



SRMUN ATLANTA 2017

Development through Dialogue: Using Global Cooperation to Build Lasting Change

November 16 - 18, 2017

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Greetings Delegates,

Welcome to the Group of Twenty (G-20) at SRMUN Atlanta 2017. My name is Michael Oleaga, and I am serving as your Director for the G-20. This will be my ninth conference as a SRMUN staff member. Previously, I served as the Director-General for SRMUN Charlotte 2017. This will be my first SRMUN Atlanta conference since 2014, when I directed the United Nations Children's Fund. I hold a Bachelor's degree in Communication Arts & Journalism and Political Science from Pace University, which I have utilized for my multimedia journalism career in New York City. Our committee's Assistant Director is Victoria Suri-Beltran. This is Victoria's third time as a staff member, after previously serving as Assistant Director for SRMUN Atlanta 2016's General Assembly First Committee. She graduated with a Bachelor's degree in Economics from Flagler College and has been working as a litigation clerk for a large Orlando, Florida law firm. Victoria's interests include international affairs, American history, and law.

The G-20 was created to address the need for stability and sustainability in the international economic system. The stated objectives of the G-20 are to serve as a deliberative body that focuses on policy coordination among its members to achieve sustainable growth, to promote financial regulations that reduce risk, and to produce a new international economic architecture. As opposed to a decision-making body, the deliberative and informal nature of the G-20 allows it to focus on endorsing international standards that increase transparency and strengthen financial systems. These standards include having fair and balanced geographical representation and including Member States that preside over regional forums.

By focusing on the mission of the G-20 and the SRMUN Atlanta 2017 theme of "*Development through Dialogue: Using Global Cooperation to Build Lasting Change*," we have developed the following topics for the delegates to discuss come conference:

- I. Developing a Post-Paris Agreement Global Energy Policy
- II. The Digital Economy and Cyber Security

The background guide provides a strong introduction to the committee and the topics and should be utilized as a foundation for the delegate's independent research. While we have attempted to provide a holistic analysis of the issues, the background guide should not be used as the single mode of analysis for the topics. Delegates are expected to go beyond the background guide and engage in intellectual inquiry of their own. The position papers for the committee should reflect the complexity of these issues and their externalities. Delegations are expected to submit a position paper and be prepared for a vigorous discussion at the conference. Position papers should be no longer than two pages in length (single spaced) and demonstrate your Member State's position, policies and recommendations on each of the two topics. For more detailed information about formatting and how to write position papers, delegates can visit srmun.org. ***All position papers MUST be submitted no later than Friday, October 27, 2017, by 11:59 p.m. EST via the SRMUN website.***

Victoria and I are eager about serving as your dais for the G-20. **As a reminder, the G-20 is a single delegate committee at SRMUN Atlanta 2017.** We wish you all the best of luck in your conference preparation and look forward to working with you in the near future. Please feel free to contact Deputy Director-General Keith Brannum, Victoria, or myself if you have any questions while preparing for the conference.

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History of the Group of Twenty

The Group of Twenty (G-20) was created to address the need for stability and sustainability in the international economic system. The stated objectives of the G-20 are to serve as a deliberative body that focuses on policy coordination among its members to achieve sustainable growth, to promote financial regulations that reduce risk, and to produce a new international economic infrastructure. As opposed to a decision-making body, the deliberative and informal nature of the G-20 allows it to focus on endorsing international standards that increase transparency and strengthen financial systems. These standards include having fair and balanced geographical representation by involving Member States that preside over regional forums.

The G-20 Ministers and Central Bank Governors was created on 25 September 1999 to respond to the need for stability and sustainability in the international economic system.¹ Commonly known as the G-20, the announcement that marked its establishment stated that its purpose would be to “broaden the dialogue on key economic and financial policy issues among systemically significant economies and promote co-operation to achieve stable and sustainable world economic growth that benefits all.”² Despite its official creation in 1999 by the Group of Seven (G7), the concept for the forum was born out of the need to advance an informal dialogue that would uphold the values and purpose of the Bretton Woods institutional system.³ The Bretton Woods documents, which were created after the Second World War, aimed to address the issues in the international financial system following the damaging effects of the war and post-war reconstruction.⁴

Following the economic downfalls between 1997-1999 that spread through Asia and Latin America, it was clear that the organizational structure aimed at building sustainable and stable financial systems needed to be assessed.⁵ After Thailand abandoned the practice of matching their local currency to that of the United States Dollar (USD), their currency began to decline rapidly, impacting the Republic of Korea and Indonesia.⁶ Eventually, this resulted in stock market declines and lowered import revenues which caused currencies to fall as much as 38 percent.⁷ These crises demonstrated the global economy was becoming increasingly integrated, as cross-border trading rose, domestic capital markets became more liberalized, and capital accounts were being opened.⁸ Although the G7 was effective for discussing economic issues, it was not representative enough to address the issues of development and their role in the international economy. In addition to this, no international organization, up until the G-20, had integrated institutions such as the International Monetary Fund (IMF), the World Bank Group, and the World Trade Organization (WTO).

Due to these concerns, the establishment of the G-20 and its structure was made to be deliberate and to anticipate the needs of the international economy in the future. The stated objectives of the G-20 are to serve as a deliberative body that focuses on policy coordination between members to achieve sustainable growth, to promote financial regulations that reduce risk, and to “create a new international financial architecture.”⁹ Known as the “premier forum for international cooperation on the economic and financial issues,” the G-20 is comprised of 19 Member

¹ "History and Past Presidencies," G20 India Secretariat, <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> (Accessed July 19, 2017).

