

From: Kieran Doherty
Sent: Wednesday 18 December 2019 12:22
To: 'john.kelly@tobin.ie'
Subject: FW: FW: GHE CMR Additional Intertidal reference area : more detailed map and statement of targets, methods, indicators, etc, PA0033
Attachments: Response 10XII BOC + Fig20(1) and 14(1).docx; GHE CMR Figures 20(1) Draft & 14(1) Draft.pdf

Hello John,

The following is the response I received from the Board's consultant. It has not been edited and is not an official response from the Board.

This is a good, detailed proposal, even more than it would be expected at this stage. As you will remember, the concerns I raised were related to the benthic infaunal monitoring programme only, and to some of the conclusions drawn from it. This proposal is more comprehensive, covering that specific issue, and integrating the monitoring programme to a detailed methodology for the compensatory measures.

I note that they have fully taken on board the suggestion of using a reference area, and this is now aligned to the compensatory measures and the monitoring programme. This is in my opinion a sound approach, which would deliver the result expected - improvement in ecological status, and a methodology capable of detecting this improvement. It is based in part on similar studies in Ireland, published in the peer-reviewed literature, and relevant to this specific programme.

One aspect that I would suggest that they consider in more detail is in relation to the threshold that they have set for measuring abundance of some specific infaunal species - 20% less abundance over a period of five years. This may be too prescriptive, as this 20% reduction may not occur. Depending on other considerations, such as overall species abundance and distribution, natural fluctuations, etc., a different value may result. I would be reluctant to evaluate the success of the compensatory measures only if this value is achieved. For example, a reduction of the abundance of these species by 8% still would be (most likely) a statistically significant improvement. The objective is to demonstrate the ecological improvement, or in EU Water Framework Directive terms, improve the 'ecological status'. A value of less than 20% may still provide evidence that the compensatory measures are working. Perhaps, 'a statistically significant reduction in abundance of the indicator species selected (and reduction in organic carbon and number of invasive *Didemnum* sp.)' would be preferable. As detailed above, I leave that to the applicant's consultants to decide and develop on this.

In summary, a comprehensive proposal, with good level of detail and information, which integrates the compensatory measures' objectives with the monitoring programme. It is fit for purpose, and I am glad that they have given full consideration to the comments and suggestions received from the Board.

Regards,

Kieran

