

# G20 Climate Change Commitments and Compliance

Research Report by Brittaney Warren,  
Researcher and Chief Compliance Analyst, G20 Research Group  
November 28, 2016

## Introduction

On December 1, 2016, Germany will formally assume the chair of the Group of 20 (G20) to prepare for and produce the annual G20 summit scheduled to be held in Hamburg on July 7–8, 2017. High on the agenda will be climate change and its central components of support for the recently ratified Paris Agreement under the UN Framework Convention on Climate Change (UNFCCC), green growth and climate finance. The world is wondering what timely, well-tailored and ambitious commitments the Hamburg Summit will make in these areas, and whether G20 members will follow through on them in the following year.

In order to provide a preliminary answer, this research report conducts a systemic analysis of the G20 Research Group's database on G20 commitments and compliance on climate change since the first G20 summit in 2008 through to its 11th in 2016 ([Kirton et al. 2016](#)). During this time it made 53 politically binding, collective, future-oriented commitments on climate change in the collective documents it issued at each summit in the leaders' name. Of these, 22 (43%) priority commitments were selected by the G20 Research Group for assessment of G20 members' compliance with them until the next summit was held.

G20 members' compliance with these climate change commitments was relatively low at an average of 65%. Climate change ranks in the bottom five of all 18 G20 issue areas assessed for compliance (see Appendix A). It is lower than the closely related issue area of energy and lower than the G20's overall average of 71% across all 191 commitments assessed for compliance.

## Trends by Summit over Time

### Commitments

The G20 did not make any climate change commitments at its first summit in Washington DC in November 2008, but did make such commitments at every summit since (see Appendix B). It made the most at St. Petersburg in 2013 and the least at Hangzhou in 2016. It made three commitments at its second summit in London in April 2009, at its third summit in Pittsburgh also in 2009 and at its fourth summit in Toronto in June 2010. This rose to eight commitments at each of the following two summits, at Seoul in November 2010 and Cannes in 2011. It made five at Los Cabos in 2012 and a high of 11 at St. Petersburg in 2013. Then its climate change commitments steadily decreased to seven at Brisbane in November 2014, three at Antalya in 2015 and just two at Hangzhou in September 2016.

### Compliance

Of these 53 commitments, 22 priority ones have been assessed for compliance. The one from London had an average compliance rate of 45% (see Appendix C). The one from Pittsburgh had a significantly higher average of 93%. The three from Toronto averaged 71% and the four from Seoul

53%. Then, in a returning surge, the three from Cannes averaged 71% and the three from Los Cabos 80%. At St. Petersburg, where the highest number of climate change commitments was made, the three assessed ones had the lowest compliance ever at 42%. At Brisbane, compliance with the four assessed commitments bounced back to 73%. No climate change commitments have yet been assessed from the Antalya or Hangzhou summits.

## Trends by Member

### By Individual Member

By individual member, compliance with these 22 assessed commitments was led by Germany at 89%, followed in turn by the United Kingdom with 87%, Australia with 84%, France with 82% and the European Union with 81%. In the middle came Korea with 79%, Canada with 75%, the United States with 73%, Japan and Mexico with 71%, China with 64%, Indonesia with 62%, and Italy with 60%. At the bottom came India with 57%, Brazil with 55%, South Africa with 48%, Argentina with 45%, Russia with 41%, Turkey with 36%, and finally Saudi Arabia with 22%.

### By Component Club

By component club within the G20, compliance is led by the Group of Seven (G7) at 77%; followed by the collective average of the 10 G20 members that are also part of the Organisation for Economic Co-operation and Development (OECD) with 74%; the MIKTA group of Mexico, Indonesia, Korea, Turkey and Australia with 66%; the BRICS group of Brazil, Russia, India, China and South Africa with 54%; the four G20 members that are also in the Organization of American States (OAS) and the Summit of the Americas (SOA) with 45%; and Saudi Arabia, member of the Organization of Petroleum Exporting Countries (OPEC), with 22% (see Appendix D).

The first component club within the G20 comprises members that make up its predecessor institution, the G7. Their average compliance is 77%. The G7 members' rank in the following order from highest to lowest compliance: Germany, the UK, France, the EU, Canada, the U.S., Japan and Italy.

The second component club includes the G20 members that are also members of the OECD. Their average compliance is 74%. The members, in order of compliance from highest to lowest, are Germany, the UK, Australia, France, Korea, Canada, the U.S., Japan and Mexico, Italy, and Turkey.

The third component club is MIKTA, whose collective average is 66%. Within this group Australia leads with an average of 84%. Korea ranks second with 79%, followed by Mexico with 71%, Indonesia with 62% and Turkey with 36%.

The fourth component club is the BRICS. The BRICS members' overall average is the lowest compared to the other component clubs, at 54%. Although China is among the lowest compliers on climate change within the G20 as a whole, among its BRICS peers China is leading. India follows with an average of 57%. Next is Brazil with 55%, South Africa with 48% and Russia with 41%, suggesting that China can indeed act as a bridge between the global north and south to improve climate change cooperation and compliance.

