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OCEANA CANADA'S 2022 SYMPOSIUM REPORT: REBUILDING ABUNDANCE: PRIORITIES FOR A RESILIENT OCEAN

OCEANA Protecting the World's Oceans

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EXECUTIVE SUMMARY

Oceana Canada was established as an independent charity in 2015 and is part of the largest international advocacy group organization dedicated solely to ocean conservation. It has successfully campaigned to ban single-use plastics, end the shark fin trade, make rebuilding depleted fish populations the law, improve the way fisheries are managed and protect marine habitat. Oceana Canada works with civil society, academics, fishers, Indigenous Peoples and the federal government to return Canada's formerly vibrant oceans to health and abundance. By restoring Canada's oceans, we can strengthen our communities, reap greater economic and nutritional benefits and protect our future.

Canada has a national and global obligation to manage our ocean resources responsibly and help ensure a sustainable source of protein for the world's growing population. While there are different views on how to rebuild and safeguard ocean abundance, Oceana Canada firmly believes there is much more that unites the ocean community than separates it. By working collaboratively, we can achieve a better future for the ocean and for those who depend on the plentiful, renewable resources it provides. With this conviction in mind, in 2016, Oceana Canada convened its first Ocean Science Symposium in Ottawa to bring this community together to meet, share information, discuss issues and foster collaboration.

After six years it was time to regroup, assess progress and identify solutions to new and persistent challenges. On a crisp October day in Ottawa, more than a hundred people from Indigenous organizations, academic institutions, the fishing industry, civil society and governments came together for a day-long meeting and a lively evening reception to discuss Canada's ocean sustainability opportunities and challenges.

Part 1 of this report summarizes the day's presentations and discussions along the lines of five Canadian fisheries management themes, prioritizing the following in decision-making:

1. Include Indigenous rights and knowledge systems more meaningfully and respectfully;
2. Account for how climate change has and will continue to dramatically affect Canada's ocean spaces;
3. Engage coastal communities more effectively;
4. Rebuild and keep fish stocks healthy; and
5. Make more – and urgent – changes to ocean policy and practice based on the evolving role of government.

Part 2 identifies three corresponding pillars that Oceana Canada believes Fisheries and Oceans Canada (DFO) must strengthen to create more abundant and sustainable fisheries:

1. Canada needs more meaningful and respectful inclusion in fisheries decision-making regarding Indigenous rights and knowledge systems;
2. Climate change is dramatically affecting Canada's ocean spaces and has major implications for current and future fisheries management; and
3. A successful blue economy strategy requires abundant wild fish. Rebuilt and sustainable fisheries must be central to the government's emerging Blue Economy Strategy, particularly their socio-economic importance at regional and local scales.

We all have important parts to play in securing healthy fisheries, oceans and coastal communities. But DFO has a central role, and it is Oceana Canada's strong recommendation that DFO publicly responds to these recommendations. In the meantime, we hope that this report will be of interest to those who participated in the symposium and to all who have an interest in protecting Canada's oceans.

INTRODUCTION

Oceana Canada convened its first national science symposium in Ottawa in October 2016, attracting widespread participation of Indigenous groups, academics, civil society organizations, industry leaders and a range of government officials, from the ministerial level through to operational fisheries management and science leaders. The symposium itself and the networking events surrounding it generated strong positive momentum around a range of issues, and consensus on the need to come together again in the future.

Some great progress has been made since that gathering, and there is much to warrant hope and optimism around the future of fisheries in Canada. This includes a wide range of industry innovations, increased marine habitat protection, renewed government funding for ocean science, a new fishery monitoring policy, new legal requirements for rebuilding depleted fisheries and a federal ban on six categories of single-use plastics polluting the oceans. New *Fisheries Act* regulations outlining the specific steps the government must take to rebuild depleted fisheries are the most recent step on the path to sustainability and are further cause for optimism.

As heartening as this progress has been, the true measure of success is on the water: have these changes led to healthier fisheries? Unfortunately, according to six years of Oceana Canada *Fishery Audits*, the answer is no. As of 2022, less than one-third of wild fish and invertebrate stocks are considered healthy, and the vast majority of critically depleted stocks lack rebuilding plans. The reality is that the number of healthy fisheries has decreased since 2017, with no meaningful improvement to many of the indicators of good fisheries science, monitoring and management.

