

**Notes to Accompany a Statement to:**

**The Law Amendments Committee of the Nova Scotia  
Legislature**

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**Concerning the:**

# **Environmental Goals and Climate Change Reduction Act Bill 57**

**Monday, November 01, 2021**

**Virtual Presentation 3:00PM**

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**Co-Chair**

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Good Day Committee Members.

Thank you for the opportunity to address you on this critically important Bill. I'm speaking today on behalf of the Clean Ocean Action Committee (COAC) which represents over 9,000 vessel owners, Captains, crew members and fish plant owners, operators and workers who are wholly dependent on a healthy ocean and on the renewable resources it provides. I am also one of those representing the "Offshore Alliance" a consortium of fishery groups and environmental NGO's working to protect our oceans.

I must start by saying that it was distressing to see a bill espousing Nova Scotia's environmental goals that makes no mention of the importance of protecting our oceans and the renewable resources contained therein from the incredibly damaging effects of global warming. I am going to limit my comments to the massive risks to our ocean created by the process of offshore oil and gas exploration and extraction.

The Nova Scotia Seafood Industry supports over 25,000 jobs and generates annually over \$2 Billion in export value. The Seafood industry makes a massive contribution to our Provincial GDP and this industry is under immense pressure from the impacts of global warming, ocean acidification, ocean de-oxygenation and changing ocean temperatures.

I will start by saying that:

***"There is no jurisdiction on the planet with more to lose from Global Warming than the Province of Nova Scotia. Our Seafood industry is an asset of expanding value and its health is critical to both our economic and social wellbeing."***

**We feel strongly that it would behoove our Provincial Government to begin to consider Nova Scotia's supply of renewable "Protein Energy" as a major asset of increasing value and importance. Nova Scotia is uniquely positioned to provide the high quality protein energy that both local and international markets**

demand. This high quality protein energy is increasing in value every year. By 2050 the demand for ocean based protein will double. The world absolutely requires an increase in this protein Energy. What the world does not require is increasing the supply hydrocarbons to burn as fossil fuels.

A forward thinking Provincial Energy Department might, today be consulting with our Fisheries Minister searching for ways to increase our output of high quality, value added, Protein Energy for world consumption other than attempting to increase the world supply of fossil fuels.

The following notes are broken into two main categories: **The “Local Threat”** and the **“Global Threat”** to our renewable ocean resources.

### THE LOCAL THREAT

**Here is a fact.**

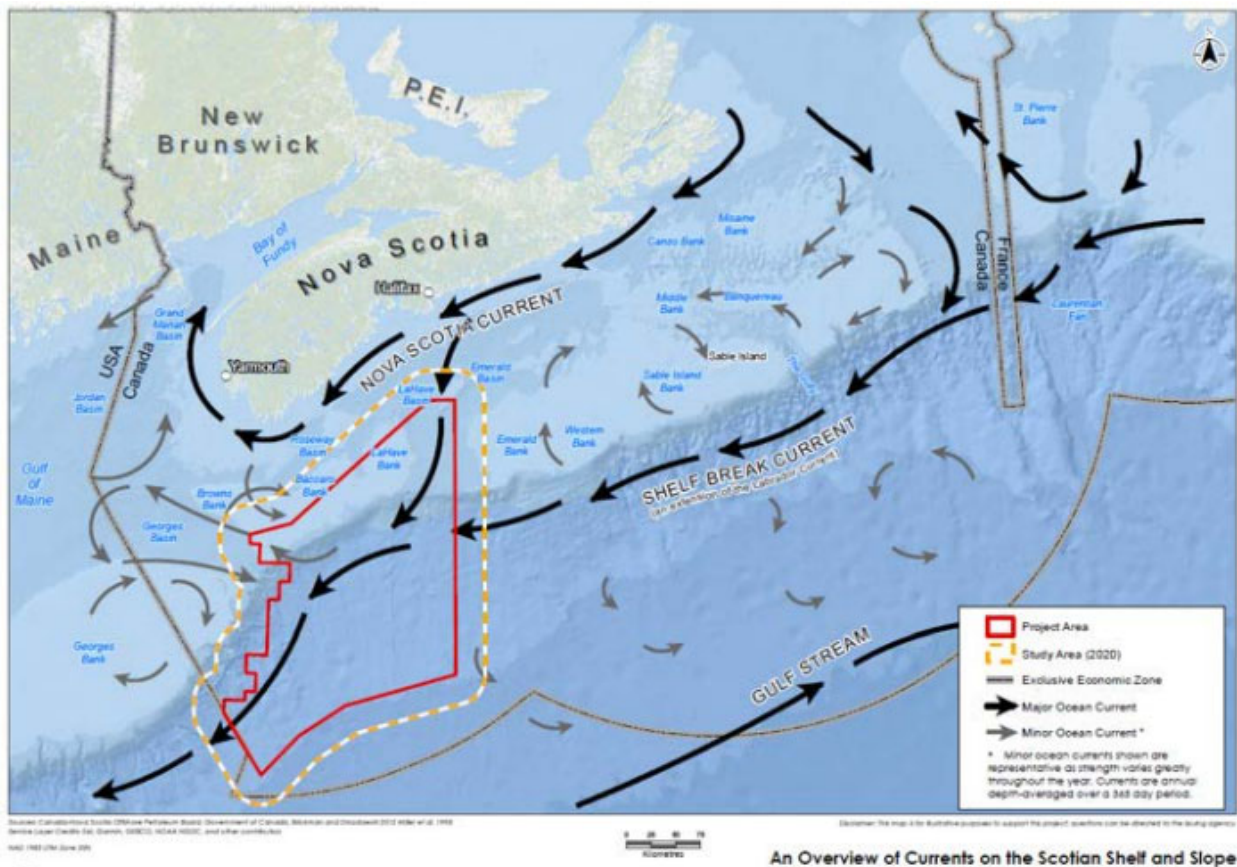
**The oil industry is incapable of cleaning up and removing an oil spill from our offshore waters. In your notes you will see**