² "The G20," G20 Informative Centre, University of Toronto, <http://www.g20.utoronto.ca/g20whatisit.html> (Accessed July 19, 2017).

³ "History and Past Presidencies," G20 India Secretariat, <http://www.g20india.gov.in/aboutg20-history.asp?lk=aboutg203> (Accessed July 19, 2017).

⁴ "About the Bretton Woods institutions," The Bretton Woods Committee, <http://www.brettonwoods.org/page/about-the-bretton-woods-institutions> (Accessed July 19, 2017).

⁵ *G7 to G8 to G20: Evolution in Global Governance*. The Centre for International Governance Innovation. May 2011. <http://www.cigionline.org/sites/default/files/g20no6-2.pdf> (Accessed July 19, 2017).

⁶ "Asian Financial Crisis," Investopedia, <http://www.investopedia.com/terms/a/asian-financial-crisis.asp> (Accessed July 19, 2017).

⁷ Ibid.

⁸ *The Group of Twenty: A History*. University of Toronto. 2008. www.g20.utoronto.ca/docs/g20history.pdf (Accessed July 19, 2017).

⁹ *The Group of Twenty - G20*. Ministry of External Affairs, Government of India. www.mea.gov.in/Portal/ForeignRelation/g20-august-2012.pdf (Accessed July 19, 2017).

States and one permanent seat for the European Union (EU). This assures that the permanent seats in the committee are reflective of two-thirds of the world's population as well as 80 percent of the global gross domestic product (GDP).¹⁰

The G-20 is allotted five non-Member States, where one invitation is extended permanently to Spain. These members range from regional representatives from organizations and regional bodies, such as the New Partnership for Africa's Development and the chair from the Association of Southeast Asian Nations.¹¹ Other formal relations of the G-20 include the IMF, the World Bank, the Financial Stability Board, and the Organization for Economic Cooperation and Development (OECD).¹² The role of those elected international organizations is to provide support and expertise to the G-20 and usually involve them in the drafting of reports, position papers, and proposals that are pertinent to the Committee.¹³ The presidency of the G-20 rotates annually and is instituted in a way to distribute regional balance over time.¹⁴ A part of this structure is the system of the troika, which is made up of the "current, immediate past, and next host" Member State.¹⁵ Unlike other groups, the President of the G-20 is responsible for the planning and organization of the agenda, in consultation and consideration of the other members and in relation to the challenges facing the global economy.¹⁶ The summits that happen on a biannual basis are hosted by the current president's Member State. Most recently, the presidency was represented by Germany as it hosted the G-20 Hamburg Summit in July 2017.¹⁷ Argentina will host the next G-20 summit from Buenos Aires, in 2018.¹⁸

Although the forum of the G-20 was created to address the global financial status and economic based topics, the Summits of the past two decades have broadened to address the issues of terrorism, the environment, and job creation as all directly impact the economy. The 2008 G-20 Washington Summit followed the world economic and financial market crash, and sought to give attention to the global markets and proper policy responses.¹⁹ Their achievements can be exemplified through their response to the financial crisis of 2008-2009. During negotiations at the 2008 summit, the G-20 "launched almost (90 percent) of the global economic measures and calmed the markets."²⁰ Also, during this time, the 2008 summit solidified a 47-point plan in order to address the prevention of financial crisis, focusing on methods to regulate the international financial market. These methods include, raising capital requirements for banks, and increasing the loss-absorbing capacities of large banks to prevent the burden on taxpayers should the institution collapse.²¹ In addition to this, the agenda recognized the importance of sustainability and clean energy initiatives as a topic to discuss. The flexibility of this informal political forum allows the G-20 to address the evolving issues and challenges associated with the global economy.

Under the leadership of German Chancellor Angela Merkel for the recent G-20 Hamburg Summit, the pillars for her agenda rested on three main focuses which include "ensuring stability, improving viability for the future, and accepting responsibility."²² A main focus for the agenda also includes the progress of the 2030 Agenda for

¹⁰ "G20: Members and Participants," Group of Twenty, http://www.g20.org/Webs/G20/EN/G20/Participants/participants_en.html (Accessed July 19, 2017).

¹¹ Ibid.

¹² "Invitees and International Organizations," Global Summitry Project, http://globalsummitryproject.com.s197331.gridserver.com/archive/g20-2013_st_petersburg1/www.g20.org/docs/about/international_guests.html (Accessed July 19, 2017).

¹³ "G20: Invitees and International Organizations," G20 Russia, http://en.g20russia.ru/docs/about/international_guests.html (Accessed July 19, 2017).

¹⁴ "G20 Members," G20 Turkey, <http://g20.org.tr/about-g20/g20-members/> (Accessed July 19, 2017).

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ "G20: FAQs," Group of Twenty, <http://www.g20.org/Webs/G20/EN/G20/FAQs/faq.html> (Accessed July 19, 2017).

¹⁸ "Argentina to chair the G20 in 2018," Ministry of Foreign Affairs and Worship of the Argentine Republic, <http://cancilleria.gov.ar/en/argentina-chair-g20-2018> (Accessed July 19, 2017).

¹⁹ "Agenda for the G20 Finance Ministers and Central Bank Governors Meeting," G20 Information Centre, University of Toronto, <http://www.g20.utoronto.ca/2008/2008agenda1107.html> (Accessed July 19, 2017).