It is with this concerning reality in mind that Oceana Canada hosted a second symposium in October 2022, *Rebuilding Abundance: Priorities for a Resilient Ocean*, to broaden and deepen understanding of the factors at play in these declines and to discuss and recommend changes to priorities, policies and practices needed for reversing them. On a crisp fall day, people answered Oceana Canada's call to gather in Ottawa[1] to talk about oceans, fisheries and about how best to ensure their future sustainability. From across Canada, people from Indigenous organizations, academia, the fishing industry, environmental groups, governments and media came together to share their knowledge and views about sustainable fisheries and the ocean abundance we all so fundamentally rely upon. The debate was robust, passions ran high and permeated throughout the panel sessions and the informal conversation during coffee breaks, lunchtime huddles and

[1] In opening the symposium, Josh Laughren, Executive Director of Oceana Canada began by acknowledging that the land on which we gathered is the traditional unceded territory of the Algonquin Anishnaabeg people and inviting Algonquin representative Verna McGregor to formally welcome the participants.

the evening reception was a firm consensus around the urgent need for change if we are to collectively succeed in safeguarding the ocean's sustainability.

PART ONE

This section draws from the symposium's panel presentations and related discussions but does not seek to represent the views or opinions of any participant or organization or to imply that there was a formal endorsement of particular action items or policy conclusions during the gathering. Rather, the approach taken here is to highlight the key substantive points of the presentations and the discussion they provoked as a contribution to our collective understanding of the issues at play.

Theme 1: More meaningful and respectful inclusion of indigenous rights and knowledge systems in fisheries management decision-making in Canada is vital.

The symposium's opening ceremony was a harbinger of a main theme of the day: the need to learn from and embrace Indigenous perspectives and knowledge systems to more effectively include them in fisheries management decision-making. The Opening Prayer, delivered by Elder Verna McGregor of the Algonquin community of Kitigan Zibi Anishinabeg First Nation upon whose traditional territory the symposium took place, was a powerful reminder of the depth and scope of Indigenous connections to nature and the need to work together in protecting it now and for future generations.

Dr. Albert Marshall, a Mi'kmaw Elder of the Unama'ki of Cape Breton, joined the group via live video and underscored the urgency for action to protect ocean biodiversity at the global scale and to address the threats that ocean plastics pose to ocean health. He spoke with eloquence and passion about the urgency for collaborative and inclusive action to protect Canada's ocean spaces and the fisheries they support. And, on a point that would recur later in the day in the remarks of Dr. Boris Worm, Dr. Marshall urged everyone to learn from conservation successes and to seek to emulate them rather than dwelling on the negative and shortcomings of our current approaches.

Later in the day, Ken Paul of the Wolastoqey Nation, reminded us that any discussion of Indigenous engagement in fisheries management must always begin from the acknowledgment of the inherent rights of Indigenous Peoples as well as their constitutionally protected treaty and aboriginal rights. He drew attention to the fact that every single treaty signed by the Crown and an Indigenous group contains a reference to fish. He outlined the need for co-governance arrangements that embrace these realities, that treat rightsholders with respect and that place the needs, rights and knowledge systems of Indigenous Peoples front and centre in fisheries management. He laid out a vision for sustainability that embraces a physical-mental-spiritual-emotional circle model for understanding these challenges and working to address them together.

Dr. Andrea Reid, a Nisg'aa First Nation member leading the Centre for Indigenous Fisheries at the University of British Columbia, evoked a similar circular image to portray the connectedness we must strive for in recognizing and embracing Indigenous rights and perspectives in fisheries management on the West Coast. She outlined the tragic history of the separation of Indigenous communities from their fisheries and how they were managed. She underscored the need to

build systems and approaches which begin to repair these fractures. Central to doing so is the adoption of what she described as the practice of "Etuaptmumk," the Mi'kmaw concept of Two-Eyed Seeing, as coined by Drs. Albert and Murdena Marshall.

Two-Eyed Seeing is action-oriented and implies an understanding that we must ensure that action taken today does not compromise the ecological integrity of a species or area in the present or future. It speaks to the belief that we must all understand how our actions ultimately affect the source of life that we all depend on. In the fisheries context, Two-Eyed Seeing encourages us to simultaneously see the world through the eyes of Indigenous and non-Indigenous people and to adopt fisheries management solutions and systems that bring these perspectives together. Perhaps channeling the guidance of Dr. Marshall, Dr. Reid avoided direct critiques of individual government actions or agencies but made clear that innovative systems of this nature will require more than simple tweaks of the status quo to come into being.

