

PROPOSED STEPS TOWARDS IMPLEMENTING THE RESULTS FROM THE UPDATED SQUID ASSESSMENT

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Background

Although the updated squid assessment is not yet finalised, current indications are that when coupled to an acceptable depletion risk criterion in line with conventional fisheries norms, this will lead to an effort level (TAE) recommendation in the vicinity of 300 thousand person-days (i.e. a level close to that recommended at the time of the previous rights allocation process).

At the time of that previous process, in which rights were allocated up to a maximum number of persons (“fishers”), the problem of converting from person-days to fishers arose. With over 2000 fishers in the fishery at the time, it was pointed out that if the re-allocated rights extended to about this same number, those rights would also require limitation to less than 150 days fishing a year. Such a limitation was however not proposed at that time, as it was envisaged that the allocation process would result in the rights granted including substantially fewer fishers.

In practice however, this reduction did not occur, with the rights allocated extending to 2422 fishers, and furthermore the situation became more confused given industry protestations (subsequently confirmed) that the DAFF (then MCM) catch-effort database was incomplete. Over the intervening period, however, this last situation has been largely rectified.

In moving towards a revised allocation of rights later this year, it is both necessary and urgent that this take place on a self-consistent basis, so that allocations are indeed in line with the appropriate level of fishing effort for the resource. Particularly given the intention that rights be extended to include small scale fishers without such rights at the present time, one cannot consider a system where if all those allocated rights fished for a realistic maximum numbers of days a year (somewhere in the 200-250 range perhaps), the appropriate effort level would be substantially exceeded. Thus, for example, if rights continued to cover 2422 fishers, and they fished an average of 225 days a year, the effort expended of some 545 thousand person-days would greatly exceed the some 300 thousand person-days appropriate.

Thus a process needs to be developed to ensure that rights allocation is effected in a way that respects the intended fishing effort limitation.

Now although the intended effort level could have been exceeded over recent years, this hardly appears to have happened (accepting for the purposes of argument that the DAFF database used for such computations is sufficiently reliable). The reason is that although in a given year some vessels have fished for well above 200 days, some others have fished for much less than this, so that the average number of days fished has been well below the maximum and broadly compatible with the TAE intended.

To ensure that this remains the case following reallocation, the following broad principles are proposed for the manner in which the 300 thousand (say) person-days TAE is divided:

- a) Existing rights holders in the fishery to whom rights are re-allocated will have those rights specified not only in respect of the number of fishers, but also in terms of a maximum number of days fishing a year, to be determined as their average performance in this respect over the last five completed seasons to which some small percentage is added.
- b) New rights holders shall have their rights similarly defined, but with their maximum number of days fishing a year set to the largest number allowed for any of the existing rights holders to whom rights are re-allocated.

Process

To this end, the following process is proposed:

- 1) In parallel with below, assessment analyses should continue post haste to finality, to allow the determination of the appropriate overall TAE as soon as possible.
- 2) Results of the following computations be presented to the 22 August SWG meeting:
 - a) The total number of person days fished for each of the last five completed seasons.
 - b) For each vessel in the fishery, an average and CV of the annual number of days fished over those five seasons, arranged in descending order of the averages.
 - c) A summary of the closed seasons that applied over the past five years, as that may need to be factored into the manner in which effort data for these years are appropriately averaged (any other information on factors which might distort the typicality of those effort statistics should also be reported).
- 3) A presentation be requested by a Management representative at the 22 August meeting that advises, *inter alia*, broadly what fraction of the TAE (or alternatively what TAC) is intended for redistribution to small scale fishers, and how their compliance with their allocations is to be monitored.

This information is critical input that the SWG will require for the computations to transform the assessment model results to a specific recommendation for a TAE (perhaps with a TAC component). For example because:

- i) Under a) above, one would like to allow as much flexibility as possible for successful rights applicants in terms of the percentage of days allowed above their previous average, without in turn reducing the total number of rights holders and the average catch by the fishery too much. Determining this trade-off to provide a basis for this decision requires simulation computations taking account of past variability in annual effort expended. Those computations will also require input on the likely extent of the allocation to the small scale sector, the nature of the associated limitation (catch or effort based), and the intended compliance procedures to allow an estimate of the extent of implementation error (difference between allocated and actual catch or effort) which is likely.

- ii) The procedure suggested under b) above, which assumes an effort-based limitation for new entrants from the small scale sector) provides a “fail-safe” cover against implementation error. However it would mean fewer rights holders and lesser catches than would be possible under a compliance system that could guarantee a certain minimum level of implementation error, which is why information on the compliance approach intended is essential.

Note that this proposed process relies on the assumption (used also in the assessment model) that fishing mortality in the squid fishery is proportional to effort. Experience this past season, when CPUE has not fallen as rapidly as effort itself in circumstances of poor squid availability, suggests that this assumption may fail at low abundance. With catch rates then not dropping as fast as abundance, an effort-based control approach provides an over-optimistic impression of security against undue resource depletion. This matter is not going to be resolved before recommendations are required from the SWG later this year to enable the rights re-allocation process to be finalised before the next season starts. Accordingly it is proposed that this matter remain under investigation, and if adequate supporting evidence for this hypothesis is found, calculations be pursued to develop rules that limit effort further than the standard TAE, should CPUE fall below some threshold level.

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