²⁰ Ibid.

²¹ Ibid.

²² "G20: G20 AGENDA PRESENTED TO CABINET," Group of Twenty, http://www.g20.org/Content/EN/Artikel/2016/11_en/2016-11-30-g20-kernbotschaften-im-kabinet en.html (Accessed July 19, 2017).

Sustainable Development and the “Paris agreement on climate change.”²³ A topic which has seen particular debate in past summits, the agenda behind climate change included viable energy source, climate strategies. Additionally, as part of their duties, Germany chose to invite Norway, the Netherlands and Singapore. The African Union (AU) also attended and was represented by Guinea, while the Asia-Pacific Economic Cooperation (APEC) was represented by Vietnam, and the New Partnership for Africa’s Development (NEPAD) was represented by Senegal.²⁴

The following G-20 Member States will be represented at SRMUN Atlanta 2017:

ARGENTINA, AUSTRALIA, BRAZIL, CANADA, CHINA, EUROPEAN UNION, FRANCE, GERMANY, INDIA, INDONESIA, ITALY, JAPAN, REPUBLIC OF KOREA, MEXICO, RUSSIAN FEDERATION, SAUDI ARABIA, SOUTH AFRICA, TURKEY, UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, and UNITED STATES OF AMERICA.

²³ Ibid.

²⁴ "G20: Members and participants," Group of Twenty, http://www.g20.org/Webs/G20/EN/G20/Participants/participants_node.html (Accessed July 19, 2017).

I: Developing a Post-Paris Agreement Global Energy Policy

Introduction

The Kyoto Protocol was an international treaty that committed Member States to reduce their levels of emissions through enforceable limitations and financial commitments. However, by its expiration in 2012, it was declared ineffective, due to a disconnect of achievable goals within developing Member States and non-enforceable policy. Nevertheless, the Protocol's purpose as an international agreement that established "internationally binding emission reduction targets" became the foundation for the United Nations Framework Convention on Climate Change (UNFCCC) which eventually led to the first universal and legally-binding global climate deal known as the Paris Agreement. In December 2015, the Paris Climate Conference (COP21) was held by the UNFCCC.²⁵ The COP21 was dedicated to resolving the current and future problems that global warming presented to the planet. In its entirety, the Conference sought to not only discuss the current situation, but to begin almost immediate implementation of climate change policy and goals within each Member State's sovereign borders.²⁶ In addition to the Kyoto Protocol, the Paris talks were built on the previous initiative of the Montreal Action Plan, which was created in 2005 to assess the extension of the Kyoto Protocol. Operating under the collective agreement to maintain global warming below two-degrees Celsius, the Paris Agreement combined efforts of both the Kyoto Protocol and Montreal Action Plan to focus on the need for cohesive global and national policies as mechanisms to combat climate change.²⁷ The key elements of the Agreement included the need to reduce emissions in developing Member States, increase transparency between institutions, and incorporate the support of regional, national, and local initiatives in combating climate change.²⁸ As a member of the G-20, the European Union (EU) was the first major entity of the Agreement to submit its contribution in March 2015 and, within their own agenda, created a target goal to reduce their emissions by forty percent by 2030.²⁹ Ultimately the 2015 agreement resulted in 195 Member States adopting the Agreement by the end of that year.³⁰

Climate change, as it pertains to the UNFCCC, refers to a "change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere, in addition to natural climate variability observed over comparable time periods."³¹ Supported by decades of research, the warming of the planet has maintained an increasing and continuous temperature trend since 1906, as well as an increase in the atmospheric carbon dioxide concentration.³² These changes lead to an increase in the acidification of oceans, high sea levels, and the notable shrinking of sea ice.³³ In the years following the Kyoto Protocol, the G-20 has reassessed the sentiment that Member States do not show a united front on the subject of multilateral energy architecture.³⁴ In 2012, the G-20 finance ministers created the Green Finance Study Group (GFSG) "to consider ways to effectively

²⁵ "Paris Agreement," European Commission, http://ec.europa.eu/clima/policies/international/negotiations/paris_en (Accessed July 18, 2017).

²⁶ "The Kyoto Protocol," The United Nations Framework Convention on Climate Change, http://unfccc.int/kyoto_protocol/items/2830.php (Accessed June 2, 2017).

²⁷ Ibid.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ "Fact sheet: Climate change science - the status of climate change science today," The United Nations Framework Convention on Climate Change, https://unfccc.int/files/press/backgrounders/application/pdf/press_factsh_science.pdf (Accessed June 2, 2017).

³² "2017 is so far the second-hottest year on record thanks to global warming," The Guardian, 31 July 2017, <http://www.theguardian.com/environment/climate-consensus-97-per-cent/2017/jul/31/2017-is-so-far-the-second-hottest-year-on-record-thanks-to-global-warming> (accessed August 26, 2017).

³³ Fact sheet: Climate change science - the status of climate change science today," The United Nations Framework Convention on Climate Change, https://unfccc.int/files/press/backgrounders/application/pdf/press_factsh_science.pdf (Accessed June 2, 2017).

