

POSSIBLE OPTIONS FOR IMPROVED MANAGEMENT OF SCOTLAND'S MIXED STOCK FISHERIES

MSFWG0907

INTRODUCTION

1. This paper is intended to generate an initial discussion of the approaches that might be made as a basis for a further and fuller paper/discussion at the next meeting, as originally planned. The paper draws upon sources of information about current practices and options, but in discussion the Group might wish to consider any additional or fresh approaches, especially those relating to voluntary options.

2. On a range starting with voluntary measures through to a last resort of temporary or permanent compulsory closure, whether of netting stations, recreational rod and line fisheries or both, there are potentially a number of management measures that fisheries managers and operators can consider. Some initial suggestions for such options are set out here in the context of the conclusions of the European Commission Staff Working Document "Report on Mixed Stock Fisheries for Salmon In Atlantic Community Waters" (SEC(2006) 590, 04.05.2006), that "national legislation is perfectly adequate to minimise the impact of mixed stock fisheries on salmon conservation".

3. The Commission Staff paper recognises that the challenge for management authorities is to ensure sustainability of stocks and a fair sharing of fishing opportunities by the various types of fishermen. Not all causes of stock decline are related to fisheries so that irrespective of management options relative to exploitation other challenges to abundance will remain. These can range from predators, water quality in rivers, deterioration or loss of spawning grounds and man made barriers to migration.

THE SCIENCE AND CHARACTERISTICS OF THE SALMON STOCKS IN NATAL RIVERS

4. As previously discussed within the Working Group the term "stock" has regularly been used interchangeably with the word "population", often leading to confusion, or at best, lack of clarity. The Working Group has therefore agreed the importance of having a shared understanding of the meaning of both these terms as follows:

- A population is a clearly defined biological term and comprises a group of individuals of the same species occupying a particular geographic area. Populations may be relatively small and closed, as on an island or in a valley, or they may be more diffuse and without a clear boundary between them and a neighboring population of the same species. For species that reproduce sexually, however, members of a population interbreed either exclusively with members of their own

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population or, where populations overlap, to a greater degree than with members of other populations.

- In contrast to the biological definition of a population, a stock is a group of individuals, not defined by biology (but usually envisioned as comprising a number of populations) but by management needs. The scale chosen depends on the level at which one intends to manage, and often, the level at which data availability allows one to manage.

5. At its second meeting the Working Group adopted the NASCO definition of a mixed stock fishery (MSF) (NASCO, 2000):

“A fishery exploiting a significant number of salmon from two or more river stocks.”

6. The Commission Staff Paper reports the view that mixed stock fisheries are not inherently detrimental to stock status. Any fishery, single stock or mixed stock, only poses a problem if it exploits stocks where there is no exploitable surplus. MSFs may, however, present particular management difficulties in relation to assessment of the stock composition of such fisheries and the status of the components.

7. NASCO has recommended the setting of **conservation limits** and management targets for each river and for groupings of rivers constituting stock units. Conservation limits (CLs) are defined by ICES (ACFM/ACE Report, 2004) as:

“the level of stock that will achieve long term maximum sustainable yield (MSY), as derived from the adult-to-adult stock and recruitment relationship.

8. The evidence presented by FRS to the second meeting of the Group has helped understanding of the impact of mixed stock fisheries on different river stocks while recognising that the information base remains patchy. In broad terms it is clear that the impact is greatest on the rivers closest to the MSF and it will therefore be important for the Group to look carefully at the state of those stocks when considering appropriate management measures.

9. The Commission Staff Paper reports an opinion that even if the real effect of an MSF on a **distant** river is low, the interception of just a few fish could harm the rebuilding to sustainable levels of some small and depleted stocks, where the spawning population may consist of just a few tens of individuals. This has the following possible implications:

- On the basis of NASCO objectives, some argue this requires the precautionary approach and therefore the complete banning of all MSFs
- The counter-argument is that this does not recognise the issue of proportionality between the socio-economic impact of the measure and the likelihood and magnitude of the threat to stock recovery

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10. Depending on the management objectives chosen a range of options for improved management of MSF may be available. The Group is invited to consider the following as initial suggestions for discussion in the first instance. It is expected that members will have additional options to put forward and they are encouraged to do this for the third meeting and on an ongoing basis as the Group's consideration proceeds.

Improved Information for Management

11. Genetic Stock Identification (GSI) work is underway in Scotland under a joint FRS/RAFTS project and results that will allow identification by distinct river stocks are projected to be available within the next 3-4 years. Scotland already has some historic information from tagging experiments. The Group is invited to consider what scope and related costs/benefits exist to gather further information by e.g. DSFBs as fisheries managers, Fisheries Trusts, the different sectoral interests, Government and FRS.

12. Additionally the Group may wish to consider the costs/benefits and practicalities of developing improved monitoring and surveillance of in river, estuarial and coastal fisheries.

Restrictions in Fishing Methods, Areas or Times

13. If there was sufficient evidence, on the basis of existing or newly acquired information, it might be possible to apply (under current legislation in Scotland) measures to all fisheries to protect specific river stocks or seasonal components of river stocks. Options could include:

- Effort limitation through changes to close times – nationally or locally, weekly or annual.
- Voluntary/mandatory catch and release for rod-caught salmon and sea trout – nationally or locally,
- Voluntary/mandatory catch and release of net caught salmon or sea trout
- Voluntary/mandatory deferral of opening of the season
- Statutory extension of the close of the season
- Voluntary/mandatory restrictions on methods e.g. baits and lures

Moratoria, Temporary Closure or Phasing Out

14. The Commission Staff paper suggests that if statutory closure of MSF by specific legal instruments were proposed, temporary rather than permanent closure might be preferable in Scotland “where statutory prohibition can be challenged due to the private nature of the fishing rights”.

15. A range of options may be available such as:

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- **Closure**- voluntary agreements [possibly with compensation] for temporary (part season or for a fixed period), partial (e.g. specific locations within a river, estuarial or coastal area) or full closure
- **Voluntary moratoria**, temporary or permanent, full or part seasonal on e.g. renewals or extensions to existing leases or new leases or at point of sale or other transfer.
- **Voluntary phasing out or buyout** by all owners or of those fisheries owned by public authorities

Conclusion

16. The Working Group's discussion on the points contained within this paper, and any new suggestions or options considered, will be incorporated into a refined Management Options paper, for consideration by the Group at Meeting Four.

Secretariat

10th February 2009