

Making History in Halifax: The Performance of the G7 Environment Ministers' Meeting in 2018

John Kirton and Brittaney Warren
G7 Research Group
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On September 19 to 21, 2018, G7 environment ministers, joined by their colleagues responsible for oceans and fisheries and energy on the second day, and energy ministers meeting on the third day, gathered in Halifax, Canada, for the 20th G7 environment ministerial meeting (EMM) since its start in 1992 (see Appendix A and Appendix B). They did so following the frustrating failure at the start of September at the week-long United Nations climate negotiations in Bangkok and the slow pace of negotiations on ocean marine diversity in New York City (Darby 2018). In Halifax they took up a broad and ambitious agenda, and approached it in an innovative way (see Appendix C).

At the meetings' end, the ministers had made history in Halifax, producing the most successful G7 EMM ever on several key dimensions of performance. They made important advances in many ways, although much remains to be done. They had invited several other countries and businesses to sign on to the G7 Ocean Plastics Charter launched at the Charlevoix Summit on June 8-9. They launched G7-wide initiatives on plastics innovation and on earth observation. Canada committed to a 75% reduction in plastic waste in its government operations and procurement by 2030. Canada with support from the United Kingdom mobilized almost \$200 million in new money to support these initiatives and also the renewable energy initiatives, far more funds than any G7 EMM had raised before. Halifax set historic highs in the number and length of its outcome documents and in the number of commitments they contained, although many commitments in the chair's summaries were not agreed to by all G7 members. Ministers promised that their advances would be built upon at the G20 summit in Argentina on November 30 and December 1 and at the next G7 summit in France in 2019. Above all, Halifax restored much of the G7 unity that had been called into question immediately after the Charlevoix Summit by a tweeted remark from U.S. president Donald Trump who had just left.

This strong success flowed from the shocks of extreme weather events that exposed the vulnerability of all G7 countries, especially the powerful United States and Japan as the meetings unfolded and during the year before, although such shocks did not induce the United States to agree to key climate change commitments, nor did they induce Japan to join the Ocean Plastics Charter. Success was also spurred by the failure of the slow moving, siloed UN institutions and processes to meet these urgent, global needs on time, although Halifax made only incremental and incomplete advances on climate change due to the resistance of the United States. The G7's global predominance and internal equality in the relevant specialized capabilities fostered Halifax's complete, communiqué-encoded consensus on the G7 Innovation Challenge to Address Marine Plastic Litter and on G7 Initiative on Earth Observation and Integrated Coastal Zone Management, and other advances on oceans (as both those documents were negotiated by all G7 members, unlike the chairs' summaries). Also important were the common principles of the members and the position of the G7 EMM as the club at the hub of a global network that reach out to involve other countries, international institutions, firms, non-governmental organizations, experts and youth, and the G20 summit too. A key cause was the ambition and experience of Canada's Catherine McKenna as the host minister, and the innovative

design of the Canadian government in bringing a cluster of three groups of ministers responsible for environment, oceans and energy from G7 governments together for the first time, for three days.

Preparations

Even before the meetings started, Halifax had made history in its innovative preparations and design.

First, Canada, as G7 host in 2018, assembled for the first time not just ministers of the environment but also those responsible for the closely connected subjects of oceans and energy in an overlapping cluster of meetings over two days, with the energy ministers meeting on their own on the third day. This produced the longest EMM ever held. The previous four ministerial meetings under Canada's presidency in 2018 had combined only two portfolios each. Never before had any G7 ministerial meeting on any subject joined three. Never before had G7 ministers of fisheries and oceans met. Canada's tripartite cluster catalyzed an unusually intense degree of interdepartmental communications and coordination among the G7 members' governments or agencies responsible for the environment, oceans and energy, both internationally and domestically, as the preparatory process for Halifax advanced.

Second, Halifax invited as participants in the EMM an unusually large number of ministers from carefully selected non-G7 countries and the heads of international organizations. The G7 EMM began in 1992 in Germany as a highly exclusive gathering at its first meeting and when G7 ministers gathered in Rio de Janeiro at the time of the summit-level United Nations Conference on Environment and Development. After a gap in 1993 and a restoration in Italy in 1994, Canada institutionalized the EMM as an annual event when it hosted a meeting on April 30 and May 1, 1995, in Hamilton, Ontario. There the G7 EMM produced its first public outcome document containing commitments, offering a robust total of 27. Taking place as a full participant and joining G7 representatives in making these commitments was Elizabeth Dowdeswell as head of the United Nations Environment Programme (UNEP).

Third, Halifax took place just over three months after the leaders' G7 summit in Charlevoix in June. It served as the last, culminating, ministerial in Canada's year as host. Of the 20 previous EMMs, only four took place after the annual G7 summit in the same year. And few of these had served as the culminating ministerial of the country's year as host.

Fourth, the leaders at Charlevoix gave their ministers an unprecedentedly large number of explicit mandates in their public outcome documents to guide their work at Halifax. This represented an unusually strong expression of confidence in their ministers and a vote of support in advance for what they would do in Halifax. Although some members' environment ministers had changed since Charlevoix, notably in the United States on July 5 and in France on August 28, the G7 leaders attending Charlevoix, and thus their highest level support for Halifax, endured.

Fifth, Halifax was preceded and accompanied by many events to bring civil society into the process in a meaningful way. Canada had been somewhat of a pioneer in this regard when it had hosted the EMM in Banff as G7 chair in 2002 (see Risbud 2006). Yet for Halifax, Canada took civil society engagement to a new high. Its many initiatives in the lead-up included a Meech Lake retreat for women leaders and a youth innovation challenge. At Halifax itself there were days of pre-ministerial side events and an oceans dialogue for about 200 invited civil society representatives on the second day.

Momentum from the Months Before

Momentum built during the months leading up to Halifax. This started with the G7 Charlevoix Summit on June 8-9, where climate change, ocean and energy formed one of the Canadian hosts' five priority themes. It was the one where G7 leaders produced the largest number of commitments (Kirton 2018a). Of the 315 commitments made at Charlevoix, the environment came first with 92 commitments for 29% of the total. It was followed in turn by gender with 71 for 23%, development with 32 for 10%, information and communications technologies with 23 for 7%, democracy with 16 for 5%, macroeconomic policy with 13 for 4%, climate change with 12 for 3%, and labour and employment with 11 for 3%. With climate change at 3% added to first-place environment, 32% or about one third of the commitments reflected the issue that Canadians had said was their foremost international issue of concern (Kirton 2018b). Compared to the distribution of commitments by subjects at past summits, climate change and the environment with 32% at Charlevoix did much better than their 10% average from 1975 to 2017.

