Improving G7 Performance on Climate Change

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The six years leading up to 2021 have been the hottest since the turn of the 21st century. And 2021 is predicted to be just as hot. Many people and all levels of government are implementing policies to reduce their greenhouse gas emissions, and have achieved some successes. However, to keep the global average temperature to no more than 1.5°C above pre-industrial levels, which was stipulated in the Paris Agreement in 2015 and signals the point at which the consequences of climate change are expected to become overwhelming, much more needs to be done now.

The G7 has not been a strong, effective leader on climate change, measured in part by its members' carbon dioxide emissions and their investments in fossil fuels far surpassing their investments in renewables. This lack of leadership was especially true in 2020. Continued political inertia combined with the chaos caused by the COVID-19 pandemic crowded out the G7's attention to climate change. The anti-climate leadership of the 2020 G7 host, U.S. president Donald Trump, was another constraint. In 2016, Trump announced he would withdraw the United States from the landmark 2015 Paris Agreement. He did so shortly after attending his first G7 summit, at Taormina, Italy, in May 2017. At home, Trump engaged in a massive rollback of environmental rules and regulations, while propping up coal, oil and gas development. His flirtations with authoritarianism also made the U.S. a temporary outlier in the democratic G7 club.

However, the G7 has made some incremental improvements since it started governing climate change in 1979. The change in U.S. leadership in 2021 offers an opportunity for further improvement. The 2021 G7 host, UK prime minister Boris Johnson, is seen by some as a populist "Trump clone." But on climate change, the two leaders are more dissimilar than similar, at least in rhetoric. In 2021, in addition to hosting the G7, the United Kingdom will co-host with Italy the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Glasgow in November. In 2020 the UK became the G7 member with the strongest climate target, committing to reduce its emissions by 68% by 2030. Yet the UK still has much work to do to align its rhetoric and its actions, including closing loopholes in its climate targets (Vaughn 2019). Still, the UK has made climate change one of four key pillars and priorities of the G7 summit it will host in Cornwall on June 11–13.

But many challenges remain. They start with inadequate political will. G7 leaders are still not treating anthropogenic climate change like the existential emergency it is. This article asks if the UK can provide the leadership to galvanize the missing political will. Can it lead the G7 to a successful outcome at the 2021 Cornwall Summit? And what would a successful outcome be?

To answer, this article first reviews the G7's past summit performance on climate change. It focuses on the three major performance dimensions of public conclusions, or deliberations, in the summit communiqués, on the future-oriented commitments they contain and on the delivery of those commitments in the year after they were made. It next explores how the G7 can use certain accountability measures that its leaders have employed in the past, to support an increase in compliance with its climate commitments. To move beyond the identified correlations between these causes and G7 members' consequent compliance, it identifies which

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causes are robustly connected, and in some cases controls for other causes. It also suggests other causal candidates for future research.

This article argues that there are some accountability measures the G7 can employ and others that it should avoid in order to improve its compliance on climate change. Useful measures include holding a pre-summit environment ministerial meeting and creating official lower-level working bodies to continue the work after the summit ends. They also include adding to its commitments short-term timelines and targets to ensure that members are on a direct trajectory to achieve their long-term net-zero targets by 2050. Yet these remain incremental changes. Without a paradigm shift, these accountability measures alone are inadequate to put the G7 and the world on a path to achieve long-term climatic stability. A transformative systemic shift is needed for humanity's survival.

It should be noted that 2020 was an exceptional year in G7 history. For the first time, leaders did not hold a regular summit with a fully prepared agenda. When they met virtually on March 16, under the U.S. presidency, to respond to the unfolding crisis caused by COVID-19, plans were under way for a two-day summit in June, which was later postponed indefinitely and effectively cancelled. Under the UK's 2021 Cornwall presidency, the G7 leaders met on February 19, 2021.

The G7's Overall Climate Performance

Conclusions

From 1975 to 2019 G7 summits dedicated 33,598 words, or 5%, of their agreed conclusions in their public communiqués to climate change (see Appendix A). Since 1979 this deliberative performance rose, but not in a smooth or steady way and only incrementally. In 2020, at the Virtual Summit the G7 focused fully on the pandemic, with no public reference to climate change.

The first phase of G7 climate governance was from 1979 to 1989 (Kirton and Kokotsis 2015). During this decade, just three summits referred to climate change. Each used fewer than 100 words and never took more than 5% of the overall summit communiqué. This phase had a total of 763 words or 1% on average per summit.

