

Appendix 3

The regulation of aquaculture in other jurisdictions

1.1 A number of countries, including Norway, Scotland, Canada, New Zealand and some states of the United States of America (US), have established legislative frameworks governing the planning and regulation of the aquaculture industry. Like Australia, aquaculture regulations differ between states and provinces in both Canada and the US.¹

Norway

1.2 Finfish farming in Norway is regulated by the Aquaculture Act 2005 (Norway). The purpose of the Act is to:

...promote the profitability and competitiveness of the aquaculture industry within the framework of a sustainable development and contribute to the creation of value on the coast.²

1.3 The Aquaculture Act 2005 (Norway) focuses on the growth and innovation of the aquaculture industry, simplification of the approval process, protection of the environment and consideration of other users of the coastal zone.³ It establishes a licensing system, and broadly applies to issues such as environmental standards, land utilisation, registration, transfer and mortgaging of licences, as well as control and enforcement.⁴

1.4 New aquaculture applications are made to the Directorate of the Regional Fisheries Office. Upon approval, the applications are sent to regional authorities such as the County Governor, the Norwegian National Coastal Administration, the

1 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 4.

2 Food and Agriculture Organization of the United Nations, Fisheries and Aquaculture Department, *National aquaculture legislation sector overview – Norway*, http://www.fao.org/fishery/legalframework/nalo_norway/en (accessed 8 July 2015).

3 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 4.

4 Food and Agriculture Organization of the United Nations (FAO), Fisheries and Aquaculture Department, *National aquaculture legislation sector overview – Norway*, http://www.fao.org/fishery/legalframework/nalo_norway/en (accessed 8 July 2015).

Norwegian Food Safety Authority, Municipality, and the Norwegian Water Resources and Energy Directorate.⁵

1.5 The Directorate of Fisheries decides when licences for marine aquaculture are to be allocated, and the geographical distribution of aquaculture projects. When licences are to be made available, the Directorate makes a public announcement seeking applications.⁶

1.6 The Directorate can limit the number of licences that are allocated in a watercourse, or allocate licences within a particular total breeding biomass that is set for a watercourse. The Directorate of Fisheries can also limit the number of allocated licences at the national, regional or local level, in order to ensure that the industry develops in a controlled manner, taking into consideration environmental consequences, the public right of access to and right to passage through the countryside (public right of access), as well as the interests of other industries. Sea ranching licences are also allocated in a coordinated manner and the Directorate determines the time for the allocation of the licences.⁷

1.7 An Environmental Impacts Assessment (EIA) is required prior to the approval of new large farms⁸ and compliance with best practice management is achieved through regulatory measures with environmental monitoring requirements set at the local and regional scale. Local environmental requirements are based on the level of impact and exploitation of the site, whereas regional environmental monitoring requirements are set at the discretion of the local authority.⁹

Scotland

1.8 Governance of the aquaculture industry in Scotland is complex, with over 60 pieces of relevant legislation and 10 different statutory authorities. The two primary pieces of legislation are the Marine Act 2010 (Scotland) and the Aquaculture and Fisheries Act 2007 (Scotland).

5 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 4.

6 Food and Agriculture Organization of the United Nations, Fisheries and Aquaculture Department, *National aquaculture legislation sector overview – Norway*, http://www.fao.org/fishery/legalframework/nalo_norway/en (accessed 8 July 2015).

7 Food and Agriculture Organization of the United Nations, Fisheries and Aquaculture Department, *National aquaculture legislation sector overview – Norway*, http://www.fao.org/fishery/legalframework/nalo_norway/en (accessed 8 July 2015).

8 $\geq 48000 \text{ m}^3$ for movable pens or $\geq 36000 \text{ m}^3$ for permanently fixed pens.

9 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, pp 4–5.

1.9 The key points of the Marine Act 2010 (Scotland) relevant to the regulation of the aquaculture industry are:

- (a) a statutory requirement to develop regional marine plans that will facilitate the sustainable management of the marine area; and
- (b) a simplified licensing system that allows aquaculture consents to be granted by regional authorities or the government.