Further momentum came from the substantial fast start in compliance by G7 members with the commitments their leaders had made at Charlevoix on the central issues their ministers would address at Halifax (Hou, Tops and Kirton 2018). At the first three-month mark of the 14-month period from the Charlevoix Summit to the next summit in Biarritz, France, in August 2019, or 21% of the way, G7 members had already complied at an average of 33%. The three commitments assessed came from the Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities:

- “We intend to leverage innovation in the field of Earth observation technologies and related applications and make them broadly available in the poorest and most vulnerable regions of the world in order to support ... infrastructure and building design.”
- “We will explore broadening disaster risk insurance coverage, including through global and regional facilities, such as the InsuResilience Global Partnership, to extend high quality insurance coverage to vulnerable developing countries and beneficiaries in need and to encourage new types of insurance products for emerging risks.”
- “We will promote the harmonization of monitoring methodologies for marine litter and collaboration on research on its impacts, in cooperation, for example with the United Nations Environment Programme (UNEP) to facilitate this work.”

Three months after the conclusion of the Charlevoix Summit, compliance averaged 69% for the commitment on earth observation technologies, 19% for the commitment on risk insurance and 13% for the commitment on marine litter.

To spur further progress, the week before Halifax, California governor Jerry Brown convened the Global Climate Action Summit in San Francisco. Participants were inspired by a call a few days earlier from UN secretary general Antonio Gutierrez. San Francisco gathered leaders from non-federal governments, business and civil society, who made 500 commitments on the Halifax-like themes of transformative climate investment, inclusive economic growth, sustainable communities, land and ocean stewardship, and healthy energy systems. Led by New York, London and Paris, 27 mega-cities made new commitments to cut their carbon emissions (Gabbatiss 2018). If implemented, the San Francisco commitments would create an estimated 65 million low carbon jobs by 2030.

Priorities and Prospects

These forces sustained Canada's determination from the start to adopt an ambitious set of priorities it sought and expected to advance at Halifax (Meyer 2018) (see Appendix C).

It would begin with the meeting of environment ministers scheduled to meet alone on the first day, September 19. Here Canada's top priority was advancing the rule book to implement the Paris Agreement, with the final decision to be made at the 24th Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) in Poland in December 2018.

The second day, on "Healthy Oceans, Seas and Resilient Communities," would add ministers responsible for oceans and ministers of energy to address the Ocean Plastics Charter launched at Charlevoix. This meeting was designed to advance the sustainable management on land and sea of plastics products and waste. Canada's aim was to broaden the international adoption of the Ocean Plastics Charter, including by encouraging G7 partner Japan to do the necessary work at home to adopt it by the time it hosted its first G20 summit in Osaka at the end of June 2019.

Ministers would also address adaptation and resilience for developing countries devastated by the climate change-intensified extreme weather events such as hurricanes, heat, floods, droughts, fires and rising seas.

On the third day, after their evening dinner on September 20, ministers of energy addressed the transition away from fossil fuels as well as offshore energy development in the emerging tidal sector and gender equality in the energy sector. The latter would advance Canada's mainstream priority and major success at Charlevoix. They would also discuss how to phase out inefficient fossil fuel subsidies by 2025, as the G7 Ise-Shima Summit agreed to do in 2016.

Together they promised to make advances.

At Halifax

At Halifax, Canada started with a special conference the day before on climate finance (Khan 2018). It featured as its keynote speaker Michael Sabia, the CEO of Caisse de dépôt et placement du Québec, Canada's second largest pension fund. He emphasized that those seeking stable, strong, long-term returns would find them in investments in renewable and clean energy, low-energy real estate and low carbon transportation. He said his firm had already declared last year that it would reduce the carbon footprint of its portfolio by 25% by 2025.

On September 19, the meeting of environment ministers started by proclaiming as its main message that the ecological transition is the growth story of the 21st century. Host Catherine McKenna stated in her opening remarks that "the opportunity is now" and that "the time had come to shift thinking from climate risks to climate opportunities." Controlling climate change is and will be a major source of inclusive economic growth, good jobs, investment and productivity for the middle class.

McKenna noted that G7 ministers had an ambitious agenda, and that she welcomed that. She also noted that their work was ultimately about people, above all the young and the most vulnerable in the world. Speaking of her conversation with high school students in Cambridge Bay she told their story of how climate change was already affecting Inuit communities in Northern Canada and said that they looked to those at the table today to provide leadership.

McKenna also emphasized how climate change control was intimately connected to gender equality, the central mainstreamed priority of the G7 Charlevoix Summit that Prime Minister Justin Trudeau hosted on

June 8-9. McKenna noted that women and girls are disproportionately affected by climate change but they are also powerful change agents who can help provide the solutions that are urgently needed.

McKenna then urged her colleagues in their discussions to avoid acronyms and wonky policy speak but instead to “make it real.” She called for ambitious leadership that responded to the needs of people, in ways that they understood and could help shape, and stated that this was what the G7 is all about when it works at its best.

The ministerial meeting itself opened with a session on climate finance, with presentations by Lord Nicholas Stern of the London School of Economics and Mark Carney, governor of the Bank of England and chair of the Financial Stability Board. They also noted, as had Sabia, that much was happening in the right direction but that much more was needed now. In her opening remarks as chair, McKenna declared that the challenge was to turn the “billions into trillions” to produce the sustainable finance transformations on time.

McKenna opened the afternoon session by noting the “great” sessions ministers had had in the morning and at lunch. Her confidence suggested that things were going well.

In setting the agenda for the first afternoon session on adaptation and conserving nature, McKenna noted the importance of biodiversity and its critical impact on human health. She listed the things Canada had recently done to build biodiversity and resilience at home, and the money it had mobilized to this end. She then looked outward, pointing to the vulnerability of small island developing states including those in the Caribbean that were still recovering from last year’s hurricane season, even as new ones threatened to come. She again noted the need to mobilize money, in the form of innovative climate finance.

In keeping with her opening remarks in the morning, McKenna set forth the agenda for the afternoon’s sessions and added her hope that they would be lively. She ended by again highlighting the role of women, not just as victims of climate change but as empowered individuals with solutions whose voice must be heard.

At the end of the first day, the G7 environment ministers alone had added meaningful momentum to various degrees to efforts to address the top three global problems, and thus their top three priorities — Paris, plastics and power.

On the Paris Agreement, their goal was to foster a deal on the rule book for implementation at COP 24 in December to help keep the global temperature increase under 2°C, and ideally to no more than 1.5°C above the pre-industrial level. At Halifax, most G7 ministers agreed to work hard to close the rule book to implement agreement and made advances to that end. But the United States remained out of this consensus and determined to pull out of the Paris Agreement itself.

