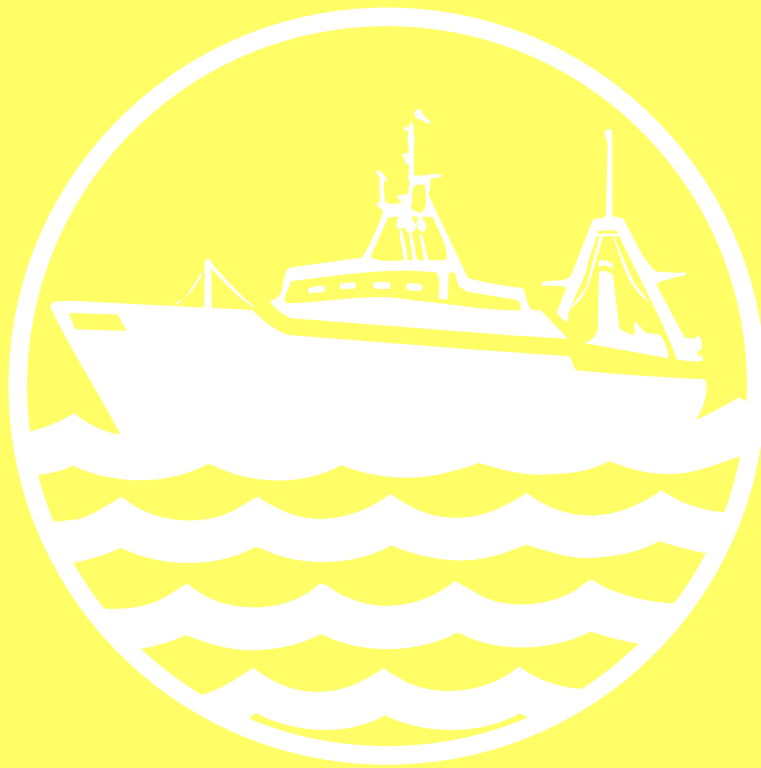


# Journal of Northwest Atlantic Fishery Science



Volume 26

Northwest Atlantic Fisheries Organization  
Dartmouth, Canada  
2000

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Printed and Distributed by:  
Northwest Atlantic Fisheries Organization  
P. O. Box 638, Dartmouth, Nova Scotia  
Canada B2Y 3Y9

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## Journal of Northwest Atlantic Fishery Science

Scientific publications by ICNAF and NAFO have been in existence since ICNAF began in 1949 with the *ICNAF Special Publication Series* dealing with Proceedings of scientific symposia. The *ICNAF Research Bulletin* was started in 1964 to provide a means of publishing results of scientific research relevant to ICNAF. The *ICNAF Research Bulletin* was terminated in September 1979 after the issue of Number 14. The first volume of the *NAFO Journal of Northwest Atlantic Fishery Science* was published in December 1980, after NAFO came into force replacing ICNAF in 1979.

The Northwest Atlantic fisheries have a rich history, and a great deal of research has been sponsored and encouraged by NAFO, and its predecessor ICNAF, and has been a leader in international organizations in the application of science to fishery management and in the regulation of fisheries. In accordance with its mandate to disseminate information on fisheries research to the scientific community, the Scientific Council of NAFO publishes the *Journal of Northwest Atlantic Fishery Science*, which contains peer-reviewed primary papers, and *NAFO Scientific Council Studies*, which contains unrefereed papers of topical interest and importance to the Scientific Council. Lists of these and other NAFO publications are given on the back of this issue.

