

EXECUTIVE SUMMARY — SUSTAINING CANADIAN MARINE BIODIVERSITY

Canada is an ocean nation. Our motto, *A Mari Usque Ad Mare*, means “from sea to sea.” Eight of ten provinces and all three territories — home to 86% of the Canadian population — are adjacent to salt water. Our coastline is more than 200,000 kilometres long, said to be the longest in the world. Our oceans cover some seven million square kilometres, seven-tenths the size of our landmass. We are an ocean nation. But we are failing our oceans.

This report, *Sustaining Canadian Marine Biodiversity*, was prepared by an expert panel convened by the Royal Society of Canada. Its task was to assess the state of Canadian marine biodiversity and look for ways to sustain it. As well, it was asked to review whether Canada is meeting its national and international commitments to sustain marine biodiversity — that is, whether it has done enough to provide healthy, safe and prosperous oceans for the benefit of Canadians today and in the future.

Since the panel began its work in June of 2010, it has found a threatened marine environment, where biodiversity is at risk. The oceans are not a government priority and it shows. The panel selected three areas to study closely — climate change, fisheries and aquaculture — because of their potential for impact on Canada’s marine biodiversity. The panel found, across all three subjects, not lack of knowledge or lack of sound policy, but a consistent, disheartening lack of action on well-established knowledge and best-practice and policies, some of which have been around for years.

In fact, compared to most developed nations, Canada has done a very poor job of fulfilling national and international commitments to sustain marine biodiversity. Years of commitments, targets and obligations to conserve and to sustainably use biodiversity have not been met. The foundation of Canadian ocean legislation is the 1868 *Fisheries Act*, written at a time when resources were assumed to be infinite. No word of conservation appears in it anywhere. It leaves huge discretionary powers to the minister of Fisheries and Oceans, who is given no science- based guidelines, targets or principles. The Oceans Act, introduced in 1996, promised to be a landmark move toward sustainable ocean management, guided by precautionary, ecosystem- based principles; but it has not been effectively implemented.

What does this lack of strong action mean for Canadian marine biodiversity? Here are a few examples:

- Climate change is making some mountain streams too shallow and warm for juvenile Chinook salmon, which could lead to extinction of some populations;
- Increasing acid levels in water will damage the ability of everything from corals to mussels to lobsters to build their shells and skeletons;
- Fish farming has the potential to accelerate the spread of parasites and diseases and

can undermine wild species by interbreeding;

- Canada has 797 marine protected areas, accounting for less than 1% of our oceans, far less than our international commitments to establish a protected network covering 10 per cent of them;
- Twenty years after the collapse of Newfoundland's northern cod fishery (once one of the largest fish stocks in the world) there is still no recovery target or timeline for rebuilding the population. Other developed countries, facing the same pressures as Canada, have done much better. In Australia, Norway and the US, sustainable ecosystem-based management practices, even going so far as to identify precise targets levels for most species, are dictated by law. There are several reasons for Canada's failure to be the leader it should be in protecting ocean ecosystems and sustaining marine biodiversity. Fisheries and oceans are not a government priority. There is a major conflict of interest at Fisheries and Oceans Canada between its mandate to promote industrial and economic activity and its responsibility for conserving marine life and ocean health. This conflict of interest is exacerbated by the absolute discretion that the minister of Fisheries and Oceans has to make decisions.

The panel believes that the simplest and best strategy to address the problems at hand is to conserve existing diversity and to rebuild depleted populations and species to restore natural diversity. By improving and protecting ocean health, this will restore the natural resilience of Canada's marine ecosystems and their ability to adapt in response to climate change and other human activities. The challenge then will be to sustain Canada's marine biodiversity so that it is able to provide a full range of ecosystem services to Canadians and to the global community.

The panel made seven recommendations to the Government of Canada in its report, including:

- Resolve the conflict of interest in the mandate of Fisheries and Oceans Canada;
- Revise Canadian laws to meet national and international commitments on sustainably use and conserve marine biodiversity;
- Rapidly increase the rate of statutory and policy implementation;
- Establish national operational objectives, indicators and targets for marine biodiversity.