The second phase, from 1990 to 2004, had a total of 2,955 words for an average of 2% per summit. There was a high of 491 words (for 6%) at Houston in 1990 and a low of 53 words (0.2%) at Kananaskis, Canada, in 2002.

The third phase, from 2005 to 2014, saw a spike to 20,910 words, for an average of 12% per summit. There was a rise to 2,667 words (9%) at the Gleneagles Summit in the UK in 2005, then a peak of 5,559 words (33%) at L'Aquila, Italy, in 2009, where the leaders of the Major Economies Meeting on Energy Security and Climate Change (MEM) also met. A trough came under the next UK leadership: at the 2013 Lough Erne Summit there were just 525 words or 4% on climate change.

The fourth phase, from 2015 to 2020, had fewer words, with 9,048. However, the portion of the communiqués dedicated to climate change rose to a new level of 13%. There were highs of 2,379 words (for 19%) at Elmau, Germany, in 2015, 3,802 at Ise-Shima, Japan, in 2016 (16%) and 1,696 (15%) at Charlevoix, Canada, in 2018. The lows were 201 words (2%) at Taormina in 2017, 892 (12%) at Biarritz, France, in 2019 and zero at the 2020 Virtual Summit with Donald Trump as host. The 2021 Virtual Summit hosted by Boris Johnson dedicated 78 words to climate, taking 12% of the communiqué. It restored the G7's attention to climate change after Donald Trump had left.

Commitments

The trend for G7 climate change commitments partly mirrors that with its conclusions (see Appendix A). Since 1985, the G7 has made 319 politically binding climate commitments. The number generally rose, through the four phases identified above.

The first phase from 1985 to 1989 had a total of five commitments for an average of one per summit. It made its first at the 1985 Bonn Summit, then none for three years and four at the 1989 Paris Summit.

In the second phase, from 1994 to 2004, G7 leaders made a total of 42 commitments, for an average of three per summit. The highs were nine at Houston in 1990 and seven in Birmingham in 1998. The lows were none at Tokyo in 1993 and at Kananaskis in 2002.

In the third phase, from 2005 to 2014, commitments spiked to a total of 221, for 22 per summit. There was a clear divide during this phase. The first five years had a relatively high number of commitments, between 21 and 42 per summit. The last five years, starting at Muskoka, Canada, in 2010, made between five and 13.

In the fourth phase, from 2015 to the 2021 Virtual Summit, there was a total of 51 commitments, for an average of seven per summit. There was a strong start at Elmau in 2015, in anticipation of the landmark Paris Agreement, with a high of 23 commitments. But the 2016 Ise-Shima Summit had just 12. Trump's arrival in 2017 caused the G7 to flounder and at Taormina agree to only one climate commitment that Trump did not commit the U.S. to. Under new domestic leadership and despite Canada's lagging contribution at its past summits (i.e., the G7's lows at Kananaskis and Muskoka), the 2018 Charlevoix Summit managed to make 12 commitments. Yet few of these included the U.S. and some included only the U.S. The host and leaders at the 2019 Biarritz Summit appeared to accept in advance that consensus with the U.S. was improbable and thus made little effort, producing no climate commitments as a result.

In 2020, with the outbreak of COVID-19 and the ensuing global economic recession and lockdown, combined with Trump's disapproval of multilateralism, the scheduled U.S. summit was delayed and eventually postponed. The emergency summit on March 16 made no climate commitments. The UK reset the agenda at its leaders' virtual meeting on February 19, 2021, where they made three climate commitments. All three included the U.S., as the new President Joe Biden had recommitted the U.S. to the Paris Agreement.

This pattern of increasing conclusions but declining commitments during the fourth phase points to the decreased cohesion within the G7 in recent years, the impact of rising populism and protectionism and the decline of democracy in the U.S. with the election of Donald Trump.

Compliance

Members' compliance with the G7's climate commitments followed a rising trajectory too (see Appendix A). This continued into the fourth phase, when fewer commitments were made and tensions between the leaders rose.

Of the 319 climate commitments, 92 have been assessed for compliance by the G7 Research Group, covering the period from 1985 to 2019. Compliance averaged 73%. This is slightly below the G7's average of 76% for all of the 594 commitments assessed for compliance across all subjects over all years.

In phase one, compliance averaged only 54%. It rose in phase two to 73%, in phase three to 75%, and in phase four to 80%.

