Food and Drink Innovation and Clustering in Scotland's Highlands and Islands: review of opportunities for engagement with the Arctic Region

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Executive summary

There is growing evidence of efforts to strengthen links between Scotland and its northern neighbours. Of particular interest has been the Arctic Region: states, nations and regions located wholly or partly inside the Arctic Circle or, as with the Faroe Islands (Denmark) and Labrador (Canada), which share significant climatic and cultural commonalities with them. Scotland's abundant natural resources, its strong historical and cultural links with the Arctic, and the socio-economic fragility of its sparsely-populated highlands and islands, with their traditional reliance on the production and processing of food and fibre, provide a strong basis for strengthening links with the Arctic Region.

A significant development was the launch of the Scottish Government's first Arctic Policy Framework in September 2019. This followed increasing engagement with Arctic and near-Arctic regions, primarily through the Arctic Circle, the largest network for international dialogue and cooperation on the region. The Arctic Policy Framework sets out the potential to reinforce Scotland's, and particularly the Highlands and Islands', close connections with northern countries and highlights shared opportunities and challenges in terms of culture, demography, connectivity, economy and sustainability.

This SEFARI Fellowship was set up to identify potential opportunities to engage with food and drink sector partners in the Arctic Region. The immediate impetus derived from a proposal, initiated by the University of Saskatchewan, to develop an Arctic Foods Innovation Cluster (AFIC). Key areas of interest for the Fellowship, which form the objectives for this report, included:

1. The Highlands and Islands as a food producing region (i.e. regional attributes shared with northern countries, e.g. provenance, slow maturing, depth of flavour, more sustainable, pristine environment, traditional methods; the opportunities and challenges facing the Highlands and Islands as a food producing region; and potential synergies with Arctic and near Arctic regions);
2. Cluster models (i.e. identification and comparison of clusters operating at local, regional, national and international levels);
3. Research and Innovation (i.e. Scottish food research strengths and innovation).

The work of the Fellowship was intended to combine analysis of secondary data and consultation with key individuals and organisations. However, given the impact on the food and drink sector of restrictions imposed in response to the COVID-19 pandemic, industry consultation was judged not to be appropriate. As there may be scope for industry consultation in future, this report identifies evidence gaps that such work could address.

The eight states exercising sovereignty within the Arctic Circle – Canada, Denmark, Finland, Iceland, Norway, The Russian Federation[1], Sweden and the United States of America (USA) – are members of the Arctic Council, an inter-governmental forum promoting cooperation and coordination in the Arctic region. Six bodies representing the indigenous peoples of the Arctic – the Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North and Saami Council – are permanent participants in the Arctic Council. The UK, along with twelve other states, thirteen inter-governmental and inter-parliamentary organisations, and twelve non-governmental organisations, has observer status. The proposal for an AFIC arose from research done under the auspices of the Arctic Council's Sustainable Development Working Group.

The strategies and policies of Arctic Council members tend to focus, though with different emphases, on: international cooperation; economic development; the environment; and the rights

[1] For economy, this report uses Russia(n) and The Russian Federation interchangeably.

and wellbeing of indigenous peoples and other residents of the Arctic region. The Russian Federation and the USA tend to prioritise economic development: both seek to further exploit Arctic mineral reserves and Russia plans to promote a Northern Shipping Route (NSR) through the Arctic Ocean. Norway also focuses on the potential for further mineral extraction, but is more explicit about the need for sustainable development. The latter is close to the views of Iceland and the Faroe Islands (part of the Kingdom of Denmark, along with Greenland), with the important distinction that both emphasise the sustainable exploitation of renewable natural resources; while the Faroese Government also sees opportunities in the development of the NSR. Finland and Sweden, while acknowledging the potential for sustainable economic development in the Arctic, appear to give greater prominence to working within the 'the capacity of nature' and to what the Swedish Government has called 'socially and culturally sustainable development' in collaboration with indigenous people. Canada's policy documents appear to go furthest in this respect, giving greater priority to the views of its indigenous peoples and of the provincial and territorial governments in planning for its Arctic region. However, there may be an element of catch-up here, as expert opinion suggests that Canada lags behind Finland, Norway and Sweden in the empowerment of indigenous peoples.

The proposal to set up an AFIC stems from a report, published in 2019, which identified three problems with Arctic food value chains:

1. General over-reliance on unprocessed food exports;
2. Bottlenecking of distribution points;
3. Limited innovation in primary and secondary product development.

Based on the report's findings, a consortium from seven Arctic Council member states (Sweden was not involved) undertook development work on an AFIC. Its developers envisaged the AFIC as an international hub connecting northern entrepreneurs, southern-based investors, research centres, businesses and bio-technology developers working in food industries that are of relevance to Arctic produce. Radiating out from this will be smaller hubs in participating countries that will focus on: business incubation; networking; consulting services; and research and innovation, particularly in by-product utilisation.