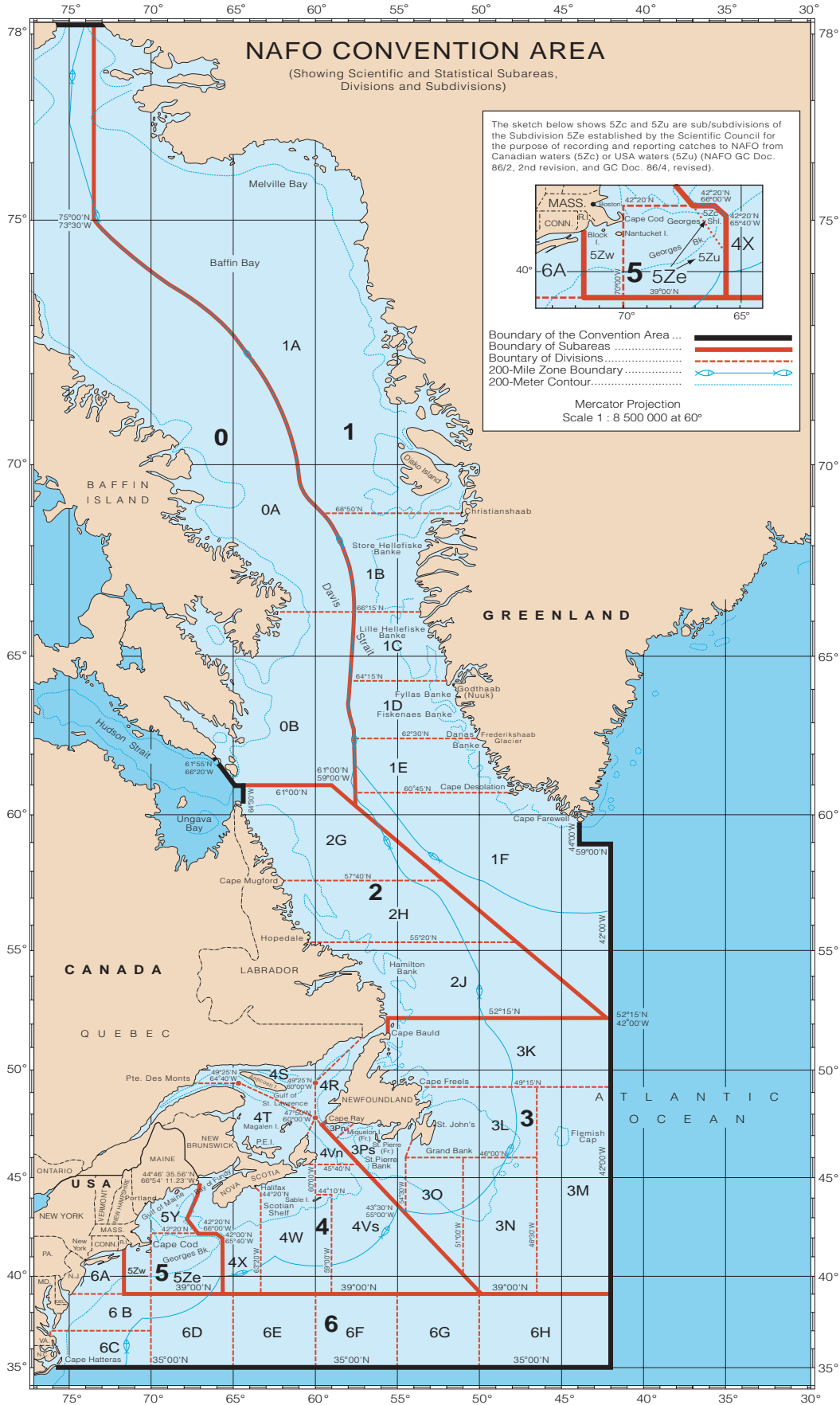
### Editorial Policy

The Journal provides an international forum for the primary publication of original research papers, with emphasis on environmental, biological, ecological and fishery aspects of the living marine resources and ecosystems. While the Journal is intended to be regional in scope, papers of general applicability, and methodological and review papers, irrespective of region, are considered. Space is available for notes and letters to the editor to facilitate scientific discussion of published papers. Both practical and theoretical papers are eligible. All papers are peer-reviewed to determine their suitability for primary publication. Associate Editors arrange for the peer-reviews and ensure that the papers accepted for publication meet the high standards required for the Journal. Manuscripts approved for publication are accepted with the understanding that they are not copyrighted, published or submitted elsewhere except in abstract form. There are no page charges.

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## Foreword

In accordance with its mandate to disseminate information on fisheries research to the scientific community, the Scientific Council of NAFO publishes the *Journal of Northwest Atlantic Fishery Science*, which contains peer-reviewed primary papers and notes on original research, and *NAFO Scientific Council Studies*, which contains review papers of topical interest and importance to the current and future activities of the Scientific Council. Both publications have included proceedings of Special Sessions or Symposium of the Scientific Council as well as individually submitted papers. The idea of a series of invited papers for publication in the *NAFO Journal* was first raised by the Standing Committee on Publications of the Scientific Council in 1985 as one way to enhance the scope of the *Journal* and to stimulate broader interest in it. Some previous issues of the *Journal* were dedicated to such invited papers.

The present issue of the *Journal* is compiled with current scientific papers as reviewed and edited by some members of the Editorial Board.

2000

Tissa Amaratunga  
Technical Editor  
Northwest Atlantic Fisheries Organization  
Dartmouth, Nova Scotia  
Canada





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