing actors can have profound effects on how rural development unfolds in any place. The ability to draw people together **and** empower them is central. The two do not always occur together. What was evident in Japan, is the recognition that rural development to support cultural capital requires finance. Empowerment can also come from collaborative governance structures as exhibited by *Akizuno Garten* and the Yoshino timber producer group, but these partnerships need catalysing actors to make a difference – someone who drives the group to aspire and to believe in themselves. The important lesson here is the push to diversify products in more innovative ways and also to re-activate traditional income streams.

The other interesting feature is whilst both top-down and bottom up exist in spades in the UK, the third way of the LCDC system is worthy of further exploration. There has been some movement in this direction with the introduction of facilitation funds for farmer groups in key catchments in England recently. There is, nevertheless, a greater subtlety to consider which is to insert the person into the local community, so that they become immersed and begin to appreciate the local issues from the view point of a locally-living person.

3.7 Territorial Land Management systems

Within Japan there are two geographical and management systems which are designed to protect traditional agricultural systems with a high socio-culture value. GIAHS (Globally Important Agricultural Heritage Systems) are designated through the FAO (Food & Agriculture Organisation) and J-NIAHS via the Japanese government. Both of these were investigated as part of this fellowship, given its relevancy to the culturally important Cumbrian hill farming system and more broadly, the UK.

The value of these types of designation for marginal hill farming in Cumbria addresses the following issues specifically :

- ISSUE 1: low direct GVA in upland farming
- ISSUE 2: poor recognition of the indirect benefits of hill farming
- ISSUE 3: lack of integrated hill farm support for multiple capitals
- ISSUE 4: cultural landscapes in need of management to maintain HNV
- ISSUE 7: loss of subsidies and grants post Brexit
- ISSUE 8: marginal farming system limiting opportunities
- ISSUE 10: loss of labour, farming businesses and related communities
- ISSUE 11: reliance on diversification to support farm incomes, either grants or additional work/products
- ISSUE 12: move away from agricultural production to public goods provision
- ISSUE 13: restructuring of upland farming away from agriculture
- ISSUE 14: rural depopulation & rural population restructuring
- ISSUE 15: lack of understanding between urban & rural populations

3.7.1 Globally Important Agricultural Heritage Systems

Japan currently has eleven regions with designated GIAHS. Introduced by the FAO in 2002, the concept is designed to conserve and sustainably manage traditional agricultural systems, which are under threat from agricultural industrialisation and intensification. The main thrust is to work with farmers to demonstrate the ecological, economic and social benefits of maintaining ancient farming practices by recognising the interrelationship between people and place (Figure 37).

