Dear Mr Vinther,

The Pelagic RAC would kindly like to inform you of its views regarding the long-term management of blue whiting in the North-East Atlantic prior to the Coastal States working group on the topic. Moreover, we would like to further discuss the topics set out below, during the meeting planned between the Pelagic RAC delegation and yourself on the 19th of May.

The Pelagic RAC recommends the following:

**a) Protection of juveniles**

The Pelagic RAC is of the view that measures should be adopted to protect juvenile blue whiting. We are aware that ICES responded in 2003 to an Icelandic request on behalf of Iceland, Norway, the Faroe Islands, Greenland, Russia, and the EC to provide information on age/composition and to evaluate possible measures to reduce exploitation of juveniles in the blue whiting fishery (copy enclosed). In light of this response, the RAC considers that the Coastal States working group should devise an action plan to implement the recommendations in the ICES response.

**b) Research**

The Pelagic RAC advocates that, in order to improve understanding and inform the management process for blue whiting, the following research issues should be pursued:

- Consider more closely new scientific research on the different stock components and advise on what additional research if any should be undertaken to address this issue;

- Undertake an evaluation of the medium and long-term effects on stock size and fishing mortality of a constant TAC, including advice on the TAC and reference points to be used as trigger points for applying the TAC; This issue we understand was part of the terms of reference for the Coastal States scientific working group.
Investigate and advise on how a more time sensitive recruitment index can be established;

Investigate and advise on whether the management plan for blue whiting should provide for a different set of criteria depending on whether or not the stock is in a period of high or low recruitment (including addressing the question of what constitutes high and low recruitment);

Investigate and advise on whether a different set of harvest control rules should be established;

Investigate and advise on the implications and constraints necessary of incorporating a TAC fluctuation constraint of +/- 15% into the management plan;

Advise from a scientific perspective on the present rule to bank or borrow 10% of the blue whiting TAC between consecutive years, with a maximum of 2 years.

The Pelagic RAC recognises that it has raised a number of difficult questions on a complicated subject that may require additional scientific research. We consider however that the Coastal States working group provides an excellent opportunity to identify the scope and nature of such research and we request that you endeavour to do this at your meeting.

The Pelagic RAC has devoted considerable amount of time in trying to develop a long-term management plan for blue whiting and we hope that you will support our attempts to gather the necessary information to develop a sustainable long-term management plan.

The Pelagic RAC looks forward to further discuss the above during our upcoming meeting on the 19th of May.

Yours sincerely,

Aukje Coers  
Pelagic RAC secretariat

c.c. Fokion Fotiadis, Emmanouil Papaioannou, Constantin Alexandrou
3.12.5.b Answer to Icelandic Request on behalf of Iceland, EC, Norway, Faroe Islands, Greenland, Faroe Islands and Russia to provide information on age/size composition and to evaluate possible measures to reduce exploitation of juveniles in the Blue Whiting Fishery

ICES is requested to provide as detailed information as possible on the age/size composition in different segments of the blue whiting fishery and to evaluate the effect on the stock and the fisheries of possible measures to reduce exploitation of juveniles. The evaluation should include but not be restricted to the effects of introducing a minimum size and closed areas/seasons. Continue the evaluation of candidates of harvest control rules.

ICES responds as follows:

The removals of immature fish in 2002 represented between 10.15% of the population of age 1 and 2 immature fish. The proportion of the population of age 0 fish (which are all immature) removed in 2002 is unknown but is believed to be small (Table 3.12.5.a.6).

About 20% of the catch (by weight) of the directed blue whiting fisheries are immature fish. In both the mixed industrial fisheries in IIa and the North Sea and in the bottom trawl fishery in VIIic and IXa about 50% of the catch by weight are immature fish. However, the catch of immature fish from these fisheries represents only about 20% of the total weight of immature fish removed from the stock each year. About 80% of the total catch (by weight) of immature fish is taken in the directed blue whiting fisheries. Among the directed fisheries the highest catches of age 1 and 2 fish are in IIa, Va, and Vb (Tables 3.12.5.a.7 and 3.12.5.a.8).

In 2002 Iceland introduced a measure to limit the number of immature fish taken in the fishery in Va, whereby if the catch comprises 30% or more fish smaller than 25 cm a temporary area closure is imposed. ICES considers this to be an effective measure to reduce directed fisheries for juveniles. ICES recommends that this measure be extended to other areas where significant numbers of juvenile fish are taken in the directed fisheries.

In general high exploitation rates on juvenile fish reduce the productivity of the population. A high exploitation rate of juveniles will accelerate the decrease in the blue whiting stock, which is expected in the longer term unless current high recruitment levels are sustained. Further work needs to be done to incorporate the different exploitation rates from the different fisheries into an overall harvest control rule. This should be done to limit the fishing mortality on juvenile fish in fisheries where more than 30% of the catch is immature.

The introduction of a minimum size limit may limit the directed fishery for juveniles but might also lead to increased discarding.