RURAL ECONOMY AND CONNECTIVITY COMMITTEE

AGENDA

11th Meeting, 2018 (Session 5)

Wednesday 18 April 2018

The Committee will meet at 9.00 am in the Mary Fairfax Somerville Room (CR2).

1. Crofting legislation reform: The Committee will take evidence from—

   Fergus Ewing, Cabinet Secretary for the Rural Economy and Connectivity, and Michael O’Neill, Crofting Bill Team Leader, Scottish Government;

   Gordon Jackson, Head of Agricultural Development and Crofting, Scottish Government;

   Ian Davidson, Head of Agriculture Policy Division, Scottish Government.

2. Salmon farming in Scotland: The Committee will take evidence from—

   Anne Anderson, Chief Officer, Compliance and Beyond Portfolio, Scottish Environment Protection Agency;

   Mark Harvey, Team Leader, Development & Infrastructure Service, Highland Council;

   Alex Adrian, Aquaculture Operations Manager, The Crown Estate;

   Cathy Tilbrook, Unit Manager, Coastal & Marine Ecosystems & Use, Scottish Natural Heritage.

Steve Farrell
Clerk to the Rural Economy and Connectivity Committee
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Edinburgh
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The papers for this meeting are as follows—

**Agenda Item 1**

Cover note | REC/S5/18/11/1
PRIVATE PAPER | REC/S5/18/11/2 (P)

**Agenda Item 2**

Cover note | REC/S5/18/11/3
PRIVATE PAPER | REC/S5/18/11/4 (P)
Purpose

1. The purpose of this session is to take evidence from the Cabinet Secretary on the Scottish Government’s proposals for crofting legislation reform.

Background

2. The Scottish Government has been considering a review of crofting legislation. To support that process, in 2016 and 2017 the Rural Economy and Connectivity (REC) Committee carried out a short, focussed review of priorities for crofting law reform. The report was published on 9 March 2017.

3. The Scottish Government ran a consultation from 28 August - 20 November 2017. On 23 March 2018, the Cabinet Secretary for the Rural Economy and Connectivity wrote to the Committee outlining proposals to take forward crofting law reform in two stages. The first stage will involve proposals for a Bill to simply legislation where there is broad support. This will be followed by a lengthier, more comprehensive, process for new crofting legislation, setting out why crofting is important and what crofting is trying to achieve.

Rural Economy and Connectivity Committee clerks
April 2018
Rural Economy and Connectivity Committee

11th Meeting, 2018 (Session 5), Wednesday, 18 April 2018

Salmon farming in Scotland

Background

1. The Rural Economy and Connectivity (REC) Committee has agreed to conduct an inquiry into salmon farming in Scotland. The inquiry aims to consider the current state of salmon industry in Scotland, identify opportunities for its future development and explore how the various fish health and environmental challenges it currently faces can be addressed.

2. On 18 April, the Committee will take evidence from the following regulatory bodies: Scottish Environment Protection Agency (SEPA), the Highland Council, the Crown Estate and Scottish Natural Heritage (SNH).

3. A SPICe briefing on Salmon Farming in Scotland was published on 13 February 2018 and is available here.

4. The Environment, Climate Change and Land Reform Committee on 5 March 2018 wrote to the Committee detailing their conclusions on the environmental impacts of salmon farming in Scotland. The letter, which contains the report can be accessed here.

5. Two evidence sessions have previously taken place. The first evidence session was held on 7 March with aquaculture research bodies. The second evidence session was held on 14 March with environmental organisations.


7. A SPICe briefing on aquaculture in Norway, Tasmania and the Faroe Islands is attached as an annexe to this paper.

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AQUACULTURE IN OTHER COUNTRIES

Background

The HIE and MS report The value of Aquaculture to Scotland states that “Production in the UK increased by some 27.1% from almost 130,000 Gutted Weight Equivalent (GWE) tonnes in 2005 to over 165,000 tonnes in 2014. This was smaller than the increase in Chile (+66.9%), although Chilean production was more volatile over the period due to disease outbreaks in 2009, which brought the industry to the brink of collapse. Production in Norway increased by almost 115% over the period, with fairly constant year-on-year increases.”

Source: HIE and MS, 2017, p 22

The HIE and MS report also considers labour productivity between the main producing countries, taken from the Marine Harvest’s 2016 report.

