

# 2020-2021 Annual Report





## The Year in Review

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Clear Seas celebrated its fifth anniversary in the fiscal year ending March 31, 2021, and continued to build its reputation as a reliable source of fact-based information on safe and sustainable marine shipping. The organization is proving to be a valuable resource for public policy decision makers at different levels of government, within federal agencies, Indigenous communities, and non-governmental organizations.

As part of Clear Seas' commitment to ensuring relevant research and information, the landmark public opinion poll survey (see page 20) was expanded to include a Shipping Confidence Index to more accurately pinpoint where public opinion sits on the topic of marine shipping. The new index provides valuable insights into regional disparities in opinion against the backdrop of the continued confidence that most Canadians exhibit in marine shipping safety. Like many matters today, opinions and perspectives on marine shipping often seem polarized with diverse and conflicting views. While debate is the sign of a healthy open society, it is hampered when misinformation becomes part of public discourse and decisions may be based on incorrect or misleading information. This can also hinder efforts by policy makers to make decisions and develop new policies. Through its fact-based and impartial research, Clear Seas provides information that users can trust to mitigate the potential harm caused by misinformation.

The world faced a global health crisis in the form of the COVID-19 pandemic, which disrupted the supply chain and shone a light on the fragility of the global trading system. COVID-related shortages of essential products prompted Canadians to gain a greater understanding of the significance of marine shipping, ports and maritime workers according to Clear Seas research. It also became clear that as the world begins to emerge from the pandemic there is an

opportunity for Clear Seas to communicate its research on marine shipping and support political, industry and other policy leaders to play a key role in building a sustainable future to “rebuild it right.” This is underlined by the industry’s pressing need to decarbonize, incorporate new digital technologies, protect the safety and wellbeing of mariners, and respond to changing public attitudes revealed in Clear Seas’ research.

The past year also provided a time for reflection and a watershed opportunity to act on the findings of the 2015 Truth and Reconciliation Commission on the path to achieving meaningful reconciliation. Clear Seas has always prioritized Indigenous and Coastal Communities and the incorporation of Traditional Knowledge in its research. In the past year, activity has intensified in this priority area with the creation of the position of Manager of Indigenous and Coastal Community Relations, ensuring that Indigenous views are incorporated into research, educating the team on these issues, and communicating how the marine shipping industry affects the waters Indigenous peoples rely on. Clear Seas also commenced an internship program to support Indigenous students working in areas of interest to their communities.

During the pandemic, Clear Seas’ board, staff, research advisors, and other partners were able to work remotely and seamlessly advance the organization’s important work. As outlined below, Clear Seas continued to fulfill its mandate to inform policy makers and the public while providing the maritime industry with actionable best practices for safer and more sustainable marine shipping.

Bud Streeter  
Chair of the Board of Directors

# Table of Contents

The Year in Review .....	iii
Table of Contents .....	v
Annual Report 2020-2021 .....	6
1.0 Measuring Public Impact.....	6
1.1 Website Performance.....	6
1.2 Clearfacts Blog Series.....	8
1.3 Social Media.....	9
1.4 E-newsletter.....	11
2.0 Relevance and Influence.....	12
2.1 Research in Action .....	12
2.2 Media Coverage.....	13
2.3 Growing Clear Seas' Quebec Presence.....	14
2.4 Contributing to the Dialogue on Safe and Sustainable Marine Shipping.....	15
2.5 Advancing a Shipping Risk Community of Practice .....	15
3.0 Making Reconciliation a Reality for Marine Shipping .....	17
4.0 Relevant and Timely Research.....	19
4.1 Recent Research Publications.....	19
<b>Assessing the Sensitivity of Coastal Areas to Oil Spills.....</b>	<b>19</b>
<b>2020 Poll: Canadians' Attitudes Towards Marine Shipping .....</b>	<b>20</b>
<b>Vessel Traffic in Canada's Pacific Region.....</b>	<b>20</b>
4.2 Research Underway: FY2022 and Beyond.....	21
<b>Environmental Impact of Exhaust Gas Cleaning Systems (Scrubbers) in Canadian Waters.....</b>	<b>21</b>
<b>Reducing Greenhouse Gases: Analysis of Lifecycle Emissions of Marine Fuels .....</b>	<b>21</b>
<b>Maritime Commercial Incidents and Accidents.....</b>	<b>22</b>
<b>Demystifying Maritime Governance &amp; Supporting Inuit Rights and Marine Use.....</b>	<b>22</b>
5.0 Conclusion.....	24
Board of Directors .....	25
Research Advisory Committee .....	26
Leadership and Staff .....	27

# Annual Report 2020-2021

## 1.0 Measuring Public Impact

Clear Seas produces a wide range of research and information on sustainable marine shipping in Canada. One of its key objectives is to make sure that this research is freely available and presented to as wide an audience as possible in both official languages. Its interactive, easy to navigate website acts as its publishing hub and content is promoted through social media campaigns and quarterly e-newsletters. This section of the report describes how the performance of these channels creates a measure of Clear Seas' public impact.

