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13th September 2014.

Dear Mr. Degnbol, MSFD Descriptor Review : Descriptor 3.

We are writing with reference to the review initiated by the European Commission in respect of Descriptor 3 for commercial fish and shellfish stocks. Also, with reference to the ICES workshop on 4/5th September 2014, Copenhagen, convened in conjunction with this review by the European Commission.

We note that the terms of reference for the Copenhagen workshop were:

The **Workshop on guidance for the review of MSFD Decision Descriptor 3 - commercial fish and shellfish** (WKGMSFD-D3), chaired by Gerjan Piet, The Netherlands, will meet in Copenhagen, Denmark, 4–5 September 2014 to:

a) Consider the issues raised by the ICES science team on the scientific challenges associated with the implementation of the MSFD decision.
b) Provide guidance for the finalisation of the review
c) Report on additional scientific challenges to the implementation of the MSFD decision (D3) criteria.

WKGMSFD-D3 will report by 15 September for the attention of ACOM.

We also advise you of an Agenda Paper that we presented to the OSPAR ICG MSFD(2) meeting on 12th September 2014, copy enclosed.

We wish to discuss with ICES, in the person of yourself or the appropriate ICES member, the matter of the working definition of Descriptor 3 and the need for this definition to be scientifically strong in order to bring to effect the aim of MSFD Preamble 3 – "The marine environment is a precious heritage that must be protected, preserved and, where practicable, restored with the ultimate aim of maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive."

At the present time we are concerned in 2 key areas with regard to the definition being given to Descriptor 3, and to the review that has been initiated by the European Commission. These are detailed in our enclosed Agenda Paper for OSPAR, and in summary they are:

Descriptor 3: "*Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.*"

1. Definition and meaning of the phrase "safe biological limits". This definition is referenced to the spawning stock, and the measures needed to sustain it. However at the present time, spawning stocks are severely depleted in historical and ecological terms due largely to over-fishing. Therefore if this part of the Descriptor is referenced to the existing size of spawning stocks, the future population of the species will remain permanently depressed. This outcome can hardly be considered to be in accord with restoring stocks to a healthy condition.

Therefore we are proposing that the spawning stock (safe biological limit) should actually be referenced to the maximum level of abundance of the stock which current ecological conditions will permit. If this is done, the stock will then be restored to its full potential, will clearly be in a healthy condition, and commercial fishermen will once again have a re-invigorated industry with abundant wild stocks, and the ecological structure of the seas will have been greatly enhanced.

2. Definition and meaning of the clause "exhibiting a population age and size distribution that is indicative of a healthy stock." At the present time, based on our experience in the United Kingdom, this part of the Descriptor is not being applied. It is being ignored as if there were no obligation or merit in implementing it.

We can understand why it is not being applied because, at present, management policy of stocks is to allow adults to survive approximately one year beyond sexual maturity before permitting them to be caught. This has resulted in stocks with a highly distorted age and size profile for nearly all commercial species. If we take the example of cod, sexually mature around 6 years and capable of living to 25 years, stocks now contains virtually no adults beyond the age of 6 years. The consequence of this in reproductive terms is immense. As we know, adult fish double their reproductive ability roughly every time they double in length. Thus older fish in a stock are the most significant members in terms of the stock's reproductive potential. By restricting the spawning stock to adult members of just one year of sexual maturity we are, taking a human metaphor, placing the survival of the species in the reproductive capabilities of its teenagers, all adults beyond that age having been eliminated. This is clearly unwise.

Therefore, if we are to safeguard the stock in reproductive terms, and if we are to rebuild the stock in size to levels near to the maximum level of abundance that current ecological conditions will permit, thus re-invigorating the fishing industry and marine ecological features in general, it is essential that stocks contain older fish.

If we take cod again as the working example, and if we assume that the age profile should allow adults to live at least 25% of their adult life, then stocks should contain adults up to the age of 10 years, rather than 6 years at present. And if we allow adults to live 50% of their adult life, then the stock will contain members up to the age of 15 years.

When larger numbers of fish are present in the population and when there is an increase in the physical size of individuals, the economic benefits of stocks being rebuilt in this manner

has been calculated to be considerable. The New Economics Foundation[1] in conjunction with the Pew Foundation has estimated that rebuilding 43 EU stocks in this manner will result in very significant economic outcomes:

- Increase the landing of fish by 3.5 million tonnes per annum.
- Result in £2.7 billion additional revenue, and 100,000 new jobs.

We also observe that the economic objective of fish food security (the ability to repeatedly meet our needs for fish every year from our own resources) would likely be restored, whereas with presently depleted stocks we can only meet these needs for 6 months of the year.

Hence the requirement for a stock to contain older fish is scientifically clear, and this part of the Descriptor essential.

Bringing stocks back into this healthy condition is therefore a core feature and purpose of fisheries management. It is wholly achievable, and can be accomplished by the following measures:

- Spawning grounds becoming no-fishing areas, so giving the stock of adult fish an assurance of reproductive success. Thus, larger fish are protected when they are most vulnerable to fishing activity. Similar protection is also be considered for nursery grounds, though perhaps less severe with limited fishing allowed depending of the concentration of adults in nursery grounds.

- Net sizes are increased to catch fish only after they have lived 25% of their adult life and, preferably, only after they have lived 50% of their adult life.

- These measures are financed by EU fishing subsidies (European Maritime and Fisheries Fund) with displaced fishermen and their vessels re-employed as managers of the no-fishing areas. This ensures that fishermen are compensated for the loss of fishing rights, and that those with the most direct interest in the success of stock rebuilding are directly associated with management policy.

We believe that a strong definition of MSFD Descriptor 3 is a positive force, not just for the ecological structure of EU seas but also for the European fishing industry.

We believe that the scientific case is clear, and essentially incontrovertible.

We believe that the management regime required is clear cut, and deliverable.

Accordingly, we would welcome your observations on these matters, and we would be pleased to learn whether ICES shares our perception. If ICES does not, we would like to know the nature of its thinking and we look forward to hearing from you.

Yours sincerely

S. D. Eades

[1] Jobs Lost At Sea, A. Esteban, February 2012, published by New Economics Foundation http://www.neweconomics.org/publications/entry/jobs-lost-at-sea