<table>
<thead>
<tr>
<th>Country</th>
<th>Production (Tonnes)</th>
<th>Farm Employment (FTEs)</th>
<th>Tonnes per FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>1,054,000</td>
<td>1,561</td>
<td>675</td>
</tr>
<tr>
<td>Chile</td>
<td>484,000</td>
<td>843</td>
<td>574</td>
</tr>
<tr>
<td>North America</td>
<td>148,100</td>
<td>501</td>
<td>296</td>
</tr>
<tr>
<td>Scotland</td>
<td>144,100</td>
<td>657</td>
<td>219</td>
</tr>
</tbody>
</table>

Source: HIE and MS, 2017, p 24

The rest of this paper considers the regulatory regime in Norway, the Faroe Islands and Tasmania. Norway since it is the largest producer in the world; the Faroe Islands because it has recently implemented a comprehensive and stringent aquaculture veterinarian regulatory regime in response to previous poor fish health; and Tasmania because of recent significant expansion in salmon farming.
NORWAY

As set out in (Review of the aquaculture licensing process, 2017) Norway is a country of 5.3 million people and has a land area, including mainland and thousands of islands, of 385,000 square kilometres.

Norwegian aquaculture has expanded enormously over forty years and is currently a world leader in Atlantic Salmon production. Norway reared 1.3 million tonnes of aquaculture products – almost exclusively salmon - in 2015. This production comes from 1067 licensed sites. The aquaculture industry has evolved from its small-scale inshore origins to a situation where it is largely controlled by a small number of large-scale seafood companies.

The pace of new licence grants has slowed considerably in recent years. This is partly due to the shortage of suitable sites. Developments in husbandry to counter disease and parasite issues have also tended towards the lowering of the number of aquaculture sites or densities in various areas. There is also a trend towards growing of smolts to larger size in freshwater prior to transfer to sea-sites, in order to make them more disease resistant and decrease the time they spend at sea, thus enabling better growth yields and productivity.

The Norwegian salmon farming industry has highly ambitious expansion plans which would entail production of a scale many times of that at present. These are, however, predicated on developments in containment technology and fish-growing techniques, which would be feasible in offshore locations or in closed systems.

THE NORWEGIAN LICENSING SYSTEM

The Norwegian licensing system is a two-stage process. Aquaculture operations need
1. Norwegian government aquaculture licenses, and
2. Local authority site-specific planning permission.

1. Norwegian Government Aquaculture Licenses

Aquaculture operations need an aquaculture license, granted by the Norwegian government. These licenses determine
a) where salmon can be farmed
b) how much can be produced, and
c) where and how much growth will take place in the industry (EY, 2018).

To regulate where salmon farming will be allowed to grow in Norway, The Ministry of Trade, Industry and Fisheries introduced new regulations in October 2017. These regulations divided the coast into 13 traffic light coded areas –
• green areas would be offered growth
• yellow areas would have frozen allowances
• red areas would eventually get reduced MAB (maximum allowable biomass).

The colour of each production area is based on a single factor (for now) - the prevalence of salmon lice and the damage it causes to wild salmon spawn.
Per Sandberg, the (then) Minister of Fisheries said this system would offer “… predictable growth, which also takes care of environmental considerations. Overall, the colouring of the coast now provides a sound approach for capacity adjustment of the industry” (Salmon Business).

To regulate how much salmon farming will be allowed to grow in Norway, licence tranches are released by the Norwegian Government from time to time. Adjustment of production capacity, in line with the traffic light system, occur when new licenses are granted or allow an increase on existing licenses.

Licences for most commercial species are issued in perpetuity but may be withdrawn in case of breach of conditions set out in the licence (Standing Senate Committee on Fisheries and Oceans, 2015). They become property assets. As a result they can be mortgaged, bought or sold. The commercial value of licences is currently at an all-time high due to scarcity of licences and the current profitability of the sector (Review of the aquaculture licensing process, 2017)

Auctions of salmon licences
Auctions of salmon licences earn multi-million euro one-off payments to the Norwegian Government.

In December 2017 the Norway Government offered the industry in green areas a 2% increase in capacity on existing licenses. The fee was set to NOK 120 000 per ton. Since a normal license is 780 tons MAB, the fee corresponds to NOK 93,6 million per licence. Approx. 98 per cent of the offered capacity was sold, and the farmers paid NOK 947 million in fees (preliminary numbers) (pers comm: Christopher Grøvdal Rønbeck, Specialist Director, Ministry of Trade, Industry and Fisheries, Norway, 2018)

NB: £1 = 11.0059 NOK (Financial Times currency converter 2 April 2018)

The Government also offers “development licences”. These licences are issued at no cost to the operators for projects intended to advance specific research and development (EY, 2018).