### 1.1 Website Performance

Over the years, Clear Seas' website has become a trusted online reference for a cross-section of Canadians – from interested members of the public, to policy makers, industry stakeholders and academics – to easily access neutral and comprehensive information on important marine shipping issues. Furthermore, the website has an effective search engine optimization capability which means that Clear Seas webpages are often the most highly returned page in any given web search.

Website visits are an excellent measure of Clear Seas' research and communications relevance and FY2021 saw continued strong growth in the number of users of and visitors to the website. Website traffic, as shown in Figure 1, increased by 34% compared to the previous year and passed the milestone of 100,000 users visiting the site over the course of a single year. The cumulative number of pages viewed (i.e., pageviews) by website users reached 540,000 at the end of March 2021.

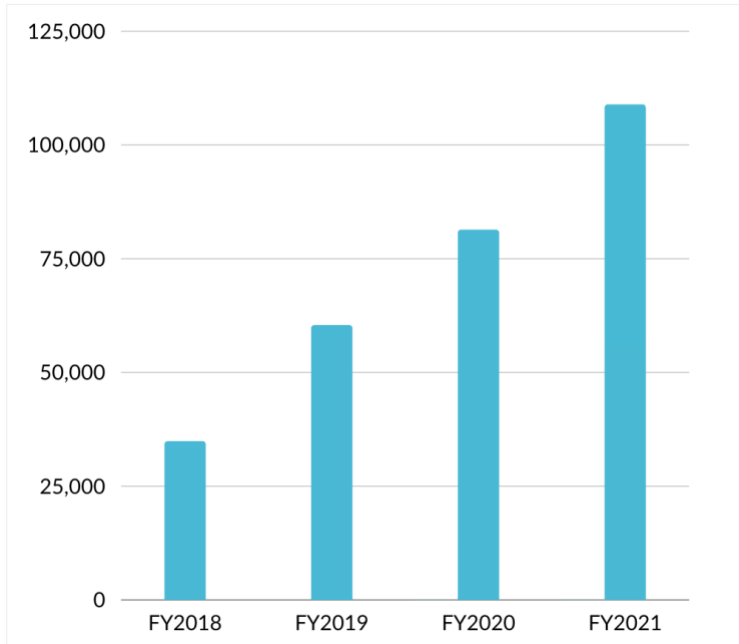


Figure 1: Year-Over-Year Growth of Website Traffic (in Number of Users)

Clear Seas' national reach is evidenced by the distribution of the 178,000 website users within Canada in Figures 2. Provinces with a maritime focus like British Columbia and Quebec have the strongest interest as a percentage of the population of those provinces.

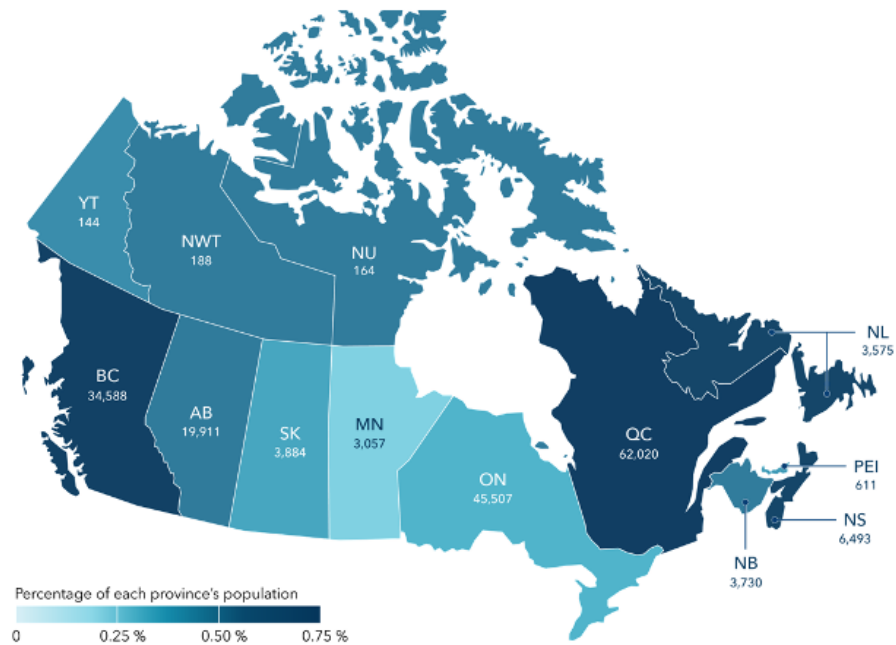


Figure 2: Geographic Distribution of Website Users

And Clear Seas’ audience is not only diversified geographically, the two charts in Figure 3 below provide evidence of the diversity of the self-identified age and first language of the users of Clear Seas’ website. All age ranges are well represented in the audience and although English remains the most common language among users, French-speaking users represent a quarter of Clear Seas’ website traffic, which exceeds the percentage of the Canadian population that speaks French.