The fifth component club includes the G20 members that are also members of the OAS and SOA. The members, in order of compliance from highest to lowest, are Canada, the U.S., Mexico and Argentina with an average of 70%.

Finally, in order to account for Saudi Arabia which is not a member of any of the aforementioned organizations, the sixth component club is OPEC. Saudi Arabia is the only G20 member that also

enjoys membership in OPEC. Saudi Arabia's average compliance on its climate change commitments is the lowest at 22%.

### **By Host**

When a member serves as host, it has an additional opportunity to have the summit as a whole mirror its own compliance performance, but the evidence suggests that this opportunity is not regularly taken.

The United Kingdom hosted the first G20 summit that addressed climate change, producing three commitments. Although the G20 as a collective did not perform well on climate change at the 2009 London Summit, with an average of 45%, the host at least partially complied here (see Appendix E). Since that time, the UK has supported the G20's efforts to control climate change well. It ranks second in the G20 with 87%. Only Germany, which will host its first G20 summit in 2017, ranks higher, with an overall average of 89%.

The next G20 summit, also producing three climate change commitments, was hosted by U.S. president Barack Obama in Pittsburgh in April 2009. This was the second and last time the U.S. hosted the G20 summit, with the first held in Washington in 2008 and which focused solely on containing the global financial crisis, overlooking climate change. The G20 as a collective did much better at Pittsburgh than at the previous summit a few months prior, with an overall average of 93%, and with the U.S. host fully complying. However, the U.S. did not fully comply with every assessed climate change commitment. It partially complied with eight commitments and did not comply at all with two. Overall, the U.S. ranks eighth with 73%.

Canada was selected to host the next G20 summit at Toronto in June 2010. Here three climate change commitments were produced and all three were assessed for compliance. Canada complied moderately well, partially complying with two commitments and fully complying with one. Overall, Canada ranks above the U.S., coming in seventh place with 75%.

Korea hosted the next summit, held in Seoul in 2010. Of the eight climate change commitments made at this summit, four have been assessed for compliance. Korea did not comply with two of the assessed commitments, partially complied with one and fully complied with one. Overall, Korea ranks above both Canada and the U.S., coming in sixth place with 79%.

France hosted the next summit, held in Cannes in 2011. Three of eight commitments made were assessed for compliance. France fully complied with all three commitments. Overall, France ranks fourth with 82%.

At Los Cabos in 2012, the G20 reduced the number of climate change commitments to five. Three were assessed for compliance. The host, Mexico, fully complied with two and partially complied with one. Overall, Mexico ranks 10th with 71%.

The St. Petersburg summit in 2013 produced 11 climate change commitments and three were assessed for compliance. Russia did not comply with any of the G20's climate change commitments in its host year. This poor start corresponds to Russia's overall low compliance of 41% and its 18th place ranking.

At Brisbane in 2014, seven climate change commitments were made and four were assessed. Australia fully complied with all four assessed climate change commitments, also reflecting its overall third-place ranking with 84%.

No climate change commitments have yet been assessed from the Antalya Summit in 2015. Overall, Turkey ranks 19th with 36%.

Finally, China hosted the G20 summit in Hangzhou in 2016. Here, despite President Xi Jinping's strong support for climate change in the lead-up to the summit, the number of climate change commitments made dropped to two, the lowest in the history of the G20. Neither of these commitments have yet been assessed as this compliance cycle is still in progress. Overall, China has not provided strong support for the G20's climate change commitments, ranking 11th with an average of 64%.

## **Trends by Component Subject**

### **Commitments**

Three component subjects can be identified within the G20's climate change commitments: those with a UN, specifically a reference to the UNFCCC or international law, and those with a focus on either climate finance or green growth. Eleven of the 22 assessed climate change commitments include a reference to the UNFCCC or international law. Six assessed climate change commitments referred to climate finance, with four of those commitments referring to the Green Climate Fund (GCF). Five assessed climate change commitments had a green growth focus (see Appendix F).

### **Compliance**

The G20's overall compliance with the 11 commitments with a UNFCCC or international law reference is 70%. This is similar to the G20's overall average on all assessed commitments.

On its green growth-related commitments the G20 does slightly better with an average of 73%. However, on its climate finance commitments, it has complied poorly with an average of just 50%. On the four climate finance commitments to support the GCF, compliance is even lower at 48%.

## **Trend by Member and by Component Subject**

### **Commitments**

Of the 11 assessed commitments that have a UNFCCC or international law reference, one was made at Pittsburgh, and two were made at Toronto and Seoul. No UNFCCC-related commitments were assessed from the Cannes Summit in 2011, and two were assessed at Los Cabos, St. Petersburg and Brisbane. Of the six assessed commitments on climate finance, one was made at London, Seoul, Cannes and St. Petersburg, and two were made at Brisbane. The commitments assessed from the Cannes, St. Petersburg and Brisbane summits all reference the Green Climate Fund. Of the five assessed commitments related to green growth, one was made at Toronto and Seoul, two were made at Cannes, and one was made at Los Cabos (see Appendices G to K).

