

November 27, 2020

Statement by Professor Robert Steneck, PhD (University of Maine's School of Marine Sciences)  
RE: Implementation of Mi'Kmaq Treaty Fishing Rights to Support a Moderate Livelihood

I was asked to comment on the implementation of Mi'Kmaq Treaty for "Fishing Rights to Support a Moderate Livelihood". I believe I was invited to this session based on my nearly 40 years of experience in and scientific publications on the biology, ecology and management of the American lobster along the coast of Maine, USA.

I believe the overarching question is: *Will proposed Mi'Kmaq fishing contribute to overfishing the lobster resource in LFA 34?*

The simple answer to this question is no. However, I'd like to provide some context and identify what I think are the key issues and data relevant to addressing this question.

LFA 34 is by far the most important fishing area in the Canadian Maritimes having landed nearly 30 thousand tonnes of lobsters annually valued over 400 million dollars in recent years.

A unique feature of American lobster fishery in Canada and the US, is that it has been fished for over 130 years but landings are higher today than ever before. Lobster landings over the last decade exceed all those in the past going back to the 1880's in both the US and Canada. Importantly, lobster landings in Maine and in LFA 34 have been remarkably similar since 1950. In both regions, lobster landings began increasing in the 1980's steadily setting new record landings right up to our current times.

Typically, for any species landings increase because fishing pressure has increased (e.g., improved methods, more harvesters) or populations have increased. There are two relatively simple methods for determining if lobster populations have increased. One examines catch rates per trap to see if the "catch per unit effort" (CPUE) has increased (and it has) and the other uses fisheries independent bottom trawl surveys to assess lobster abundance (number of lobsters caught per standardized trawl). For both of those metrics, for both Maine and LFA 34 the evidence shows not only population increases over the past four decades but specific patterns of inflection and decline in common.

The similarities between the lobster fisheries in Maine and LFA 34 are striking and important because lobster fisheries regulations between the two regions have some important differences. Both regions fish using traps, protect juvenile lobster by having a minimum harvestable size and protect lobster reproduction by prohibiting the harvest of egg bearing lobsters. However, the two

biggest differences between the regions are that the fishing effort in Maine is much greater than that in LFA 34 (Table 1) and the Maine fishery is year round rather than limited to a fishing season as is the case in LFA 34.

The best comparison between lobster fishing in Maine compared to that of LFA 34 is with Maine fishing Zones A & B (see figure below). In 2016, which was a peak landings year in LFA 34 and in Maine, landings between Maine's Zones A and B and LFA 34 were remarkably similar (Table 1). The trajectory of landings and CPUE are similar despite the much greater effort in Maine with more than twice the number of fishing boats and harvesters, traps and months of fishing (Table 1).

Table 1. Comparison between Maine state fishing zones A & B with LFA 34. The comparison is between the geographically closest fishing areas, with approximately the same coastline length and similar overall landings. Sources Maine's Department of Marine Resources and Canada's DFO.

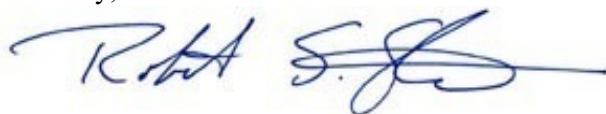
<u>Region</u>	<u>Landings</u>	<u>Fishing effort per harvester and overall</u>
Maine*	23,635 MT, 2137 boats, 800 traps/harvester, 1,709,600 traps,	9.7 tonnes/license
LFA 34	29,000 MT, 979 boats, 400 traps/harvester, 391,600 traps,	29.6 tonnes/license
Mi'Kmaq	11 boats, 50 traps/harvester,	550 traps

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\* Zones A & B (see figure below)

The most recent stock assessment by the Atlantic States Marine Fisheries Commission (22 October 2020) concluded that lobster stocks in the US Gulf of Maine and Georges Bank are "*not overfished nor experiencing overfishing.*" Given that the fishing effort in Maine is much higher than that in LFA 34 and fished over the entire year (Table 1), it is unlikely that the proposed Mi'Kmaq fishing effort will have a negative impact on lobster stocks in the region.

Sincerely,



Robert S. Steneck, Ph.D.  
Professor of Marine Biology, Oceanography and Marine Policy

