



Sheepdrove Organic Farm

SUMMARY

INTRODUCTION

UKCIP carried out a climate change impacts audit of the farm to help them understand the potential threats and opportunities that climate change will bring to their business.

“I would say that a process of considering the long-term future of a business can often benefit from the broad perspective provided by UKCIP” Jason Ball, Farm Manager.

KEY MESSAGES

- **Climate change is likely to have a number of implications for Sheepdrove Organic Farm, some of which will be positive and some will be negative. The table below (see under Vulnerability) summarises some of the potential impacts that each of the expected headline changes may have on Sheepdrove Organic Farm.**
- **Although agricultural businesses are sensitive to physical and biological changes they are used to responding to natural variability, i.e. highly sensitive but also with high adaptive capacity.**

ABOUT THE COMPANY

The farm is owned by the Kindersley family trust and the business is run by a partnership of family members. It is an SME, made up of a number of different enterprises with several activities including arable and livestock farming, horticulture, a food community, conference facilities, wholesale, retail and conservation projects.

Due to the nature of farming and land ownership, long timescales are potentially important when making decisions. This means that climate change is an important consideration in business planning. Sheepdrove Organic Farm is involved in several activities to improve their environmental performance. Adaptation to climate change had not been explicitly considered but is now being looked at in order to maintain their high reputation in this area. In addition, it is recognised that it may be useful to understand and prepare for any impacts on productivity, business continuity and markets.

METHODS AND RESOURCES

One to one meeting and site visit with UKCIP and farm manager to carry out a climate impacts audit, based on UKCIP's BACLIAT tool.

KEY PLAYERS

Internal:

- Farm Manager, Manager for Biodiversity and Alternative Energy, Operations Manager

External

- Project Officer for Business at UKCIP

VULNERABILITY, RESILIENCE AND EXISTING ADAPTATION MEASURES

Agricultural activity by definition is closely linked to the natural environment, relying on biological processes and outdoor activity. It is therefore sensitive to physical and biological changes but also used to responding to natural variability. Much of Sheepdrove Farm lacks shade and shelter, which increases the vulnerability of livestock to the impacts of intense heat and stormy weather. The current outdoor staff at Sheepdrove however, are thought to be able to cope very well with extreme weather. Like all farms their heavy reliance on water is a source of vulnerability during periods of drought although they have a reedbed, which helps to replenish the groundwater.

The buildings at Sheepdrove are thought to be quite well adapted to high temperatures with natural passive ventilation that proved to be adequate through the hot summer of 2006. The back-up generator provides some resilience against potential loss of electricity supply caused by extreme weather, although it does not cover all areas. Most of Sheepdrove's supply chains are relatively short, which reduces their exposure to extreme weather events. Moreover, if such events were to disrupt the supply chain, some resilience would be provided by the large amount of storage space in the grain stores and kitchen. However, there is limited storage at the butchery.

The business model at Sheepdrove farm is very much about diversification and they are used to identifying and developing new products. This coupled with the knowledge and expertise of staff and the ability to cooperate with other growers means that they are likely to have the capacity to adapt to any change in their markets and new opportunities that climate change could present.

CHANGE	IMPACT
Hotter, drier summers and increased frequency of drought	<p>PROCESS</p> <p>A reduction in plant growth potentially leading to lower productivity of livestock and altered quality of the wheat crop. Water troughs will have higher demand. There might, in very extreme situations, be a risk of troughs running dry which would have implications for livestock health and monitoring by staff. The water table may get lower so that abstraction becomes more difficult. Higher temperatures increase the energy requirement for chilling meat. Added costs.</p>
	<p>LOGISTICS</p> <p>Regional water shortages could mean that mains water increases in price and increased demand could lead to Sheepdrove reaching the limit of their abstraction allowance.</p>
	<p>PEOPLE/ PREMISES</p> <p>Very high indoor temperatures could lead to staff and visitor discomfort.</p>
	<p>MARKETS</p> <p>Increased demand for new products, such as wood, BBQ meat products. Growing market for farm tours and other leisure based activities. Potential diversification into new markets like wine or different herbs.</p>
Milder winters and decreased frequency of snow	<p>PROCESS</p> <p>Changing lifecycle patterns of pests and crops, leading to crop damage.</p>
	<p>PEOPLE/ PREMISES</p> <p>Lower winter heating requirements and complaints from visitors.</p>
	<p>LOGISTICS</p> <p>Roads blocked by snow/ ice less frequently Less travel disruption.</p>
Wetter winters and heavier downpours of rain	<p>PREMISES</p> <p>Leaking roofs in the staff accommodation might result in dissatisfied staff and repair costs.</p>
	<p>PEOPLE</p> <p>Wet and muddy outdoor conditions could also create comfort and productivity issues for staff, especially if the mobility of farm vehicles were reduced.</p>

Reduced cloud cover (high uncertainty)	<p>PEOPLE</p> <p>Sun overexposure of outdoor staff and associated health, comfort and productivity issues.</p>
All trends	<p>PROCESS/ MARKETS</p> <p>Altered lifecycle timings of plants and pests and the characteristics of soils. This could have an effect on the performance of crops such as cereals, beans and herbs. Added costs and reduced yield would impact on the profit levels and could affect viability of arable enterprises.</p>
Extreme events (wet, windy weather and heatwaves)	<p>LOGISTICS</p> <p>Travel disruption, especially in surrounding valley which has flood-prone zones; possible disruption of deliveries, supplies and staff and visitor travel.</p> <p>Damage to mains electricity supply (local distribution network).</p> <p>Erosion of sloped land (although chalk is fast-draining and less vulnerable than other soils). Erosion of road sides where land is sloped. (Intense run-off from road surface.)</p>

OUTCOMES

Report summarising vulnerabilities, resilience, existing adaptation measures and potential impacts.

CONSTRAINTS

- Agriculture is a highly competitive industry so that it can be difficult to make long-term investments.

ENABLERS

- Free UKCIP site visit
- A business model based on diversification
- The knowledge and expertise of staff
- Their ability to cooperate with other growers

TRANSFERABLE LESSONS LEARNED

- With minor modifications, UKCIP's BACLIAT tool can be used as a climate impacts audit checklist.

CASE STUDY PROFILE	LOCATION	Lambourn, West Berkshire
	SCOPE	Company
	SECTOR	Agriculture
	DATE	July 2007
	BUSINESS AREAS	Markets, logistics, premises, process, people
	RISK/ OPPORTUNITIES FOCUS?	Both
	CLIMATE CHANGE/ weather event focus	HOTTER, DRIER SUMMERS
		MILDER, WETTER WINTERS
		MORE HEAVY RAIN
		Heatwave
		Drought
	Cold snap	
Building adaptive capacity or delivering adaptation action	BAC	
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