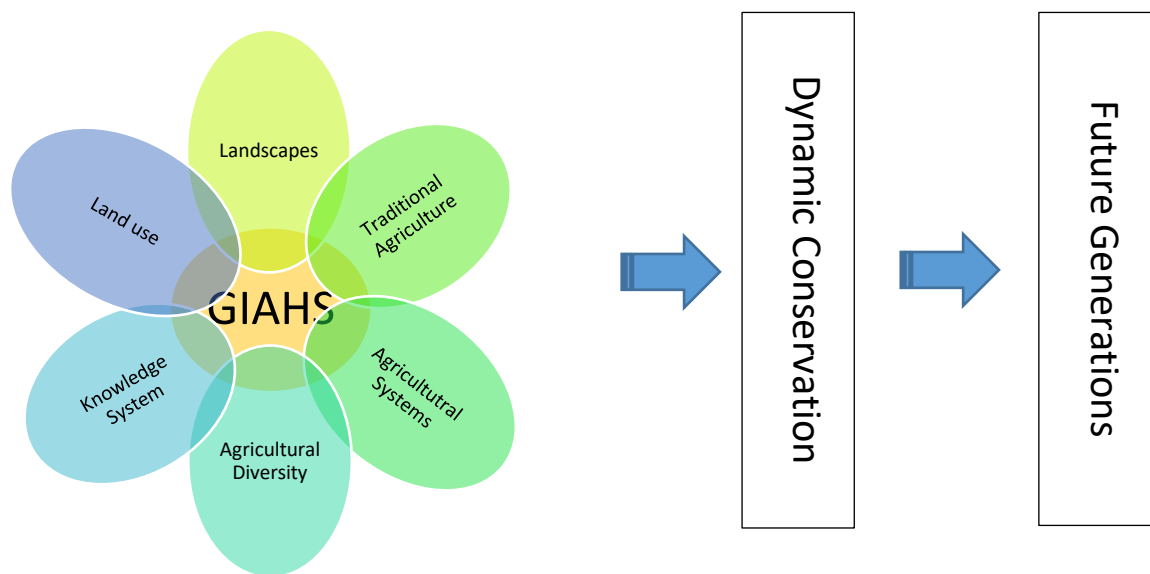


Figure 37 – GIAHS relationships

(Source: adapted from R Nakahaya, Minabe Town Agriculture Officer, MAFF, 15/7/19)

GIAHS are designated on the basis of FIVE main criteria:

1. Food and livelihood security
2. Agro-biodiversity
3. Local & traditional knowledge systems
4. Cultures, value and social organisations
5. Landscapes and Seascapes features

GIAHS is applied typically to developing nations, nevertheless, the Japanese Government recognised that their policies of economic development for agriculture threatened the *Satoyama* system of the Minabe-Tanabe area (within this study area of the Kii Peninsula) and achieved designation in 2015. It is very unusual for a developed nation to employ and be granted GIAHS, there are only three other states currently in this situation (Korea, Spain and Portugal).



Minabe-Tanabe GIAHS logo

The author visited the Minabe-Tanabe Ume (plum) region as part of this fellowship. Key elements of the traditional farming system was *satoyama* - the agroforestry system which once covered most of

upland Japan. The integrated nature of this socio-cultural system and its water management and related biodiversity made it an ideal candidate as GIAHS (Figure 38).

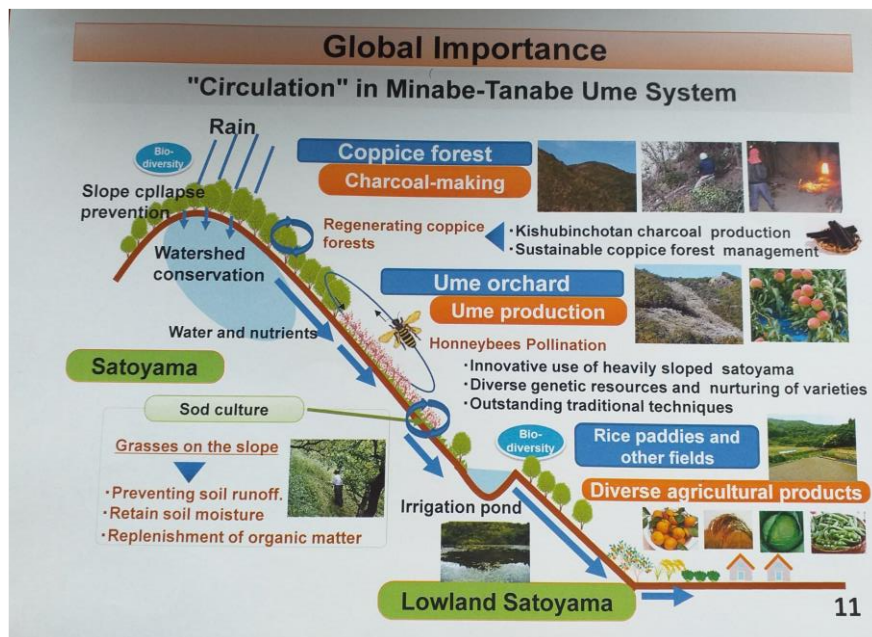


Figure 38 – Minabe-Tanabe Ume System underpinning GIAHS Designation

(Source: R Nakahaya, Agriculture Officer, MAFF, 15/7/19)