³⁴ "The Group of Twenty Briefing and Setting the Global Agenda," The G20, January 2015, [http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/545712/EPRS_BRI\(2015\)545712_REV1_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/545712/EPRS_BRI(2015)545712_REV1_EN.pdf) (Accessed June 2, 2017).

mobilize resources, taking into account the objectives, provisions, and principles of the UNFCCC.”³⁵ Through their sessions from Brisbane to Hamburg, the G-20 utilized this group to conduct various inquiries into climate change policy. During the Brisbane 2014 G-20 Summit, the role of climate change, as it pertained to the global economy, became a topic of discussion. This led to the support of the Green Climate Fund as well as a renewed commitment towards a more rigorous discourse on the subject. Following the Paris Agreement, the G-20 has committed themselves to mitigating the human influence on climate change, recognizing its impact that surpasses socioeconomic boundaries and geographical borders.

History

Following the global financial crisis of 2007-2008, the G-20 focused on issues that address loans, developing economies, and the role of the financial sector. It was during the Brisbane G-20 Leaders Summit that Members began to actively discuss the importance of climate change. Only a week before, the United States of America (USA) and China agreed on new targets for climate change policy and furthered the idea of a future agreement that would “reflect the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances.”³⁶ The then-President of the UN General Assembly, Mogens Lykketoft, noted that “the China-US ratification and the great Chinese initiatives put useful pressure on those UN-members that have not yet ratified or made their own national action plans.”³⁷ With such a public announcement from the largest two emitters of carbon dioxide (CO₂), the Brisbane agenda promptly reflected the importance of discussion on global warming for the G-20. Not only did the G-20 pledge support for the Paris Agreement as a legal agreement, they also categorized their concern for climate change through concern over global energy markets. Among these concerns was the phasing out of fossil fuel subsidies, establishing clean energy as a private sector, and providing financial support for the Green Climate Fund.³⁸ During the summit, the USA and Japan pledged over USD 4 Billion to the Green Climate Fund’s goal of keeping atmospheric temperatures below two-degrees Celsius.³⁹ In preparation for the Global United Nations Conference on Climate Change in Paris, the G-20 leaders stated, “[T]hey will work together to adopt successfully a protocol, another legal instrument or an agreed outcome with legal force under the UNFCCC that is applicable to all parties at the COP21 in Paris in 2015.”⁴⁰

During September 2016, the G-20 met once again in Hangzhou, China. While the G-20 did not meet its goal of setting a deadline for the ratification of the Paris Agreement, nor the phasing out of fossil fuels, China and the USA, both comprising 40 percent of the world’s carbon emissions, agreed to join the Paris Agreement, creating a greater vote of confidence.⁴¹ In addition to this, the Hangzhou Summit was another platform where the G-20 demonstrated a pursuance of global climate change policy among its Members. This was especially significant in referencing the importance of the current energy market that is dependent on fossil fuels. It is estimated by the International Monetary Fund (IMF) that fossil fuel subsidies cost between USD 160 Billion and USD 5.6 Trillion to the world’s governments.⁴² These subsidies are a large source of fiscal support for companies and Member States who wish to

³⁵ “Promoting efficient and transparent provision and mobilization of climate finance to enhance ambition of mitigation and adaptation actions,” The Climate Finance Study Group, June 2016, <http://www.g20.utoronto.ca/2016/2016-promoting-efficient-transparent-provisio-n.pdf> (Accessed June 3, 2017).

³⁶ “US and China push momentum for global climate action with new joint pledges” *Climate Change Observer*. November 12, 2014. <http://climateobserver.org/us-china-push-momentum-global-climate-action-new-joint-pledges/> (Accessed June 10, 2017).

³⁷ “In historic ceremony, UN chief hails China, US for formally joining Paris climate agreement,” The United Nations, <http://www.un.org/apps/news/story.asp?NewsID=54836#.WaiLgK2ZPxs> (accessed August 26, 2017).

³⁸ “G20 Leaders’ Communiqué Brisbane Summit, 15-16 November 2014,” G20 Australia, http://www.g20australia.org/sites/default/files/g20_resources/library/brisbane_g20_leaders_summit_communique.pdf (Accessed June 10, 2017).

³⁹ “The Climate Challenge,” The Green Climate Fund, <http://www.greenclimate.fund/about-gcf/global-context> (Accessed June 14, 2017).

⁴⁰ Ibid.

⁴¹ “Paris climate deal: US and China formally join pact,” BBC, September 3, 2016, <http://www.bbc.com/news/world-asia-china-37265541> (Accessed June 12, 2017).

⁴² Daniel Cusick, “Fossil Fuel Subsidies Cost \$5 Trillion Annually and Worsen Pollution,” May 19, 2015, <https://www.scientificamerican.com/article/fossil-fuel-subsidies-cost-5-trillion-annually-and-worsen-pollution/> (Accessed July 6, 2017).

keep industries such as coal and oil as prominent sectors in energy markets.⁴³

For many developing Member States, the fiscal and technical infrastructure needed to reduce dependence on fossil fuels is more difficult. Despite the widespread dependence and challenges associated with a transition from fossil fuels to clean energy, the G-20 focused on endorsing environmentally sustainable growth. Through a report published by the GFSG, the focus on green finance, the production of clean energy, and the endorsement of the “G-20 Voluntary Collaboration Action Plan on Energy Access renewable energy,” as well as the G-20 Energy Efficiency Leading Programme, were all seen as important steps in the right direction.⁴⁴ Additionally, in order for developing Member States to meet climate priorities, it became vital to support international climate funds, such as the Green Climate Fund, to enhance future proposals and capacity building.⁴⁵ During the Hangzhou Summit, developed and affluent Member States agreed to donate USD 100 Billion to the Green Climate Fund by 2020.⁴⁶

Given this new role in addressing climate change, the G-20 has refocused on addressing financial and global economic initiatives that support climate agreements, such as the Paris Agreement. The G-20 Member States are responsible for more than 75 percent of the greenhouse gas emissions, as well as 85 percent of the global GDP.⁴⁷ Due to growing concerns over global warming, G-20 summits have focused on promoting the topic and fostering significant milestones in policy and action. Continuing forward to the G-20 Summit in Hamburg on 7 July 2017, a priority of the summit has been outlined as “protecting the climate and advancing a sustainable energy supply.”⁴⁸ This includes ensuring that all Member States sign onto the Paris Agreement, and achieve further success in commitment and united international action.