On preventing plastic pollution in the oceans, G7 environment ministers agreed that this was a major problem. The United States and Japan thus showed that they were committed to tackling plastic pollution, but in different ways from those prescribed by the Ocean Plastics Charter. All agreed that the solution lay in moving toward a circular economy. The call, as the British representative put it, was to move “from trash to cash.” At Halifax the emphasis was to focus on serious, concrete action, including commitments by some large multinational firms. In all, on day one the environment ministers got off to a good start for their joint meetings with G7 ministers of fisheries and oceans, where much more action was expected to come.

On energy, an integral part of the long-term transition to a sustainable economy, the environment ministers agreed on the need to move to clean energy, and the benefit for air quality that this would bring. Much more would be added on the second day and on the third day when G7 energy ministers would meet.

Above all, after day one, the G7 Halifax EMM's pioneering innovative cluster of environment, oceans and energy ministers' meeting over three days was a G7 first that had produced results. Other firsts that added more transparency to the G7 process were the involvement of so many diverse stakeholders beyond G7 governors, including the outreach countries of Jamaica, Marshall Islands, Norway, Vietnam, Kenya, Nauru, Seychelles Islands and Poland as well as business leaders and representatives from multilateral institutions, and the decision to let the media hear from several of them as well as McKenna's opening remarks.

Canada also mobilized new money. McKenna announced \$2 million from Canada to help developing countries adapt to the impacts of climate change. The funds would be managed by the International Institute for Sustainable Development.

The environment ministers also heard from the Gender Equality Advisory Council and McKenna made the environment-gender connection far more broadly and deeply than any EMM before. In her closing statement at the end of the first day McKenna also made the climate-health connection, stating that "we see extreme heat that is killing people." It had been a long time since the G7 EMM and even the G7 leaders at their summit had emphasized these vital links.

More advances would come on the second day, when, for the first time in G7 history, environment ministers were joined by their colleagues responsible for oceans and for energy. McKenna was joined as co-host by Jonathan Wilkinson, Minister of Fisheries, Oceans, and the Canadian Coast Guard, and Amarjeet Sohi, Minister of Natural Resources.

At the end of the second day the Canadian host committed \$187 million in new money to advance the G7 priorities on preventing plastic pollution, strengthening ocean health and renewable energy. This was far more money mobilized than any G7 EMM has raised before. Another £5.5 million was added as the British government's share of a joint venture with Canada on energy. It was evidence that Canada's financial leadership had an immediate follower from a G7 partner. It raised the Halifax total of money mobilized to almost \$200 million.

Halifax also inspired several other countries to join the G7 Ocean Plastics Charter, which Canada had pioneered at the G7 Charlevoix Summit and which the United Kingdom, France, Germany, Italy and the European Union joined there. At Halifax the United States and Japan remained out but added were Jamaica, Kenya, the Marshall Islands and Norway and others, all of which participated in the G7 Halifax meetings as outreach guests. Also joining the Ocean Plastics Charter were many major private sector firms, including Loblaw's, Walmart, Nestlé Canada, IKEA, Dow Chemicals, the Coca-Cola Company, BASF Canada and A&W Canada.

McKenna also announced a zero plastic waste strategy for the Canadian government, including in its procurement process.

On the third day, when energy ministers met alone, they repeated the G7 commitment to phase out fossil fuel subsidies by 2025. But they added no details about how they would move more effectively than they had in the past. Moreover, Canada's commitment to its fossil fuel economy was highlighted when Sohi announced how Canada would proceed to have its National Energy Board reconsider and presumably approve the

expansion of the controversial Trans-Mountain Pipeline carrying heavy oil from Alberta to the British Columbia coast to be loaded on tankers to be shipped to markets in Asia and elsewhere.

Dimensions of Performance

The historic success of the G7's Halifax EMM appeared in its achievements on many of the major dimensions of performance that such meetings have (see Appendix D).

Domestic Political Management

On the first dimension, domestic political management, performance was substantial. The key ministers attended, led by the U.S. Acting Administrator of the Environmental Protection Agency, Andrew Wheeler. Indeed, the evening before the meeting started he had a bilateral meeting with McKenna as host. Unlike the U.S. representative at the Charlevoix Summit, Wheeler did or said nothing at or after Halifax to create negative media attention and approval for its results.

France, the G7 host in 2019, sent its secretary of state, Brune Poirson, rather than its minister who had been appointed only a few weeks before. She was an experienced participant and had held her office since June 2017. She served as the French representative at all the meetings over three days, providing a unique ability to integrate them all.

Media attention and approval was small but positive overall. While the EMM did not make the front section of Canada's English-language elite daily national newspaper, *The Globe and Mail*, columns in its business section on September 19 and shortly after the meeting's end cast its initiatives and accomplishments in a positive light. The most continuous, detailed and comprehensive coverage, that by Michael Tutton of the Canadian Press, was neutral, but slightly positive, usually starting with the government's announcements and ending with criticisms such as the call of well-known Canadian environmentalist David Suzuki for McKenna to resign.

Public approval was neutral. In the Nanos poll of Canadians' preferences for political parties, the governing Liberals, reached 41% approval before the meetings' start, but dropped to 39% by September 21. But these results aggregate responses from the previous four weeks, and many more high-profile events were taking place in Canada, including two provincial election campaigns, that could have produced the change. After Halifax, the Liberals remained in a comfortable lead of almost 10% over the second-place Conservatives.

Deliberation

On the dimension of deliberation, in its public component, the Halifax EMM's number of outcome documents was an historic high of seven (counting the annexes to the earth observations document and the energy chair's summary separately), surpassing the four produced at Kobe, Japan, in 2008. The Halifax environment ministers produced two chair's summaries, one for their meeting on their own and one for their meeting with the oceans and energy ministers, and two pre-negotiated communiqués: the G7 Innovation Challenge to Address Marine Plastic Litter and the G7 Initiative on Earth Observation and Integrated Coastal Zone Management, with its lengthy detailed annex. The energy ministers produced a stand-alone chair's summary with its own annex on G7 outcomes at the end of their meeting on the third day, raising the Halifax cluster to a total of seven.

The environment ministers' five documents set a new historic high in their length and thus in the breadth, transparency and detail of the collective conclusions they contained. They contained a total of 11,423 words, surpassing the previous high of 10,126 words at Kobe in 2008. At Halifax the environment ministers' chair's

summary had 1,947 words, the environment, oceans and energy ministers' chairs' summary had 2,172 words, the marine litter challenge had 1,213 words, and the earth observation initiative and its annex had 6,091.