In the three years since designation the focus has been to raise the profile internationally, whilst in parallel working with the local communities to demonstrate how the brand can be used to add value to their products. A range of events have been organised, exchanges from other overseas GIAHS, linkages with urban Japanese, internships from overseas via FAO, an product export project created. Projects in the last year have included a resource inventory of the key elements of GIAHS designation, a schools education project, a sea turtle conservation programme and the charcoal pizza project (see earlier) (<http://www.giahs-minabetanabe.jp/> Accessed: 15/09/19) (Figure 39).



Figure 39 – GIAHS in Action: charcoal, ume and rice (the key elements of *Satoyama*)

The value of GIAHS a concept cannot be under-estimated particularly in terms of future agricultural sustainability. These types of systems have adapted to function effectively in the environments they have evolved within. Reed (2019: 15) notes:

'The value of understanding these cultural and environmental contexts is increasingly, by researchers, organisations, and policy makers, as important for addressing issues of agricultural sustainability. Context is important because cultural values are not always integrated within existing policy research and implementation, resulting in many interventions failing due to lack of understanding of the cultural and historical backgrounds. This can sometimes lead to a poor reception by the very people and societies they are intended to help.' [this author's emphasis]

3.7.1 Japanese Nationally Important Agricultural Heritage Systems

There are of course, sites that do not reach the GIAHS criteria for designation, consequently MAFF-Japan have set up their own national scheme echoing the same principles. J-NIAHS (Japanese Nationally Important Agricultural Heritage Systems) are designated using five of the GIAHS criteria and then three, which have been identified by the Japanese government:

1. *Resilience to change* – to ensure that the agricultural system is reliably conserved and inherited, a high resilience to disasters must be present
2. *Participation of various entities* – agricultural systems are inherited not only by local residents but also new mechanisms involving the participation of various entities (ie. water management, the forest industry or biodiversity conservation organisations in this context)
3. *Promotion of the sixth industrialisation* (ie. adding value to products, see earlier) – regional revitalisation and conservation of agricultural systems are pursued by the community-wide promotion of the sixth industrialisation. (Source: J-MAFF, 2019).

An example of J-NIAHS are the rice fields of Aragijima, which were designated in 2013. These rice fields (Figure 40) are the remnants of a field system developed in 1658 by the local village official. There are currently 54 paddies managed by only six farmers. The system is not so well developed as for GIAHS; in Aragijima there is a single viewing point (which is mind blowing (Figure 41)), some walking routes and a small community *michi no eke* (wayside shop). Even the two interpretation boards are not presented in English, but only Japanese and Korean. There is however, plenty of

potential with a number of abandoned buildings nearby, with scope to create a good interpretation centre. Given the beauty of the field system there is already a reasonable size car park and toilets!



Figure 40 – the Aragijima Rice Paddies, Wakayama Prefecture July 2019



Figure 41 – Aragijima Viewing Point Interpretation Panel (24/7/19)

3.7.3 Opportunities for Cumbrian Marginal Farming

The potential for GIAHS designation for the Cumbria hill farming system must be explored. Not only to enable the system to be conserved, but recognised nationally and globally as a traditional farming system. Many of the five key criteria are already met, as discussed in Part 1 of this report, particularly the socio-cultural aspects; the only one with some doubt is Criterion 2 – the agro-biodiversity; due to inappropriate previous agricultural policy.