Post-Paris Agreement: The Role of Green Finance

Given the G-20’s expanding role, focus has been cast toward making policy integration achievable for all Member States. In pursuit of this, the GFSG published a report that concentrates on “green finance.”⁴⁹ Within the document the term “green finance” is defined as the “financing of investments that provide environmental benefits in the broader context of environmentally sustainable development.”⁵⁰ These investments aim to reduce pollution in waterways and in the air, increase energy efficiency, and reduce greenhouse gas (GHG) emissions through both the private and public sector. Despite the pertinence to the topic of green infrastructure, it was noted that less than one percent of holdings of global bonds were geared toward developing infrastructure assets worldwide.⁵¹

In 2015, the G-20 mandated the Financial Stability Board to develop guidelines focusing on green financing that ensures investments in projects that contribute to the avoidance or reduction of greenhouse gas emissions. Given their purview that includes global and economic issues, the future of energy sustainability and the development of green growth has become critical to future economies.⁵² Following the 2015 fiscal year, it was concluded that the

⁴³ Ibid.

⁴⁴ “G20 leaders reaffirm green finance, climate commitments in Hangzhou” *The Climate Policy Observer*, September 8, 2016, <http://climateobserver.org/10572-2/> (Accessed June 25, 2017)

⁴⁵ Ibid

⁴⁶ Stewart M. Patrick, “A G20 Agenda for China: Meeting the World’s Infrastructure, Climate, and Development Needs,” Council on Foreign Relations, April 12, 2016, <http://www.cfr.org/blog/g20-agenda-china-meeting-worlds-infrastructure-climate-and-development-needs> (Accessed June 24, 2017).

⁴⁷ “How Germany’s G20 can accelerate progress on climate change,” Climate Home, September 21, 2016, <http://www.climatechangenews.com/2016/12/09/how-germanys-g20-can-accelerate-progress-on-climate-change/> (Accessed July 2, 2017).

⁴⁸ “G20 Green Finance Synthesis Report,” United Nations Environmental Programme, September 5, 2016, http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis_Report_Full_EN.pdf (Accessed June 29, 2017).

⁴⁹ Ibid.

⁵⁰ “G20 Green Finance Synthesis Report,” European Commission, <http://europa.eu/capacity4dev/climatefinance/blog/g20-green-finance-synthesis-report> (Accessed June 29, 2017).

⁵¹ Ibid.

⁵² Stewart Patrick, “A G20 Agenda for China “Meeting the World’s Infrastructure, Climate, and Development Needs,” Council on Foreign Affairs, April 12, 2016, <https://www.cfr.org/blog/g20-agenda-china-meeting-worlds-infrastructure-climate-and-development-needs> (Accessed June 27, 2017).

amount of climate finance investments had increased 18 percent. In addition, global climate finance flows had reached an estimated USD 391 Billion by 2015, which correlated with increases in public finance and private investments in renewable energy technologies.

These positive strides were attributed to an increase in international investors, both on behalf of private institutions and world governments.⁵³ Despite this, it was acknowledged during the COP21 and by the GFSG that green climate flows need to close the gap between private and public investments and become more transparent in the process. A key component of this strategy would be to address the barriers to green investments by providing incentives that would increase capital flows. Additionally, the report found that by increasing partnerships in public and private sectors, it was a “good practice to use public funds to leverage private finance.”⁵⁴ By doing so, it would incentivize more private firms to invest in green climate projects, all the while ensuring that standards and results are obtained and sustained. In the months leading up to the Hamburg Summit, the official pre-Summit meetings published its support “on making the financial market risks resulting from environmental risks more transparent and on presenting options to reduce risk.”⁵⁵

Current Situation

The G-20 leaders met in Hamburg during 7-8 of July in order to discuss topics related to the global markets, corruption, and post-Paris agreement topics. In their official action plan for growth regarding climate and energy, G-20 leaders stated the importance of “diverse energy systems that rely on affordable, secure and sustainable energy sources and clean technologies such as energy efficiency, renewable energy, natural gas and nuclear power for those countries that opt to use it, and advanced and cleaner fossil fuel technologies, employed in a sustainable manner.”⁵⁶ In contrast with past G-20 summits, Hamburg targeted specific energy concerns that contribute to larger emissions such as economically viable options to make technological energy transitions more possible. Additionally, the G-20 established their desire to address energy poverty in places such as the Asia Pacific and Africa by expanding modern energy systems to underserved regions.⁵⁷

The G-20 leaders agreed to focus on the financing of clean energy by multilateral development banks in order to surpass past efforts in developing energy infrastructure for Member States. Building upon the Paris agreements and setting goals within their own states, Mexico has started using carbon pricing as an instrument to lower emissions. This included setting a program known as *MÉXICO2*, created to help companies develop projects that are healthy for the environment, while receiving carbon credits to lower the carbon tax.⁵⁸ Following their goal to add clean air and wind capacity to their systems, India has exceeded their target of adding 5.5 gigawatts (GW) to their plan of achieving at least 4 GW within 2017. The Hamburg Summit represented a greater response and focus on climate change than has been seen before with the G-20. As the G-20 develops new agendas and hosts new summits, most members have committed to following through on the implementation of clean energy policies and the Paris Agreement, both domestically and globally.