Theme 2: Climate change is dramatically affecting Canada's ocean spaces and has major implications for current and future fisheries management.

The fact that climate change is profoundly affecting our oceans on a global scale did not come as a revelation to anyone in the room. Nonetheless, the several symposium presentations that described the climate-driven biophysical changes oceans are undergoing dramatically underscored the challenges climate change presents for sustainable fisheries management in a way that was quite sobering to most participants. The point made repeatedly was that our oceans are changing in ways that are likely not positive for most species and that fisheries management processes urgently need to adapt to this reality.

The central dynamic highlighted by Dr. Julia Baum and Dr. William Cheung is a simple one: the ocean is holding substantially more heat than it has in the past and it is doing so at all depths, not just at the surface. In addition to driving the increasingly extreme weather events that so regularly capture the headlines, the changing heat profile of the ocean is driving shifts in species productivity, range and resilience. As Dr. Cheung explains in Figure 1, climate change poses risk to stock biomass integrity and that risk increases significantly under a climate change scenario featuring global warming in the range of 3.5^{0}C no matter how aggressive or modest a harvest strategy is adopted.

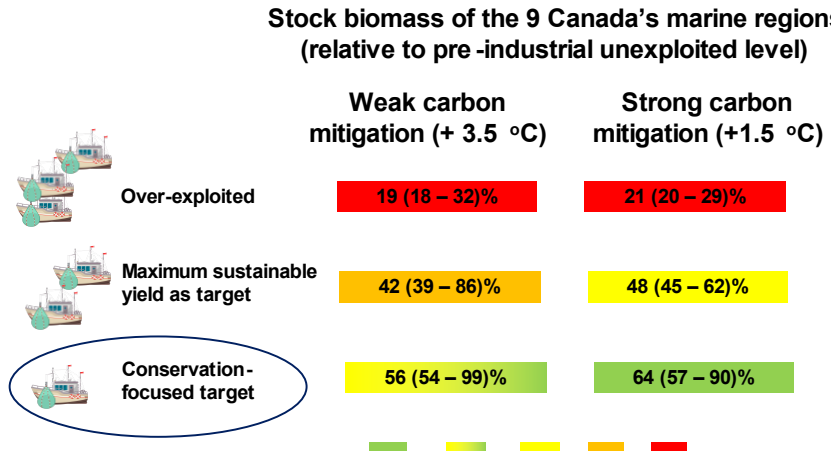

Figure 1

Even under optimistic carbon mitigation scenarios, biomass decline is likely, fisheries resilience is almost certainly declining and the challenges to rebuilding depleted stocks are growing. Dr. Baum's series of "before-and-after" images brought into stark relief the nature of the changes underway and reminded participants that the process is not a theoretical "maybe" for the future. Not only are changes occurring in ocean heat energy storage, but ocean chemistry is being modified as well with acidity rising and available dissolved oxygen declining. Again, this was not news for people in the ocean conservation community. But as several speakers noted, these trends are further increasing the risk of fisheries collapse, reducing the room to manoeuvre for fisheries managers, and undermining the validity of longstanding fisheries management models and other predictive tools in ways that may not be fully appreciated. This theme was further amplified by several of the question-and-answer exchanges following panel presentations.

The bottom-line symposium message on climate change is that it is fundamentally changing ocean processes and that fisheries management decisions processes and criteria will have to change with them if critical stocks are to be rebuilt and healthy stocks maintained.

Theme 3: More effective engagement of coastal communities in fisheries management is clearly needed.

It has long been acknowledged that while Canada's fisheries sector embraces a broad cast of players spanning a diversity of interests and capacities when it comes right down to it, coastal communities and individual fish harvesting operators lie at the heart of the Canadian fisheries sector. While international market trends and the pandemic fallout continue to buffet us all, these communities and operators are particularly vulnerable to these pressures.

Moreover, fisheries management decision-making and other ocean conservation measures have not always been as inclusive of their interests as might be expected given their positioning in most fisheries. The symposium explored these challenges from several angles.

Sonia Strobel walked the gathering through a new but increasingly popular mechanism for connecting fish harvesters directly to consumers. Under this approach, groups such as her organization, Skipper Otto, are establishing Community Supported Fisheries (CSF) networks for attracting "subscribers" to their products in a way that simultaneously builds a reliable buyer network for the harvesters in her group and predictable, sustainable supplies of fresh seafood for subscribing consumers. This approach is not simply a "direct marketing" innovation – although it is that too – but rather is a means of transforming community and operator engagement in the fisheries of interest to them. This approach, which is growing globally and has now formed its own international network called "Local Catch," places harvesters in the position of being able to catch only what they know they have buyers for and dramatically reduces waste, overhead expenses and transaction times and costs. On the flip side, consumers know exactly what fish they are eating, where it came from, who caught it and that it was caught sustainably.