### **Compliance**

The United Kingdom complied fairly well in all three component subject areas. On commitments with a reference to the UNFCCC or other international law, the UK ranks third with 87%. The UK has fully complied with the G20's UNFCCC-related commitments at every other summit (at Pittsburgh, Seoul and St. Petersburg) and has partially complied at the others (Toronto, Los Cabos and Brisbane), showing neither a rising or declining trend. On compliance with the six assessed climate finance commitments, the UK ranks second (tied with France) with 92%, partially complying with the first assessed commitment made at London and then fully complying every year since. On the sub-component of the Green Climate Fund the UK ranks first (tied again with France, and with

Korea) with 100%, fully complying at Cannes, St. Petersburg and Brisbane. On green growth–related commitments, the UK ranks second with 80%, fully complying in every year apart from Seoul in 2010.

On UNFCCC-related commitments the United States ranks fifth with 82% (tying with Canada, France and Mexico). Its year-to-year compliance is consistently in the positive range, but fluctuates between partial and full compliance in any given year. On climate finance the U.S. ranks sixth (tied again with Canada, and with Indonesia) with 59%, and ranks 5th on its compliance with GCF-related commitments with 50%. U.S. compliance with the G20's commitments on climate finance on a year-to-year basis is unpredictable — sometimes fully or partially complying and sometimes not complying at all. On green growth, the U.S. ranks 3rd (along with five other countries) with 70%, again showing an inconsistent trend year-to-year.

Canada's performance coincides closely with the U.S. across most component subjects, with the exception of green growth. It ranks fifth on compliance with UNFCCC-related commitments with 82%, sixth on compliance with climate finance commitments at 59% and fifth on GCF compliance with 50%. On green growth, however, at 80% Canada ranks higher than the United States.

Korea complied very well with the G20's climate finance and GCF commitments, as well as on green growth. However, it did not comply well with the G20's UNFCCC-related commitments. Korea has fully complied with the G20's climate finance commitments with 100%, ranking first among its G20 peers. Korea also shares 1st place on its compliance with GCF-related commitments with the UK, also at 100%. High compliance here is not surprising as the Green Climate Fund is headquartered in Korea. On green growth Korea also ties with the UK for second place, with 80%, fully complying with the G20's assessed green growth commitments at Toronto, Cannes and Los Cabos, and notably not complying at all with the one assessed in its host year at Seoul in 2010. Finally, on green growth, Korea ranks sixth with 65%, again complying the least with the one assessed commitment made during its hosting year in 2010.

France has also complied well with the G20's commitments on climate finance and the GCF. France ranks second on all six assessed climate finance commitments with 92%, partially complying with the one assessed from London and fully complying in every year since. It thus ranks first, along with the UK and France, with 100% compliance on the G20's GCF-related commitments. France also complied relatively well on climate change commitments with a UNFCCC or international law reference ranking 4th with 82%, and with green growth-related commitments ranking third with 70%, only not complying with the green growth commitment made at Seoul in 2010.

Mexico, host of the Los Cabos summit in 2012, ranks 4th with 82% on UNFCCC-related commitments, complying positively in every year assessed. On green growth, Mexico ranks third with 70%, showing an improvement in compliance year-to-year. It did not comply at all with the assessed green growth commitment made at Toronto in 2010, partially complied with the one made at the following summit in Seoul, and then fully complied at Cannes in 2011 and during its host year in 2012. On climate finance Mexico ranks seventh with 50%. Here, Mexico partially complied in 2009 and 2011, did not comply at all in 2010 or 2013, and fully complied in 2014. On GCF commitments specifically, however, Mexico does a bit better ranking fourth at 63%, ahead of its North American counterparts of Canada and the United States.

Russia, former G8 member and host of the St. Petersburg Summit in 2013, complied relatively poorly on all component subjects. Its highest compliance is with the G20's commitments that include a UNFCCC or international law reference. Here, Russia ranks eighth with 59%, complying positively in all years apart from its host year in which it did not comply at all with either of the two assessed commitments. On green growth Russia ranks sixth with 40%. Here, Russia shows

improvement on a year-to-year basis. With the commitments assessed from the Toronto summit and the Seoul summit in 2010, Russia did not comply at all. However, it partially complied with the two assessed at Cannes in 2011 and then fully complied with the one assessed at Los Cabos in 2012 (no green growth commitments were assessed since the 2012 summit). On climate finance, Russia ranks second last, tying with India and ahead of only Turkey, with 42%. On the four assessed GCF commitments, Russia ranks last, tying with both India and Turkey, not complying at all in any year.

As indicated, Turkey, host of the 2015 summit held in Antalya, has not complied well with the G20's climate finance commitments. Turkey ranks last on climate finance overall. It has not complied with any climate finance commitment, including all GCF ones, in any year. It also ranks relatively low on green growth with 60% and on UNFCCC-related commitments with 50%, showing no pattern in its level of compliance on a year-to-year basis.