By G7 member, the three highest climate compliers are the European Union with 91%, the UK with 83% and Germany with 82%. In the next tier came Canada with 76%, Japan with 74%, France with 72% and the U.S. with 70%. Italy came last, with only 55%.

Causes and Corrections of Compliance

What accounts for this compliance? There are many possible causes. Yet there seem to be several accountability measures, some that are low cost, that G7 leaders control and have used in the past and that potentially increase compliance (Warren 2019). They can use them again, in a more conscious, careful and concentrated way to continue improving their compliance at their next summit in Cornwall on June 11-13, 2021.

Internal Institutional Support

Two measures are among the strongest predictors of increased compliance with G7 summit climate commitments: holding pre-summit environment ministerial meetings and creating an official level body of the environment or climate change.

For ministerial meetings, during the 20 years that had at least one meeting of G7 environment ministers, G7 summit climate compliance averaged 77%. During the 16 years that had no ministerial meeting, compliance averaged 69%. This finding is consistent with an earlier analysis using a similar method (Kirton, Kokotsis and Warren 2019).

G7 summit climate commitments were 33% more likely to have higher compliance in the same year an official level body was formed and 20% more likely to have higher compliance the year after (Kirton, Warren and Rapson 2021).[1] This finding also supports earlier findings that, with one exception, the summit years that created an official level body had higher compliance (Kirton, Kokotsis and Hudson 2018).

Surrounding Summit Support

G7 summit climate compliance could also be influenced by surrounding summits of other international institutions, especially those to which all G7 members belong.

The global summit institution most closely connected to the G7 is the Group of 20 (G20) systemically significant states (Kirton 2013). The G20 started making climate commitments at its second summit in London in April 2009. Its compliance with its own climate commitments appears to have a significant effect on G7 members' compliance with their own G7 commitments, even when the content of their respective commitments do not fully coincide (Kirton, Warren and Rapson 2021). G7 climate change commitments are 9% more likely to have higher compliance for each 10% increase in the G20's average compliance in that same year. However, this effect becomes insignificant when controlling for the general increase in the climate compliance of each group over time.

UN summits also help improve G7 summits' climate compliance. Earlier research showed that G7 compliance is higher in the years where a high-level UN climate summit was held (Kirton, Kokotsis and Warren 2018).

Non-state and Sub-state Actors: Indigenous Peoples and Cities

Including specific references in the G7's climate change commitments may also catalyze greater compliance with them. References to two specific actors stand out. The first are Indigenous peoples, who broadly represent the land's original stewards, have powerful traditional ecological knowledge and experience to offer, and whose land management knowledge produces better biodiversity, and thus climate, outcomes. The second actor is the world's mega-cities, that account for over 70% of global emissions and are projected to host almost 70% of the world's population by 2050 (C40 Cities 2021; UN 2018).

[1] There is no effect of official climate change bodies created or lagged official climate change bodies created on the number of G7 conclusions or commitments on climate change when controlling for yearly trends.

In terms of Indigenous peoples, the G7 has unsurprisingly done very little. Only four G7 summits — 2000 Okinawa, 2009 L'Aquila, 2018 Charlevoix and 2019 Biarritz — referenced Indigenous peoples in their communiqué conclusions on climate change. The G7 made three relevant commitments, including one at L'Aquila in 2009 and two at Charlevoix in 2018. Charlevoix's commitments linked engagement with Indigenous peoples to climate change and oceans. As these commitments have not yet been assessed for compliance, this study examined the broader correlation between the summits with communiqué references to Indigenous peoples and compliance with the climate commitments at those summits. It finds that summits with a reference to Indigenous peoples had 85% compliance with their climate commitments. The summits that left Indigenous people out had 72%. Including Indigenous peoples may improve G7 compliance with its climate change commitments by a considerable amount.

References to cities may as well. All but two summits refer to cities in their public deliberations, even if the G7 dedicated a mere 0.01% of its communiqué conclusions to cities. Those summits that did refer to cities had slightly higher compliance with climate commitments at 76% compared to the two with no references at 72% — a small difference. Yet the creation of the Urban 20 (U20) engagement group to support the G20 summit in 2017 and the centrality of climate change in the U20's advocacy at the G20 suggest that cities will play an increasingly important role in the G20's networked governance. Given that the G20 appears to have an influence on the G7, there is a possibility this U20-G20 advocacy could spill over into the G7's own networked governance.

In both cases, a gap in G7 engagement with both cities and Indigenous peoples, and a commitment to respect the Indigenous nations' sovereignty, is evident.