The starting points for understanding possible synergies with Scotland, and in particular the Highlands and Islands, are the Scottish Government's Arctic Policy Framework and the policy mapping work undertaken at Glasgow Caledonian University and the University of the Highlands and Islands (UHI) in 2019. This report also summarises additional policies and reports of relevance to the food and drink sector, before examining in more detail the potential for involvement by food and drink producers in Scotland's Highlands and Islands.

That more detailed examination begins with a discussion of clustering. The 'orthodox' definition of a cluster is a spatial concentration of economic activity in related sectors characterised by high incidences of traded and untraded economic interdependencies. However, researchers advise caution when discussing clustering in relation to primary production, which is often driven by the distribution of natural resources rather than other economic factors. With this caveat in mind, the structure of the food and drink sectors in the Highlands and Islands was examined for evidence of spatial concentrations of activity.

Government statistics show changing spatial concentrations in the food and drink sectors in Scotland's Highlands and Islands between 2009 and 2018. Shetland has concentrations of employment in ship building, ship repair, sea fishing and fish processing. Relative levels of employment in aquaculture have grown in Orkney and Shetland but declined elsewhere. Overall, there appear to be spatial concentrations of at least two types of food-related employment in the marine sector in all six local authority areas in the Highlands and Islands. The evidence on agriculture is mixed. Concentrations of agricultural employment have changed relatively little, but the degree of farm specialisation may have declined. Even where concentrations persist, such as for dairying in Orkney and Argyll and Bute, this appears to have resulted from declines elsewhere, rather than growth in those areas. The concentration of employment in the distilling and blending of spirits increased between 2009 and 2018 throughout the Highlands and Islands (except Shetland). In all cases this was accompanied by increased employment. There may be an element of clustering here (although perhaps not in Na h-Eileanan Siar (the Western Isles)), with gin production benefitting from economic spillovers from the whisky industry. These findings are broadly consistent with previous research into clustering in Scotland's food and drink industries.

However, in the context of the Highlands and Islands a focus on economic clusters, of the orthodox variety described above, is arguably too limiting. For, even in sectors that show evidence of clustering, notably whisky production and salmon aquaculture, there has been considerable consolidation of ownership. This matters because, although these sectors are important employers, much of the decision-making and higher-paid employment associated with their executive functions is located elsewhere. Interestingly, a recent report makes the case for a 'social enterprise cluster' for food innovation in northern Canada. This chimes with the purpose of Highlands and Islands Enterprise, which has a dual remit as an economic and community development agency for the region.

There is also a case for adopting a broad definition of innovation in the context of food and drink production. Innovation is often associated with new technologies, but can also be applied to branding and food distribution networks. Section six of this report presents a branding case study: engagement with protected names schemes introduced by the European Union (EU) in 1993. Data on scheme registrations show that the Highlands and Islands has, per capita, more awards than any EU member state.

Section seven of this report reflects further on such issues, using findings from a separate survey, conducted by the author, of micro, small and medium-sized food and drink enterprises in Scotland. Responses show that land-based food enterprises in the Highlands and Islands tend to be smaller than those elsewhere in Scotland, reflecting the continuing importance of crofting. They also suggest that there may be higher levels of female entrepreneurship in the Highlands and Islands food and drink sectors than in the Scottish economy generally.

Over half of survey respondents considered it important that their main suppliers were as local to them as reasonably possible, were competitively priced and adhered to high levels of animal welfare; while more than forty per cent considered it important that their main suppliers had high levels of employee welfare and adhered to the principles of fair trade. Respondents from the Highlands and Islands tend to evince a stronger attachment to their local area than those from elsewhere in Scotland. Moreover, there is a statistically significant relationship between the strength of respondents' local attachment and the level of importance they attach to their main supplier being as local to them as reasonably possible. However, food and drink enterprises in the Highlands and Islands also appear to be more willing than their counterparts elsewhere in Scotland to build significant trading relationships with suppliers located over 100 miles (180 km) away.

More than a quarter of survey respondents from the Highlands and Islands use some form of geographical branding on their produce. This was, surprisingly, slightly lower than the proportion based elsewhere in Scotland that do so. Respondents who use some form of geographical branding were more optimistic about their growth prospects: more than half expected their revenue to rise over the next five years; compared to less than a quarter of those who do not use any geographical branding. The largest perceived barriers to growth, for respondents throughout Scotland, were the availability of capital and time. Almost three-quarters of respondents from the Highlands and Islands use their own profits as a source of finance, compared to just over half who use banks. By contrast, about sixty per cent of respondents from elsewhere in Scotland used both sources. Thus, food and drink entrepreneurs in the Highlands and Islands may be less likely to apply to banks for finance.