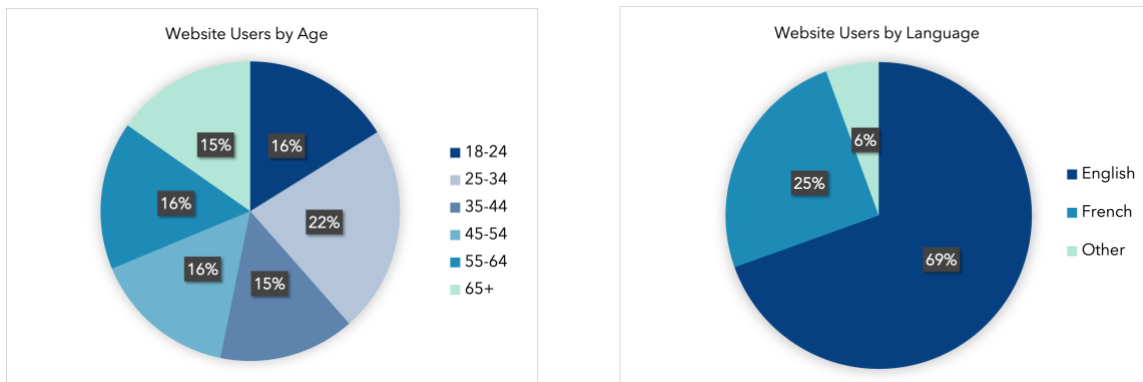


Figure 3: Website User Distribution by Age and Language

Website traffic was driven in large part due to the introduction of relevant new content, in particular the new key issues web page on the topic of oil spill response in Canada, three research reports, one of which involved the development of an interactive mapping tool. In order to improve user experience on the site, these new research pages were redesigned to allow for simpler navigation and to offer high level, quick reference summaries.

Clear Seas now has a total of eight key issues web pages, 13 research reports, and 14 research digests. Clear Seas also provides a range of infographics to facilitate understanding of complex, multifaceted marine shipping concepts. Five infographics were added to Clear Seas’ content library this year: three on the topic of oil spill response, one highlighting Canada’s icebreaking capacity as well as one mapping the unique features of the St. Lawrence River and Seaway.

## 1.2 Clearfacts Blog Series

While research reports and key issues web pages have a longer planning and production horizon, blogs are a regular feature that allow Clear Seas to cover and respond to topical and current issues. On average, blogs are published monthly. These comprehensive pieces – accompanied by visuals and infographics – address topical issues of interest to Clear Seas’

audience. The 11 blogs published over the past year, together with those that were released in previous years, generated significant interest among Clear Seas' audience and were viewed more than 88,000 times, accounting for 42% of all the pageviews recorded in FY2021. The topics explored and explained on the blog over that period included:

- Decarbonization
- Marine fuels
- Oil spill response technologies
- Marine shipping on the St. Lawrence River
- Impact of underwater noise in the Arctic
- Eastern Arctic sealift operations
- Reconciliation in the marine shipping industry
- Icebreakers and de-icing operations
- Ships at anchor

### 1.3 Social Media

Clear Seas maintains a highly responsive and interactive presence on Twitter, Facebook and LinkedIn. The organization uses these channels to broaden its reach with the wider public and encourage them to learn more about relevant topics through the website both through organic followership and modest paid advertising campaigns. These platforms also provide opportunities to engage directly and build relationships with the public, stakeholders, policy makers and influencers. They allow Clear Seas to keep abreast of trends and issues in marine shipping, providing an opportunity for a reasoned voice in a highly active and, at times, charged environment.

Clear Seas' goal is to engage with and inform its audience on social channels rather than simply grow a large, but not necessarily committed, following. Figure 4 shows that Facebook followership jumped by more than 30% to 7,051 at the end of the Fiscal Year, due in part to the active engagement on Facebook and an "invitations to follow" campaign sent daily to people who liked a Clear Seas post. LinkedIn followers also grew due to invitations to connect and the publication of relevant material on this channel. Growth on Twitter has been less vigorous as the platform doesn't permit the team to send "invitations to follow." Twitter is also a place where strong opinions are expressed, and Clear Seas' neutral position tends to generate less interest. Clear Seas uses its position on the platform to reach out to influencers to provide the facts on key issues and correct misinformation.