Volume of Conclusions and Commitments

A much broader analysis of the G7's communiqué conclusions shows that the group of summits with the highest compliance, averaging 84%, had more words and more commitments on climate change than the group of summits with lower compliance with 59%. The high complying group had an average of 1,371 words and 12 commitments per summit and the lower complying group had only half as much or less — 499 words and six commitments per summit. This suggests that more is better. However, it is likely that factors beyond sheer volume have a greater effect.

Commitment Catalysts and Synergies

One such factor is the substance of the specific commitments that the leaders agree to take action on. These include various commitment catalysts, which refers to the language used in the commitment itself. Catalysts are carefully placed language, agreed to by all the G7 leaders, and that specify what the leaders want done, how much they want done, when and how. Some catalysts seem to work for better compliance and some do not. They also reveal where the G7's priorities lie.

Those commitments where compliance is highest, sitting at and above the overall climate average of 73%, include the catalysts of a past G7 summit at 78%; the Paris Agreement or UNFCCC at 77%, the private sector at 77%; higher-binding language at 75%; a one-year timetable at 74%; and a quantifiable target at 73%.

Those commitments with lower compliance, suggesting an inhibiting, compliance-reducing constraint, and/or lower priorities, include commitments with a multiyear timetable, sitting just below the overall average at 72%; with lower binding language also at 72%; the one on "civil society;" the one to a regional facility also at 50%; and the one on least developed countries at 45%.

On synergies with other subjects, the highest compliance came with the commitments that referenced the economy, markets and growth at 85% and natural disasters at 80%. Those linked to transportation averaged 78%, followed by energy at 75% and technology at 74%.

Lower compliance came with commitments linked to education at 72%, environmental pollution at 68%, health at 59%, food security at 56%, sustainable development also at 56% and the nature-based solution of forests at 55%.

Money Mobilized

Importantly, for many climate commitments, implementation requires funds. Yet, the G7's compliance with its climate finance commitments is only 68%. This is a full 5% below its 73% average compliance with all climate commitments.

Regional Geographic Influence

Finally, the compliance of each individual G7 member could be affected by causes that are specific to it, rather than to the climate commitment as a whole or the specific summit from which it comes. Here geographic location, culture, continuity and membership in regional organizations might matter.

There is indeed some difference in compliance when G7 members are grouped by geographic continuity and proximity, measured more precisely by the corresponding regional organizations to which they belong. Members of the European Union (including the EU itself and its four country members, with the UK still inside) average 76%. Across the Asia Pacific, inside the Asia-Pacific Economic Co-operation (APEC) forum that was created in 1989, comes Japan with 74%. Also inside APEC but uniquely inside the trilateral North American institutions, whose summits started in 2005, are Canada and the United States with a combined average of 73%.

This compliance-enhancing EU membership effect could reflect of the nature of the G7 itself, as the EU makes up a majority of the G7's members, and EU members' economies depend less on the export of fossil fuels and extractive resources than the North American members of Canada and the United States. Regional compliance also shows that no one region pulls down the G7's score, with all regions in the mid 70% range, including Japan as the sole representative of Asia. All three of these overlapping summit institutions, each of which includes non-G7 members, may raise or have no effect on their G7 members' compliance with G7 climate commitments. That the EU does the most may reflect its greater legal and international organizational strength, measured by the size of its secretariat in personnel and budget (Larionova 2012).

Conclusion and Suggestions for Future Research

The G7's climate compliance has improved over time, despite the challenges in international cooperation that arose in recent years. But given its average compliance of is 73% — or a B grade — its members must go beyond making long-term targets to taking bold action now.

Promising accountability measures under the G7 leaders' direct control include holding pre-summit ministerial meetings, creating official level bodies and deepening engagement with non-state actors, starting with Indigenous peoples and cities. This is supported by research observing the trend in global climate governance of rising inclusion and influence of non-state actors (see, for example, Hale 2016).

Catalysts and constraints embedded in the climate commitments, including synergies with other subjects, suggest compliance-enhancing or -inhibiting effects that leaders can use or avoid. Here the G7 leaders should complement their aspirational long-term net zero 2050 targets — due less than 30 years from now — with one-year benchmarks.

There is also a need for the G7 to shift its priorities from (or balance its priorities with) technical innovations and economic growth, measured as gross domestic product (GDP), to the social and environmental pillars of the Sustainable Development Goals (SDGs). The G7 also needs to step up its delivery of climate finance.