China, host of the G20 summit in Hangzhou on September 4–5, 2016, also has not complied well with the G20's climate finance and GCF-related commitments, with 34% and just 13%, respectively. On the GCF, China may be improving, although at a very slow rate. China did not comply at all with the commitments assessed in 2011 and in 2013, but complied at 25% with the two assessed commitments made at the Brisbane Summit in 2014. China has complied better with the G20's commitments with a UNFCCC reference ranking fifth with 73% and with its green growth commitments ranking second (along with Australia, Brazil and Canada) with 80%.

Finally, the incoming G20 chair, Germany, ranks high across all component subjects. On commitments with a UNFCCC or international law reference, Germany ranks first, tying with Australia, with 91%. Germany also ranks first on green growth, this time tying with Italy, with 90%. Finally, on climate finance Germany ranks third overall with 84% and second highest with 88% on GCF-related commitments.

## Conclusion

From this analysis the following observations on commitments and compliance flow.

First, a higher number of climate change commitments a summit makes does not correlate with high compliance on the issue overall. The St. Petersburg summit in 2013 highlights this. Here, where the highest number of climate change commitments were made, overall compliance with the three priority commitments chosen for assessment was the lowest at 42%. The summit that produced the second highest number of climate change commitments, Seoul in 2010, also had low compliance overall with 48%. Conversely, at the Cannes summit in 2011, where eight climate change commitments were also made, overall compliance with the three assessed commitments was much higher at 71%. There are similar variations when looking at summits that made the least number of climate change commitments. At the London summit in 2009 three commitments were made and one was assessed. Similarly, at the following summit at Pittsburgh three commitments were made and one was assessed. The compliance results, however, are vastly different. Overall compliance with the assessed commitment from London was 45%, while overall compliance with the assessed commitment from Pittsburgh was 93%. Further, comparing a summit that made a high number of climate change commitments to one that made few shows an ambiguous result. At the Cannes summit in 2011 eight commitments were made and three were assessed with an overall average of 71%, while at the Toronto summit in 2010 just three commitments were made with all three assessed resulting in the same overall average of 71%. Thus the quantity of climate change commitments made at a given summit is not a strong measure for predicting the level of compliance with them. Members are thus free to make as many climate commitments as they want, as far as compliance with them is concerned.

Second, the collective average of the 10 G20 members that have hosted a summit is 71%, whereas the 10 G20 members that have not hosted a summit is much lower at 58%. However, this may not be a reliable predictor of compliance, as compliance among the 10 host countries ranges from 87% to 36%. Russia which hosted in 2013 and Antalya which hosted in 2015 rank 18th and 19th on climate change compliance, behind only Saudi Arabia which has not hosted a summit. China and Mexico rank 10th and 11th, while the UK and Australia rank second and third overall. Moreover, Germany, which has never hosted a G20 summit, ranks first overall with 89%.

Third, most members comply better with the commitments that reference the UNFCCC and green growth compared to those that reference climate finance and the Green Climate Fund. This indicates that the G20 prefers to support and work through the UN system on the issue of climate change (Kirton and Kokotsis 2015). It may be easier to comply with green growth commitments as they tend to be more general, leaving greater room for interpretation and thus implementation. The commitments made on climate finance, and specifically on the Green Climate Fund, are more specific with less room for interpretation. Moreover, climate finance is a relatively new area in global environmental governance and a controversial subject that divides developed countries from emerging economies that demand more financial support for adaptation and mitigation efforts (Kirton 2015). The low compliance on the G20's climate finance commitments, and even lower compliance on the Green Climate Fund commitments, suggests that this is indeed an area that needs more attention. However, that all G7 members have the highest compliance on climate finance and GCF commitments also suggests that the less wealthy G20 members of the BRICS and MIKTA, as well as Saudi Arabia, should also contribute to supporting the least developed countries (LDCs) and small island developing states that the GCF was designed to support.

### **At Hamburg**

Given Germany's high compliance on climate change across all component subjects, and the German priority for this issue-area that this high compliance reflects, it is likely that more commitments will be made on climate change at Hamburg than were made at either Hangzhou in 2016 or at Antalya in 2015. The prospective German agenda for Hamburg also suggests this. Yet, while greater attention to climate change in the form of politically binding commitments is welcome, Germany should focus on the quality rather than the quantity of those commitments. Specifically, Germany should use its leverage as a climate leader to encourage all G20 members to scale-up their support for emerging economies, LDCs and small island developing states by committing to quickly mobilizing more money for adaptation and mitigation. The G20 should urgently work towards its second foundational principle of making globalization work for all by supporting those most vulnerable to the impacts of climate change.