Direction Setting

On the dimension of principled and normative decision making, Halifax also made history. It referred to gender, the central Canadian G7 priority in 2018, more often and more broadly than any EMM had before. The environment ministers' chair's summary contained six gender references; the chairs' summary of the environment, oceans and energy ministers' meeting had seven; the communiqué on marine plastic litter had two and that on earth observation had one. There were thus a total of 16 affirmations of the principle of gender equality and women's empowerment, appearing in four of the five outcome documents.

There was also a revival of attention of the link between human health and the environment (including climate change). There were a total of nine references, appearing in each of the five outcome documents.

There was also a reference to the G20 in each of the chairs' statements, suggesting that the G7 would work together with the G20 and forward its results at the forthcoming G20 summits in Argentina at the end of November and in Japan in June 2019. The several links made in the Halifax documents between the environment and food reinforced this potential partnership as food security is one of the top three priorities Argentina has set for its G20 summit in November.

There were, however, no references to the G7's distinctive foundational principle of promoting open democracy and human rights. In this it continued the pattern set by earlier EMMs.

Decision Making

On the dimension of decision making, through the production of public, collective, precise, future-oriented, political binding commitments, the Halifax ministers made a total of 69, surpassing the previous peak of 66 at Toyama in 2016. In the chairs' summaries the environment ministers produced 14 (with seven in the standard hard form and seven of a softer sort). The three ministers on day two added 25 and the energy ministers on day three another 28. In the communiqués, the marine litter initiative contained seven and the earth observation initiative 17. Seven of the commitments in the chairs' summaries were sub-set commitments in which not all members were bound.

These commitments came over a broader and more innovative set of subjects than ever before, with those on oceans and energy standing out in this regard (see Appendix E).

Development of Global Governance

In the institutionalized development of global governance, both inside and outside the G7, performance was also high.

The four environment ministers' outcome documents contained 14 references to institutions inside the G7 to five different bodies (see Appendix F). This is slightly more than at the 2017 Bologna meeting that made 10 references to four institutions, and was on par with the 2016 Toyama meeting that had 14 references to three institutions. At Halifax the highest number of references were made to past G7 summits or meetings with five. This was followed by three references each to the G7 Alliance on Resource Efficiency and to the newly created Gender Equality Advisory Council. Two references were made to the G7 Working Group on the Future of the Seas and the Oceans and one reference was made to the Task Force on Climate-related Financial Disclosures.

There were 31 references to 11 intergovernmental institutions outside the G7 (see Appendix F). This is lower than at Bologna in 2017, which had 45 references across 14 institutions, but on par with the 2016 Toyama meeting, which had 31 references across 14 institutions. However, at the first meeting of the EMMs in 1995 in Hamilton, Canada, at which commitments were made, there were 59 references to outside institutions to 13 different bodies. Here most references went to the UNEP with 15. Thus although there were many more references to international organizations at the 1995 EMM, at Halifax there was a greater breadth of references.

At Halifax the highest number of references were given to the World Bank with four and the Organisation for Economic Co-operation and Development with three. Two references each were made to the Food and Agriculture Organization, the International Maritime Organization (IMO), UNEP and the World Economic Forum and to international organizations in general. The rest had only one reference each: the African Development Bank, COP 24, the Inter-American Development Bank, the International Labour Organization, Interpol, Regional Fisheries Management Organizations, general references to the UN, the UN Convention on Biodiversity, the UN Convention on the Law of the Seas, the UN Development Programme, the UN Education, Cultural and Scientific Organization, the World Health Organization, the World Meteorological Organization and the World Trade Organization.

Propellers of Performance

Joining these innovative preparations are the propellers of performance that are highlighted by the concert equality model of G7 governance and that have proven their worth in spurring G7 success on climate change, oceans and energy and elsewhere in the past (see Kirton 2013; Kirton, Kokotsis and Hudson 2018; Kirton and Larionova 2018).

Shock-Activated Vulnerability

The first is shock-activated vulnerability, a sequence of sharp, sudden, surprising events that bring harm to citizens of G7 members and those beyond. The weeks leading up to Halifax saw historically high temperatures and searing heat in most G7 members, notably the United States, Japan and Europe. These sparked or intensified many extreme weather events, such as historically large and long forest fires in California, British Columbia and parts of Europe.

In the United States and the Caribbean territories of the United Kingdom, France and the Netherlands, the 2018 hurricane season had been modest, until September 9. Then Tropical Storm Florence became a category one hurricane and was forecast to hit the southeastern Atlantic U.S. states as a category four hurricane by September 13. By September 16 it was downgraded to a tropical depression and had killed at least 17 people and left nearly one million without electricity in North and South Carolina, two states that supported Donald Trump in the presidential elections in 2016. Two other hurricanes were following in Florence's wake.

As the governors of North Carolina, South Carolina and Virginia declared states of emergency, Florence's approach revived memories of the ravages of the unusually deadly and damaging ones last year. The Halifax ministerial marks the one-year anniversary of Hurricane Maria, which devastated the Caribbean and Atlantic territories of the United States, United Kingdom, France and European Union's Netherlands. Figures just released show that Maria killed almost 3,000 people in Puerto Rico, making it one of the most deadly hurricanes in the United States in recent times.

In Japan, the most deadly typhoon in 25 years, Tornado Jebi, struck the western part of the country on September 4, leaving six dead and disabling the Kansai Airport serving Osaka, Kyoto and Kobe (Lewis 2018).

It reminded many that 12 of the world's major airports are less than five metres from sea level, including those in New York City, San Francisco and Shanghai (Tabuchi 2018). It followed a prolonged heat wave and heavy flooding near Hiroshima. Tornado Jebi was followed by a major earthquake that killed many in northern Japan. Nearby, in the Philippines, Taiwan, Hong Kong and Southern China, the powerful Typhoon Mangkhut had left dozens dead in its destructive wake by September 16.

Compelling images of beached whales with bellies full of plastic, of a seahorse swimming with a cotton swab, and the BBC's documentation of marine life in its Planet Earth series narrated by Sir David Attenborough have gone viral on social media, prompting strong public reaction, including changes in consumer behaviour. While public outrage may not have been as strong as it was in response to the image of the Syrian boy Alan Kurdi's appearance on Canada's beaches, the message that humans are causing unnecessary harm was well received. These powerful images thus seem to have provided impetus for action for the G7 to increase momentum on addressing ocean health.