- A report titled, “Characteristics of Response Strategies” published by
- The American Petroleum Institute, the National Oceanic and Atmospheric Administration, the U.S. Coast Guard and the U.S. Environmental Protection Agency makes the following statements when discussing oil spill containment booms;
- 
- “Boom Effectiveness drops significantly because of entrainment and/or splash-over as short- period WAVES develop beyond 2 to 3 feet (0.6 to 0.9 METERS) in HEIGHT.
- Containment and recovery decrease rapidly as slick thicknesses drop below a thousandth of an inch (i.e., very low oil encounter rates).”
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- In a separate report prepared for the U.S. Department of Transportation, the United States Coast Guard, Marine Safety and Environmental, titled,
- Field Guide Oil Spill Response in Fast Currents
- section 3.3 states;
- “Oil will be lost under a boom when the current exceeds about .75 knots. This value is independent of boom skirt depth. Wind loads are not significant in high-current areas but the loads created by wind-induced currents can affect the equipment performance so the effect of the wind must be included.”

Further, you will see in my notes a table taken directly from the Stantec Strategic Environmental Assessment created in March of 2021 for the Canada Nova Scotia Offshore Petroleum Board (CNSOPB) to help justify their recent oil lease offerings. Please note the Mean Wave height:..... At no time, in no season, is the mean wave height within the required parameters for offshore oil spill cleanup and removal.

**Table 3.2 Minimum, Maximum, Mean and Standard Deviation of Significant Wave Height at Grid Point 6001526 by Season(1954-2018)**

Season	Minimum Wave Height (m)	Maximum Wave Height (m)	Mean Wave Height (m)	Standard Deviation (m)
Winter (Dec – Feb)	0.54	12.79	3.09	1.46
Spring (Mar – May)	0.370	15.28	2.37	1.31
Summer (Jun – Aug)	0.45	14.93	1.46	0.62
Fall (Sep – Nov)	0.45	14.54	2.72	1.19



From the same Stantec report are shown the Scotian Shelf currents. There is no time when currents fall below .75 knots and the Bay of Fundy tides are immensely strong. You will note in the chart above the red outlined area. This is the area covered by the Stantec environmental assessment.

In reality, the oil industry has only one option in dealing with an oil spill on Georges Bank or on the Scotian Shelf and that is the use of **chemical dispersants** which break up the oil spill and make the oil slick conveniently disappear below the waves.

It is important to understand that in the U.S., NOAA and 16 additional U.S. government departments and agencies list dispersants as a “contaminant.” They do so for good reasons. Dispersant-based chemicals persist in the environment, but the real problem is that dispersants act as a vector, a delivery system, for the highly toxic polyaromatic hydrocarbons in the oil, which allows these toxins to have much greater negative impact on our fish stocks.