Conclusion

⁵³ Ibid.

⁵⁴ “Promoting efficient and transparent provision and mobilization of climate finance to enhance ambition of mitigation and adaptation actions,” The Climate Finance Study Group, June 2016, <http://www.g20.utoronto.ca/2016/2016-promoting-efficient-transparent-provision.pdf>, (Accessed July 15, 2017).

⁵⁵ Angela Merkel, “Priorities of the 2017 G20 Summit,” The Group of Twenty, December 1, 2016, https://www.g20.org/Content/DE/Anlagen/G7_G20/2016-g20-praesidentschaftspapier-en.pdf?blob=publicationFile (Accessed July 14, 2017).

⁵⁶ “G20 Hamburg Climate and Energy Action Plan for Growth,” Group of Twenty, https://www.g20.org/Content/DE/Anlagen/G7_G20/2017-g20-climate-and-energy-en.pdf;jsessionid=1EFE96CB66441367A23E5E83B00412DA.s1t1?blob=publicationFile&v=6 (Accessed July 24, 2017).

⁵⁷ Ibid.

⁵⁸ Juan Carlos Altamirano, “Mexico’s 3 Big Steps Towards Comprehensive Carbon Pricing,” World Resources Institute, April 14, 2017, <http://www.wri.org/blog/2017/04/mexicos-3-big-steps-towards-comprehensive-carbon-pricing> (Accessed July 24, 2017).

In recent years, the G-20 began a shift towards the widespread effects of global warming. Following the election of German Chancellor Angela Merkel as the G-20 President, the agenda now favors explicit discussions about climate change policy. A key component to the Habsburg agenda is a commitment to discussing viable energy and climate strategies for the future and “realizing the goals of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change.”⁵⁹ Although 19 of the 20 permanent members have committed to ratifying the Paris Agreement, the USA announced in June 2017 its withdrawal from the Agreement.⁶⁰ Despite its major contributions to greenhouse emissions, USA President Donald Trump views the agreement as “an attack on the sovereignty of the United States and a threat to the ability of his administration to reshape the nation’s environmental laws.”⁶¹ As the G-20 moves forward, it will have to address the concerns of Member States, such as the USA. In addition, the G-20 has aimed to discuss and agree on reforms necessary to the advancement of the COP21. Many members, such as the EU, have shown support towards fossil fuel subsidy reform. This is an extension to the G-20’s promise in 2009 when the G-20 vowed to eliminate inefficient fossil fuel subsidies, and the stratagem of a peer review program for information sharing, the pressure to continue that progress in the upcoming summit.⁶² As the issues of global climate change advance, the G-20 has the responsibility to address its impacts on the economy, natural resources, and human lives.

Committee Directive

During the period of research, delegates should consider the documents published by the Hamburg G-20 Summit. This includes a series of mandates and advancements made in the subject with a distinct focus on how it builds upon the ratification of the Paris Agreement. Delegates should come prepared to discuss the role of regional, national and local initiatives in the framework of climate change policy and the role of the G-20 in its progress. Delegates are expected to ask themselves what is the role of the G-20 in influencing climate change policy matters? In addition, delegates should ask themselves: What more can be done to include the Paris goals within growth strategies? What is the role of the G-20 as the world advances towards green finance? Delegates may debate the barriers to green investments and if providing incentives that would increase capital flows. How can the G-20 become more relevant and deliberate when discussing the role of climate change policy and its effects on economic and financial institutions? Lastly, it is important that delegates focus on what points the financial and climate change policy converge to affect the existing economic infrastructure and how can the G-20 improve that relationship.

⁵⁹ “Germany makes climate change G20 priority,” The Climate Home, January 12, 2017, <http://www.climatechangenews.com/2016/12/01/germany-makes-climate-change-g20-priority/> (Accessed July 14, 2017).

⁶⁰ Michael D. Shear, “Trump Will Withdraw U.S. From Paris Climate Agreement,” The New York Times, June 1, 2017, <https://www.nytimes.com/2017/06/01/climate/trump-paris-climate-agreement.html? r=0> (Accessed July 14, 2017).

⁶¹ Ibid.

⁶² Thijis Van de Graff, *The Politics of and Institutions of Global Energy Governance* Ghent University, Belgium, 2013, Page 141-143.

II: The Digital Economy and Cyber Security

Introduction

The digital economy is of great interest to the global community since its development and implementation are critical for every Member State's economic growth.⁶³ Utilization of the digital economy has become an integral part of people's lives, ranging from basic services such as searching information online, ordering household items, connecting with businesses, filing taxes, and much more.⁶⁴ Further, economic growth and its societal benefits depend on the digital environment.⁶⁵ Digital technology and security have rapidly evolved since the first Group of Twenty (G-20) meeting in 1999, which was held with finance ministers and central bank governors in Berlin, Germany.⁶⁶ When the Berlin 1999 meeting occurred, it had only been a couple years since Steve Jobs returned to Apple Inc., and current tech giants such as Amazon, Google, and PayPal were still in their infancy. Eighteen years later, the global economy has profoundly relied on digital services and in doing so, has inadvertently entrusted itself to a secure cyber space.

