

24th January 2013

Dealing with choke species in mixed fisheries

The concept of catch quota management (CQM) is stated in the Council of ministers General Approach of June 2012, article 15. CQM entails, that once the quota has been taken, all catches of the species have to stop. If the species is a component of a mixed fishery, the mixed fishery must stop. The least plentiful quota allocation will “choke” the mixed fishery.

It is the responsibility of the fisherman to plan for the best use of his fishing rights, but a number of conditions will influence his success. In the following these conditions are discussed from the level of policy to the level of fishing methods.

To put it simply, the catches lost due to lack of quota availability should not reach a level comparable to the level of discards if a stringent application of CQM is to work in practical management. For that reason the Mediterranean is not ripe for CQM, some fisheries south of Bretagne will require a prudent phasing in, and most fisheries in the North are ready for CQM now, and preferably before the final CFP is implemented.

Relative Stability

Relative Stability constitutes a systemic choke species problem. Relative Stability is not to be changed, but it is necessary to establish more efficient transfer mechanisms between Member States. The Commission’s proposal (425) article 32 was taken out in the Council general approach. It should be reinserted. It establishes flexibility and respects the prerogative of the MS.

More permanent solution should be found in cases where we have gross imbalances between catch compositions and quota portfolios. Article 15, 4 in the General Approach indicates some solutions. Another solution might be:

“In mixed fisheries defined by ICES as severely quota limited fisheries MS may fish and land over quota catches, for such species, for other purposes than human consumption” (ICES should be requested to define quota limited species – see annex 1). The consequence of this would be

1. TAC’s would have to be reduced to take account of the over quota catches. This way all MS with quotas would pay to the “pool”
2. MS with plenty quota would benefit if they were transferring or leasing quotas to quota limited MS. They might just offer enough quota to lift the other MS out of the choke species situation, and the MS in question would be interested in receiving even less than the over quota catches, as the quota transfer would give fish to be landed for consumption. [A simple illustration with some figures from Haddock in VII: "Total catch (2011) = 26.8 kt, of which 47% are landings (all fleets combined) and 53% discards." Given that Spain has 1/3 of the Hake quota I assume it is responsible for a substantial share of the discard of haddock of which its quota is zero. If Spain moves to full accountability (incl CCTV) other MS may offer a substantial transfer for free and still get more fish for themselves + the benefit of a fishery which is accounted for.]

Source: <http://www.ices.dk/committe/acom/comwork/report/2012/2012/had-7b-k.pdf>

Conclusion: The Basic Regulation must provide the necessary tools for MS to make the desired choice of quota exchange model. EU should not police this by instituting common by-catch quotas or the like.

MSY- application

According to the CFP proposal the regional bodies shall develop and recommend conservation measures including multiannual plans and the application of MSY. MSY is by definition a yield concept. In multispecies context MSY should be fixed to obtain the desired optimal catch compositions taking into account both the prey predator relationship as well as the obtainable species composition in catches. In other words if in certain situations more yield can be gained from one stock by fishing another stock beyond its individual MSY reference point this is a sensible way to go. More so as a range F 's (fishing mortality) for one species may make little difference for the yield of that species but may markedly influence the yield of another species (e.g. saithe with an F of 0.5 instead of 0.4 will result in little loss of saithe and a markedly increase in haddock).

An ecosystem based precautionary level must always prevail. Also it should be borne in mind that if "choke species balancing of MSY" takes place in a system with rigid application of fishing methods and technology it will result in a loss of wealth. The fisher must have a free choice of gear and methods to optimize his result, and science and innovation must assist and provoke his user driven innovation.

Conclusion: The sensible MSY management is to optimize the total biomass outtake or economic yield for the sea basin under the restriction that the ecosystem based precautionary levels for individual species are respected.

Year to year flexibility

Who says that quotas have to follow the quota year? Year to year quota flexibility is a necessary tool in a result based fisheries management. In a more broad perspective the quota year approach as such might be challenged. Improved data from fully documented fisheries, speedy data transmission and more stable year classes allow us to think in terms of real time advice and real time adjustments of TAC's and quotas.

Management at Member State level

If a Member State is stuck with an in-optimal quota balance the following options could be considered in order to establish flexible quota utilization.

National management could induce instruments for optimal use.

- A TFC-like system will improve flexibility (Denmark has a market for fishing rights that enables a willing seller and buyer to make a quota transfer even after catches has been landed and sold. A number of design solutions for TFC systems – individual or community based, exist.
- A "buffer quota" could be established on national basis for the use in certain mixed fisheries
- MS could interfere in the quota allocation – requiring that a certain amount should be used in mixed fisheries (advisable only in extreme situations)

The fishing community and the individual fisher

The fishing community may establish risk-pools or shared management.

Fishing communities may also consider developing information sharing systems for fishermen at sea. Real-time sharing of catch compositions and even hydrographic data etc. will improve the ability of the individual fisher to target the right fish.

Results based management is the ultimate tool to incentivize the fisher to fish selectively by choice of time, area, depth, gear, towing time etc.

Dealing with the choke species once the quota portfolio is given will be a user driven process for the fisher trying to innovate the best methods. For science and technology platforms the task is to serve the fisher.

AquaMind

AquaMind is dedicated to the work for an economically viable and sustainable fishery. We design management solutions, carry out fisheries projects in support of the Common Fisheries Policy and establish documentation and traceability as a means to aligning sound fisheries practices with market requirement for sustainably sourced fish. Our mission is to provide value adding solutions for public management and private enterprise in context of the emerging framework and opportunities following the reform of the Common Fisheries Policy.

References

This paper and more material can be found at <http://aquamind.dk/en/yield-of-fish>

See annex 1

Annex 1

- Commission or ICES member request to ICES on the choke species issue

Establishing full catch accountability according to the Council General Approach article 15 entail that discards are exchanged with the problem of choke species (imbalance of quota allocation in mixed fisheries. Reference to: *Calculating effects of choked species* at [http://www.fvm.dk/cqm_\(catch_quota_management\).aspx?ID=42783](http://www.fvm.dk/cqm_(catch_quota_management).aspx?ID=42783))

In order to consider the magnitude of the problem and possible solutions the following information should be provided.

1. An overview of the portfolio of quotas allocated to each MS. This would give indicative information on fisheries where the choke species problem may occur for each MS. EU Commission will provide.
2. ICES should establish guiding indicators on the problem for each Member State. The indicators are calculated on basis estimated non-quota discards as a proportion of total fisheries for the relevant species for each MS. Other ways of calculating may be considered. The main issue is to identify “green, yellow and red” choke species areas for each MS.
3. ICES should on a general level qualify the reason for the indicator level. In some cases it may be an unavoidable situation e.g. caused by Relative Stability rigidity. In other cases a red light may be turned green by simple changes in management or fisheries approaches.

This is a desk study. It should be kept simple. It will rely on MS supplying the information.

A mathematical model awaits translation into a computerized simulation: “Calculating effects of choked species” at the webpage mentioned above.

Note: It would be interesting to have the list to see how many of the quotas allocated to MS could be said to be in the choke species “red area” 10% 30%? The magnitude of the problem has a bearing on the difficulties we face when the accountability and landing obligation is to work. The list would be a first step to a qualified discussion on the nuances of the problem and the possible solutions.