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10<sup>th</sup> February 2017

To: The Independent Review of Aquaculture Licensing  
C/o Deidre Morgan, Secretary to the Independent Review  
Dept of Agriculture, Food and Marine, National Seafood centre Clonakilty Co Cork  
P85 TX47

Dear Ms Morgan,

Please find attached my submission to the Independent Review Group on Aquaculture Licensing in Ireland. I have decided to make this submission because of my concerns about the disappointing growth of this promising sector of food production in Ireland. I have noted that, in spite of the potential offered around the Irish coastline, the Aquaculture industry has not been growing or diversifying to match the growth seen in other maritime nations. This represents a major lost opportunity for Irish food exports into the rapidly expanding global markets for healthy and sustainable food products. Concerning my background, I have had a long time involvement in the development of aquaculture and marine product harvesting in Ireland, the UK, Canada, and other cold water regions. Through the 1970's and 1980's I was one of the founding shareholders in Fanad Fisheries in Donegal. Subsequently I became involved in the development of salmon farming and many other types of aquaculture across Canada. I coordinated and wrote the initial development Plan for Aquaculture for the Science Council of Canada. ( in 1974). Subsequently I became the Director of the BC Aquaculture Development Council working with the BC Science Council (1987-1995) to foster growth in this sector and represented the industry in assessment and funding of a wide range of R&D projects to support aquaculture and seafood development. In this time I have seen, for example, Salmon Farming in British Columbia grow from nothing, to the extent that now the export value of farmed salmon exceeds that of the long established and extensive cattle ranching business in B.C. Other forms of aquaculture including, marine fish other than salmon, shellfish and macro algae are also now expanding, and are addressing the inevitable questions that arise from time to time concerning interactions and conflicts with the wild environment.

I hope that this submission will be of some assistance in encouraging the Independent Review Panel to address opportunities for growth in this sector around the coasts of Ireland.

If you have any queries or require further documentation to verify statements in my submission please do not hesitate to contact me.

Yours sincerely

John A Spence

February 2017

## **Submission to the Aquaculture Licensing Review Panel**

**by John A Spence**

### **The Significance of the Aquaculture Review Group**

In the context of managing the common property marine and coastal environment of nation states the development and implementation of appropriate licensing and leasing systems to allow private operators to produce food and wealth while still protecting the environment and biodiversity becomes an important issue. In the absence of an adequate system conflicts and impacts will occur; while on the other hand, an overly bureaucratic approach inhibits economic development and essential wealth creation especially within coastal communities. This is the challenge before the Independent Review Group on Aquaculture Licensing. It is important that they seek to find ways and means for Irish entrepreneurs and communities to pursue sustainable business opportunities while the marine environment and biodiversity is also protected.

### **Why continued growth of the Aquaculture Sector is Important to Ireland**

Over the last decade all FAO and national statistics on fisheries and aquaculture point towards the fact that many wild stocks are being harvested at or beyond sustainable yields. Globally many wild fisheries are listed as over exploited; only a relatively small number meet MSC standards of being sustainably fished. Today and in the future there is an increasing gap between the demand for fish and seafood products and the ability of the worlds oceans, shorelines, sealochs and lakes to produce sufficient wild caught seafood. This gap can only be closed by aquaculture and it is evident that increasing quantities of aquaculture products –fish shellfish and aquatic plants are seen on global markets today, whereas with wild fisheries there is little or no scope to increase their contribution towards human food production. At the same time the demand for aquatic food products is increasing.

This reality has implications for the future of coastal communities, in essence they are slowly shifting from a way of life based exclusively on “hunting” wild fish stocks towards more intensive management and farming. At the same time recreational fishing is also increasing. These shifts have large economic, socioeconomic and environmental implications, but the only reasonable approach must be towards ensuring that diverse aquaculture opportunities can be developed in a sustainable and environmentally responsible manner to allow the continued viability and development of coastal economies. In the context of managing the common property marine and coastal environment of nation states the emergence of appropriate licensing and leasing systems to allow private operators to produce food and wealth while still protecting the environment and biodiversity becomes an important issue. This is the significance of this Independent review Group.

