



MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

Policy Brief

UK - SCOTLAND | Speyside Malt Whisky



Photo credit: Rachel Creaney



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862739

Highlands and Islands: Speyside Malt Whisky

Authors: Kirsty Blackstock, Rachel Creaney, Jonathan Hopkins and Keith Matthews (The James Hutton Institute)

Summary

Speyside Malt Whisky is a global value chain with strong cultural and geographical links to natural assets originating in the Scottish mountains. Speyside Whisky depends on mountain and lowland inputs. Whisky is produced by multi-national organisations but marketed using place-based and family brands. Whisky draws attention to water, often an unvalued natural asset in mountain regions; climate change effects water quality and quantity. The upstream land uses that impact on water are often managed by different social groups to those working in, and visiting, distilleries, setting up interesting socio-economic dynamics in the value chain. Finally, the Cairngorms National Park Authority and other stakeholder groups are focused on ensuring more of the values generated by land use, whisky and tourism remain in the local area.

Know more about the Highlands and Islands (UK-Scotland) Reference Region, its selected value chain and the regional multi-actor platform (MAP), [here](#).

Key policy messages

- Scotch Whisky protected geographical indication (PGI) is Scotland's most exported food and drink commodity.
- The Whisky value chain depends on water, impacted by climate change.
- The Whisky value chain illustrates the interaction between production and consumption (food and drink tourism) in mountain areas.
- The Whisky value chain requires a Green Recovery that considers natural, human, social and economic capital assets.

1. The Mountain Reference Region (MRR)

The Highlands and Islands MRR is part of a larger area defined as an area of naturally constrained land capability for agriculture and forestry. The upper Speyside Mountain Reference Landscape (MRL), which is the focus of the Value Chain (VC) analysis, has many large estates (often a mixture of forestry, sheep, grazing, conservation deer stalking and/or grouse shooting land uses). Estates can be profit-orientated or managed for public good outcomes. Upper Speyside is also part of the wider [Cairngorms National Park](#) (CNP), one of two Scottish National



Parks. The CNP was designated due to the mix of nationally important natural and cultural heritage, and comprises an important alpine montane system in the UK. The Cairngorm Mountains are the source of several major Scottish rivers that are threatened by climate change through impacts on quality (soil erosion, dissolved organic carbon) and quantity (with concerns over low flows and high-water temperatures combined with periodic flooding). The upland catchment consists predominantly of heather moorland, a mosaic of habitats, including dry and wet heath, blanket bog and rough grasslands. Peat soils can act as both source and sink for greenhouse gases. Much of the area is designated under EU or national biodiversity regulations e.g. the River Spey is a [Special Area of Conservation](#) under the Natura 2000 regulations. A large part of upper Speyside is [classified](#) as very remote -rural, or remote-rural but areas of the catchment are pressurised due to the inward migration and investment associated with the National Park. Despite being remote and sparsely populated, the area has a relatively high (positive) socio-economic profile compared with more socio-economically fragile areas in the Highlands and Islands. However, there are considerable differences within the local population. Currently economic value tends to accrue further down the value chains within lowland urban regions.

2. A Taste of Place?

There are about 28 distilleries in the area, with more downstream (outside the mountain boundary). Some distilleries have (re)opened due to the sustained upturn in the popularity of Scotch whisky over the past decade. These distilleries produce malt whisky (whisky made from malted barley), including single malts (premium products) from individual distilleries.

Whisky production requires:

- Malted barley (some barley is grown and malted locally, but the value chain is tele-coupled with other lowland barley producers);
- Peat may be added to the fire used in malting;
- Water (the quality of water affects the specific flavour, whilst considerable quantities are needed for cooling);
- A specific climate for maturation (Scotch must be matured for at least three years);
- Distillery-specific 'pot stills' and local, often familial, knowledge.

Distilleries are popular visitor attractions for tourists. Most Speyside distilleries, particularly those with visitor centres, market themselves as unique brands based on individual combinations of place, history and culture. However, many are owned by multi-nationals such as Diageo and Pernod-Ricard.



3. Value chain contribution to sustainability and resilience

The case considers the sustainability and resilience challenges of a biophysically fragile region dealing with socio-economic success. The rural population in the MRL is predominantly employed in the tertiary economic sector. Increasingly, rural development opportunities result from interlinkages between land used for production (food, fibre) and land used for recreation, amenity and tourism consumption. There is an emerging Scottish Government policy focus on a green recovery from COVID-19 and a just transition to a low-carbon economy. Some distillery operators contribute to upstream restoration (natural flood management and peatland restoration) to protect their assets. The connections between whisky and other value chains can be positive but there are some potential conflicts to be managed. By-products from the distilling process (draff, pot-ale) have traditionally been part of the local livestock supply chain. Recent developments in bioenergy means there is competition for these by-products, increasing their cost. Water scarcity and elevated temperatures can exacerbate a decline in Atlantic salmon and trout, on which the fly-fishing industry depends. These factors are also amplified by increased demand from domestic and tourism water use. Transportation remains a problem in remote areas. Landowners and distillery operators hold valuable financial capital, but waged labour tend to earn lower than national average income.

Finally, there are also wider questions about the social costs of alcohol, and the use of arable land for alcohol rather than food production. Increased visitor numbers due to COVID-19 travel restrictions have resulted in corresponding visitor management problems; and staff shortages in the agricultural, forestry, environment and service sectors mean that opportunities may not be fully realised.

There is currently little reference to 'mountains' in Scottish Government policy. [Different policies](#) focus on either upland habitats, geographical remoteness, or land capability for agriculture or forestry. Policy implications of our study include:

- How to better link upstream ecosystem services with downstream beneficiaries (polluter pays, payment for public goods and/or private investment in carbon markets);
- How to improve opportunities for local, including young, people in the whisky value chain; and
- How to improve the local rural development outcomes linking whisky with other local value chains.

Connections between land use, conservation, communities and economic development underpin the Cairngorms National Park Partnership Plan and Scotland's approach to a [Green Recovery](#).



Acknowledgements

Participants from the July 2021 Stakeholder Advisory Group Meeting are thanked for their contributions that improved this policy brief.

References

- Kirsty Blackstock, Rachel Creaney, Jon Hopkins and Sharon Flanigan (2021). A selection of mountain value chains: Private sector valorisation of natural capital? Mountain Value Chains Report, November 2021. [Research Note](#).
- Cairngorms National Park (CNP): <https://cairngorms.co.uk>
- Cairngorms National Park Authority (2017) [National Park Partnership Plan 2017-2022](#)
- [River Spey's designation of Special Area of Conservation](#) (SAC)
- Scottish Government (2016) [Urban Rural Classification](#)
- Scottish Government (2020) [Programme for Government 2020-21](#)
- Scottish Government (2020) [Scotland's green recovery](#)
- Scotch Whisky Association (2019) [Scotch Whisky Economic Impact Report 2018](#)

Authors

Kirsty Blackstock, The James Hutton Institute, Kirsty.Blackstock@hutton.ac.uk

Rachel Creaney, The James Hutton Institute, Rachel.Creaney@hutton.ac.uk

Jonathan Hopkins, The James Hutton Institute, Jonathan.Hopkins@hutton.ac.uk

Keith Matthews, The James Hutton Institute, Keith.Matthews@hutton.ac.uk