

## Regulatory Area to be Addressed

**Regulatory Cooperation on Marine Aquaculture**

Building on the existing bilateral relationship and expertise in both countries, Fisheries and Oceans Canada (DFO) and the National Oceanic and Atmospheric Administration (NOAA) endeavor to undertake greater cooperation in the environmental management of the marine aquaculture sector under three specific work streams:

- A. Comparison of regulatory environmental management objectives and outcomes of net pen aquaculture;
- B. Cooperation on farmed to wild fish interactions, and;
- C. Cooperation on regulatory oversight and management for off-shore aquaculture.

NOAA Fisheries and DFO Aquaculture Management Directorate are the lead organizations for the NOAA-DFO aquaculture regulatory partnership and each intend to undertake the appropriate steps to work in partnership with their relevant national and sub-national regulatory departments/agencies, as necessary to further the collaboration. Improved regulatory cooperation between DFO and NOAA supports continued sustainable aquaculture development in both countries, as well as ensures that aquaculture regulatory reform is aligned to the extent practicable as both countries improve overall environmental management of the sector.

DFO and NOAA intend to review this work plan annually at the co-chairs meeting. Changes may be made, as appropriate, with the concurrence of the co-chairs of the Aquaculture Regulatory Cooperation Committee.

In addition to the action items listed under each work stream, several administrative actions will be undertaken. The process include:

- Establishing working groups, and;
  - Co-chairs identify working group leads for each work stream.
  - Working group leads draft terms of reference, including proposed membership, for each work stream.
  - Co-chairs approve terms of reference for each working group.
- Developing detailed work plans for each working group.
  - Working group leads convene initial meeting to develop a detailed work plan.
  - Co-chairs approve the work plan for each working group.

As indicated in the Joint Forward Plan, this Technical Work Plan is not intended to create binding obligations under domestic or international law. In addition, meeting the targeted deadlines in this work plan is subject to overall support from the executive branch of government in both countries, as well as the availability of appropriations, personnel and other resources.

<b>Work Stream A</b>	<p>DFO and NOAA intend to compare regulatory environmental management objectives and outcomes for the aquaculture sector in both countries.</p> <p>DFO and NOAA share similar environmental management objectives for aquaculture, namely to ensure that living marine resources and their habitat are protected using mitigation, monitoring and compliance approaches that are efficient, effective and commensurate with the potential risk to the environment.</p> <p>This work may be used in the future to evaluate the feasibility, as well as costs and benefits of developing of a joint statement on the equivalence of Canadian and U.S. regulatory programs for net-pen aquaculture.</p>
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<b>Department / Agency</b>	 United States	 Canada
	National Oceanic and Atmospheric Administration (United States Department of Commerce)	Fisheries and Oceans Canada

<b>Planned Initiatives and Sub-Deliverables</b>	<b>Date</b>
<b>Initiative 1: Comparison of regulatory environmental management objectives and outcomes for net-pen aquaculture</b>	<b>2015</b>
• Identify working group co-leads	2 <sup>nd</sup> quarter 2015
• Establish full membership of working group	3 <sup>rd</sup> quarter 2015
• Draft terms of reference for working group	4 <sup>th</sup> quarter 2015
• Draft detailed work plan for working group	4 <sup>th</sup> quarter 2015
• Annual working group meeting	4 <sup>th</sup> quarter 2015

<b>Work Stream B</b>	<p>DFO and NOAA intend to collaborate on management approaches that address farmed to wild fish interactions as they relate to genetic interactions and pathogens.</p> <p>In order to ensure effective management of the marine aquaculture sector it is necessary to consider the environmental impacts of potential farmed to wild fish interactions and take appropriate management actions. DFO and NOAA are particularly interested in genetic and pathogen related effects of farmed to wild fish interactions.</p> <p>Ultimately, cooperation on farmed to wild fish interactions will support the sustainable development of the aquaculture sector in Canada and the United States.</p>
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<b>Planned Initiatives and Sub-Deliverables</b>	<b>Date</b>
<b>Initiative 1: Cooperation on farmed and wild fish interactions</b>	<b>2016 – 2017</b>
<ul style="list-style-type: none"> <li>• Comparability assessment of escape/containment regulatory measures</li> </ul>	1 <sup>st</sup> quarter 2016
<ul style="list-style-type: none"> <li>• Comparability assessment of aquaculture siting decisions</li> </ul>	2 <sup>nd</sup> quarter 2016
<ul style="list-style-type: none"> <li>• Comparability assessment of area management approaches</li> </ul>	3 <sup>rd</sup> quarter 2016
<ul style="list-style-type: none"> <li>• Comparability assessment of overall regulatory risk assessment framework for potential genetic interactions and potential pathogen transfers</li> </ul>	3 <sup>rd</sup> quarter 2017
<b>Initiative 2: Evaluate the feasibility, as well as costs and benefits of a joint-statement on the equivalence of Canada and United States regulatory programs</b>	<b>4<sup>th</sup> quarter 2017</b>
<b>Initiative 3: Identification of potential areas for regulatory alignment on management of farmed and wild fish interactions</b>	<b>2018</b>
<ul style="list-style-type: none"> <li>• Explore areas for cooperation on escape management and codes of containment</li> </ul>	2 <sup>nd</sup> quarter 2018

<b>Work Stream C</b>	<p>DFO and NOAA intend to collaborate on regulatory aspects for off-shore aquaculture management with a mutual goal of advancing the development of the industry in each country. For purposes of this work, offshore aquaculture refers to open ocean aquaculture in exposed areas of federally managed waters of each country's exclusive economic zone.</p> <p>Globally, offshore aquaculture is being explored as the new paradigm in marine aquaculture. Siting aquaculture facilities in deeper waters that are farther away from the coast can potentially reduce environmental impacts and conflicts with other coastal users.</p> <p>Currently, all marine aquaculture operations in Canada are located in coastal waters. In the United States, most marine aquaculture operations occur in coastal waters, with a limited number of off-shore aquaculture sites.</p> <p>The United States has been working on regulatory frameworks to enable offshore aquaculture in federal waters. Several new permits for aquaculture in federal waters were issued in 2014 and early 2015, yet economic, scientific, regulatory, and social challenges remain for the industry to reach its full potential.</p> <p>Though Canada has advanced in developing regulatory measures and tools for managing environmental impacts associated with coastal aquaculture, offshore aquaculture has not yet been developed.</p>
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<b>Planned Initiatives and Sub-Deliverables</b>	<b>Date</b>
<b>Initiative 1: Cooperation on regulatory development initiatives for offshore aquaculture</b>	<b>2017</b>
<ul style="list-style-type: none"> <li>• Inventory of regulatory development initiatives of offshore aquaculture management</li> </ul>	2 <sup>nd</sup> quarter 2017
<ul style="list-style-type: none"> <li>• Identification of regulatory tools and challenges moving forward</li> </ul>	4 <sup>th</sup> quarter 2017