Multilateral Organizational Failure

The second propeller is multilateral organizational failure, notably that of the universal, hard law, development-oriented United Nations to act with sufficient ambition, speed and success to control climate change, and create clean oceans and energy. This has left it to the G7 to try to fill the global environmental governance gap (Kirton and Kokotsis 2015).

The September UN climate change negotiations in Bangkok made little progress in preparing the rule book to implement the 2015 Paris Agreement, as they were paralyzed by the traditional divides that flourish within the United Nations (Darby 2018). China sought to allow poorer countries to have lower standards than rich ones, a proposal vetoed by the United States. Progress was also stopped on other key issues as well, such as climate finance and, above all, the information that countries should submit in updating their climate change commitments. Here too, the UN's divided regimes failed, as China and emerging countries wanted mandatory rules to apply only to traditionally developed countries, while the umbrella group of the United States, Canada and Australia, supported by the United Nations, sought a single, high-standards regime. As a result, at Bangkok officials produced no consensus text that was ready for ministers to work with, leaving Patricia Espinosa, head of the UNFCCC secretariat, to point to the need for political-level intervention to resolve the impasse before the deadline to produce the rule book at COP 24 in December. At Halifax, most environment ministers agreed to continue to support the process, but did not make any new specific agreements to this end.

UN efforts to protect the marine biodiversity of the world's oceans beyond national jurisdiction, covering 45% of the planet, were also moving at a very slow pace (UN 2018). An intergovernmental conference in New York City on September 17 sought to develop a text for a legally binding instrument within the 1982 UN Convention on the Law of the Sea, pursuant to UN General Assembly Resolution 72/249. Most speakers highlighted the urgent need to create such an instrument, and some were encouraged by the organizational meeting in April and the non-paper "aid to discussions document" that the Singapore chair had produced. But most were comfortable with a predefined UN process that would move on to the second and third phase of the conference in 2019 and the fourth and final session in the first half of 2020, when the United States is scheduled to be the G7's host and chair. As of September 5, it was unclear if the current meeting would produce even a "zero draft" as a basis for negotiations on a text to begin, even though the recently produced first Global Integrated Marine Assessment had highlighted the urgency of the threat and need to act. The G7 did not address biodiversity in depth, but did seek to advance the concept of a circular economy. It did so by expanding membership of the Oceans Plastics Charter, whose implementation is expected to have a positive impact on marine life.

Conversely, international institutional success also helps explain the G7's inaction in the area of reduction of greenhouse gas (GHG) emissions in the shipping sector. On April 9-13, 2018, more than 100 IMO member states, three associate members, two UN bodies including the UNFCCC, eight intergovernmental organizations and 47 non-governmental organizations met in London. They adopted a resolution on the Initial IMO Strategy on the Reduction of GHG Emissions from Ships. In line with the Paris Agreement, the strategy "envisages" a reduction in emissions from the global shipping sector by at least 50% by 2050 relative to 2008 levels, "pursuing efforts towards phasing them out entirely." The G7 did not therefore need to fill a global governance gap on emissions from this sector, and instead focused on other ocean issues, namely marine litter, illegal, unregulated and unreported fishing, and offshore tidal power development.

Predominant, Equalizing Capability

The third propeller is the strong global predominance and internal equality that G7 members have in the specialized capabilities most relevant to the agenda of the Halifax meeting.

Host Canada is the G7's least powerful member in overall terms, as measured by gross domestic product at current market exchange rates. Yet it is the leading ecological superpower in the G7 and the world. This is largely due to its place in the privileged set of being a country of transcontinental reach, bordering the three great oceanic theatres of international politics, the Atlantic, Pacific and Arctic, as the creator of the concept of superpower noted (Fox 1944). Canada's previous prime minister Stephen Harper had identified Canada as an emerging energy superpower in 2006 (Taber 2006). Yet it is far more of an established ecological superpower to this day. It has the world's longest coastline, largest boreal forests and largest body of freshwater (thanks to the Great Lakes, which it shares with the neighbouring United States). Canada stands fourth in the world — by far the G7 leader — as a source of cobalt, the critical ingredient in the batteries required for electric cars (Sanderson 2018). The United States, while the most powerful G7 member overall, is far behind Canada as a cobalt power at second in the G7 and 12th in the world.

The United States stands first in the specialized capability of official development assistance (ODA), with an annual expenditure of about \$35 billion (*Economist* 2018a). But Germany is a strong second at about \$28 billion, followed in turn by Japan at \$18 billion, the United Kingdom at \$17 billion, France at \$14 billion, Italy at \$6 billion and Canada at \$4 billion. With a total of \$122 billion (excluding those of the other EU members), the G7 has globally predominant capability in the public finance needed to support the Halifax initiatives, and the United States provides only about 29% of the G7 total. Moreover, the Republican Congress has withstood efforts to reduce overall U.S. ODA by one third.

Public Support

The fourth propeller is the strengthening support in G7 members' mass public opinion for action to control these shocks and their underlying cause of climate change.

Canada

In host Canada, citizens in an Abacus Data poll taken on August 15-20, 2018, placed climate change second among the issues they were extremely concerned about, with 34% respondents behind only the 48% who chose Donald Trump (Anderson and Coletto 2018). Canadians also put extreme weather in sixth place, showing that the summer's shock-activated vulnerability was hitting home.

In similar fashion, Environics Research found that a majority of Canadians believe that environmental protection and economic growth are and should be mutually supportive (Coulson 2018). Indeed, three quarters think environmental protection increases economic growth and jobs while only one quarter think it

reduces them. They also support the construction of new pipelines, including the proposed expansion of the Trans-Mountain pipeline from Alberta to British Columbia, and believe this can be done with reasonable environmental protection. Even a slight majority of those in British Columbia agree. At the end of 2016, a majority had also supported the Trans-Mountain pipeline and agreed that the Canadian government should proceed to tax carbon (Nanos 2016). However, these majorities are small, and there is significant opposition. Although 43 Indigenous groups signed agreements of support for the Trans Mountain pipeline, this represents just 7% of the 634 nations across Canada. Thirty-three of these 43 agreements were made with nations in British Columbia, with over two thirds of First Nations in B.C. having made no such agreement. Additionally, 150 Indigenous nations across Canada and the United States have signed the Treaty Alliance Against Tar Sands Expansion, and more than a dozen lawsuits have been filed against the project.

The Canadian government was also bolstered by rising political support in the public opinion polls. The Nanos poll that had showed the opposition Conservative Party leading the Liberal Party of Prime Minister Justin Trudeau and environment minister Catherine McKenna on July 20 put the Liberals in first place at 38.8% and Conservatives in second at 34.4% by August 24 (Nanos 2018a, 2018c). Their Liberal Party lead increased by August 31 to 39.9% against the Conservatives 32.4%, the New Democratic Party's 15.8% and the Greens 6.7%. By September 7, the Liberals held their lead at 39.9%, to the Conservatives at 32.8%, the NDP at 14.9% and the Greens at 6.5%.