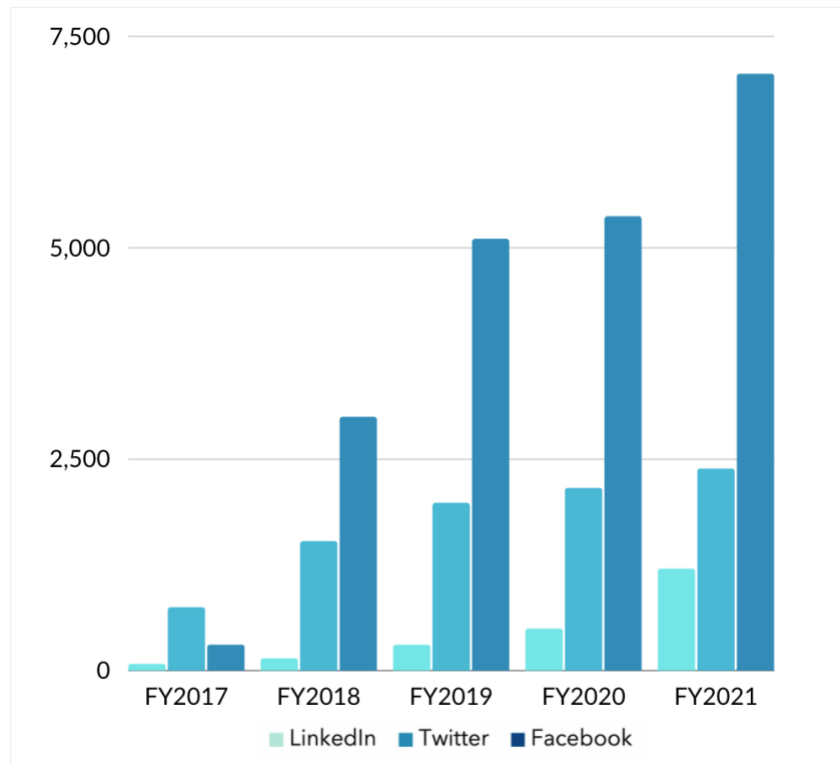
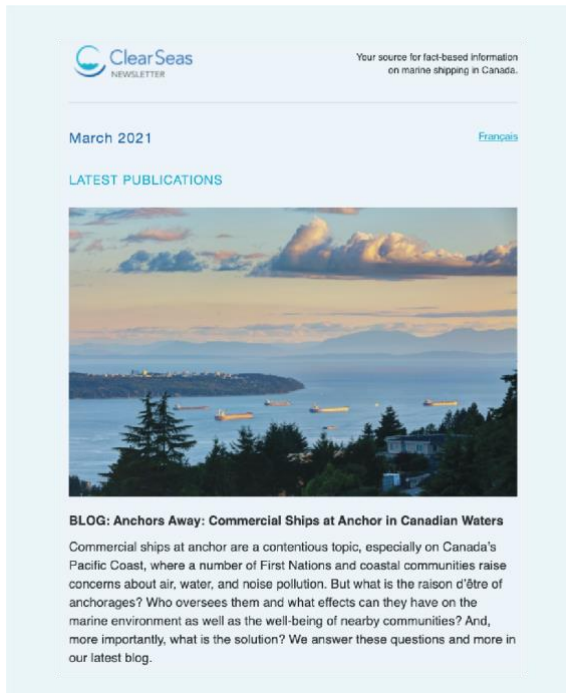


Figure 4: Year-Over-Year Growth of Social Media Audience (in Number of Followers)

The audience on social media shows a consistent level of engagement that continues to increase year over year. The content Clear Seas shared on social media generated approximately 142,000 clicks (up 84%), 67,000 reactions (up 44%), and 9,800 shares (up 32%). The number of comments received, 4,150, remained consistent with the numbers recorded during the last fiscal year, with a small decrease of 7%.

## 1.4 E-newsletter



During FY2021, Clear Seas grew its quarterly e-newsletter mailing list by 26%, acquiring 433 new subscribers. The e-newsletter, which features a digest of new research, news and blogs is distributed to more than 2,000 individuals across Canada and abroad, in both English and French. Its average open rate of 34% over the year is well above the industry standard of 20% for subscription-based e-newsletters. At 7.5%, the average click-rate of Clear Seas' emails received was also above the industry open rate of 5%, indicating the strong interest that subscribers have in Clear Seas' content.

## 2.0 Relevance and Influence

While the objective measures of users and followers demonstrate Clear Seas' impact with the wider public, its research has also been adopted and used by government, Indigenous peoples, public policy leaders and industry influencers to make decisions about marine shipping. Over the past year, Clear Seas' research has made news around shipping safety, the impact of emission control areas, and its assessment of B.C.'s coast to oil spill sensitivity. Its Executive Director and research team have hosted webinars and have been invited to conferences to share this work. This section of the report describes some of the highlights of Clear Seas' relevance and influence in marine shipping.

### 2.1 Research in Action

Clear Seas' research has real-world applications and contributes to public policy decisions. Between February 2019 and June 2020, its study on Vessel Drift and Response Analysis for Canada's Pacific Coast -- produced in conjunction with Nuka Research -- was used by the Council of the Haida Nation and Transport Canada to support the implementation of a 14-month trial Voluntary Shipping Protection Zone in the waters off Haida Gwaii. The trial, which was developed in consultation with the marine shipping industry, incorporated Clear Seas data and research findings. The zone came into effect on September 1, 2020 and is part of the Haida Nation's Safe Distance Offshore project aimed to prevent accidents by keeping large vessels at a safe distance from shore to allow for adequate response time by emergency response vessels.