The theme of stronger community engagement in all aspects of fisheries was strongly echoed by Dr. Barbara Neis in her presentation urging the adoption of "full spectrum sustainability" approaches to fostering and maintaining coastal community resilience. She noted that coastal communities are largely excluded from discussion and investigations around fisheries management and that historic management paradigms consistently undervalue or ignore the social community needs aspects of fisheries management. Using several examples backed up by research undertaken with colleagues in Newfoundland, she pointed to the need to shift our food

production systems generally, and fisheries systems in particular, to more of a circular economy approach that drives pollution and waste down while maximizing efficiency and productivity. Key to doing so is exploring ways to better connect communities to markets and harvesters to buyers and broader infrastructure investments to fisheries management and other food systems. As the passionate Q&A session following the presentation dramatically highlighted, current systems and approaches fall well short of this goal.

Theme 4: We need to rebuild and keep fish stocks healthy.

The overarching theme of the symposium was maintaining and rebuilding the abundance of fish populations in Canada. As the opening remarks of Oceana Canada's executive director Josh Laughren and its science director Dr. Bob Rangeley underscored, this is a substantial challenge.

Oceana Canada's *Fishery Audit* shows that far too many stocks are trending the wrong way and that the status quo simply won't cut it. We need to do better in the fisheries management realm. The themes described above established an important context for the nature of this challenge and are critically important dynamics to consider and factor into any discussion of fisheries management. At the core of the symposium were discussions about how we actually manage our fisheries, how we balance risks to the ecological integrity of fish stocks with harvester and community social and economic imperatives and how we better position the sector to meet the challenges of the future. The symposium presented a spectrum of views on these challenging questions.

Sam Waterston, award-winning actor and Chair of Oceana's global Board of Directors, delivered an impassioned call for Canada to continue to lift its game in managing its fisheries. He emphasized that Canada has much to be proud of in this domain and that it is widely seen as a global leader in fisheries management. At the same time, he drew attention to the need for stronger action to rebuild stocks in the critical zone and emphasized the urgency of our current situation in the face of climate change and other major pressures on the resource. His remarks repeatedly emphasized the need to work together and he noted that "in many ways, we are all saying the same thing just in different voices."

Dr. Daniel Pauly introduced the fisheries management theme with a global perspective on trends in fish stocks and exploitation rates. Central to his message was the view that fishing activity has a direct impact on stock health, that catch is consistently underreported in global fisheries and that the dramatically enhanced technological capacity of fishing vessels relative to several decades ago has considerably increased the volume of fish a single vessel can harvest. In response to questions on this point, he noted repeatedly that, "One boat does not mean what it did in the past," and that pressure on global fish stocks has grown substantially as the harvesters of today can fish further, faster and deeper than their predecessors could. His message was that fishing pressure is harming global fish stocks at an ever-increasing rate and that more conservative catch limits must be adopted for most global fisheries, including those in Canada.

Dr. Boris Worm's remarks adopted a similarly global lens. He argued that a combination of species protection actions and wise harvest strategies, coupled with pollution protection measures, protected area expansion and climate change mitigation has the strong potential to achieve stock rebuilding targets globally by 2050. In a departure from somewhat more traditional approaches, as noted above, he echoed a theme of Dr. Albert Marshall's remarks in advocating the adoption of approaches that feature greater attention to learning from our successes, which

is commonly the case. Drawing his reading of The Power of Positive Deviance[2] , he presented a careful analysis of fisheries management actions for more than two hundred stocks to identify areas of success that can be studied and replicated. Rather than the more traditional "learn from our mistakes," his approaches focus on "bright spots" and how we can build on them for broader success in fisheries management. His upbeat perspective was that if we do so effectively, we can simultaneously achieve substantial success in ocean biodiversity conservation, carbon storage and food security.