### **References and Bibliography**

- Kirton, John J., Ella Kokotsis, Jenilee Guebert et al. (2016). "Compliance Coding Manual for International Institutional Commitments." March, Global Governance Program, Trinity College, University of Toronto, Toronto. <http://www.g7.utoronto.ca/compliance/compliance-coding-manual-2016.pdf> (November 2016).
- Kirton, John J. and Ella Kokotsis (2015). *The Global Governance of Climate Change: G7, G20 and UN Leadership*. Farnham: Ashgate.
- Kirton, John J. (2015). "Mobilising Climate Finance." Newsdesk, London. <http://www.g7g20.com/publication/mobilising-climate-finance> (November 2016).

## Appendix A: Commitments and Compliance by Issue Area, 2008–2016

Issue area	Total commitments assessed of total made		Compliance	
			Score	Percentage
Microeconomics	1 of 10	10.0%	+1.00	100
Infrastructure	1 of 36	2.8%	+0.95	98
Terrorism	2 of 16	12.5%	+0.73	87
Macroeconomics	23 of 402	5.8%	+0.60	80
Migration and refugees	1 of 7	14.3%	+0.60	80
Labour and employment	16 of 100	16.0%	+0.55	78
Health	4 of 38	10.5%	+0.53	77
Financial regulation	20 of 271	7.4%	+0.50	75
Energy	16 of 106	15.1%	+0.45	73
Food and agriculture	6 of 64	9.4%	+0.39	70
Gender	5 of 6	83.3%	+0.41	71
Reform of international financial institutions	5 of 120	4.2%	+0.34	67
Development	45 of 193	23.3%	+0.32	66
Climate change	22 of 53	42.0%	+0.29	65
Trade	14 of 133	11.0%	+0.26	63
International cooperation	2 of 39	5.1%	+0.15	58
Crime and corruption	7 of 78	9.0%	+0.14	57
Information and communication technologies	1 of 49	2.0%	+0.10	55
Total/Average	191 of 1,836	10.4%	+0.41	71

## Appendix B: Climate Change Commitments by Summit

Summit	Number of commitments
2008 Washington	0
2009 London	3
2009 Pittsburgh	3
2010 Toronto	3
2010 Seoul	8
2011 Cannes	8
2012 Los Cabos	5
2013 St. Petersburg	11
2014 Brisbane	7
2015 Antalya	3
2016 Hangzhou	2
Total	53

### Appendix C: Climate Change Compliance by Summit

	Average		2009 London	2009 Pittsburgh	2010 Toronto	2010 Seoul	2011 Cannes	2012 Los Cabos	2013 St. Petersburg	2014 Brisbane
Germany	+0.77	89%	0	+1.00	+0.33	+0.75	+1.00	+1.00	+1.00	+0.75
United Kingdom	+0.73	87%	0	+1.00	+0.67	+0.50	+1.00	+0.67	+1.00	+0.75
Australia	+0.68	84%	0	+1.00	+0.67	+0.50	+1.00	+1.00	0	+1.00
France	+0.64	82%	0	+1.00	+0.33	0	+1.00	+0.67	+1.00	+1.00
European Union	+0.62	81%	+1.00		+1.00	+0.50	+0.33	+0.67	0	+1.00
Korea	+0.57	79%	+1.00		+0.67	-0.25	+1.00	+1.00	0	+1.00
Canada	+0.50	75%	0	+1.00	+0.33	+0.50	+0.33	+0.67	0	+1.00
United States	+0.45	73%	0	+1.00	+0.33	+0.50	0	+0.67	+0.33	+0.75
Japan	+0.41	71%	0	+1.00	+0.33	0	+0.33	+0.33	+0.33	+1.00
Mexico	+0.41	71%	0	+1.00	0	+0.25	+0.67	+0.67	-0.33	+1.00
China	+0.27	64%	+1.00	+1.00	+0.67	0	+0.33	+1.00	-1.00	+0.25
Indonesia	+0.23	62%	0	0	0	0	+0.33	+0.33	0	+0.25
Italy	+0.19	60%	0		+0.67	-0.25	+0.33	0	+0.33	+0.25
India	+0.14	57%	-1.00	+1.00	+0.67	+0.25	0	+1.00	-0.67	-0.25
Brazil	+0.09	55%	-1.00	0	+0.67	+0.50	+0.33	+0.67	-1.00	-0.25
South Africa	-0.05	48%	0		0	-0.50	0	+0.67	-0.33	0
Argentina	-0.11	45%	-1.00		+1.00	-0.67	0	+0.33	-1.00	+0.25
Russia	-0.18	41%	-1.00	+1.00	0	-0.25	-0.33	+0.33	-1.00	0
Turkey	-0.28	36%	-1.00	1.00	0	-1.00	0	+0.50	-1.00	0
Saudi Arabia	-0.56	22%	0		-1.00	-1.00	+0.67	-0.33	-1.00	-0.50
Average	+0.29	65%	-0.10	+0.86	+0.42	+0.05	+0.42	+0.59	-0.17	+0.46

Note: Blank cells indicate the country was not assessed for compliance with any commitment in that year.

