



December 30, 2001

Dr. Dennis McGillicuddy  
Mail Stop #11  
Woods Hole Oceanographic Institution  
Woods Hole, MA 02543

Dear Dr. McGillicuddy:

As an associate PI of the ECOHAB-GOM project for the past several years, I have participated in the annual PI meetings where the latest research on *Alexandrium* blooms in the Gulf of Maine has been presented. This project has demonstrated tremendous progress in understanding *Alexandrium* blooms in the Gulf of Maine. In particular, your biological/hydrographic models that simulate *Alexandrium* bloom dynamics in the region are a culmination of those efforts and would be quite useful to Canadian officials and researchers as predictive tools for protecting coastal resources and public health. My hope is that shellfish managers and researchers will eventually use these models to predict blooms within regions of the northwest Atlantic. Therefore, I fully support your proposal "Predictive models of the toxic dinoflagellate *Alexandrium fundyense* in the Gulf of Maine: quantitative evaluation, refinement, and transition to operational mode for coastal management."

Fisheries and Oceans Canada (DFO) has an active HAB research programme in the Bay of Fundy (adjacent to the Gulf of Maine) and results obtained from the models would be of great benefit to my research efforts. Where *Alexandrium* populations exist throughout the region, studies such as these will provide a better understanding of *Alexandrium* population dynamics - including migration, seeding, transport, and resulting shellfish toxicities. Additionally, Canadian HAB researchers are in the process of planning a national proposal for a Canadian GEOHAB research component (with the cooperation of international research partners such as you and your colleagues) for submission to the international GEOHAB scientific committee. Canadian contributors to this national effort will include: the DFO Phycotoxin Working Group (I am the current Chair), universities, the private sector, and other government departments such as the Canadian Food Inspection Agency (CFIA), National Research Council, Department of Health and the Canadian Museum of Nature. In October, 2001 a workshop was convened in Montreal, QC to outline the approach to coordinating and focusing efforts of the Canadian scientific research committee into HAB research. *Alexandrium* was identified as one of the key species to be studied. One component will include coupled physical-biological models using advanced three-dimensional circulation models and more representative biological and predictive models using novel statistical methods to analyse existing data and data assimilation methods incorporating near-real-time observations. Therefore, I strongly support your proposal as it proposes a Gulf wide effort and the models that are proposed are region-wide simulations that will assimilate near real time observations from the Gulf of Maine and can include information from Canada.

For the Canadian contribution, I plan on participating in the several annual workshops that you propose during the course of the study.

I look forward to working with you and expect that the models will provide scientifically based approaches that we can use to manage shellfish resources efficiently while protecting public health and coastal resources. If there is any other information that you need, please let me know.

Sincerely,

Jennifer Martin

Canada

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