Drawing from his new book Infinity Fish[3], Dr. Rashid Sumaila spoke to the power of more appropriately valuing fish than traditional economic practices do. Rather than focusing solely on its market price, a shift to more holistic valuation mechanisms that incorporates the non-market and indirect values associated with a fishery invokes a more comprehensive and accurate picture of the value of fisheries. Seen from this vantage point, fish take on a far greater economic value than a simplistic market price-based approach establishes and creates a foundation for considering fish as a viable economic resource in perpetuity or to "Infinity." As a further outcome of this innovative way of thinking, the high seas, which today provide only a small portion of the global fish harvest, could be closed to fishing and positioned as a "fisheries bank" that serves as a continuous biomass investment in these appropriately valued domestic fisheries.

The notion that the oceans have the potential to produce more fish at a higher value in a way that better sustains livelihoods were very much taken up in the remarks delivered by Jim McIsaac of the Canadian Independent Fish Harvesters Federation. With 34 member organizations and more than 14,000 operator enterprises, in many ways, the Federation represents the core of the Canadian fishery sector. His remarks showcased the tremendous local and community values independent harvesters generate over and above the baseline economic returns of the fish they catch. He drew attention to the important challenges confronting independent harvesters in securing legal access to fisheries in the face of climate change, marine protected areas and other pressures on the ocean and advanced a model of coupled systems; one focussed on producing fish and one more centred around the management, marketing and broader social and governance dimensions of fisheries as illustrated in Figure Two. In his presentation and his responses to questions, he particularly focussed on the need to regulate Canada's fisheries in a far more efficient and effective manner than we do at present.

[2] The Power of Positive Deviance. Richard Pascale, Jerry Sternin, Monique Sternin. Harvard Business Press, 2010

[3] Infinity Fish Ussif Rashid Sumaila. https://doi.org/10.1016/C2020-0-01006-6

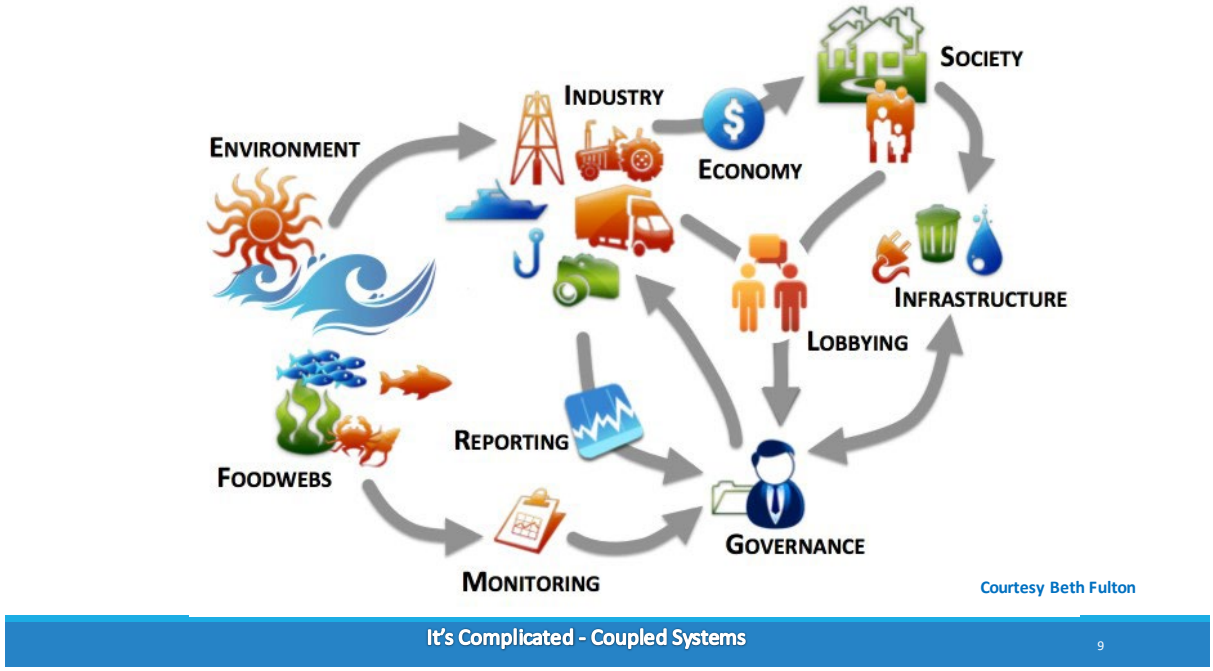

Figure 2

Carey Bonnell, Vice-President, Sustainability and Community Engagement for offshore fish harvester Ocean Choice International and Past-Chair of the Fisheries Council of Canada added further depth to the theme of optimism around the potential for growth in fisheries productivity in Canada. Like all the speakers, he drew attention to the urgent realities of climate change but highlighted the fact that wild capture fisheries are one of the lowest carbon footprint protein sources available today. Much as Dr. Rashid Sumaila emphasized the need to holistically value fisheries, Carey Bonnell argued that every $1 invested in fisheries returns approximately $10 in a combination of health, environmental and economic benefits to local and regional economies.