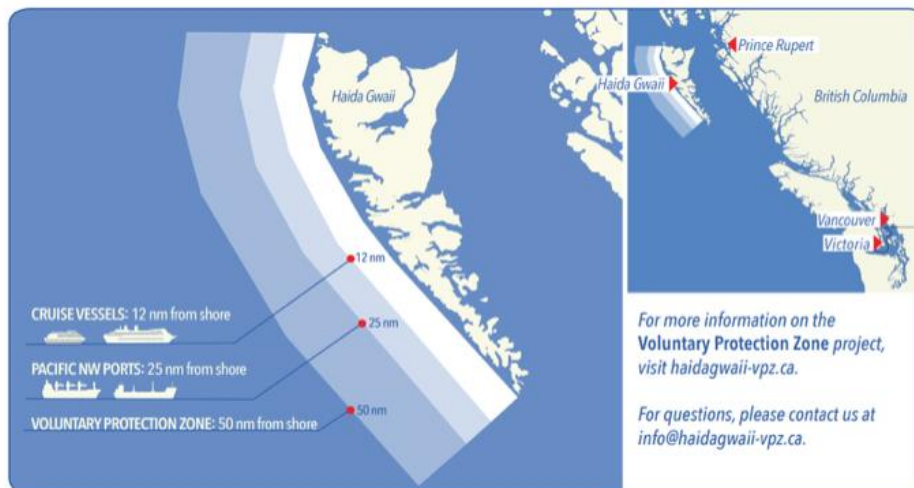


Figure 5: Council of the Haida Nation Voluntary Protection Zone



In 2019, the Canadian Coast Guard (CCG) incorporated the results from Clear Seas' Emergency Towing Vessel Needs Assessment into its West Coast Towing Needs Assessment. Based on Clear Seas' analysis, the CCG issued specifications for the lease of two emergency towing vessels (ETVs) capable of towing most vessels in most weather conditions expected to occur on Canada's Pacific coast. During FY2021

the vessels were called into action on several occasions, including a high-profile rescue of a bulk carrier adrift close to Victoria in British Columbia.



The preliminary findings from Clear Seas' work in collaboration with the University of Ottawa on shipping patterns in the Arctic was used by Transport Canada in support of its Cumulative Effects of Marine Shipping pilot program, to better understand synergies and existing data. This research, along with several other Clear Seas research products, is being used to support the CCG's ongoing work to create a National Towing Needs Assessment, as follow-on work to the West

Coast Towing Needs Assessment.

## 2.2 Media Coverage

While Clear Seas uses its website to showcase its research, media coverage ensures that industry specialists and stakeholders from around the world are aware of and recognize the importance of the organization's work. Coverage in industry publications builds credibility and allows the organization to develop relationships with journalists and suggest story ideas for future coverage as a respected commentator on marine issues.

The release of three important research studies – including the third biennial public opinion poll on the attitudes of Canadians towards marine shipping – and monthly blogs on topical issues allowed Clear Seas to garner significant media coverage online, in trade publications as well as in regional and national news outlets to bring important information to many more Canadians.

Recognizing that many marine issues have a local impact, Clear Seas' research on the Sensitivity of Coastal Areas to Oil Spills was covered in a dozen community newspapers along the B.C. coast. That story still had a national and a wider interest as it appeared in the *Toronto Star*, which has a daily print and digital circulation of 2.65 million, the *National Post*, and the *Maritime Executive* magazine.

*Bunkerspot* and *Ship and Bunker*, two leading specialist publications, wrote about the unintended consequences identified through Clear Seas' research of ships changing course to save on fuel costs in sulphur emission control areas. Together, these trade publications reach more than 70,000 online readers around the world every month. They are important sources for industry news, events and analysis and help form the opinions of stakeholders and policy makers globally.

A blog and an article describing the human side of how the annual Arctic sealift was able to keep Canada's northern communities safely supplied during COVID-19 received coverage in the *Iqaluit News* and other industry publications in Canada, as well as in *Maritime Executive* in the United States and the United Kingdom's *International Harbour Masters Association Magazine*. Keeping with the Arctic theme, an article on icebreakers was also published in *Maritime Executive* and other niche publications.

An op-ed article based on Clear Seas' biennial opinion poll conducted in partnership with the Angus Reid Institute was published in *Le Soleil* (circ. 80,000), Quebec City's French-language daily newspaper highlighting the differences in opinions towards the marine shipping industry in Quebec and contributed to this important discussion.

### 2.3 Growing Clear Seas' Quebec Presence

Fueled by the strong interest for marine shipping-related information of website users from the Quebec as well as by the unique reality and challenges of the St. Lawrence River, Clear Seas developed its vision and strategy for a Quebec-based satellite office. The limited level of awareness and knowledge of the marine shipping industry observed in Quebec and the strong need for Quebecers to reconnect with their maritime industry, as highlighted in Clear Seas' 2020 marine shipping public opinion poll, have been at the core of Clear Seas' initial conversations with local stakeholders. So far, Clear Seas has met with Quebec's port authorities, research organizations, and relevant government officials and shared its plan to

establish a presence in the province. The project is currently being assessed by local stakeholders.

