



# Whitaker Institute Policy Brief Series

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**Cluster:** SEMRU

**Theme:** Business, Innovation & Economic Development

**Further reading:**

Grealis, E., Hynes, S., O'Donoghue, C. Vega, A., van Osch, S. and Twomey, C. (2017). The economic impact of aquaculture expansion: An input-output approach, *Marine Policy*, 81, 29–36.

Grealis, E. and O'Donoghue, C. (ed.), (2015). *The Bio-Economy Input-Output Model: Development and Uses*. Teagasc Publication, Dublin

Scientific, Technical and Economic Committee for Fisheries (STECF, 2016). *Economic Report of EU aquaculture sector (STECF-16-19)*;

Independent Aquaculture Licensing Review Group (2017). *Review of the Aquaculture Licensing Process* <http://www.fishingnet.ie/media/fishingnet/content/ReviewoftheAquacultureLicensingProcess310517.pdf>

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**Read More About:** [The Socio-Economic Marine Research Unit \(SEMRU\)](#) within the Whitaker Institute for Innovation and Societal Change.

## Economic impact from expansion of the Irish aquaculture sector

As part of the European Union (EU)'s Blue growth Strategy to create sustainable growth and employment in the marine economy, aquaculture has been identified as a sector with high growth potential. In Ireland, the Strategic Plan for Sustainable Aquaculture Development (NSPSAD) sets out a target of achieving production levels, for all aquaculture sub-sectors, at or near previous historic maxima simultaneously. This equates to a total aquaculture output of 82,000 tonnes National annually which represents a substantial increase on current production levels; more than double the average annual output from the sector based on 2014 levels of production (31,000 tonnes) (STECF, 2016). The NSPSAD highlights the necessary investment in coordinating measures to increase competitiveness. Research by SEMRU has modelled both the direct and indirect economic contribution of the Irish aquaculture sector and examined the economic impacts on the wider economy that would result from the proposed significant expansion outlined in the NSPSAD.

### Research Findings

By disaggregating the aquaculture sector from Ireland's national Input-Output table the Bio-Economy Input Output Model (Grealis and O'Donoghue, 2015) produces a number of economic multipliers for the aquaculture sector which were estimated and used to calculate the potential indirect impacts of expansion. The analysis involved the estimation of the economic impacts of an increase in utilisable aquaculture output of approximately 34,000 tonnes per annum utilising the aquaculture multiplier. In addition to the direct and indirect benefits due to the expansion of aquaculture, further benefits from the likely expansion in the seafood processing sector were also considered. The results of the model indicate that the expansion of the aquaculture sector could have significant impacts on the wider economy. The potential macroeconomic and employment impacts of an increase in aquaculture output in line with NSPSAD targets were estimated to result in an increase in aquaculture output worth approximately €243m per annum with the creation of over 1,500 jobs in the wider Irish economy, assuming a substantial proportion of the resultant raw seafood material produced in the expansion is processed domestically.

### Policy Implications

Aquaculture in Ireland has the potential to contribute significantly to Irish exports and to create additional employment in the domestic market. This is particularly significant for regions which traditionally have struggled to provide sustainable, long-term permanent employment for local residents but where aquaculture presents a viable option for economic development. Understanding the total economic impacts of aquaculture expansion is also necessary in order to make informed decisions when weighing economic considerations against environmental concerns. If the NSPSAD targets are to be achieved reform of the aquaculture licencing system, which has proven to be a bottleneck for development of the sector will need to be reformed as recommended by a recent independent review group of the aquaculture licencing system in Ireland (Independent Aquaculture Licensing Review Group, 2017).