He outlined the considerable value the fisheries sector contributes to the Canadian economy today and argued that it has the potential to contribute much more. Central to its ability to do so, he suggested, is the need to more deeply invest in fisheries science and at-sea monitoring in particular. In a more provocative line of thought, he noted that while the industry is firmly supportive of fisheries rebuilding plans, these plans need to be grounded in the realities of today in terms of ocean productivity and ecosystem change, as opposed to setting targets based on the ocean conditions of the past.

Fellow Newfoundlander Keith Sullivan, then President of the Fish, Food and Allied Workers Union, added a final link to the chain of optimism around the potential of the fisheries sector to grow and to yield expanded and enduring community and economic benefits. With a focus on Newfoundland and Labrador, he provided a pointed and detailed affirmation of the importance of fisheries to coastal communities spoken about by several presenters during the day. He drew attention to the importance of listening to the observations and local knowledge of inshore fishers and the close ties they have to the marine ecosystems that surround them. On that note, he made a clear and strong pitch to reconsider recent management decisions concerning mackerel, which his members were seeing in record numbers, and rethink current approaches to

rebuilding Northern cod. For cod, he pointed to recent spawning stock biomass estimates as clear evidence of the ability of the stock to withstand increased harvesting pressure and argued that the time has come to allow inshore fish harvesters to begin rebuilding the fishery. As a companion to this point, he drew attention to the recent rapid expansion in redfish stocks and the need to build a stronger market for this species as a key avenue for an expanded sustainable fishing sector in the future.

Theme 5: The evolving role of government requires more and urgent changes to ocean policy and practice.

If there was an elephant in the room throughout the Symposium, it was the role of government generally and the Department of Fisheries and Oceans (DFO) in particular. Two of the Symposium's eldest participants, Dr. Albert Marshall and Sam Waterston, set the tone early in the day with their passionate words about the need for respect and collaboration in addressing the challenges facing ocean sustainability today But this tone of respect notwithstanding, calls for change to DFO fisheries management and ocean conservation policy and practices wove their way through every Symposium presentation and almost every Q&A session or hallway chat. While the precise nature of such change was, of course, the subject of considerable debate, consensus did emerge around the need for increased data transparency from DFO and for the department to, at minimum, return its at-sea stock survey program to its past levels of activity and ideally to expand it.

With that backdrop, it was welcome news that the Honourable Joyce Murray, Minister of Fisheries, Oceans and the Canadian Coast Guard joined the Symposium remotely from British Columbia toward the end of the day. She pointed to the strong commitment she and the government have made to work in partnership with Indigenous Peoples on fisheries management issues. Her comments particularly zeroed in on the government's recent sustainability-related changes to the *Fisheries Act* and innovative approaches to fisheries management they are driving. Notably in this regard, she was clear and emphatic about ensuring that target-based fisheries rebuilding plans should be in place for all critical stocks as soon as possible. In both her prepared remarks and her response to questions, the Minister underscored the need for strong collaboration across all elements of the sector if we are to achieve these rebuilding goals.

Fisheries and Oceans Canada's Senior Assistant Deputy Minister of Strategic Policy, Dr. Niall O'Dea, joined the symposium to provide an overview perspective on many of the topics that arose over the day. His remarks focussed on the strategic level as opposed to delving into specific issues and highlighted the importance of climate change to fisheries management, the strong commitment DFO is making to expanding its science program and the important attention it is devoting to rebuilding plans. In a manner that channeled several of the early speakers, he also reflected on the need to consider fisheries in the broader context and to consider its role in the government's Blue Economy initiative in particular.

CONCLUSIONS

The symposium panel discussions were organized along common themes and were moderated by three journalists: Ainslie Cruikshank from The Narwal, freelance journalist Jenn Thornhill Verma and Paul Withers from CBC in Halifax, each of whom brought their professional skills and instincts to animating the conversation strategically. The panel discussion themes were:

- An Abundant Ocean is Possible: What is the potential for rebuilding abundance in Canada's oceans in the next decade?
- An Abundant Ocean is our Legacy: What are the growth opportunities for food security, income and livelihoods in coastal communities?
- Priorities for Rebuilding Ocean Abundance

Panel discussions were staged in such a way as to impart a flow to the day and speakers were asked to address a particular set of questions and offer recommendations for them. While participants were not asked to formally endorse an action plan or communique of some kind, several points of consensus nonetheless became clear.