It is proposed here that for Cumbrian hill farming systems this is a designation, which could be re-instigated, particularly with the direction of travel of the Lake District WHS OUV and the new National Park Management plan, which is currently under construction (2020 to 2025). Climate

change mitigation, nature recovery and farming & forestry management are the keystones of the plan. The only drawback is that there is no financial package in place, which comes with GIAHS designation. With respect to the J-NIAHS concept the three additional criteria are also of interest to Cumbrian upland farming systems, particularly as the three aspects are central to current activity:

1. *Resilience to change* – climate mitigation is key to all locally evolving plans since the effects of Storm Desmond in 2015
2. *Participation of various entities* – there are many competing land uses and property rights for agricultural land in Cumbria, notably water management, biodiversity conservation and recreational pressure.
3. *Promotion of the sixth industrialisation* (ie. adding value to products, see earlier) – given the changing policy context, adding value will become the lynch pin of survival for many hill farming businesses.

3.8 Summative Comments – Lessons learnt

Five main areas have been explored with regard to cultural capital in marginal farming systems in Japan, these are: renewed diversification, diversification innovation, community projects, catalysing actors and territorial land management designations. With respect to the fifteen issues identified in Part 1 of this report Table 8 summarises where the five main ideas can address them. Whilst Issue 9, destabilising farming system via decoupling and modulation, cannot directly be solved through the application of various innovations, the cumulative effect of using cultural capital to develop a more resilient hill farming sector should go some way to resolving this state of affairs.

	Low direct GVA in upland farming	Poor recognition of the indirect benefits of hill farming	Lack of integrated hill farm support for multiple capitals	Cultural landscapes in need of management to maintain HNV	Limited enterprise choices on hill farms	Lack of cultural and social capital financial support	Loss of subsidies and grants post Brexit	Marginal farming system limiting opportunities	Destabilisation of farming system through decoupling & modulation	Loss of labour, farming businesses and related communities	Reliance on diversification to support farm incomes, either grants or additional work/products	Move away from agricultural production to public goods provision	Restructuring of upland farming away from agriculture	Rural depopulation & rural population restructuring	Lack of understanding between urban & rural populations
Farm level															
Renewed diversification	☺	☺			☺		☺	☺				☺	☺		
Diversification: alternative crops	☺				☺		☺	☺			☺		☺		
Diversification: agri-tourism		☺	☺	☺		☺				☺		☺		☺	☺
Community level															
Community driven projects						☺				☺	☺		☺	☺	☺
Catalysing Actors		☺								☺	☺	☺	☺	☺	☺
Territorial Landscape Level															
GIAHS	☺	☺	☺	☺			☺	☺		☺	☺	☺	☺	☺	☺
J-NIAHS	☺	☺	☺	☺			☺	☺		☺	☺	☺	☺	☺	☺

Table 8 – Addressing UK Hill Farm Issues via Japanese cultural capital

PART 4

Recommendations

From this critical analysis it is apparent that there are a range of opportunities based on cultural capital, which could be considered for hill farming businesses and communities in Cumbria. These are clustered into those possibilities operating at the farm business scale, those for communities to consider and others operating at a landscape scale.

Renewed diversification was the first area of interest focusing on **farm wood management** and the **production of charcoal as a food ingredient**. Second, **alternative crops** such as wasabi and shiitake mushroom growing provide diversification potentials. Another area of diversification is **agri-tourism** focused on food production methods, cuisine, a concept known loosely as 'rent-a-paddy' whereby urbanites rent rice paddies from the local farmer to produce their own rice and countryside stay, which is fundamentally working farm holidays.

Whilst these ideas focus on the farm unit itself, other possibilities revolve around the development of **community projects** such as **government sponsored roadside farm shops** and bottom-up **community driven green tourism ventures**. Another important result was the role of key **catalysing actors** who galvanised and led their communities.

The final area of interest is the application of territorial land management designations. The first is **Globally Important Agricultural Heritage Systems**, an FAO system focused on supporting and celebrating traditional farming systems through high quality branding and diversification. The five key themes are: food & livelihoods security; agro-biodiversity; local and traditional knowledge systems; cultures, value & social organisations, and landscapes/seascape features. The second is a **national agricultural heritage scheme**, including the same five themes as GIAHS with the addition of resilience to change, partnership management and adding value to local products.