Further research requirements include a deeper examination of the G7's relationship with non-state actors (including with G7 engagement groups), the effectiveness of governing through global climate goals, and the opportunities and barriers within the G7 to prioritize nature, health, food security and equality above GDP-driven economic growth.

There are several other candidates to explore as potential causes of G7 members' compliance with their summit commitments on climate change.

One is geography. Do those G7 countries that have their capital cities and major economic cities located on an oceanic coast feel most vulnerable to climate change–caused sea level rise and oceanic extreme weather events and thus comply with their climate commitments more? If so, the highest compliers, with 100% geographic vulnerability, should be the United Kingdom and Japan, followed by the United States (with only Chicago located inland), then Italy, France, Germany and Canada. Arctic territory could be another source of vulnerability to global warming, which should make Canada, then the U.S, then the EU, with its members of Sweden and Denmark including Greenland, comply the most. Canada, with its three oceans and the largest coastline in the world, should comply the most. But it also has the highest per capita emissions in the G7.

A second causal candidate is democracy. Some scholars argue that democratic polities control climate change better than non-democracies do (Fiorino 2018). As the level of democracy of each G7 member can vary every year, as measured by Freedom House, Polity 4 or other such standard sources, does its changing compliance coincide with such shifts? The suspension of a de-democratizing Russia from the G8 in 2014 suggests it might, as G7 climate compliance rose after that. More broadly, perhaps the complete disappearance of G7 climate governance in 2020 might be connected to the declining democratic score of the U.S. during the year that President Trump served as the G7's chair.

A third causal candidate is energy. Do those countries with the highest share of hydrocarbon production or exports in their GDP, or voters working in hydrocarbon industries, comply the least? For this analysis one could usefully add Russia, which was a full member of the G8 from 1998 to 2013. One could ask in particular how much the coal industry and oil and gas industry constrain G7 commitments and compliance on climate change, starting with the repeated, unmet commitment to phase out inefficient fossil fuel subsidies in the medium term.

A fourth causal candidate is women and Indigenous representation. Do G7 members that have women leaders at the summit comply more with the climate commitments made there? Here one would examine the record of Germany under Angela Merkel, the UK under Margaret Thatcher and Theresa May, Canada under Kim Campbell, and the EU under Ursula von der Leyen. One would look specifically at the summits that they host — Merkel at Heiligendamm in 2007 and Elmau in 2015, and Thatcher at London in 1984. More broadly, when more female leaders of guest countries and international organizations come to G7 summits, does the number of climate change conclusions, commitments and compliance rise?

One could also add other high-level Indigenous women decision makers who attend or host G7 ministerial meetings, such as the first Indigenous person to be nominated as U.S. secretary of the interior Debra Halland of the Laguna Pueblo people. A comparative study could also be done, with the summits of APEC and the Commonwealth, with high-level leaders such as New Zealand's first Indigenous female minister of foreign affairs, Nanaia Mahuta of the Māori people.

A fifth causal candidate is hosting. Do some countries, or their specific leaders, host summits that produce stronger climate commitments and compliance with them?

A sixth is initiatives and partnerships. Do such projects and collaborations support higher compliance? Are they effective in achieving their stated goals on mitigation, adaptation and resilience?

These questions and accountability measures are important pieces in game of climate roulette. Yet for humanity to win, accountability for those that consciously continue to hedge their bets against this planet must come fast and first.

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G7/8 Climate Change Performance, 1975–2020