Although the international community has witnessed the fast spread and practice of digital technologies, G-20 economies' adoption and usage have varied across demographics, industry size, and the ever-growing concerns of digital inclusiveness.⁶⁷ G-20 members have encountered barriers and limitations to full utilization of digital technologies because of insufficient infrastructure, shortage of digital economy skills, service trade barriers, and high costs and financing.⁶⁸ According to the World Economic Forum, G-20 leaders need to understand the severity of digital disruptions, which is described as the innovative growths in data and technology, and its impact on its Member States and industries, rather than focusing on "a few adjustments."⁶⁹ Member States may have focused on the "few adjustments" method in order to re-stabilize the global economy, especially as a result of the growing start-up culture and "overnight success" businesses such as AirBnb, Dropbox, Facebook, Twitter, and Uber.⁷⁰ If G-20 members do not collaborate to understand the impact of digital disruptions, the World Economic Forum suggests, "all will be impacted; none will be spared," from cyber disruptions.⁷¹ Digital security risks have traditionally been viewed as a "technical problem" and therefore would need a "technical solution."⁷² However, the G-20 economies are now becoming more aware to reevaluate their own policies and strategies to the evolving nature and scale of digital security risks.⁷³

History

When realizing the potential benefits of digital technologies, a more secured and reliable digital ecosystem is required.⁷⁴ Digital security threats and incidents could increase and affect a corporation's finances, assets and

⁶³ "A Communique on the G-20 Digital Economy Ministerial," U.S. Department of Commerce, 20 April 2017, <http://www.commerce.gov/news/fact-sheets/2017/04/communique-g-20-digital-economy-ministerial> (Accessed July 23, 2017).

⁶⁴ Ibid.

⁶⁵ *Key Issues for Digital Transformation in the G-20*. Organization for Economic Co-operation and Development. January 2017. <http://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf> (Accessed July 23, 2017).

⁶⁶ "1999 Documents: Communiqué," University of Toronto, <http://www.g20.utoronto.ca/1999/1999communique.htm#participants> (Accessed July 23, 2017).

⁶⁷ *Key Issues for Digital Transformation in the G-20*. Organization for Economic Co-operation and Development. January 2017. <http://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf> (Accessed July 23, 2017).

⁶⁸ Ibid.

⁶⁹ "Why the G20 needs to focus on the digital economy," World Economic Forum, 12 November 2014, <http://www.weforum.org/agenda/2014/11/why-the-g20-needs-to-focus-on-the-digital-economy/> (Accessed July 23, 2017).

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² *Key Issues for Digital Transformation in the G-20*. Organization for Economic Co-operation and Development. January 2017. <http://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf> (Accessed July 23, 2017).

⁷³ Ibid.

⁷⁴ *Key Issues for Digital Transformation in the G-20*. Organization for Economic Co-operation and Development. January 2017. <http://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf> (Accessed July 23, 2017).

image.⁷⁵ In a report from the Organization for Economic Co-operation and Development (OECD), digital security incidents have interrupted services in numerous Member States, including some G-20 members, such as the 2014 attack against a German steel mill, the broadcast interruption attack against TV5 Monde in 2015, the breach of Saudi Arabia's Saudi Aramco in 2012, and the United States of America's US Office of Personnel Management in 2015.⁷⁶ In 2015, the OECD Council Recommendation on Digital Security Risk Management for Economic and Social Prosperity had issued a "Security Risk Recommendation" that layered multiple policy areas to address digital security risk management.⁷⁷ The Security Risk Recommendation called for organizations' overall risk management and decision-making processes to integrate digital components of security risk management.⁷⁸ The aforementioned recommendation can incorporate organizations' chief executive officers (CEOs), management boards, and managers to better comprehend opportunity and security of information and communication technology.⁷⁹ If there's a lack of understanding the economic and social trade-offs, the adoption of security measures could cost an organization, and G-20 members, an unnecessary immense budget and infringe on international digital communication that is crucial to economic prosperity.

During the G-20 Antalya Summit in 2015, G-20 leaders recognized the current Internet economy has both opportunities and challenges to global growth. G-20 leaders agreed to acknowledge the threats to information and communication technology's (ICT) security and affirmed Member States should not "conduct or support ICT-enabled theft of intellectual property, including trade secrets or other confidential business information with the intent of providing competitive advantages to companies or commercial sectors."⁸⁰ G-20 members further reaffirmed the United Nations' (UN) efforts pertaining to ICT.⁸¹ Members embraced the UN Group of Governmental Experts in the Field of Information and Telecommunications in the Context of International Security's 2015 report that examined existing and potential threats from ICT usage by Member States and welcomed relevant standards in the use of ICTs for all Member States to abide by in accordance with UN General Assembly resolution A/C.1/70/L.45.^{82,83}

At the G-20 Hangzhou Summit in 2016, G-20 members endorsed the *G-20 Blueprint on Innovative Growth* with the intent that the report would serve as an agenda for the digital economy.⁸⁴ The "Blueprint" called for the next 1.5 billion people to have "meaningful access" to the Internet by 2020; an effort to develop the potential of the digital economy.⁸⁵ The goal to provide 1.5 billion people with Internet access, according to the report, comes "through expanded and affordable broadband access, as well as improving quality, promoting the flow of information for economic growth, trust and security, recognizing that freedom of expression and the free flow of information, ideas, and knowledge," which are fundamental for the digital economy and development.⁸⁶ While the G-20 members endorsed the Blueprint, members also agreed they would act on the recommendations in accordance to their respective national circumstances.⁸⁷

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ "Digital Security Risk Management for Economic and Social Prosperity," Organization for Economic Co-operation and Development, 01 October 2015, <http://www.oecd.org/publications/digital-security-risk-management-for-economic-and-social-prosperity-9789264245471-en.htm> (Accessed July 23, 2017).

