

Draft Memorandum

For: Scallop SCA7 Non Commercial Alliance (KCSRA, PBC and MRFA)

Subject: Some Management Observations from the Expert Panel Report of April 2016

From: Andrew Caddie/John Leader

Date: 19 April 2016

Introduction

1. As part of the development by MPI of a policy/management response to the collapsing Marlborough Sounds Scallop fishery, MPI organised a number of overseas Scallop experts (3) to visit NZ and carry out a review of NZ's scallop fishery stock assessment data and methods. This took place in Wellington over the week of Monday 29 Feb to Friday 4 March 2016.
2. At SWG meetings on 1 and 31 March and in Version 2 (dated 18 March) of an "Options Paper" MPI was developing we received various suggestions as to the useful insights that MPI and others were gleaned from the experts.
3. In due course, a report was generated by the panel of experts (S Smith, D Hart and M Haddon). A number of us had a skim through that report and, in essence, our initial collective response **was negative**. The report did not seem to offer any insights. John and I resolved to take a closer more detailed review.
4. The terms of reference attached to the report immediately highlighted the problem. The Experts had been carefully and **severely cautioned and restricted** from commenting on the efficacy of past, current or future scallop **management** actions.
5. Nevertheless carefully hidden amongst the text **there are** comments and insights from the Experts on scallop management. The purpose of this memo is to identify and record the "forbidden fruit". We identify them in the order they appear in the report.

Management Suggestions from the Experts Report

6. High-density areas contribute most of the larvae because scallops need to be in close proximity for eggs to be successfully fertilised. Thus removing a high proportion of scallops in high-density areas may remove important spawning aggregations and reduce fertilised egg production. This will impact negatively on sustainability. **Comment:** This seems clear Expert backing to our argument that closing at the very least Ships Cove and Guards Bay for spawning purposes is optimal (Bottom of page 7). MPI have also supplied an Australian scientific paper (Tasmanian Scallops) on this issue which clearly supports

/underlines the importance of using high-density areas in terms of supporting a rebuild of a scallop fishery.

7. Rotational fishing of the most productive areas (shutting for one or more years and opening for one) would prevent gross overfishing of the productive areas, increase larval production and enhance recruitment. **Comment;** Further Expert support to the closure as a minimum of Ships Cove and Guards Bay (Top of page 8).
8. Rotational fishing was an important component of the GB and TB reseeded program when it was operating successfully. **Comment;** the Experts agree that part of the failure of GB and TB reseeded program was the collapse of rotational fishing (Mid Page 8).
9. The Experts were struck by the mismatch between our fishing gear selectivity and the minimum legal size. The Experts believe that increases in ring size would improve yield per recruit and that it should reduce mortality from the discarding of undersized scallops. The Experts **recommended** that this should be promptly investigated. The experts also gave some helpful hints as to how this might be theoretically examined. **Comment:** a real *light bulb* moment here (page 8).
10. **Note** in the recommendations this “management” issue is mixed up with recommending studies on the important impact of incidental mortality (from the fishing effort) in different substrates and gear configurations (e.g. mesh size, box dredge v’s bag etc.) (page 18).
11. The Experts agreed that scallop fisheries could certainly be overfished. **Comment:** “Reassuring” to see in light of CSEC’s recent communication.
12. The Experts noted that the current NZ approach to Stock Status Determination is **not model** based. The NZ approach is to scale abundance data to the population using dredge efficiency to provide estimates of exploitable biomass. The Experts agreed developing a NZ model to better understand the underlying dynamics of the fishery was **NOT recommended**. Better to work on improving the estimates used. **Comment:** OK, not a strictly management matter but given CSEC recent confusion/comments around models worth noting (page 9).
13. The Experts noted their observations that dead scallop shells aid settlement of post larval scallop **and recommended** NZ consider changing its practice. **Comment:** all good but why did we remove scallops – just compliance reasons or was their other reasons? (page 10) .
14. Given NZ’s use of scallop surveys to estimate absolute population abundance and biomass, determining dredge efficiency is Very important (key). Experts **recommend** more work - experimental and modelling - needed.
15. The Experts record they felt compelled given the agreed objectives of the Review to comment on the **Management** strategy used in the Coromandel

around CPUE (Catch per unit effort). The Experts usefully highlight the difficulties of CPUE. Full co-operation of all fishers is required. An effective CPUE monitoring system independent of the statutory data collection is required. Particular soft and hard limit reference points have to be calibrated. It may not be useful in an enhanced fishery (page 15). Comment seems of limited application then in the MS.