Regardless of the traffic light system, farmers that operate sites that meet certain criteria, can apply for to increase capacity. The criteria are -
- No more than 0.1 female lice per fish from 1 April – 30 September
- 1 or less drug treatment (last production cycle)

If a site meets the criteria, a formula is used to work out the number of tons of increase at license level the farmer qualifies for, with a maximum 6% per license. **The fee for capacity adjustment is NOK 120,000 per tonne.** The application deadline was 31 January and 42 applications were received. (pers comm: Christopher Grøvdal Rønbeck, Specialist Director, Ministry of Trade, Industry and Fisheries, Norway, 2018)

**Norway’s municipalities benefit from an “Aquaculture fund”**
Parliament decided to create the "Aquaculture fund" (**Havbruksfondet**) from the licence fees paid by aquaculture operators. The Government pays out the entire income from the last 12 months each year in October.

- 80% of the income from allocation rounds are transferred to the fund. The Government keep 20 per cent.
- Of the 80 percent left - 87.5% is transferred to the municipalities. 12.5% is transferred to the counties.
- The distribution among the municipalities and the counties are decides by the number of tons of MAB on sites located in each municipality/county. This mean that municipalities will benefit from being hosts to the aquaculture industry. (pers comm: Christopher Grøvdal Rønbeck, Specialist Director, Ministry of Trade, Industry and Fisheries, Norway, 2018)

In 2017, **NOK 60.4 million** was paid to 164 municipalities and 11 county municipalities (**Havbruksfondet**).

**2. Local Authority Site-Specific Planning Permission**

The local authority function in respect of planning permission for a licensed site is underpinned by an established coastal zone management plan, which is integrated with the coastal terrestrial zoning and planning process (**Review of the aquaculture licensing process**, 2017).

Applicants deal with only one public agency, which coordinates the work of the other public authorities (national and local) involved. The county is the coordinating authority or “one-stop-shop”. The other authorities are shown in the figure above.

The application is also forwarded to the relevant municipality, which acts as the planning and construction authority. Time limits are established for each step of the aquaculture licence application process and Public consultations take place at the municipal level (**Standing Senate Committee on Fisheries and Oceans**, 2015).

The official maximum case-handling period for licence determinations is 22 weeks, but a 6 month time horizon is normal in straightforward cases. More complex applications can take a number of years to be concluded. The case-handling period does not include pre-application processes or consultations (**Review of the aquaculture licensing process**, 2017).
Aquaculture sites are monitored and results impact stocking densities
The operation of aquaculture licences are closely monitored. Parasite levels on the various sites and disease status and details of veterinary treatments are reported on a weekly basis. These are published on a website which gives full public and management access to information on a near real-time basis - https://www.barentswatch.no/en/

Monitoring results determine whether licensed stocking densities are decreased, maintained or increased. They also determine management measures including transport of product in and out of identified areas (Review of the aquaculture licensing process, 2017).

FAROE ISLANDS

This section edits chapter 7 in the Review of the aquaculture licensing process, 2017.

The Faroe Islands consists of 18 major islands about 650km off the coast of Northern Europe, lying about halfway between Iceland and Norway. Its closest neighbours are the Outer Hebrides in Scotland. The islands have a total land area of 1,400 km², with a population of 50,000 inhabitants. The Faroe Islands is an autonomous country within the Kingdom of Denmark.

Farmed salmon were first reared in the Faroes in the early 1970’s. The aquaculture industry in the Faroe Islands is well consolidated, both horizontally and vertically. There are only 3 companies that currently produce and export farmed salmon from the Faroe Islands - Bakkaefrost, Hiddenfjord and Marine Harvest Faroes. Initially the industry encountered serious problems relating to a poor and uncoordinated licensing regime and a poor fish health regime.
Due to the effects of Infectious salmon anaemia (ISA), which hit the Faroes in the early 2000's, the Faroe Islands developed and implemented what is now regarded as a very comprehensive and stringent aquaculture veterinarian regulatory regime.

A consolidation of the industry and a greater emphasis on training fish farm employees resulted in clearer and more coherent objectives for the industry and major improvements in fish health. There was an emphasis on decreasing stress and disease, lowering mortality and eliminating the use of antibiotics. The industry achieved a reduction in the production cycle at sea and reduced the risk of serious sea lice infestation.

The authorities in the Faroes now review and approve all production and contingency plans. There is a one company / one fjord- bay policy and a major focus on controlling sea lice levels as the most important parameter of the overall fish health regime. There is a greater emphasis on the potential impacts on wild fauna and flora (e.g. lice from farms impacting on migrating wild salmon along the coast and reduced oxygen levels in the benthos).

The density of salmon held in cages has been reduced and is now, on average, 9 kg/m3. There is mandatory monitoring of core environmental parameters and mandatory counting of lice by an external, non-aligned party.

