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# CONSIDERATIONS ON HOW TO RE-OPEN A CLOSED FISHERY

A FRCC Discussion Paper

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Canada

## CONSIDERATIONS ON HOW TO RE-OPEN A CLOSED FISHERY

### Introduction

The Fisheries Resource Conservation Council (FRCC) advises the Minister of Fisheries and Oceans on matters pertaining to the conservation of Atlantic fisheries resources. Conservation objectives include:

*rebuilding stocks to their 'optimum' levels and thereafter maintaining them at or near these levels, subject to natural fluctuations, and with 'sufficient' spawning biomass to allow a continuing strong production of young fish; and,*

*managing the pattern of fishing over the sizes and ages present in fish stocks and catching fish of optimal size.*

The FRCC's mandate is to recommend measures, including total allowable catch levels, to ensure conservation of fish stocks; to recommend measures leading to an ecosystem approach to fisheries management; and, to recommend research directions, within the Department of Fisheries and Oceans, which foster the above objectives.

### Background

In 1993, following a sharp decline in catches, the scientific assessment revealed a situation where many groundfish stocks had declined to unprecedented low levels, with no evidence of large new year classes, low spawning stock biomass, and reduced spatial distribution. To conserve remaining stocks, the FRCC recommended closure of directed fisheries in a number of areas. These closures are expected to contribute, over a number of years, to recovery of depleted fish populations.

A significant concern of the FRCC is then the question of when and at what level to recommend re-opening a closed fishery. At which point will a particular stock be deemed to have sufficiently recovered to allow fishing to

recommence? What fishing level will then ensure sustainable exploitation, building and/or preserving the stock while providing appropriate socio-economic benefits?

The FRCC has begun deliberations and consultation on the various issues surrounding these questions and, through its Subcommittee on Stock Assessment, is preparing a discussion document which will be published in the fall of 1994, for extensive public consideration in 1995. We present here, in advance of that document, an outline of the FRCC's current thinking on the general principles which are to guide the re-opening of a fishery, and on the process which will lead to decision-making in particular instances.

### A Re-Opened Fishery

We begin by imagining a fishery, after re-opening, as a harvesting process based on adequate information about target species, and on an understanding of their relation with the rest of the ecosystem and their physical environment.

Such a harvesting process can clearly operate smoothly only through the collaboration of all concerned: harvesters, processors, managers and scientists. In particular, an accurate and timely flow of information about catches and other indices of stock properties, the environment and other relevant parts of the ecosystem would be required to provide a solid basis for establishing conservation measures to ensure a sustainable harvest.

### The "Health of the Stock"

Before harvesting can begin however, there has to be an assessment of the state of the stock to determine whether a fishery can be conducted at all. That assessment has to include information on the abundance of the stock, the spawning biomass, the age structure, the spatial distribution, and any other relevant property contributing to a collective index which we may call the "health of the stock".

A healthy stock, from which a fraction may be taken by fishing, will be defined according to certain levels of total biomass and/or spawning biomass, and according to expected properties of age structure, condition, distribution, and any other biological indicators appropriate to that stock. The identification of the relevant biological indicators, and their combination in defining a threshold "health" level above which a fishery might be considered, will of course have to be established for each stock.

Important questions concern the particular thresholds for each biological indicator, their relative importance, and how they are to be combined in assessing the "health" of the stock. For example, will it be necessary for each one of a number of biological indicators to be at a level above some threshold, or will it be sufficient for an average to be exceeded, or will some combination be deemed appropriate? The FRCC will seek advice from all parties concerned in establishing such "health of the stock" thresholds.

Thus, to re-open a fishery, it will be necessary to have on hand a reliable evaluation of the current status of the stock in relation to the particular thresholds defining its "health".

### The Decision Making Process

Re-opening will be considered only when a stock is judged to have reached a "healty" condition, and then only at an exploitation rate judged to allow that stock to maintain or improve its health. While it is within the FRCC's mandate to recommend exploitable stock levels based upon stock status, a decision to open the fishery may also depend on whether the fishing levels are economically or socially feasible, which is beyond the FRCC's purview. As well, the decision-making process may involve looking some years ahead into the consequences of various exploitation levels.

There are a number of critical points within the decision-making process where information and consultation are required. Extensive consultation involving all harvester and processor groups, managers, and scientists will be necessary to ensure informed and cooperative participation by all.

The consultation process envisaged by the FRCC at this point begins with the circulation of this document and will be continued through the publication of an extended discussion paper this fall. Public meetings focusing on the general strategy and its application to specific stocks will be scheduled for the spring of 1995.

### Requirement

Discussion and feed-back are invited in response to the general concept presented above, and on a process to arrive at consensus on the criteria to be used in defining the "health of the stock".