## HENSEY GLAN-UISCE TEO.

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Department of Agriculture, Food and the Marine
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## Submission to the independent aquaculture review group

Hensey Glan-Uisce Teo. is an independent accredited laboratory which was established in 1987 to carry out water sampling and analysis for the aquaculture industry. The following submission includes a short history of environmental monitoring at fin-fish farms in Ireland.

In 1979 the Dept. of Fisheries, Forestry and Tourism developed an environmental monitoring programme for fin-fish farms which became a requirement of the aquaculture licence in 1984. Water sampling was carried out throughout the year to measure nutrients, chlorophyll, dissolved oxygen, temperature, salinity and transparency. Sediment surveys were carried out annually at the sites.

In 1990 an independent assessment of the impact of fish farming on the water column and sediment was carried out by Dr. Richard Gowen from Scotland. A copy of the report which was prepared for the Dept. of the Marine, is included with this submission. Dr. Gowen recommended that sampling be reduced to include analysis of nutrients in the months from December to March only and that chlorophyll sampling would be carried out from June to September when most algal growth occurs. He also suggested that benthic monitoring should include annual summer measurements of redox potential and macro-faunal populations.

In the following decade, salmon farming expanded rapidly and sites were established in most suitable bays along the coast. The monitoring continued on a monthly basis and the majority of farms maintained monthly sampling of all the parameters. Therefore there is a considerable body of data for the years between 1984 and 2001. The monitoring was carried out at cages and a control site in each bay.



In 2001 the Dept. of Communications, Marine and Natural Resources introduced monitoring protocols for offshore finfish farms. Protocol No. 1 requires benthic monitoring on an annual basis at a level which depends on the tonnage at the site. The monitoring includes photographic studies, redox measurements and, at larger sites, macro-faunal analysis. Protocol No. 2 requires water column monitoring monthly from December to March inclusive and the tests include nutrients (ammonia, nitrate, nitrite and phosphate), temperature and salinity at the cages and a control site.

The protocols introduced in 2001 have been the basis of environmental monitoring at the salmon farms for the past sixteen years. For some bays, we now have more than thirty years of data collected at cage sites and control sites. Data from some bays have been included in EIS studies submitted on behalf of fish farms in recent years.

Environmental data is now sitting in filing cabinets and should be informing decisions made about current and future license applications. To my knowledge, the data that has been collected since 1990 has not been subjected to statistical analysis. Use of this available evidence of the impact that fish farming has on our coastal waters could be crucial in making decisions and in expediting the granting of licenses. For example, the availability of water quality data for a bay should make it easier to obtain a new licence in the same bay.

Is mise le meas,

Mary Hensey

**MANAGER**