Section eight of this report moves towards a gap analysis for the potential engagement of food and drink producers in the Highlands and Islands with their peers in the Arctic region. It presents, courtesy of Interface, a summary of Innovation Vouchers awarded to the food and drink sector. However, further work is needed to produce a detailed picture of innovative activities in the Highlands and Islands food and drink sector. Similarly, the wider conception of clustering advanced in this report requires testing and, if found useful, further development. This section suggests three areas on which such work might focus: fishing; 'alternative' food distribution networks and those based on geographical branding; and social and community enterprises.

An obvious but nonetheless important characteristic shared, to varying degrees, by the Arctic region and Scotland's Highlands and Islands is their peripherality. It significance stems from the fact that socio-economic peripherality is a product of the operation of economic, political and socio-cultural forces which, in general, are controlled or 'steered' by powerful agents based in core metropolitan areas. In other words, places and regions are peripheral not simply because they are remote from the main currents of economic, political and social change but also because they have been and remain subject to them.

This has significant implications for the encouragement of economic and community development through economic clustering, research and innovation. Such approaches seek to use, for the purposes of regional development, the very forces that help to maintain the peripherality of those regions. Moreover, economic and community development policies, which tend to emanate from core regions, can be insensitive to the contexts in which they are applied. This issue has particular salience in Arctic states that exercise sovereignty over the homelands of indigenous peoples. It is also relevant in the Highlands and Islands, homeland of the crofting way of life and the Gàidhealtachd.

This report, therefore, recommends against restricting attention to consideration of 'orthodox' cluster-formation and innovation policies. Widening the focus in the ways it discusses may help to secure wider community benefits. Inhabitants of peripheral areas, such as, for example, Scottish crofters and indigenous peoples living in the Arctic regions of Canada and The Russian Federation, frequently engage in small-scale processing and trading activities which, while they may not represent their main source of income, contribute to their and their communities' sustainability. In this context, it would be worth exploring broadening the policy focus from strictly economic enterprises to include social and community enterprises. For, if sustainable development of the Arctic region, and of Scotland's Highlands and Islands, is a priority, then the development of their communities, in ways that are acceptable to those communities, should be a priority. A prerequisite for this is knowing what kind of development communities want and how they propose, with appropriate long-term support, to bring it about.

Such development needs to engage with the UN's Sustainable Development Goals. Goal 8 (decent work and economic growth) is a good fit, given that a key aim of a cluster-based approach to food production is to generate economic development. There is also a link to Goal 5 (gender equality), given the focus on female empowerment in the Scottish Government's Arctic Policy Framework. An 'orthodox' cluster-based approach would seem to emphasise Goals 8 and 9 (industry, innovation and infrastructure). However, a broader conception of enterprise suggests the relevance of Goal 17 (partnerships). In addition, Goals 13-15 (climate action, life below water, and life on land) are particularly important for the food and drink sectors, the Highlands and Islands and the Arctic region.

Goals 13-15 can conflict with Goals 8 and 9, but producers are finding innovative ways to balance them, for example, by focusing on Goal 12. A number of fishing bodies see a value in securing and maintaining third-party certification, for instance through the Marine Stewardship Council, to emphasise the environmental sustainability of their catch. There is a particular tension between livestock farming, which is one of the few possible agricultural uses of much of the poorer-quality land in the Highlands and Islands and plays an important role in sustaining crofting communities, and climate action, given that ruminants produce large quantities of methane, a potent greenhouse gas. This, in turn, suggests the importance of focusing on partnerships (Goal 17) to achieve gender equality (Goal 5) and responsible production and consumption (Goal 12) as a means of seeking to balance Goals 8 and 9 with Goals 13-15.

This report provides a basis for open and informed dialogue between policy makers and the communities and enterprises that, while they may have the most to gain from such engagement, will be the ones who will, with policy support, have to build and sustain it. Dialogue could initially focus on four sets of issues. First, it is necessary to build a better understanding of what stakeholders need to do to in order to work more closely with the food and drink sectors in the Arctic region. This could be approached by setting up a 'task and finish' group of policy and business stakeholders to work through the issues raised by this report and by recent development work in the Arctic region, such as on the AFIC. Secondly, the work of such a group could be informed by analysing the experiences of producers that have developed and worked with geographical branding. Food and drink enterprises in the Highlands and Islands have demonstrated a relatively high level of engagement with such branding schemes. Given that policy proposals emanating from the Arctic region, such as the AFIC, appear to favour geographical branding, such knowledge would be invaluable in helping to gauge the potential benefits and limitations of engagement. Thirdly, it will be necessary to understand the amount and types of investment that engagement in food and drink networks in the Arctic region will require and where this could come from. Lastly, consideration will need to be given to the governance arrangements for any engagement with the Arctic region. For example, it is the UK, not Scotland, which has observer status at the Arctic Council. Any engagement with initiatives developed under its auspices, such as the AFIC, may therefore require UK authorisation. It will also be vital to ensure that any such engagement, should it go ahead, empowers communities and enterprises in the Highlands and Islands to engage effectively.