## 2.4 Contributing to the Dialogue on Safe and Sustainable Marine Shipping

The organization continues to be recognized for its impartiality and is invited to contribute to important public policy issues and leading conferences attended by industry experts. Over the course of FY2021, Clear Seas participated in 17 marine industry events and conferences.

The Clear Seas team also hosted several events of its own. A webinar was scheduled to launch each of the three research studies released over the course of the year: *Assessing the Sensitivity of Coastal Areas to Oil Spills* (research report and mapping tool); *Canadians' Attitudes Towards Marine Shipping* (Canada-wide public opinion poll); and *Vessel Traffic in Canada's Pacific Region* (research report). These webinars were attended by more than 200 participants from across Canada and internationally.

In other outreach to the marine research community, the team also presented at two workshops and participated in ten industry events. Among them, the regional and national Canadian Marine Advisory Council as well as the Oceans Protection Plan Dialogue Forum. Clear Seas also participated in Canada's Blue Economy Strategy consultations held from February to June 2021.

Clear Seas' expertise is often sought out and the Centre was asked to provide written feedback on Transport Canada's discussion questions on Proactive Vessel Management and Strengthening Marine Environmental Protection and Response Potential Legislative Amendments. Again, this participation puts the organization front and centre with public policy leaders and provides tangible, trusted research that can be applied in a real-world setting.

Attendance at major conferences and meetings permits the organization and its team to share its findings and engage with industry leaders and decision makers, which helps formulate important public policy initiatives.

## 2.5 Advancing a Shipping Risk Community of Practice

The Canadian Marine Shipping Risk Forum (CMSRF), co-founded by Clear Seas, Marine Environmental Observation, Prediction & Response (MEOPAR) Network and exactEarth in 2019, experienced its first full year of activity during FY2021. This Community of Practice (COP) was convened in response to a growing need for a shared approach to and understanding of

shipping risk management in Canada. This COP is open to people and organizations working in or conducting research on shipping risk. It provides those interested with a platform to network and share knowledge around shipping risk.

Risks from, and to, marine shipping have an inherent interdisciplinary nature, with interest held in diverse fields, including waterway traffic management, remote sensing, environmental science, geospatial modelling, transportation regulation, and risk analysis and management. The natural tendency of research within disciplines is generally more inward-looking than outward, which tends to concentrate globally valuable information within single fields of study or organizations. The CMSRF is one mechanism to help lower inter-discipline barriers to marine shipping analysis.

The COPs activities revolve around three primary areas of interest: shipping movement data, shipping traffic modelling, and shipping risk quantification and assessment. Shipping risk topics range from assessment of risks within a given operating region, to examination of the impacts of shipping traffic on diverse receptors (e.g., environment, species at risk, human health), and applications concerning vessel safety.

Following the successful inaugural workshop in December 2019 -- "State of the Art in Shipping Risk and Modelling" -- the CMSRF hosted the 2020 workshop "Creating an Inventory of Marine Shipping Risk Resources," during which 90 participants took part in virtual breakout discussion groups to help identify shipping risk initiatives in Canada, information resources, risk frameworks and common risk-related terminology. To continue the conversation on shipping risk topics, the CMSRF launched a webinar series, co-hosting the webinar "Building a shared perspective on Arctic waters through community-engaged research," with guest speakers from the Arviat Aqqiumavik Society and the University of Ottawa/McMaster University. The first webinar was held in February 2021 with 40 participants.

### 3.0 Making Reconciliation a Reality for Marine Shipping

Clear Seas has made significant strides forward with its Indigenous and Coastal Communities strategy, in part due to the addition of a permanent staff member to manage this important portfolio. This has already paid dividends in establishing and strengthening Clear Seas’ relationships with Indigenous communities across Canada, with a special focus in the Pacific Region.

The establishment of an Indigenous internship program is developing partnerships with Indigenous communities across Canada by collaborating on research projects of mutual interest. Through the course of this program, the interns will conduct research on maritime topics of interest to their communities that relate to safety and sustainability of marine shipping from an Indigenous perspective. The first cohort of interns started in May 2021.

**Indigenous Internship Opportunity**

Clear Seas is excited to introduce this opportunity to Indigenous post-secondary students across Canada. Our goal is to build unique partnerships by collaborating on research topics that are important to Indigenous communities.

Clear Seas is based in Vancouver, BC, but applicants are invited to apply from all regions of Canada and will be permitted to work remotely.

**6-12 month paid internships**

- Community-led
- Open to post-secondary students
- Mentorship & support from Clear Seas
- Academic support
- Community priorities & concerns

**Please get in touch with us if you are:**

- An Indigenous post-secondary student interested in taking up an internship – the closing date for the first intake of interns is March 12<sup>th</sup>.
- If you have expertise in the topics listed below and are interested in being a mentor or supervisor to an intern working on one of these projects.
- If you are an Indigenous community representative with a research project idea.