## Appendix D: Climate Change Compliance by Component Club

G20 Member	Average	
	Score	Percentage
<b>BRICS</b>	+0.07	54
China	+0.27	64
India	+0.23	57
Brazil	+0.09	55
South Africa	-0.05	48
Russia	-0.18	41
<b>MIKTA</b>	+0.32	66
Australia	+0.68	84
Korea	+0.57	79
Mexico	+0.41	71
Indonesia	+0.23	62
Turkey	-0.28	36
<b>G7</b>	+0.54	77
Germany	+0.77	89
United Kingdom	+0.73	87
France	+0.64	82
European Union	+0.62	81
Canada	+0.50	75
United States	+0.45	73
Japan	+0.41	71
Italy	+0.19	60
<b>OTHER</b>		
Argentina	-0.11	45
Saudi Arabia	-0.56	22

Notes:

Organisation for Economic Co-operation and Development members in order of compliance, highest to lowest: Germany, United Kingdom, Australia, France, Korea, Canada, United States, Japan, Mexico, Turkey, with a collective average compliance of +0.47 or 74%.

Organization of American States members: Canada, United States, Mexico, Argentina with a collective average compliance of +0.39 or 70%.

Organization of Petroleum-Exporting Countries: Saudi Arabia.

## Appendix E: Climate Change Compliance by Host

Overall compliance by member		Year(s) Hosted			
		City	Date	Compliance by host	Overall compliance at summit
Germany	+0.77	Hamburg	6–9 July 2017		
United Kingdom	+0.73	London	14–15 November 2009	0	-0.10
Australia	+0.68	Brisbane	15–16 November 2014	+1.00	+0.46
France	+0.64	Cannes	3–4 November 2011	+1.00	+0.42
European Union	+0.62				
Korea	+0.57	Seoul	11–12 November 2010	-0.25	+0.05
Canada	+0.50	Toronto	26–27 June 2010	+0.33	+0.42
United States	+0.45	Pittsburgh	24–25 September 2009	+1.00	+0.86
Japan	+0.41				
Mexico	+0.41	Los Cabos	18–19 June 2012	+0.67	+0.59
China	+0.27	Hangzhou	4–5 September 2016		
Italy	+0.19				
India	+0.14				
Indonesia	+0.14				
Brazil	+0.09				
South Africa	-0.05				
Argentina	-0.11				
Russia	-0.18	St. Petersburg	5–6 September 2013	-1.00	-0.17
Turkey	-0.28	Antalya	15–16 November 2015		
Saudi Arabia	-0.56				

Notes:

The United States also hosted the first G20 summit at Washington on 14–15 November 2008, but no climate change commitments were made.

Blank cells indicate the G20 member has not hosted a summit, or has hosted but no climate change commitments have been assessed for that year

Host countries' overall compliance is +0.41 or 71%.

Non-host countries' overall compliance is +0.16 or 58%.

## Appendix F: Climate Change Commitments by Component Subject

Commitment	Score
<b>Climate Finance (6)</b>	
2009-84 London: We agreed to make the best possible use of investment funded by fiscal stimulus programmes towards the goal of building a resilient, sustainable, and green recovery.	-0.10
2010-133 Seoul: We are all committed to achieving a successful, balanced result that includes the core issues of mitigation, transparency, finance, technology, adaptation, and forest preservation	+0.30
2011-247 Cannes: We stand ready to work towards operationalization of the Green Climate Fund as part of a balanced outcome in Durban, building upon the report of the Transitional Committee	-0.35
2013-188 St. Petersburg: We support the operationalization of the Green Climate Fund (GCF)."	-0.20
2014-79 Brisbane: We reaffirm our support for mobilising finance for adaptation ... such as the Green Climate Fund.	+0.10
2014-80 Brisbane: [We reaffirm our support for mobilizing finance for] mitigation, such as the Green Climate Fund	+0.25
Average	0
<b>United Nations/International Law (11)</b>	
2009-85 Pittsburgh: We will intensify our efforts, in cooperation with other parties, to reach agreement in Copenhagen through the UNFCCC negotiation. An agreement must include mitigation, adaptation, technology, and financing.	+0.86
2010-57 Toronto: those of us who have associated with the Copenhagen Accord reaffirm our support for it and its implementation and call on others to associate with it.	-0.06
2010-58 Toronto: We are committed to engage in negotiations under the UNFCCC on the basis of its objective provisions and principles including common but differentiated responsibilities and respective capabilities and are determined to ensure a successful outcome through an inclusive process at the Cancun Conferences.	+0.89
2010-131 Seoul: We reiterate our commitment to take strong and action-oriented measures and remain fully dedicated to UN climate change negotiations.	+0.25
2010-132 Seoul: Those of us who have associated with the Copenhagen Accord reaffirm our support for it and its implementation.	+0.47
2012-91 Los Cabos: We reiterate our commitment to fight climate change and welcome the outcome of the 17th Conference of the Parties to the UN climate change conferences.	+0.70
2012-94 Los Cabos: We [welcome international efforts in launching the Green Growth Knowledge Platform and] will continue exploring options to provide appropriate support to interested developing countries.	+0.05
2013-180 St. Petersburg: [We are committed to a full implementation of the outcomes of] Durban	-0.25
2013-185 St. Petersburg: We also support complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), based on the examination of economically viable and technically feasible alternatives.	-0.05
2014-75: Consistent with the United Nations Framework Convention on Climate Change (UNFCCC) and its agreed outcomes, our actions will support sustainable development	+0.70
2014-77: [Consistent with the United Nations Framework Convention on Climate Change (UNFCCC) and its agreed outcomes, our actions will support] certainty for business and investment.	+0.80
Average	+0.39
<b>Green Growth (5)</b>	
2010-56 Toronto: We reiterate our commitment to a green recovery and to sustainable global growth	+0.40