Dr. Terry Snell, chair of the school of biology at Georgia Tech and Dr. Samantha Joye, professor at the University of Georgia have been studying dispersant laced oil since the Deepwater Horizon disaster in 2010. They state unequivocally that,

***“When commercial fisheries are at risk from hydrocarbon pollution, the use of dispersants is not an advantage. Dispersant use would, in fact, be a disadvantage in trying to protect commercial fish stocks or shellfish species from the toxic impacts of hydrocarbon pollution.”***

These facts are well established in the greater scientific community but have apparently escaped the attention of our regulators.

In the Fall of 2015 the Canadian Energy Pipeline Association (CEPA) and the Canadian Association of Petroleum Producers (CAPP) commissioned a Royal Society of Canada Expert Panel to investigate the impacts of oil in an aqueous environment. This panel made many important findings. Among these highly disturbing comments about dispersant laced oil is the following information.

**Page 163 Royal Society of Canada Report**

***“Recommendation: Research is needed to: 1) assess the toxicity of dispersed oil to deep water corals, ground fish and invertebrate species that have high economic importance (e.g., lobster, crab, scallops);***  
***2) Research is needed to model the distribution of deepwater plumes of dispersed oil in relation to areas of known fisheries productivity, such as the fishing banks of Canada’s east coast ...***

Committee Members, The fishing Banks of Canada’s East Coast are our fishing grounds. The Scotian Shelf, Georges Bank and the Bay of Fundy make up the richest multi-species fishery in North America. LFA 40, at the South Western end of the Scotian Shelf is the only designated lobster spawning ground on the East Coast of North America.

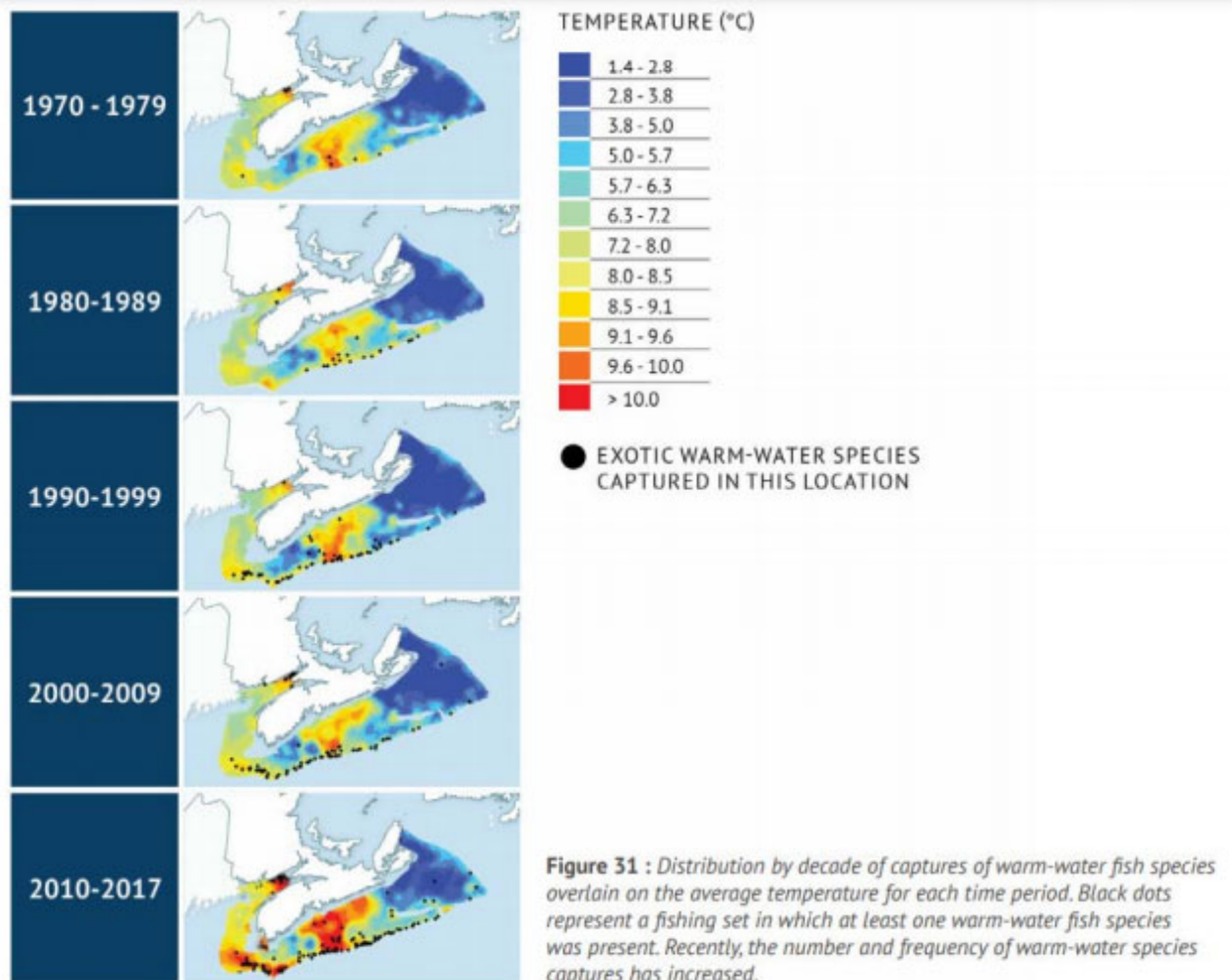
World scientists tell us that dispersant laced oil is much more toxic than oil alone. World scientists tell us that you cannot protect fish stocks with dispersants. Canada’s best scientists tell us emphatically that more study is needed before we know that dispersants can be used safely near any important commercial species.