Having said this there are distinct cultural differences between the UK and Japan, which do need to be taken into consideration, which could limit possibilities. We can view this in two ways:

1. Adoptable opportunities (do-able in our culture)
2. Appropriate opportunities (understandable in our culture)

With regard to the former, there will be cultural capital activities, which fit well with the business model and practical management systems of hill farming, which gradually move towards those

which are less possible at present due to financial constraints, or certain skill sets & knowledge, for example. The second control, appropriateness is more to do with cultural variation. As discussed, Japanese culture is underpinned by religion related more closely to the environment, the role of food, a more contemporary relationship of the general population with agriculture and with it, closer community ties. Western religion's relationship, on the other hand, with the environment is more external and controlling. Furthermore, UK rural communities are just that – multiple communities of place (farming, non farming, retired, commuters etc..) many of whom are several generations removed directly from farming. This make community driven projects more complex to deliver.

Consequently, appropriateness and adoption of opportunities form a continuum of possibilities (Figure 42). At one extreme are those which are appropriate and adoptable; these are typically farm-based and generally mechanistic in approach and do not rely on cultural variation (green zone). At the other extreme are those opportunities which not adoptable and harder to appropriate; they are difficult to integrate and require major cultural re-alignment in order to become viable (red zone). In between is a range of activities, which could, with different levels of support, assist with place-based rural development for hill farming. Figure 42 is therefore aspirational but we need to be - billions have been spent to support hill farming, the industry still struggles and remains marginal.

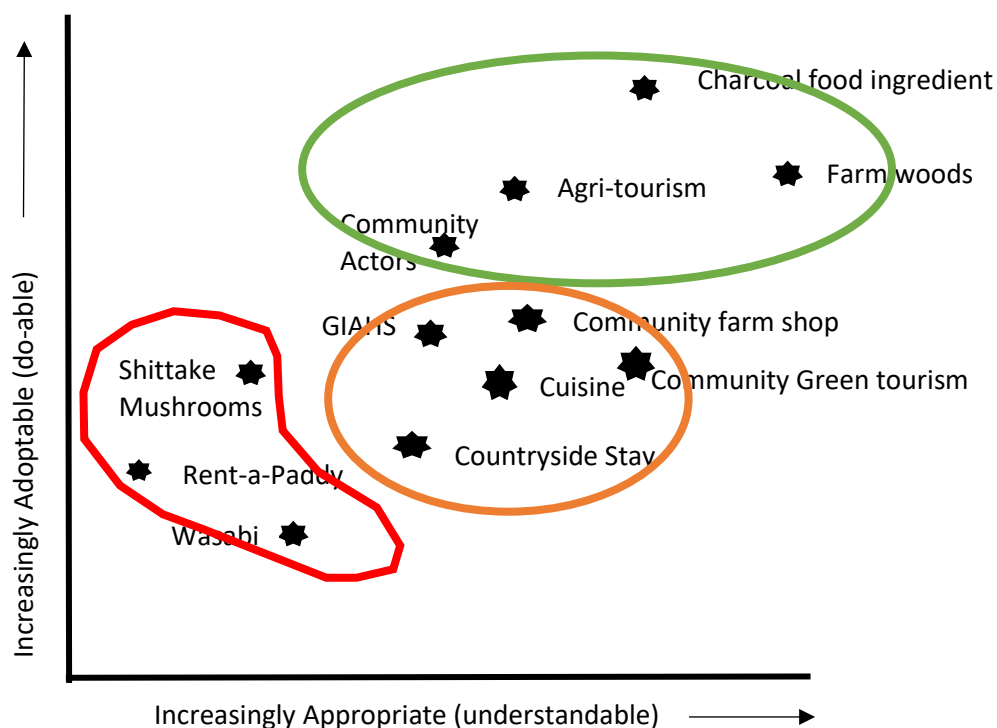


Figure 42 – Adoptable & Appropriate: continuum of Cultural Capital Opportunities

From this critical analysis, the following specific recommendations are:

1. Reactivate farm wood management on farms through a peripatetic practical woodland management team.
2. Explore the market of charcoal as a food ingredient and develop demand and supply.
3. Explore the opportunities for experience agritourism and identify potential suppliers.
4. Apply to the Shared Prosperity Fund via Cumbria LEP for a community farm shop grant scheme.
5. Identify catalysing actors in every community and provide training, support and community facilitation.
6. Develop an 'Akizuno Garten' style farm diversification academy in Cumbria
7. Approach DCMS/DEFRA to support application for GIAHS for upland farming systems.

Next Steps

1. Disseminate these findings at local, regional and national level.
2. In collaboration with key stakeholders in each themed area make the recommendations happen!

Concluding remarks

Whilst these types of opportunities do exist, it is important to recognise, of those that can, Cumbrian hill farmers and farmers of other uplands have traditionally embraced a range of diversification activities as part of their businesses. Adding value to agricultural produce and farm accommodation are the most common. One of the hill farming business's core strengths is adapting to changing situations in order to make their operation resilient. The challenge comes when the direction of travel accelerates too fast for many of them to respond effectively. There are a plethora of constraints amongst which financial capital, risk aversion, limited labour, lack of knowledge & skills and general predisposition are commonly cited (CRE, 2019). Furthermore, community development for agricultural purposes as operated in Japan is more unusual in the UK, most likely because the proportion of farming families is miniscule in UK uplands in contrast to contemporary Japan. In other words, few people in UK rural communities directly rely on the continuation of agriculture for employment and consequentially overlook the possibilities.

Having said this, society often forgets that hill farming is not just about producing food. The system provides a plethora of other benefits – biodiversity, flood control, climate mitigation, recreation and cultural heritage to name but a few. The switch to paying for these public goods away from production support proposed by the English Government demonstrates this. Hill farmers are pleased that there is finally tangible recognition for goods and services which they have long provided, but received neither formal recognition nor financial redress. Nevertheless, hill farming is much more than that. It is a relationship between people and the natural environment, a cultural landscape formed from a range of tangible structures and intangible practices, a blend of social and cultural capital, which in turn underpins its natural public goods through its management practices. If we do not celebrate and support hill farming, its people and culture as equally as environmental public goods, then we impoverish ourselves and our society. Indeed in Cumbria, we celebrate this through the inscription of World Heritage status for the Lake District, not forgetting our sister site of Hadrian's Wall in the north of the county!