1.10 At present, Local Authorities deal with applications for new aquaculture sites through the terrestrial planning process, with advice from statutory consultees and any representations from other interested parties such as wild fish interests and the general public. Decisions now also have to give regard to the Scottish National Marine Plan and future regional marine plans.¹⁰ Marine and terrestrial development plans must jointly identify areas which are potentially suitable, and sensitive areas which are unlikely to be appropriate for such development, reflecting Scottish Planning Policy and any Scottish Government guidance on the issue.¹¹

1.11 The Town and Country Planning (Marine Fish Farming) (Scotland) Regulations 2013 also require that, before granting planning permission, there must be consultation with the following bodies:

- (a) the planning authority for the marine planning zone in which the marine fish farm is situated;
- (b) where the operation of the marine fish farm is likely to affect marine waters in another marine planning zone, the planning authority for that marine planning zone;
- (c) Scottish National Heritage; and
- (d) the Scottish Environmental Protection Agency.¹²

1.12 The Scottish National Planning Policy (the Policy) also sets out the Government's planning guidelines regarding aquaculture. It states that the planning system should support a sustainable and diverse aquaculture industry that is competitive and viable, whilst still having due regard for the marine environment.¹³

1.13 The Policy also sets out guidelines for local development plans including the making of positive provision for aquaculture developments, and setting out the issues

10 Marine Scotland, *Scotland's National Marine Plan*, March 2015, p. 52, <http://www.gov.scot/Resource/0047/00475466.pdf> (accessed 29 July 2015).

11 Marine Scotland, *Scotland's National Marine Plan*, March 2015, p. 50, <http://www.gov.scot/Resource/0047/00475466.pdf> (accessed 29 July 2015).

12 The Town and Country Planning (Marine Fish Farming) (Scotland) Regulations 2013, s. 3.

13 The Scottish Government, *Scottish Planning Policy*, p. 56, <http://www.gov.scot/Resource/0045/00453827.pdf> (accessed 29 July 2015).

that will be considered when assessing aquaculture proposals. These issues may include:

- (a) impacts on, and benefits for, local communities;
- (b) economic benefits of the sustainable development of the aquaculture industry;
- (c) landscape, seascape and visual impact;
- (d) biological carrying capacity;
- (e) effects on coastal and marine species (including wild salmonids) and habitats;
- (f) impacts on the historic environment and the sea or loch bed;
- (g) interaction with other users of the marine environment (including commercial fisheries, Ministry of Defence, navigational routes, ports and harbours, anchorages, tourism, recreational and leisure activities); and
- (h) cumulative effects on all of the above factors.¹⁴

1.14 It also states that where applications are made, they should be supported, where necessary, by sufficient information to demonstrate:

- (a) operational arrangements (including noise, light, access, waste and odour) are satisfactory and sufficient mitigation plans are in place; and
- (b) the siting and design of cages, lines and associated facilities are appropriate for the location. This should be done through the provision of information on the extent of the site; the type, number and physical scale of structures; the distribution of the structures across the planning area; on-shore facilities; and ancillary equipment.¹⁵

1.15 Approval of new large finfish farms (>100t/yr, or >1000m²) or farms located in a sensitive habitat also require the completion of an EIA.¹⁶

1.16 Management of disease and parasitic infections is a major focus of Scottish aquaculture legislation with regular monitoring conducted by the Fish Health

14 The Scottish Government, *Scottish Planning Policy*, p. 57, <http://www.gov.scot/Resource/0045/00453827.pdf> (accessed 29 July 2015).

15 The Scottish Government, *Scottish Planning Policy*, p. 57, <http://www.gov.scot/Resource/0045/00453827.pdf> (accessed 29 July 2015).

16 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 5.

Inspectorate (FHI). The FHI has the power to prevent movement of diseased stock, specify control measures, or order the culling of diseased stock.¹⁷

Canada

1.17 Aquaculture in Canada is governed at both the federal and provincial level and is regulated by several pieces of legislation. At the federal level, aquaculture is governed by the Fisheries Act 1985 (Canada) and the Species at Risk Act 2002 (Canada) which protects wild species and their habitats; and the Navigable Waters Protection Act 1985 (Canada) which governs maritime safety issues.¹⁸

1.18 Prior to 2012, the majority of new aquaculture developments were required to conduct an Environmental Assessment (EA) under the Canadian Environment Assessment Act 2012 (Canada) prior to gaining an approval for an aquaculture development. However, an amendment to the Act removed the federal requirement for an EA for aquaculture developments though EAs may still be required by provincial governments.¹⁹

1.19 Prior to 2012, the federal Fisheries Act 1985 (Canada) primarily focused on any 'harmful alteration, disruption or destruction of fish habitat'. This historical legislation only considered the local and small-scale effects which could be practically monitored and these were used as proxy measures for identifying large-scale effects. In 2012 a review of the regulatory framework refocused assessments on identifying large-scale effects.²⁰

1.20 A Decision Support System (DSS) is now used in Canada to assess both potential far-field and near-field effects of new aquaculture developments, and to reduce subjectivity and inconsistencies found between environmental assessments. The DSS develops a cumulative score based on a series of questions and aquaculture applications are rated as 'acceptable, provisionally acceptable or unacceptable.' It assumes that far-field impacts exist, but does not quantify them, and it seeks to

17 Ministry for Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 5.

18 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 6.