	Domestic political management		Deliberation			Direction setting			Decision making			Delivery		Development of global governance		
			Words							Assessed					Outside	
Summit	# compliments	% compliments	#	%	Documents	Priority placement	Democracy	Human rights	# made	#	%	Score	%	Inside	# references	# bodies
1975	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1976	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1977	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1978	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1979	0	0	28	1.3	1	0	0	0	0	-	-	-	-	0	0	0
1980	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1981	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1982	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1983	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1984	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1985	0	0	88	2.9	1	0	0	0	1	1	100	+0.50	76%	0	0	0
1986	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0
1987	0	0	85	1.5	0	0	0	0	1	1	100	+0.29	65%	0	0	0
1988	0	0	140	2.7	1	0	0	0	0	-	-	-	-	0	3	2
1989	0	0	422	6	1	0	0	0	4	4	100	−0.07	47%	0	3	2
1990	0	0	491	5.9	1	0	0	0	7	4	57	−0.11	45%	0	2	2
1991	0	0	236	2.4	1	0	0	0	5	2	40	+0.38	69%	0	1	1
1992	0	0	137	1.8	1	0	0	0	7	3	43	+0.71	86%	2	2	1
1993	0	0	154	3.1	1	0	0	0	4	2	50	+0.57	79%	0	2	2
1994	0	0	107	2.6	1	0	0	0	4	2	50	+0.71	86%	1	0	0
1995	0	0	87	0.7	1	0	0	0	7	1	14	+0.29	65%	1	0	0
1996	0	0	167	0.8	1	0	0	0	3	1	33	+0.57	79%	1	2	2
1997	0	0	305	1.6	1	0	0	0	9	4	44	+0.31	66%	1	0	0
1998	0	0	323	5.3	1	0	0	0	10	3	30	+1.00	100%	1	0	0
1999	0	0	198	1.3	1	0	0	0	4	1	25	−0.22	39%	1	1	1
2000	0	0	213	1.6	1	0	0	0	4	1	25	+0.44	72%	1	1	1
2001	1	11	324	5.2	1	0	0	0	4	4	100	0	50%	2	2	2
2002	0	0	53	0.2	1	3	0	0	1	1	100	+0.89	95%	1	0	0
2003	0	0	62	0.3	1	5	0	0	4	2	50	+0.88	94%	1	0	0

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			Words							Assessed					Outside	
Summit	# compliments	% compliments	#	%	Documents	Priority placement	Democracy	Human rights	# made	#	%	Score	%	Inside	# references	# bodies
2004	0	0	98	0.3	1	0	0	0	3	2	67	+0.89	95%	0	0	0
2005	0	0	2,667	9.3	3	10	0	0	29	5	17	+0.80	90%	3	20	6
2006	0	0	1,533	3.1	3	2	0	0	20	9	45	+0.35	68%	1	10	5
2007	4	44	4,154	12	5	10	0	0	44	4	9	+0.56	78%	1	16	7
2008	0	0	2,568	17.5	3	8	0	0	54	5	9	+0.53	77%	2	22	11
2009	0	0	5,559	33.3	7	17	5	1	42	5	12	+0.64	82%	1	19	10
2010	1	11	1,282	12	1	1	2	0	10	3	30	+0.26	63%	0	5	3
2011	0	0	1,086	5.9	1	1	1	0	7	1	14	+0.67	84%	0	7	6
2012	0	0	789	7.1	2	0	0	0	5	1	20	+0.11	56%	0	4	3
2013	1	11	525	3.9	1	0	1	0	12	2	17	+0.22	61%	0	5	4
2014	0	0	747	14.6	1	0	0	0	16	2	13	+0.63	82%	0	7	6
2015	0	0	2,379	18.8	2		3	0	23	5	22	+0.60	80%	0	44	3
2016	0	0	3,802	16.5	2		2	2	12	3	25	+0.46	73%	0	17	10
2017	0	0	201	2.3	1		0	0	1	1	-	-	-	0	0	0
2018	0	0	1,696	15.1	3	1	2	0	12	4	33	+0.64	82%	0	8	8
2019	0	0	892	12.4	1	0	0	0	0	0	0	-	-	1	14	12
2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	-	33,598	-	55	58	16	3	369	89	-	-	-	22	218	101
Average	0.20	1.70	746.6	5.1	1.2	1.4	0.4	0.1	8.2	2.7	40.4	+0.50	75%	0.5	4.5	2.2

Notes: All data derived from documents issued in the G7/8 leaders' names at each summit.
Domestic political management includes all communiqué compliments related to climate change, i.e., references by name to the G7/8 member(s) that specifically express gratitude in the context of climate change. % indicates how many G7/8 members received compliments in the official documents, depending on the number of full members participating.
Deliberation refers to the number of references to climate change. The unit of analysis is the paragraph. % refers to the percentage of the words in each document that relate to climate change.
Direction setting: priority placement refers to the number of references to climate change in the chapeau or chair's summary; the unit of analysis is the sentence.
Democracy refers to the number of references to democracy in relation to climate change. Human rights refers to the number of references to human rights in relation to climate change.
Decisions made refers to the number of climate change commitments made. Assessed refers to the number and percentage of climate change commitments assessed of the total made.
Delivery refers to the overall compliance score for climate change commitments measured for that year. % assessed refers to percentage of commitments measured.
Development of global governance: inside refers to the number of references to G7/8 environment ministers. Outside refers to the number of multilateral organizations related to climate change. The unit of analysis is the sentence.