References

- Attwood EA & Evans HG (1961) *'The Economics of Hill Farming'* University of Wales Press: Cardiff
- Backshall J, Manley J & Rebane M (2001) *'The Upland Management Handbook'* English Nature: Peterborough
- Bonn A, Rebane M & Reid C (2009) 'Ecosystem Services: a new rationale for conservation of upland environments' Ch25 p448 to 474 in: Bonn A, Allott T., Hubacek K. & Stewart J *'Drivers of Environmental Change in Uplands'* Routledge: London
- Burton R, Mansfield L, Schwarz G, Brown K and Convery I (2005) *'Social Capital in Hill Farming.'* Report to the International Centre for the Uplands: Hackthorpe: Cumbria
- Caskie P, Davis J & Wallace M (2001) 'Targeting disadvantage in agriculture' *Journal of Rural Studies* Vol 17 p471 to 479
- Cumbria LEP (2017) *'Cumbria Rural & Visitor Economy Growth Plan,'* Cumbria LEP: Penrith
- Department of Environment, Food and Rural Affairs (2009a) *'Farm Practices Survey 2009 – Uplands and Other Less Favoured Areas (England)'* National Statistics, DEFRA: London
- DEFRA (2017) *Agricultural Census 2016* <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june> Accessed: 24/08/19
- DEFRA (2018a) 'Health & Harmony: the future of food, farming and the environment in a Green Brexit.' Cm9577 Accessed (10/2/19)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684003/future-farming-environment-consult-document.pdf
- DEFRA (2018b) 'Agriculture Bill' Accessed (10/02/19) at:
<https://publications.parliament.uk/pa/bills/cbill/2017-2019/0292/18292.pdf>
- Drew Associates (1997) *'Economic Evaluation of the Hill Livestock Compensatory Allowances Scheme in England.'* Drew Associates & University of Exeter: Exeter
- Drewitt AL & Manley V (1997) *'The vegetation of the mountains and moorlands of England- national assessment of significance'* English Nature Research Reports No218
- English Nature (1998) *'State of Nature: the upland challenge'* External Relations team: Peterborough
- Franks J, Lowe P, Phillipson J & Scott C (2003) 'The impact of foot and mouth disease on farm businesses in Cumbria.' *Land Use Policy* Vol 20 p159 to 168
- Hoogeveen Y, Petersen J-E, Balazs K & Higuero I (2004) *'High nature value farmland: Characteristics, trends and policy challenges.'* European Environment Agency: Luxembourg
- LDPNA 2015 *'Lake District Partnership Plan'* LDNPA: Kendal
<http://www.lakedistrict.gov.uk/caringfor/partnership/ldnppmanagementplan> Accessed: 10/1/19
- Mansfield L (2011) *'Upland Agriculture & the Environment.'* Badger Press: Bowness on Windermere
- Mansfield L (2018) *'Upland Resource Management: New Agendas for the Rural Environment.'* Whittles Publishing: Dunbeath.

Midmore P., Sherwood A-M, Hounscome B, Hughes G, Jenkins T, Roughley G & Russell S (1998) '*LFA Policy in Wales: A Review of the Socio-Economic and Environmental Effects of the HLCA Scheme*' University of Wales: Aberystwyth

Natural Capital Committee (2014) '*Towards a Framework for Defining and Measuring Changes in Natural Capital*' Working Paper 1
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/516946/ncc-working-paper-measuring-framework.pdf Accessed: 12/07/16

Ostermann P.O. (1998) 'The need for management of nature conservation sites designated under Natura 2000.' *Journal of Applied Ecology* Vol 35 p968 to 973

Pine, J II & Gilmore JH (1998) 'Welcome to the Experience Economy.' *Harvard Business Review*
<https://hbr.org/1998/07/welcome-to-the-experience-economy>

Putnam R. (1993): *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press, Princeton.

Ratcliffe D. (2002) '*Lakeland: the wildlife of Cumbria*.' Collins New Naturalist: London

Thompson DBA., Macdonald AJ., Marsden JH. & Galbraith CA. (1995) 'Upland Habitat Management in Great Britain: a review of international importance, vegetation change and some objectives for nature conservation.' *Biological Conservation* Vol 71 p163 to 178

Towle B (2018) '*Kumano Kodo Nakahechi Official Guide*.' Kumano Kodo Tourist Information Centre: Tanabe.

UNESCO (1998) '*Operational guidelines for the Implementation of the World Heritage Convention*' UNESCO

Wallace M & Scott C (2018) '*Impact of Brexit Scenarios on Grazing Livestock Farms in the Lake District National Park*.' University of Newcastle.
<https://research.ncl.ac.uk/esrcbrexitproject/outputs/LDNP%20Brexit%20report%20-final.pdf>
Accessed: 1/02/19

Whitby M (1994) (eds) '*Incentives for Countryside Management: The Case of Environmentally Sensitive Areas*.' CAB International: Wallingford

Williams R (1981) '*Culture*.' Fontana: London

Wilson RM, Busque J, Fawcett RH, Jones JW, Morse DJ, Tait EJ (1997) '*Economic Evaluation of the Hill Livestock Compensatory Allowances Scheme in Scotland*.' Institute of Ecology and Resource Management, University of Edinburgh: Edinburgh