Most importantly, the status quo in Canada's fisheries sector appears to be acceptable to no one. The urgency for change, whether in response to climate change, Indigenous interests and rights, fish population trends or market opportunities, is strong and widely agreed upon. There was virtual unanimity around the need for collaborative solutions that engage all elements of the sector rather than any inkling of a simplistic "it is all up to the government to deal with" or an "industry is the problem" sentiment. And importantly, there was complete unanimity that improved fisheries management will lead directly to more abundant, sustainable and economically prosperous fisheries and that we have made great progress in this regard over the past several years. There was equally clear unanimity that much more remains to be done.

PART TWO – OCEANA CANADA'S CALL FOR ACTION

The themes summarized above illustrate the complexity of ocean abundance and fisheries sustainability issues. Simple solutions to the challenges we face are simply not available and the symposium dialogue points to the need for action on multiple fronts, simultaneously. Equally, collective and individual action on the part of Indigenous governments and organizations, industry, academia and civil society is essential for success.

As important as this consortium of interests is, enduring progress toward ocean abundance and fisheries sustainability will only occur if the conditions for collective success are fostered and maintained by DFO. Oceana Canada's symposium firmly demonstrated that these conditions are not in place and that many of the good intentions and positive steps of the various actors promoting ocean sustainability are frustrated or thwarted by many of DFOs' inadequate, non-existent or ignored policy and scientific frameworks. Although collective stewardship of fisheries is necessary for their sustainability, there is an enormous onus on DFO to set and maintain the firm foundations for sustainability upon which success can be built. Our call for action, therefore, centres on three key pillars DFO must strengthen if we are to move towards abundant and sustainable fisheries in Canada.

PILLAR 1: INDIGENOUS RELATIONSHIPS

Action: **DFO must reset its relationships with Indigenous people from coast to coast to coast by formally committing to developing and implementing modern fisheries co-management arrangements.**

DFO has adopted a comprehensive Indigenous Reconciliation Strategy and is working through a series of updates and modifications to the myriad of Indigenous fisheries programming it has in place in all three ocean spaces. While these and other Indigenous fisheries-related initiatives are

reasons for optimism, the symposium and the workshop Oceana Canada convened on Indigenous priorities for fisheries rebuilding demonstrate that relationships between DFO and most First Nations are characterized by mistrust, frustration, uncertainty and a lack of optimism. Tinkering at the margins of governance arrangements or with specific program designs and firefighting around individual fisheries allocation issues is not working. What is urgently needed is to reset DFO-Indigenous relationships in a way that creates modern, purpose-built arrangements for embracing Indigenous rights, knowledge systems and interests in fisheries decision-making. New arrangements should aim to re-engineer the relationships between DFO and Indigenous groups and go beyond species-by-species negotiations of access to resources.

This fundamental shift can only be achieved with a new direction-setting policy that explicitly commits the government to develop and implement collaborative fisheries management arrangements with Indigenous Peoples and eliminate existing legislative and policy barriers to doing so. A policy of this nature does not exist. Accordingly, Oceana Canada supports the repeated calls on DFO to work with Indigenous governments and organizations to reorient its policy foundations toward the creation of co-management arrangements and similar mechanisms for moving DFO – Indigenous relationships to shared decision-making and respect-based collaboration.

PILLAR 2: FISHERIES MANAGEMENT REFORMS

Action: **DFO must drive changes to its fisheries management models and systems to directly respond to the implications of climate change and ecosystem impacts, including with stock rebuilding plans,**

As speaker after speaker emphasized at the symposium, climate change is affecting ocean ecosystems dramatically and has been doing so for decades. And yet, DFO fisheries management models and systems appear not to have responded to these realities and the *Fisheries Act* remains silent on it despite changes to its content as recently as 2019. While our collective knowledge of climate change implications remains imperfect, waiting "until we understand it all" before building lower risk tolerances and more conservative population estimates into management decisions is irresponsible.

