Marine Institute Response to ALAB Query Ref AP1/2018

In response to your formal letter of the 7th of March last Received at the Marine Institute on the 12th of March which the Board requested information pursuant to Section 47(1) (a) of the Act please find attached the response on behalf of the Marine Institute.

Standing Stock Biomass is defined as: The weight or mass of live fish (stock) held at a particular site or location at a particular time.

Biomass is the weight of live matter, of fish, in the case in question. It can also be used to describe the amount of shellfish or plant matter or a combination of all three depending on the context.

Maximum Allowable Biomass can be defined as the Maximum Standing Stock Biomass permitted at a site or location. In effect standing stock biomass can be regarded as the measurement where the MAB is the limit.

Maximum Allowable Biomass as assessed in terms of **Standing Stock Biomass** is an appropriate parameter to measure production capacity at a finfish aquaculture site. These matters were the subject of detailed studies and investigations by the Working Group (WG) convened to develop the new Aquaculture License Templates. The WG consisted of the Aquaculture and Foreshore Management Division of the Department, the marine Engineering Division of the department, BIM and the Marine Institute. On the basis of the recommendations of this WG there was a new template produced to give effect to a move to Standing Stock Biomass as a measure of production capacity at a finfish aquaculture site.

At an annual input of 400,000 fish the site would hold at any given time a maximum of 800,000 fish. This situation arises because the grow-out period for salmon at sea, from initial stocking as smolt until harvest at 4.5 – 5.5 Kg is 18 to 24 months. Therefore there would be 2 generations on site for a significant part of the year. The harvest fish, at an average weight of 5.5 Kg would have a biomass of 2200 tonnes immediately pre-harvest. The fish in their first year at sea would have a biomass of approximately 300 - 400 tonnes at this time. This would give a total biomass of in the region of between 2500 and 2600 tonnes based on the license conditions. An MAB of 2,200 tonnes is therefore conservative in terms of the licence conditions contained in the Departments letter of 11th December 2017. The site has operated effectively with a licensed annual input of 400,000 fish for many years. There is no evidence of unacceptable adverse environmental impacts associated with the standing stock biomass at the site over this period. Taken together all of the above would suggest that an MAB of 2,200 tonnes would be a safe limit and within the carrying capacity of the site.