United States

In the United States, public concern about climate change is strong and rising. The Yale Climate Opinion Map finds that 70% of U.S. adults believe that global warming is underway. A majority 57% think that humans cause it (Marlon et al. 2018). And 61% worry about it now. In 2014, only 63% of them had believed global warming was underway. Moreover, a majority of U.S. residents believe that environmental protection is more important than economic growth.

Furthermore, a poll released in early September 2018 found that over 80% of Americans, including 65% of Republicans, felt their government should act to limit carbon emissions, with 56% supporting in a bipartisan fashion a plan to tax fossil fuel firms on their emissions and return the money directly to households as a monthly cash dividend (Hill and Knowlton Strategies 2018). Almost two thirds said the issue of carbon emissions mattered to them personally and 51% said it would influence the candidate they voted for.

These views of the public acquire more importance as the U.S. mid-term congressional elections approach on November 6, with polls showing Trump's Republican Party already due to lose control of the House of Representatives. By September 6, *The Economist's* weekly YouGov poll found that Trump's approval rating had dropped to 38%, its lowest level since April (with 53% disapproving), with those strongly disapproving on the rise (*Economist* 2018c). Other polls confirmed these results.

United Kingdom

In the United Kingdom, 80% of Britons indicate they are concerned about and want urgent action against the use of single use plastics (Pritchard 2018). In Scotland, in the annual Scottish Household Survey, adults seeing climate change as an urgent, serious concern, rose to 61% in 2017, a rise from 55% in 2016 (Duncanson 2018).

France

In France, which will host the G7 in 2019, support for President Emmanuel Macron, whose party has a legislative majority, stood at a record low of 31% by September 4 and at 34% in a poll on August 29-30, a decline of 5% since July (Keohane and Agnew 2018; Groupe BVA 2018). It was only 21% among those supporting Europe-Écologie-les-Verts, a decline of 18 points. However, recently resigned environment

minister Nicolas Hulot stood first as the most influential figure at 38%, a gain of three points. This suggested that the French sought strong action on environmental protection and climate change.

By early September, Macron's approval rating had dropped in an Ifos poll to 31% (*Economist* 2018b). However, if elections for the European Parliament were held then, Macron's La République en Marche party would stand first in France.

Germany

In Germany, Chancellor Angela Merkel, the longest serving G7 leader and a former environment minister, leads a coalition whose CDU party is 44 percentage points more popular than the populist AfD (Mudde 2018).

Italy

In Italy, the populist party M5S is in the governing coalition, and viewed most favourably, but only by 39% of adults (Mudde 2018).

Media

More broadly, over the past year there has been a contagious tide of media attention and civil society action on preventing plastic pollution in the oceans, which is a central priority on the Halifax agenda. Initiated by Sir David Attenborough and the BBC, the spreading message to "free Willy" from plastic poisons offers an emotionally compelling rallying cry.

Ministers' Continuity, Convictions and Expertise

The fifth propeller is the attending ministers' continuity and resulting experience and their personal convictions and expertise.

Canada's chair of the key EMM, Catherine McKenna, has been Canada's minister of the environment and climate change since the Trudeau government entered office with its parliamentary majority in November 2015. She participated in the G7 EMMs in Bologna in Italy in 2017 and Toyama in Japan in 2016. She attended the G7 summit in Lyon, France, as a journalist in 1996. She was the only minister of a G7 country at Halifax who attended the previous two EMMs.

The only other EMM veteran is Karmenu Vella of Malta, as the European commissioner for the environment, maritime affairs and fisheries, who assumed the post on November 1, 2014.

The fact that all the others are newcomers offers opportunities for them to make a fresh start, injecting innovation and ambition.

In France, François de Rugy was appointed environment minister on September 4, 2018, replacing Hulot who had suddenly resigned the week before (Keohane and Agnew 2018). de Rugy is an ecologist, a member of Macron's En Marche party and an early supporter of Macron, and was previously the president of the National Assembly. He thus brings experience in environmental issues and an expectation that France's environmental policy would not change. On his appointment, he posted on Facebook that it is no longer the time for analyzing speeches, but now requires action, more action and always action (*L'écologie, cela ne peut pas être que des grands discours d'analyse, de dénonciation ou même de propositions mais bien de l'action, encore de l'action et toujours de l'action*). However, he sent his secretary of state, Brune Poirson, to represent France at Halifax.

Compact Club at the Hub

The sixth propeller of performance is the position of the G7 and its EMM as an interpersonal compact club at the hub of a global governance network. A key finding of social psychology is that “positive, intimate contact between members of rival groups across an extended period can produce compromise” (Bail 2018). With only eight G7 ministers at the table for the opening day, expanding to 16 on the second, the G7 EMM is a compact group where all participate as equals, where transactions costs are low, where free, frank, flexible exchanges can flourish in private, and where psychological as well as rationally calculated broader instrument bonds can arise. It has met annually for the previous two years and its ministers encounter one another regularly in other forums.

Its status as the hub of a global network will be reinforced by well-chosen ministers from non-members coming as invited guests, including Jamaica to represent the hurricane-ravaged Caribbean, with its many small island developing states. Also invited was Argentina, with its long coastline, critical position facing the South Pole and key role as host of the G20's Buenos Aires Summit on November 30 to December 1, 2018 (Meyer 2018). Argentina will be able to take the results of Halifax to a broader, leaders-level summit, where climate change and energy are on the agenda as priorities set by Argentina when it assumed the G20 chair on December 1, 2017. Also invited was G20 member South Africa, which hosted the annual stand-alone BRICS Summit this summer, and the Marshall Islands.

More broadly, the dense array of side meetings with civil society will expand the reach. The ministerial meetings were preceded by an opening roundtable on sustainable finance, which Mark Carney, governor of the Bank of England and chair of the Financial Stability Board, participated by videoconference.

Conclusion

While much was done in Halifax, there is still much left to do. But the successes of Halifax can be built upon at COP 24 in December, the G20 summits in Buenos Aires in November and Osaka in June 2019, and the G7 summit in Biarritz in the summer of 2018.