Oceana Canada calls on DFO to explicitly address climate change in all fisheries management decision-making and all fisheries science priority setting. This includes providing evidence in the Canadian Science Advisory Secretariat (CSAS) stock assessment process and we expect to see substantive attention to climate change in science advice, Integrated Fisheries Management Plans and stock rebuilding plans. More specifically, it is essential that fisheries management in general, and stock assessments in particular, evaluate vulnerability and climate risk in all populations to enable climate-resilient management measures for stocks most vulnerable to climate change. It is essential that DFO summarize available knowledge on ecosystem change, and more explicitly integrate environmental variability into fisheries science and advice as part of a broader strategic shift to more ecosystem-based approaches to fisheries management, monitoring and modelling.

In Oceana Canada's view, laws for fisheries-related ocean research and monitoring would establish a strong new foundation for the climate-resilient approaches called for above, including government's mandate commitment to update the *Oceans Act* to more explicitly address climate change. It is unlikely that such improvements would lead directly to better fisheries management decision-making. However, done right, these legislative changes could drive substantial

improvements to the scientific foundation for climate-sensitive fisheries management and habitat protection. DFO must accelerate its efforts to meet its *Oceans Act* mandate commitments and ensure that new legislative provisions directly address the climate-related research and monitoring needs of a modernized ecosystem-oriented approach to fisheries management.

Doing so would go a long way to strengthen the implementation of the 2019 amendments to the *Fisheries Act* and the regulations that specify the legal requirements for rebuilding plans for depleted fish stocks. Yet, as was clear from the symposium presentations, there is much work to do. All critical and cautious stocks must be listed under the regulations as soon as possible. At the same time, other policies committing Canada to the Precautionary Approach and the principles of ecosystem-based fisheries management — including the Fishery Monitoring Policy — need to be implemented swiftly. That means integrating ecosystem impacts into fisheries decisions, prioritizing rebuilding depleted forage fish and addressing vulnerabilities to climate change. To date, Canada's approach to fisheries management fails to adequately address these issues (see Oceana *Fishery Audit* 2022).

PILLAR 3: BLUE ECONOMY

Action: **A successful DFO Blue Economy Strategy requires abundant wild fish. DFO must ensure that rebuilt and sustainable fisheries, particularly their socio-economic importance at regional and local scales, feature centrally in its emerging Blue Economy Strategy.**

The symposium repeatedly drew attention to the fact that fisheries are far more than just a livelihood for individual fishery workers and that fisheries management is about far more than understanding fish biology and calculating harvest tolerances for individual fish stocks. Abundant fisheries are a foundational element of Canada's cultural history and lie at the social and economic centre of countless communities, Indigenous and non-Indigenous alike across Canada.

Mechanisms for more effectively engaging communities in fisheries management decisions and for ensuring that the community knowledge and interests are appropriately incorporated are as diverse as the very communities themselves. At the macro scale, DFO's efforts to develop a new Blue Economy Strategy hold great promise for economic and social policy innovations that will support and strengthen the socioeconomic resiliency of fishing communities and fisheries more generally. There have been early government efforts to launch the Blue Economy dialogue process and it was supported by the Minister and her senior officials at the symposium; however, this initiative has yet to generate any tangible outcomes. Oceana Canada supports this initiative, but as noted in its submission on the Strategy, calls on DFO to:

1. Emphasize the central role of fisheries in Canada's Blue Economy;
2. Include the contributions of marine habitat protection;
3. Demonstrate stronger international leadership on issues affecting our oceans from beyond our borders; and
4. Strengthen policy geared towards enhancing the social and economic resiliency of fishing communities.

Oceana Canada requests a public response to these priorities and looks forward to continuing to work with DFO to ensure Canada returns abundance to its oceans for the benefit of all.

ACKNOWLEDGEMENTS

Oceana Canada thanks Trevor Swerdfager for his work in drafting this report. We are grateful to Fisheries and Oceans Canada for its financial support to several of the symposium participants. Special thanks to the three tremendous journalists – Ainslie Cruikshank, Jenn Thornhill Verma and Paul Withers – who so ably served as panel moderators. Oceana Canada is greatly appreciative of the work of our event planner Marie-Louise Doyle and the incredible support team who made our audiovisual systems function flawlessly and allowed two of our participants to join the symposium virtually. We are especially grateful to the incredibly devoted team that contributed so much to the symposium design and its successful implementation. And last, and most importantly, an enormous thanks to the more than one hundred people who were so generous with their time, expertise and input in attending the symposium and contributing to its deliberations in such an intensive and productive fashion! Thank you all!