2010-134 Toronto: We are committed to support country-led green growth policies that promote environmentally sustainable global growth along with employment creation while ensuring energy access for the poor	-0.75
2011-230 Cannes: We are committed to promote sustainable development and green growth and to continue our efforts to face the challenge of climate change	+0.95
2011-241 Cannes: We will promote low-carbon development strategies in order to optimize the potential for green growth and ensure sustainable development	+0.65
2012-230 Los Cabos: We are committed to promote sustainable development and green growth and to continue our efforts to face the challenge of climate change.	+1.00
Average	+0.45
Overall Average	+0.29

**Appendix G: Climate Change Compliance by Component Subject**

	United Nations Framework Convention on Climate Change/International law	Green growth	Climate finance	Green Climate Fund
Germany	+0.82	+0.80	+0.67	+0.75
United Kingdom	+0.73	+0.60	+0.83	+1.00
Australia	+0.82	+0.60	+0.50	+0.50
France	+0.64	+0.40	+0.83	1.00
European Union	+0.80	+0.60	+0.33	0
Korea	+0.40	+0.60	+1.00	+1.00
Canada	+0.64	+0.60	+0.17	0
United States	+0.64	+0.40	+0.17	0
Japan	+0.45	+0.40	+0.33	+0.50
Mexico	+0.64	+0.40	0	+0.25
China	+0.45	+0.60	-0.33	-0.75
Italy	+0.10	+0.80	-0.17	0
India	+0.45	+0.60	-0.83	-1.00
Indonesia	0	+0.40	+0.17	0
Brazil	+0.27	+0.60	-0.67	-1.00
South Africa	-0.10	+0.20	-0.17	-0.25
Argentina	-0.13	+0.40	-0.50	-0.50
Russia	+0.18	-0.20	-0.83	-1.00
Turkey	0	+0.20	-1.00	-1.00
Saudi Arabia	-0.71	0	-0.50	-0.50
Average	+0.39	+0.45	0	-0.05

## Appendix H: Compliance with Commitments Related to the United Nations Framework Convention on Climate Change

United Nations Framework Convention on Climate Change/International law	Average	2009 Pittsburgh	2010 Toronto	2010 Seoul	2012 Los Cabos	2013 St. Petersburg	2014 Brisbane
Germany	+0.82	+1.00	+0.50	+0.50	+1.00	+1.00	+1.00
Australia	+0.82	+1.00	+0.50	+1.00	+1.00	+0.50	+1.00
European Union	+0.80		+1.00	+1.00	+0.50	+0.50	+1.00
United Kingdom	+0.73	+1.00	+0.50	+1.00	+0.50	+1.00	+0.50
United States	+0.64	+1.00	0	+1.00	+0.50	+0.50	+1.00
Canada	+0.64	+1.00	0	+1.00	+0.50	+0.50	+1.00
France	+0.64	+1.00	+0.50	0	+0.50	+1.00	+1.00
Mexico	+0.64	+1.00	+0.50	+1.00	+0.50	0	+1.00
China	+0.45	+1.00	+0.50	+0.50	+1.00	-1.00	+1.00
Japan	+0.45	+1.00	+0.50	+0.50	0	0	+1.00
India	+0.45	+1.00	+0.50	+0.50	+1.00	-0.50	+0.50
Korea	+0.30		+0.50	-0.50	+1.00	-0.50	+1.00
Brazil	+0.27	0	+0.50	+1.00	+0.50	-1.00	+0.50
Russia	+0.18	+1.00	+0.50	0	0	-1.00	+1.00
Italy	+0.10		+0.50	0	-0.50	0	+0.50
Turkey	0	+1.00		-1.00	0	-1.00	+1.00
Indonesia	0	0	0	0	0	-0.50	+0.50
South Africa	-0.10		0	-0.50	+0.50	-0.50	0
Argentina	-0.13		+1.00	-1.00	0	-1.00	+0.50
Saudi Arabia	-0.71			-1.00	-1.00	-1.00	0
Average	+0.39	+0.86	+0.42	+0.05	+0.59	-0.17	+0.46

Notes:

No commitment related to the United Nations Framework Convention on Climate Change was assessed for the 2009 London or 2011 Cannes summits.

Blank cells indicate the country was not assessed for compliance in that year.