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Appendix A: G7 Environment Ministers

Canada

Catherine McKenna, Minister of the Environment and Climate Change, November 4, 2015

France

François de Rugy, September 4, 2018– (New) (represented by Brune Poirson, Secretary of State to the Minister for the Ecological and Inclusive Transition, June 2017–)

Nicolas Hulot, May 17, 2017, to September 4, 2018

Germany

Svenja Schulze, March 14, 2018– (New) (Ministry of the Environment, Nature Conservation, Building and Nuclear Safety)

Barbara Hendricks, December 17, 2013, to March 14, 2018

Italy

Sergio Costa, June 1, 2018– (New)

Gian Luca Galletti, February 22, 2014, to June 1, 2018 (Minister of Environment and Protection of Land and Seas)

Japan

Masaharu Nakagawa, August 3, 2017– (New) (Minister of the Environment/Minister of State for Nuclear Preparedness)

Koichi Yamamoto, August 3, 2016 to August 3, 2017 (at Bologna)

United Kingdom

Michael Gove, June 11, 2017– (New) (Secretary of State for Environment, Food and Rural Affairs)

Therese Coffey, Parliamentary Undersecretary represented the United Kingdom at the 2017 Bologna EMM

Andrea Leadsom, July 14, 2016, to June 11, 2017

Elizabeth Truss, July 15, 2014, to July 14, 2016

United States

Andrew R. Wheeler, July 9, 2018– (New)

Scott Pruitt, February 17, 2017 to July 6, 2018

European Union

Karmenu Vella (Malta), November 1, 2014– (Commissioner for the Environment)

Janez Potočnik (Slovenia), February 2, 2010, to November 1, 2014

G7 environment ministers and high representatives and European Commissioners responsible for environment and climate met in Bologna, Italy, on June 11-12, 2017, and in Toyama, Japan, on May 15-16, 2016.

Appendix B: List of G7 Environment Ministers Meetings

Spring 1992, Germany

June 1992, Rio de Janeiro, Brazil

March 12-13, 1994, Florence, Italy

April 29-May 1, 1995, Hamilton, Ontario

May 9-10, 1996, Cabourg, France

May 5-6, 1997, Miami, United States

April 3-5, 1998, Leeds, England

March 26-28, 1999, Schwerin, Germany

April 7-9, 2000, Otsu, Japan

March 2-4, 2001, Trieste, Italy

April 12-14, 2002, Banff, Canada

April 25-27, 2003, Paris, France

March 17-18, 2005, Derbyshire, United Kingdom

November 1, 2005, London, United Kingdom (with energy ministers)

October 3, 2006, Monterrey, Mexico

March 15-17, 2007, Potsdam, Germany

May 24-26, 2008, Kobe, Japan

April 22-24, 2009, Siracusa Italy

May 15-16, 2016, Toyama, Japan

June 11-12, 2017, Bologna, Italy

September 19-21, 2018, Halifax, Canada

Appendix C: Agenda of the 2018 G7 Ministerial Meeting on Working Together on Climate Change, Oceans and Clean Energy

September 18, 2018

G7 Sustainable Finance Roundtable New Climate Economy will convene leaders from government, industry, and key institutions in advance of the Environment

Ministers' Meeting Introduction

1:00 p.m.–1:20 p.m.

G7 Sustainable Finance Roundtable

Session 1 – Enabling Conditions

1:20 p.m.–2:05 p.m.

G7 Sustainable Finance Roundtable

Session 2 – Innovative Solutions

2:05 p.m.–3:00 p.m.

Event: G7 Sustainable Finance Roundtable

Session 3 – Mobilizing Capital

3:30 p.m.–4:50 p.m.

G7 Sustainable Finance Roundtable

Conclusion

4:50 p.m.–5:00 p.m.

September 19, 2018

Environment Ministers' Meeting

Opening session with opening remarks by Minister Catherine McKenna

8:15 a.m.–8:25 a.m.

Plenary session 1 – Long-Term Economic Transition

8:25 a.m.–10:00 a.m.

Plenary session 2 – Near-Term Ambitious Action and Reduction Opportunities

10:30 a.m.–12:00 p.m.

Plenary session 3 – Adaptation

2:00 p.m.–3:30 p.m.

Closed session 3

4:15 p.m.–5:00 p.m.

Family photo of G7 environment ministers and media availability with Minister Catherine McKenna

5:00 p.m.

September 20, 2018

Joint ministerial session on Healthy Oceans, Seas, and Resilient Communities

Opening session with opening remarks by Ministers Catherine McKenna and Jonathan Wilkinson

8:30 a.m.–9:00 a.m.

Session 1 – Plastics and Marine Litter

9:30 a.m.–10:30 a.m.

Session 2 – Sustainable Oceans and Fisheries

10:45 a.m.–11:45 a.m.

Session 3 – Resilient Coasts and Communities

1:00 p.m.–2:00 p.m.

Closed session

2:15 p.m.–3:45 p.m.

Family photo of G7 environment, oceans, and energy ministers and press conference with Ministers

Catherine McKenna, Jonathan Wilkinson and Amarjeet Sohi

4:00 p.m.–5:00 p.m.

Evening event and reception

5:30 p.m.

Energy Ministers' Meeting

Dinner with G7 energy ministers

7:00 p.m.–9:00 p.m.

September 21, 2018

Energy Ministers' Meeting

Opening remarks by Minister Amarjeet Sohi

8:00 a.m.–8:20 a.m.

Roundtable on offshore energy development

8:20 a.m.–9:45 a.m.

Panel discussion on gender equality in the energy sector

9:45 a.m.–10:45 a.m.

Family photo of G7 energy ministers

10:45 a.m.–11:15 a.m.

Discussion on just transition in the energy sector

11:15 a.m.–12:15 p.m.

Building Energy Systems of Tomorrow

1:00 p.m.–4:00 p.m.

Media availability with Minister Amarjeet Sohi

4:00 p.m.–4:30 p.m.

Appendix D: G7 Environment Ministerial Performance, 1992-2018

EMM	# words	# documents	# commitments	Development of global governance	
				Outside	Inside
1994 Florence	1,219	1	0		
1995 Hamilton	2,370	1	27	59	0
1996 Cabourg	2,830	1	9		
1997 Miami	3,417	3	48		
1998 Leeds	2,030	1	26		
1999 Schwerin	3,637	1	50		
2000 Otsu	2,945	1	45		
2001 Trieste	3,848	1	18		
2002 Banff	2,157	1	16		
2003 Paris	3,136	1	23		
2004 no meeting	-	-	-	-	
2005 Chairman's conclusions	1,172	1	-		
2005 Summary of energy and environment	1,573	1	0		
2006 Monterrey	0	0	-		
2007 Potsdam	646	1	24		
2008 Gleneagles Dialogue	1,058	1			
2008 Kobe	10,126	4	46		
2009 Siracusa	4,560	2	26		
2010 no meeting	-	-	-	-	
2011 no meeting	-	-	-	-	
2012 no meeting	-	-	-	-	
2013 no meeting	-	-	-	-	
2014 no meeting	-	-	-	-	
2015 no meeting	-	-	-	-	
2016 Toyama	8,592	2	66	31	14
2017 Bologna	3,874	2	49	45	10
2018 Halifax Total	11,423	4	69	31	14
2018 Halifax environment alone	1,947	1	17	11	7
2018 Halifax environment/oceans/energy	2,172	1	26	13	5
2018 Innovation Challenge	1,213	1	7	5	1
2018 Earth Observation Initiative	928	1	19	2	1

Note: Halifax excludes the appendix to the Earth Observations communiqué.