The Licensing Process

- The land / sea area concerned is zoned in advance of any application
- The Food and Veterinary Authority issue the licences in the Faroes. Currently there are 30 aquaculture licences, 20 Fjords have salmon farms and there are three companies licensed to farm. On average the Food and Veterinary Authority deals with ten renewals per annum.
- Applicants for a new licence must prove they have the ability to farm by presenting evidence of experience and scientific knowledge. They must be members of the Quality Insurance System, have signed an agreement with a processor and have developed a contingency plan for escapes and fish disease / parasite infestation.
- Once the application has been made and following a preliminary screening, a fish farming licence in principle is granted.
- The Faroese Environmental Authority must assess the site and the application both prior to commencement of operations and / or when a renewal is sought. Assessments are also carried out several times annually. Each farm is required to have an independent veterinary advisor.
- There is a statutory distance of 2.5km between farms to prevent the spread of disease and to minimize the risk from sea lice.
- The Faroe Islands have national environmental standards which they generally align to EU standards.
- Applicant pay for these services. Generally a private consultant does the required environmental work.
- It takes between 3 months and 6 months to issue an aquaculture licence in the Faroes.
- A Foreshore licence equivalent (lease) is issued for 10 years and an activity aquaculture licence for 5 years. Such licences can in legal terms be revoked but in practice are never revoked.
- In the future there may be a move towards auctioning fish farming quotas as in Norway.
The Faroese regulatory regime is based on the allocation of specific smolt numbers to each farm. It is not based on biomass as the authorities believe that regulating according to smolt number provides the farms with an incentive to stock out only healthy smolts into cages and ensures that survival rate is a high priority for the salmon farms. It also supports co-ordinated fallowing and co-ordinated de-lousing on all of the farms.

Practical enforcement of the above is done by means of a penalty point system, which tightly regulates the numbers of smolts put out to sea each year and the rate at which the farms can expand. Breaches of defined parasite loading and fish health protocols result in a reduction in the number of smolts permitted to go to sea. Alternatively compliant farms are allowed to increase the number of smolts stocked out, subject to the other best practice and holding capacity parameters.

**TASMANIA**

Independent Review of Scottish Aquaculture Consenting (2016) said the Tasmanian aquaculture industry is an interesting example to explore because –
- it has shown significant expansion, by around 320% in gross value terms over a ten-year period (from 2001/2 to 2011/2),
- is predominately related to salmon (>90% gross value) and
- covers more than 10,000 leasable hectares.

This section is taken from that report.

Tasmania has legislation specifically relating to aquaculture, the Marine Farming Planning Act 1995, which covers establishing aquaculture zones and allocating leases. Licensing of aquaculture activities is done under relevant fisheries legislation for either marine or inland aquaculture. Marine aquaculture must occur in a specified aquaculture zone. The approvals required are:
- A marine farming licence (under the Living Marine Resources Management Act 1995)
- A marine farming lease for an area designated in a marine farming development plan (under the Marine Farming Planning Act 1995).

There have been 14 Marine Farm Development Plans developed under the Marine Farming Planning Act 1995, which identify specific sites for aquaculture.

Generally Development Plans are prepared by the Department of Primary Industries, Parks, Water and Environment (DPIPWE), and then sites defined by the plan are leased to proponents. The onus has therefore been on the regulating authority to define site sizes and locations, and undertake Environmental Impact Statements (EISs) at a zone level. Where the DPIPWE is the planning authority, the process for allocating leases within an aquaculture zone is set out in the Marine Farming Planning Act 1995. In practice, leases have generally been allocated using some form of public application process. Applications are assessed by a Board/Panel, which then makes recommendations to the Minister.

The Marine Farming Planning Act 1995 also allows for circumstances where the marine farming zone is designated under a privately prepared draft plan or as a result of a privately requested amendment to a marine farming development plan. This has recently led to industry undertaking EIAs and amendments to plans with a view of securing sites directly.
Marine Farm Development Plans specify various Management Controls, which typically include: nitrogen outputs, carrying capacity, disease controls, visual controls, monitoring requirements etc.

The Independent Review of Scottish Aquaculture Consenting notes that -

- Development at a spatial zone level, including zonal Environmental Impact Statements, has allowed a relatively rapid expansion of Tasmania’s aquaculture industry.

- The onus of site selection and EIS being carried by the relevant authority reduces burden on the industry, but removes a degree of flexibility which has resulted in industry privately carrying out plan amendments and EISs with a view to securing new sites directly.

Wendy Kenyon
SPICE
12 April 2018

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