19 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 6.

20 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 6.

position fish farms at a distance from any features which may be adversely affected by the development.²¹

1.21 Once a new aquaculture development receives approval, an operating licence from the relevant provincial government must also be obtained. The provincial government is responsible for ensuring that aquaculture operations comply with both federal and provincial regulations, and they are also responsible for conducting site inspections.²²

New Zealand

1.22 Aquaculture in New Zealand is regulated by the Resource Management Act 1991 (NZ) and the Aquaculture Reform (Repeals and Transitional Provisions) Amendment Act 2011 (NZ).²³

1.23 Prior to 2004, the approval process for new aquaculture projects was a two-step process with local regional councils being responsible for granting 'resource consents' and the Ministry of Fisheries providing marine farming permits.²⁴

1.24 In 2004, the Aquaculture Reform Act 2004 (NZ) created a single, process for granting aquaculture consents and aimed to 'enable the sustainable growth of aquaculture and ensure the cumulative environmental effects are properly managed while not undermining the fisheries regime or Treaty of Waitangi settlements'. The Act stated that finfish farms were only permitted in Aquaculture Management Areas (AMA) designated by local regional councils. However, due to complications with the process of creation of AMA, very few aquaculture projects were approved.²⁵

1.25 In 2011, the Aquaculture Reform (Repeals and Transitional Provisions) Amendment Act 2011 (NZ) repealed the requirement that finfish farms be located in designated AMA. In addition, applications can be made to the Environmental

21 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 6.

22 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 6.

23 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 9.

24 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 9.

25 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 9.

Protection Authority for plan changes or concurrent resource consents if producers wish to locate farms in areas prohibited by coastal management plans.²⁶

1.26 The Resource Management Act 1991 (NZ) requires an Assessment of Environmental Effects and a resource consent/coastal permit from the relevant regional council or unitary authority for all new aquaculture developments. In order to obtain a resource consent, public consultation is required which can include both submissions and public hearings.²⁷

1.27 Once a resource consent has been obtained, the Ministry for Primary Industries has responsibility for assessing the project to ensure it will not have any Undue Adverse Effects on recreational, customary or commercial fishing. Should a project be found to have Undue Adverse Effects, compensation must be paid to the affected parties.²⁸

1.28 New Zealand does not have any regulations or standards governing the environmental monitoring of aquaculture projects. Each individual resource consent stipulates the size and location of the farm, the production limits, and environmental monitoring and compliance requirements. Some consents utilise broader industry standards while some use standards that are specific to their regional council as regional councils are responsible for ensuring compliance.²⁹

Issues common across jurisdictions

1.29 Across all these jurisdictions there are a number of common issues which arise in the licencing and monitoring of aquaculture projects. In particular, regulation of the industry is achieved through multiple pieces of legislation involving regulatory authorities at both federal and regional levels of government. There are also often difficulties in promoting and supporting a viable aquaculture industry whilst simultaneously maintaining environmental integrity and the social expectations of other users of the water space.

1.30 In New Zealand, the requirement for public consultation on individual aquaculture resource consents has also led to lengthy and costly delays to applicants.

26 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 10.

27 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 10.

28 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 10.

29 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 10.

Additionally, the lack of designated areas for aquaculture has impeded the expansion of the aquaculture industry.³⁰

1.31 Scotland sought to remedy both the complex application process, and the lack of designated aquaculture water space, with the Marine Act 2010 (Scotland) which now requires authorities to create marine development plans where aquaculture is permitted. This has significantly lessened the time and costs associated with applications as environmental impact assessments and public consultation requirements for these areas are significantly reduced.

1.32 Each jurisdiction has also sought to develop mechanisms for monitoring and reducing environmental impacts through both voluntary best management practices and mandatory regulations.

30 Ministry of Primary Industries (NZ), *Comparison of the international regulations and best management practices for marine finfish farming*, MPI Technical Paper No: 2013/47, 2013, p. 11.