Making History in Halifax: The Performance of the G7 Environment Ministers' Meeting in 2018

Issue	1996	1997	1998	1999	2000	2001	2002	2003	2005	2007	2008	2009	2016	2017
Sustainable consumption (demand)	-	-	-	-	-	1	-	3	-	2	-	2	2	1
Food waste and loss	-	-	-	-	-	-	-	-	-	-	-	-	3	1
Civil society/business	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Private sector/jobs	-	-	-	-	-	-	1	-	-	-	-	1	-	1
Green public procurement	-	-	-	-	-	-	-	1	-	-	-	-	-	2
Remanufacture, refurbishment, repair and direct reuse	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Next product revolution	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Circular economy	-	-	-	-	-	-	-	-	-	-	5	-	3	-
Trade	1	1	-	4	-	-	-	-	-	-	5	1	-	-
Effective management	-	-	-	-	1	-	2	1	-	-	-	7	-	-
Governance														
International cooperation	3	5	7	5	9	3	3	1	-	-	2	2	9	-
Information sharing	-	-	3	1	2	-	2	1	-	-	3	-	-	2
Institutions	6	5	4	9	2	2	2	3	-	-	1	-	-	-
Capacity building	-	-	-	2	6	-	-	-	-	-	-	-	-	-
Other														
Environmental crime	-	-	4	7	-	-	-	-	-	1	-	1	1	-
Transportation	-	-	-	3	-	-	-	-	-	-	-	-	1	-
Chemicals	-	7	-	2	-	3	1	-	-	-	-	-	1	-
Gender	-	-	-	-	-	-	-	-	-	-	-	-	1	1
U.S. commitment	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Small and medium-sized enterprises	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Air quality	-	5	-	-	-	1	-	-	-	-	-	-	-	-
Public awareness	-	-	1	-	-	-	-	1	-	1	-	-	-	-
Sustainable development	-	-	1	3	2	1	2	2	-	-	-	-	-	-
Africa	-	-	-	-	1	-	-	8	-	-	-	-	-	-
Biosafety	-	-	-	2	-	-	-	-	-	-	-	-	-	-

Note: G7 environmental meetings started making public commitments only in 1996.

Appendix F: Development of Global Governance

Table F-1: Inside Institutions

	1995 Hamilton	2016 Toyama	2017 Bologna	2018 Halifax				
				Total	EMM	Joint	Marine	Earth
Financial Stability Board Task Force			1					
G7		7	6	5	4	1		
G7 Alliance on Resource Efficiency		6	2	3	1	1	1	
G7 Working Group on the Future of the Seas and the Oceans				2		1		1
Gender Equality Advisory Council				3	1	2		
Strategic Dialogue of the Carbon Market Platform		1	1					
Task Force on Climate-related Financial Disclosures				1	1			
Total number of references	0	14	10	14	7	5	1	1
Total number of institutions	0	3	4	5	4	4	1	1

Note: References to G7 included if in reference to a past summit. G7 Investors Global Initiatives excluded. Halifax 2018 Halifax: EMM = Chair's Summary for the Environment Ministers' Meeting; Joint = Chairs' Summary of the G7 Joint Ministerial Session on Healthy Oceans, Seas and Resilient Communities; Marine = G7 Innovation Challenge to Address Marine Plastic Litter; Earth = G7 Initiative on Earth Observation and Integrated Coastal Zone Management.

Table F-2: Outside Institutions

	1995 Hamilton	2016 Toyama	2017 Bologna	2018 Halifax				
				Total	EMM	Joint	Marine	Earth
African Development Bank				1			1	
Agence française du développement			1					
Conference of the Parties	2							
21st Conference of the Parties		3						
22nd Conference of the Parties		1	3					
23rd Conference of the Parties			2					
24th Conference of the Parties				1	1			
Food and Agriculture Organization		1		2		2		
Global Environment Facility	2	1						
G20			7					
General	1		2	2	1		1	
Inter American Development Bank				1			1	
International Civil Aviation Organization		2	1					
International Finance Corporation			1					
International Labour Organization				1		1		
International Monetary Fund	1							
International Maritime Organization		2		2		2		
Interpol				1		1		
Multilateral development bank			15					
Organisation for Economic Co-operation and Development	7	4	8	3	2	1		
Regional fisheries management organizations				1		1		
United Nations	1		1	1		1		
UN Convention on Biological Diversity		1		1	1			
UN Convention on Sustainable Development	8							
UN Conference on Environment and Development	1							
UN Convention on the Law of the Sea				1		1		
UN Development Programme	2			1	1			
UN Environment Assembly		2	1					
UN Environment Programme	15	5	1	2	1	1		
UN Economic and Social Council		1						
UN Education, Science and Culture Organization				1				1
UN Framework Convention on Climate Change	6	4	1					
UN General Assembly		2						
UN Global Compact		2						
World Economic Forum				2	1	1		
World Health Organization				1	1			
World Bank	11		1	4	2		2	
World Meteorological Organization				1				1
World Trade Organization	2			1		1		
Total number of references		31	45	31	11	13	5	2
Total number of institutions		14	14	21	9	11	4	2

Notes: Total number of references at the Halifax Environment/Oceans Ministerial = 26 across 21 institutions.

1995 Hamilton: references to Berlin Conference counted under United Nations Framework Convention on Climate Change.

2016 Toyama = Communiqué.

2017 Bologna = Communiqué.

2018 Halifax: EMM = Chair's Summary for the Environment Ministers' Meeting; Joint = Chairs' Summary of the G7 Joint Ministerial Session on Healthy Oceans, Seas and Resilient Communities; Marine = G7 Innovation Challenge to Address Marine Plastic Litter; Earth = G7 Initiative on Earth Observation and Integrated Coastal Zone Management (excluding annex).

General = general references to "international organization," "intergovernmental organization."