## Appendix I: Compliance with Commitments Related to Green Growth

	Average	2010 Toronto	2010 Seoul	2011 Cannes	2012 Los Cabos
Germany	+0.80	0	+1.00	+1.00	+1.00
Italy	+0.80	+1.00	0	+1.00	+1.00
Australia	+0.60	+1.00	-1.00	+1.00	+1.00
Brazil	+0.60	+1.00	-1.00	+1.00	+1.00
Canada	+0.60	+1.00	-1.00	+1.00	+1.00
China	+0.60	+1.00	-1.00	+1.00	+1.00
India	+0.60	+1.00	0	+0.50	+1.00
Korea	+0.60	+1.00	-1.00	+1.00	+1.00
United Kingdom	+0.60	+1.00	-1.00	+1.00	+1.00
European Union	+0.60	+1.00	-1.00	+1.00	+1.00
Argentina	+0.40	+1.00	-1.00	+0.50	+1.00
France	+0.40	0	-1.00	+1.00	+1.00
Indonesia	+0.40	+1.00	-1.00	+1.00	+1.00
Japan	+0.40	0	-1.00	+1.00	+1.00
Mexico	+0.40	-1.00	0	+1.00	+1.00
United States	+0.40	+1.00	-1.00	+0.50	+1.00
Turkey	+0.20	0	-1.00	+0.50	+1.00
South Africa	+0.20	0	-1.00	+0.50	+1.00
Saudi Arabia	0	-1.00	-1.00	+0.50	0
Russia	-0.20	-1.00	-1.00	0	+1.00
Average	+0.45	+0.42	+0.05	+0.42	+0.59

Note: No commitments related to green growth were assessed for the 2009 London, 2009 Pittsburgh, 2013 St. Petersburg and 2014 Brisbane summits.

## Appendix J: Compliance with Climate Finance Commitments

	Average	2009 London	2010 Seoul	2011 Cannes	2013 St. Petersburg	2014 Brisbane
Korea	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00
United Kingdom	+0.83	0	+1.00	+1.00	+1.00	+1.00
France	+0.83	0	+1.00	+1.00	+1.00	+1.00
Germany	+0.67	0	+1.00	+1.00	+1.00	+0.50
Australia	+0.50	0	+1.00	+1.00	-1.00	+1.00
European Union	+0.33	+1.00	+1.00	-1.00	-1.00	+1.00
Japan	+0.33	0	0	-1.00	+1.00	+1.00
United States	+0.17	0	+1.00	-1.00	0	+0.50
Canada	+0.17	0	+1.00	-1.00	-1.00	+1.00
Indonesia	+0.17	0	+1.00	-1.00	+1.00	0
Mexico	0	0	-1.00	0	-1.00	+1.00
Italy	-0.17	0	-1.00	-1.00	+1.00	0
South Africa	-0.17	0	0	-1.00	0	0
China	-0.33	+1.00	0	-1.00	-1.00	-0.50
Saudi Arabia	-0.50	0	-1.00	+1.00	-1.00	-1.00
Argentina	-0.50	-1.00	0	-1.00	-1.00	0
Brazil	-0.67	-1.00	+1.00	-1.00	-1.00	-1.00
Russia	-0.83	-1.00	0	-1.00	-1.00	-1.00
India	-0.83	-1.00	0	-1.00	-1.00	-1.00
Turkey	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Average	0	-0.10	+0.05	+0.42	-0.17	+0.46

Note: No climate finance commitments were assessed at the 2009 Pittsburgh, 2010 Toronto, 2012 Los Cabos summits.

## Appendix K: Compliance with Commitments Related to the Green Climate Fund

	Average	2011 Cannes	2013 St. Petersburg	2014 Brisbane
United Kingdom	+1.00	+1.00	+1.00	+1.00
Korea	+1.00	+1.00	+1.00	+1.00
France	+1.00	+1.00	+1.00	+1.00
Germany	+0.75	+1.00	+1.00	+0.50
Japan	+0.50	-1.00	+1.00	+1.00
Australia	+0.50	+1.00	-1.00	+1.00
Mexico	+0.25	0	-1.00	+1.00
European Union	0	-1.00	-1.00	+1.00
United States	0	-1.00	0	+0.50
Canada	0	-1.00	-1.00	+1.00
Indonesia	0	-1.00	+1.00	0
Italy	0	-1.00	+1.00	0
South Africa	-0.25	-1.00	0	0
Saudi Arabia	-0.50	+1.00	-1.00	-1.00
Argentina	-0.50	-1.00	-1.00	0
China	-0.75	-1.00	-1.00	-0.50
Brazil	-1.00	-1.00	-1.00	-1.00
Russia	-1.00	-1.00	-1.00	-1.00
India	-1.00	-1.00	-1.00	-1.00
Turkey	-1.00	-1.00	-1.00	-1.00
Average	-0.05	+0.42	-0.17	+0.46

Note: The first Green Climate Fund commitment was made at the 2011 Cannes Summit. No related commitments were assessed for the 2012 Los Cabos Summit.