Contact: Sarah Thomas,  
Manager of Indigenous & Coastal Community Relations  
sarah.thomas@clearseas.org  
Cell: 778-713-1444

**Clear Seas**  
Centre for Responsible Marine Shipping

Figure 6: Clear Seas’ Indigenous Internship Program Flyer

Clear Seas is integrating the Truth and Reconciliation Commission’s Calls to Action into its work in research and relationship building. As a starting point, Clear Seas published a blog that surveyed what the marine shipping industry is doing to improve relations and to work together with Indigenous communities. It provided an important snapshot of where the industry – from ports, ship builders and operators to educational and training bodies – is on the path towards



reconciliation. It opened the conversation with several organizations around the need for the marine sector to invest more attention and resources to this area.

Clear Seas continues to pursue opportunities to collaborate with Indigenous peoples through its research and, for example, through its support of the Commercial Shipping Issues in Canada's North study and a new Inuit Rights project in the area of maritime governance. The organization intends to expand its efforts to collaborate with Indigenous communities and look for opportunities to incorporate Traditional Knowledge into its research efforts in the coming year.

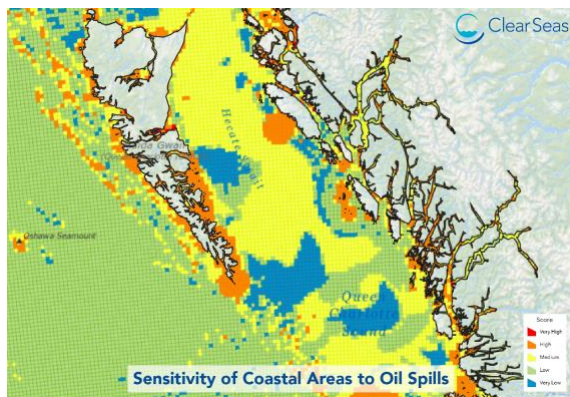
## 4.0 Relevant and Timely Research

Clear Seas' mission is to be the leading source of credible, fact-based information and to bring clarity to decision-making for safe and sustainable marine shipping in Canada. It uses its in-house capabilities and works with a network of academic and industry experts across Canada to conduct its research. As part of achieving this goal, the organization published three new research reports and continued to work on a range of other research studies during the fiscal year. These studies contributed to a greater understanding of marine shipping issues in Canada, and were the focus of academic analysis, utilized by stakeholders from government, consulted by Indigenous peoples and referenced by others across the marine shipping community.

### 4.1 Recent Research Publications

The three reports published during FY2021 accounted for more than 400 downloads from the website since their release:

#### Assessing the Sensitivity of Coastal Areas to Oil Spills



This research project created an interactive mapping tool to help the shipping industry, regulators and coastal communities plan marine activities by better understanding the sensitivity of the coast in the event of an oil spill caused by marine shipping activity. The study assessed sensitivity to oil spills of the coastline and sea floor, any animal and plant species present, and any socio-economic activities. This research was

the fourth component of Clear Seas' Marine Transportation Corridors initiative, which aims to determine and describe risks related to commercial marine shipping activities in Canada, starting with the Pacific region.

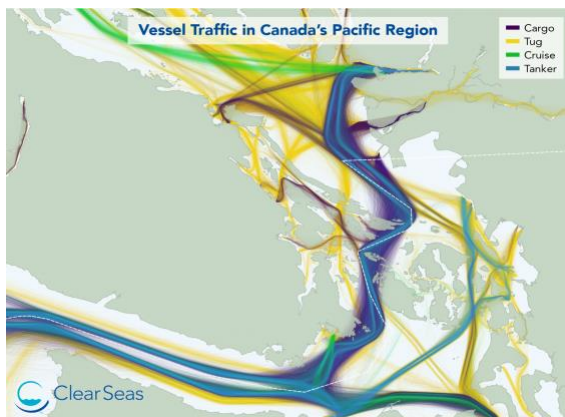
## 2020 Poll: Canadians' Attitudes Towards Marine Shipping



Clear Seas published the third edition of its biennial national public opinion poll on attitudes towards marine shipping, conducted by the Angus Reid Institute. The study's most notable results included the important role the marine shipping industry is expected to play in the post-pandemic economic recovery, the overriding concern of the public regarding the transportation of petroleum products by ships in Canadian

waters as well as the higher levels of scepticism towards the safety of the industry expressed by many Quebeckers. The creation of a Shipping Confidence Index comprised of three groups – shipping supporters, maritime moderates and cautious critics – designed to help better understand the numerous viewpoints on marine shipping in Canada, was a new feature of this edition of the survey.