### **Simplicity and Efficiencies of the Application processes**

At both the EU and National levels there is a plethora of existing legislation and regulations to be complied with. These are administered by various departments and agencies that need to be consulted. This can place a considerable burden of both time

required and costs onto applicants and yet does little to either identify and protect the environment or marine resources that may be impacted.

I strongly recommend that the process of application be handled by an independent single lead agency that would coordinate all applications and the inputs required from different government agencies and data bases and maps. This agency can also play a role in ensuring that all the relevant coastal data bases, satellite imagery, GIS mapping of key environmental parameters etc. is made available to applicants and the regulators, so that particularly sensitive sites can be identified and avoided at an early stage in the application process. The coordination of this data would also allow appropriate limits to be placed on lease boundaries.

#### Duration of Aquaculture Licences and Tenures.

As in the case of land based farming, in aquaculture, a long term tenure of lands is required to foster an attitude of stewardship and commitment, and to encourage capital investment and innovation. The aquaculture licensing system should facilitate this by structuring licences over a long time period to enable the holders to:

- Make the investments to ensure that operations are carried out in a sustainable manner and also providing a good return on investment;
- Make a commitment to innovate and improve production systems towards higher quality products and also to reduce any possible environmental impacts (externalities).
- Owners of tenures should be encouraged to invest in and adopt high and rigorous quality production standards and systems, so that all Irish aquaculture products fetch premium pricing on global markets and market designations. These designations might include organic certification, especially high quality assurance and health standards in production and processing, or particular geographic designations etc. Implementation of such standards and attitudes also has benefits in protecting the environment in that hazardous chemicals, other risks (such as algal toxins) and diseases that could impact consumers or the local environment are avoided.
- Long term leases will also enable entrepreneurs and governments to address long term issues that may arise more through partnerships and collaboration, rather than through arms length confrontations. Again land agriculture practices in Ireland provide a model, where collaboration between the industry and government has enabled solutions to be found to serious threats (such as BSE and Brucellosis) In aquaculture equally serious threats to economic viability may arise from coastal eutrophication, coastal pollution and related algal blooms and algal toxins. The solutions to such problems will require collaboration between a tenured industry and the responsible government agencies to find solutions.

#### Research and Development to encourage more sustainable production.

As in land based agriculture, investment and innovation are required to reduce any external impacts, reduce carbon emissions etc. Today for land farmers there is an impressive R&D capacity, especially within Teagasc to enable these farmers to move towards sustainability objectives. a similar level of R&D support is required to assist Irish aquaculture achieve parallel objectives in sustainability and to minimizing environmental impacts. Relevant examples in aquaculture include innovation towards using biological controls against sea lice to minimize and eliminate the usage of

hazardous chemicals and pesticides. Some companies have made good progress in this direction and this innovation can be encouraged by way of terms attached to licences.

Multiple uses of existing licences.

In aquaculture there is a distinct shift towards integrated aquaculture whereby by alternating or managing species being raised, potential environmental impacts can be minimized. One example I would give is in the Faroe Islands where sites licenced for salmon farming with a high capital investment into heavy duty mooring systems, are also used to culture macro algae seaweeds on long lines. The seaweeds effectively utilize soluble nutrients produced by adjacent fish rearing. In a similar manner shellfish rearing can also utilize particulates in the water column thus redressing nutrient imbalances. There is scope for more innovation in Ireland towards these more environmentally integrated forms of aquaculture. Such measures could mitigate potential cumulative environmental impacts while also diversifying revenues from a fixed capital investment at individual sites. Such systems also assume long term rights to a particular site without the threat of losing it if activities are diversified for reasons of good management.