**We need to listen, Oil exploration and extraction on our fishing grounds cannot be carried out safely.**

## I will now turn to “THE GLOBAL THREAT”

The following chart explores some of the threats posed by global warming caused by the burning of fossil fuels and the ever increasing amount of CO<sup>2</sup> in our atmosphere and in our oceans.

### Ocean Warming



The chart in your notes outlines two important issues. The first is that increased CO<sup>2</sup> in our atmosphere and dissolved CO<sup>2</sup> in our oceans caused by the burning of fossil fuels is responsible for the rapid increase in ocean temperature around the Nova Scotian coast. Warmer ocean temperatures have dramatically increased the number of exotic warm water species invading our waters potentially displacing important local species by moving northward in search of colder water.

One very concerning example of the impact of northwardly migrating species is:

## Lobster, epizootic shell disease

Warming water temperatures are impacting the Gulf of Maine and epizootic shell disease is moving north and is now damaging a substantial percentage of lobsters being landed on the coast of Maine. The disease has two major impacts. First, it kills more female lobsters than males and second, the disease deforms the carapace of the lobster rendering it unfit for the very lucrative fresh market. There is no doubt, that as water temperatures continue to rise the epizootic bacteria will continue its march northward. Next season could see Nova Scotian landings impacted by this, Global Warming induced disease.

## Reduced Ocean Oxygen Levels

Warming waters affect the ocean and its dissolved oxygen content in several ways. Among other things, it influences the solubility of oxygen in the water. Oxygen levels in Nova Scotian waters are declining.

The continual absorption of CO<sub>2</sub> also increases acidity levels, and—when combined with the warming of our oceans—more coral reefs are dying off and can no longer offer a healthy ocean habitat for the commercial species that rely on them for food and protection. Scientists estimate if the current rates of temperature increase continue, the oceans will become too warm for coral reefs by 2050.

Our Provincial Government should recognize that the effort to advance offshore drilling for oil and gas equates to much less than a zero sum game. Any short term benefits that might accrue from the extraction of non-renewable hydrocarbons is far outweighed by the local potential of oil spills which would spell disaster for our fishing and tourism industries. Concurrently increases to the world supply of hydrocarbons will amplify the very real impacts of global warming which, in real time, is already threatening our multi-billion dollar Seafood industry.

The United Nations “**Intergovernmental Panel on Climate Change**” (IPCC) and other important environmental groups have called for a complete stop to all new oil exploration and extraction. We cannot utilize the hydrocarbons that are now available and still keep global warming levels to the required maximum of a 1.5 degree Centigrade increase.

**In Closing, We have a specific requests of the Committee.  
It is:**

**“We recommend that clause 7 of Bill-57 be amended as follows:**

**Following point (M) in Clause 7 the creation of a point (N) which states:**

**“(N) to prohibit all offshore oil and gas exploration activity, and all new offshore oil and gas production and transportation activity as of January 1, 2022, and to phase out all offshore oil and gas-related activity by January 1, 2025.”**

**It is past time that we take action on this issue.**

**Thank you for your time and consideration**