## Vessel Traffic in Canada's Pacific Region



The fifth component in Clear Seas' multi-part Marine Transportation Corridors initiative was released, providing an analysis of marine traffic in Canada's Pacific region. This study closed the knowledge gap concerning the 6,000 commercial ships and tugboats that ply these waters annually by providing valuable data to assess the oil pollution risks they represent. The study found that a surprising amount of traffic on the coast is made up of tugboats towing barges to and from

smaller ports, and that a high quantity of persistent oil carried in ship fuel tanks is travelling the narrow waterways of the Inside Passage – the equivalent of 332 Olympic swimming pools – in an average year. The publicly available report represents the most current and comprehensive commercial vessel traffic analysis of Canada's Pacific region.

## 4.2 Research Underway: FY2022 and Beyond

Clear Seas continued working on other research projects around decarbonization and pollution that will contribute to the discussion on these important topics in the coming decade, including:

### Environmental Impact of Exhaust Gas Cleaning Systems (Scrubbers) in Canadian Waters



Clear Seas continued to investigate the environmental impact from Exhaust Gas Cleaning Systems (scrubbers). The research team refined the objectives and assessment approach to better understand the differing perspectives on scrubber effluent impacts, augmented the literature review and effluent water quality dataset with additional resources, and conducted a meta-analysis of effluent water quality data from 10 studies. The

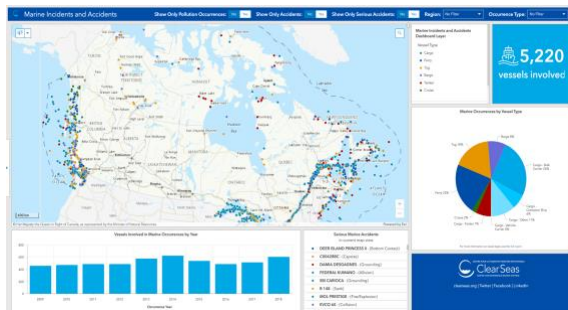
results of this project aim to provide additional evidence-based information and insight to the debate about the use of or restrictions on scrubbers.

### Reducing Greenhouse Gases: Analysis of Lifecycle Emissions of Marine Fuels



Clear Seas continued work on the lifecycle greenhouse gas (GHG) emissions associated with each alternative marine fuel. The results are intended to support policy makers and industry considering alternative fuels in accordance with the International Maritime Organization's commitment to reduce the marine shipping industry's GHG emissions to 50% below 2008 levels by 2050.

## Maritime Commercial Incidents and Accidents



The Maritime Commercial Incidents and Accidents project - which consists of the creation of an interactive mapping dashboard - has been a focus of Clear Seas' research team during FY2021. This publicly available visualization tool was developed to examine the spatial distribution of commercial marine shipping incidents and

accidents in and around Canadian waters. This new resource combines Canadian and U.S. data sources and allows interested members of the public, policymakers and industry stakeholders to search for specific incidents or accidents and filter through the data based on various events or vessel characteristics. This tool is intended to highlight areas of potential shipping risk, identify trends in marine accident reporting, and help inform policymakers and the public on the safety of marine shipping in Canada. The dashboard and its associated report were released in July 2021.

## Demystifying Maritime Governance & Supporting Inuit Rights and Marine Use



In collaboration with Dalhousie and Memorial Universities, Clear Seas launched two research projects to better understand maritime governance and its effects on commercial marine shipping in Canada. The first project - *Demystifying Maritime Governance: Analysis of the Framework and Emerging Issues for the Governance of Shipping in Canada* - will explain in simple terms the global and domestic make-up

of marine governance including various structures, actors, connections and processes, and analyze the major drivers of change in the system. The second project - *Supporting Inuit Rights and Marine Use* - will support the design and production of multilingual and informational posters and a guidebook on marine shipping issues and regulations, and contribute to a better awareness and understanding of how the governance of shipping affects Inuit and communities in Nunavut.

## Decarbonizing Marine Shipping: Air Quality Co-Benefits for Coastal Communities



A project addressing the decarbonization of marine shipping was also progressed during FY2021. Conducted in collaboration with a research team at the University of British Columbia, the project is developing an integrated modelling framework that links policy scenario analysis, emissions and air quality modelling, and health impact analysis. The first phase of the study, which consists of surveying experts from different sectors about future decarbonization pathways for the commercial marine shipping industry, is currently taking place and expected to be completed in the summer of 2021.

## 5.0 Conclusion

Clear Seas continues to build trust through a voice that provides decision makers and leaders with quality materials required for informed decisions. True to its mandate, it is dedicated to continual improvement of the shipping industry, highlighting both areas for development and the progress being made. Its efforts also aim to improve public understanding of key issues and an evidence-based confidence in the marine shipping industry which is vital to the well-being and prosperity of Canadians.

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**Dr. Francis Wiese**

Technical Leader for Marine Science, Strantec Consulting



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**Edward Downing**  
Director, Communications



**Jennifer Steele**  
Manager, Research  
& Knowledge Mobilization



**Sarah Landry**  
Manager, Communications



**Sarah Thomas**  
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