Appendix 1 – List of Interviewees

Interviewee	Position	Organisation
Rural Development	Deputy Director, Rural Development	MAFF Japan
Countryside Stay	Director, CS (Nouhaku) Promotion Office	MAFF Japan
Rice Heritage scheme	Rural Environment Conservation office	MAFF Japan
6 th Innovation	6 th Innovation Officer	MAFF Japan
Mountain & hill payments	Deputy Director, HMA	MAFF Japan
Japanese Agriculture	Deputy Director, Regional Development	MAFF Japan
National Park system	Deputy Director General	Ministry of Environment
Academics (6)	Environment/rural devt/architecture	Kyoto University
Academics (2)	Rural devt.	Ritsumeikan University
Agri-tourism operators	Director and Guide	Lac du Biwa Tours
Agri-tourism	Site Guide	Akizuno Garten
Local MAFF official	Manager	Wakayama MAFF
Farmers (3)		Tanabe area
Added value (3)		Tanabe area
Government Officer	Chief Assistant manager, UME division	Minabe, Wakayama MAFF
Revitalisation officer	LCDC	Wakayama MAFF
Local Actor	Various hats!	Minabe
Farmers (4)		Minabe
Added value (3)	Local businesses	Minabe
Charcoal producer	Local business	Minabe
Y-K national park info	Park Officer	Yoshino-Kumano NP
WHS info	Local WHS Manager	Bureau of Cultural Affairs
Food Entrepreneurs (2)	Local Businesses	Hongu
Timber Revitalisation	Director, Wood Promotion Office	Yoshino City
Yamamori	Private contractor	Yoshino
Timber processor	Mill owner	Yoshino
Added value (3)	Local businesses	Yoshino
Farmers (2)		Yoshino
Farmers (2)		Nosegawa
Revitalisation officer	LCDC	Nara MAFF
Added value (2)		Nosegawa
Local Actor		Nosegawa

Appendix 2 – what is LEADER?

LEADER (*Liaisons Entre Actions de Développement de l'Economie Rurale*) is an EU initiative, which uses a bottom-up approach to deliver rural development. Local people are empowered to solve their own challenges. Since its inception in 1991, it has gone through various iterations (LEADER 1, LEADER II, LEADER+ and RDPE Leader in the UK).

The philosophy of LEADER operates through the seven specificities:

- Bottom-up planning – using local community representation to select which projects receive funding;
- Innovation – to explore experimental forms of rural development that might otherwise struggle to receive financial support;
- Horizontal partnership – working across sectors of rural development, rather than vertically (within, say, just agriculture or nature conservation);
- Easy access to finance – by streamlining paperwork, making the application process accessible to all;
- Networking – working with other LAGs and LEADER areas to build critical mass;
- Complementarity – financing projects that are not fundable from other EU sources;
- Territorialism – focusing on local participation to exploit local resources and use this cultivate territorial identity.

Once a plan is accepted, a LAG is formed from local community representatives (private and public sector, charities and individuals) and it then has access to a block grant to be allocated to local projects. LAGs are a good example of local-to-external connectedness with their mixed membership spreading beyond the farming community. The first three LEADER programmes operated outside the mainstream support system of the EU, allowing them to support ideas that would not receive funding from other grant initiatives. However, it did mean that funding was much lower than for main rural development policies; for example, the England RDP received 996.1m euros, but LEADER+ had only 5.3% of this budget.

It is important to remember that, while officially it is a scheme designed to tap social capital through increased innovation and capacity building, many of the outputs are economic and environmental, spread across the entire rural economy. The types of project supported through LEADER+ were far ranging, including: the re-introduction of the great bustard on Salisbury Plain, the conservation of

old apple orchards, provision of childcare, cyber cafés, celebrations of local artists and farm diversification.

The EU LEADER+ programme became so successful, that it is now the main approach to rural development under Axis 4 of the European Agriculture Fund for Rural Development. However, there has been some tension about the funding allocation becoming more top-down controlled in the UK.