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ "G20 Leaders' Communiqué agreed in Antalya," Group of Twenty - Turkey, <http://g20.org.tr/g20-leaders-commenced-the-antalya-summit/> (Accessed July 23, 2017).

⁸¹ Ibid.

⁸² A/70/174. *Report of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security*. The United Nations. 22 July 2015. http://www.un.org/ga/search/view_doc.asp?symbol=A/70/174 (Accessed July 23, 2017).

⁸³ A/C.1/70/L.45. *Developments in the field of information and telecommunications in the context of international security*. The United Nations. 21 October 2015. http://www.un.org/ga/search/view_doc.asp?symbol=A/C.1/70/L.45 (Accessed July 23, 2017).

⁸⁴ "G20 Leaders' Communique Hangzhou Summit," Group of Twenty - China, http://www.g20chn.org/English/Dynamic/201609/t20160906_3396.html (Accessed July 23, 2017).

⁸⁵ *G-20 Blueprint on Innovative Growth*. Group of Twenty- China. http://www.g20chn.org/English/Dynamic/201609/t20160906_3396.html (Accessed July 23, 2017).

⁸⁶ Ibid.

⁸⁷ "G20 Leaders' Communique Hangzhou Summit," Group of Twenty - China, http://www.g20chn.org/English/Dynamic/201609/t20160906_3396.html (Accessed July 23, 2017).

The 2016 Summit also delivered the *G-20 Digital Economy Development and Cooperation Initiative*, which built on discussions from the Antalya Summit.⁸⁸ The Initiative outlined a series of recommendations concerning the digital economy. Strengthening confidence and trust among the G-20 economies was once again outlined in the Report.⁸⁹ G-20 members agreed to improve international collaboration, capacity building, public-private partnerships, encourage secure information infrastructure development as a trust and stable Internet application, and jointly combat cybercrime.⁹⁰

Current Situation

A January 2017 Report for the G-20 German Presidency by the OECD reaffirmed digital infrastructures are a “foundational element” for the G-20 economies.⁹¹ The G-20 members' economic performances may vary significantly -- and linked to each economy's stage development -- due to the lack of digital infrastructures.⁹² The January 2017 Report acknowledged geography may play a crucial role in how G-20 members engage with online activity.⁹³ G-20 economies that are "relatively isolated" geographically are more likely to engage strongly online; this is based on e-commerce transactions and web presence.⁹⁴ If G-20 members were to improve e-commerce and digital technologies for business purposes, then G-20 members could improve “cross-country comparable metrics in e-commerce and business use of sophisticated digital technologies,” which includes data analytics and cloud computing.⁹⁵ The OECD Report, however, recognized an important gap on trust, largely caused by consumers, in the digital environment and among members.⁹⁶

According to the January 2017 Report, barriers and limitations to digital services access could be eased with the development and implementation of comprehensive national digital strategies “to enhance competition in telecommunication markets and improve Internet access for disadvantaged groups, [Small and medium-sized enterprises (SMEs)] and regions; elevate the importance and clarify the objectives of policies and practices to address digital security and privacy risks; reduce firm-level barriers and enable complementary investments; ensure life-long learning mechanisms to improve workers' skills; ensure Internet openness and cross-border data flows; and foster firm dynamics within the economy.”⁹⁷

While there's an emphasis on necessitating trust within the G-20, the OECD encouraged G-20 economies to start international arrangements that would promote effective privacy and data protection, including a national-level strategy approach.⁹⁸ The 2017 OECD Report also recommended strategies to curb digital security risks, which will require support from the highest level of G-20 members' governments. The G-20 economies could create settings for stakeholders to manage digital security risks for economic and social activities but this concept should incorporate "a whole in society perspective" for the benefit of everyone to take advantage of digital technologies.⁹⁹

An important element to reduce digital security risks on economic and social levels is the decision on the choice of proper security measures.¹⁰⁰ In the OECD Report from January 2017, security measures should be determined after an appropriate assessment of the risk and based on the economic and societal objectives at stake.¹⁰¹ In addition, the

⁸⁸ "G20 Digital Economy Development and Cooperation Initiative," University of Toronto, <http://www.g20.utoronto.ca/2016/g20-digital-economy-development-and-cooperation.pdf> (Accessed July 23, 2017).

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ *Key Issues for Digital Transformation in the G-20*. Organization for Economic Co-operation and Development. January 2017. <http://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf> (Accessed July 23, 2017).

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

cost and impact of the digital security measures must be considered.¹⁰² The Report openly recognizes the aforementioned considerations will be a challenge for organizations but these assessments are aimed to determine the "acceptable level of risk and address the economic and social trade-offs" from implementing digital security measures.¹⁰³

Under the German Presidency, the G-20 Hamburg Summit earlier this year focused on the digital transformation.¹⁰⁴ During a speech at the Hamburg Summit, German Chancellor Angela Merkel said the digital revolution is a very significant global development.¹⁰⁵ She continued:

"We are talking about the effect that digital technology is having on our lives, our economies and our work. We are also discussing how we can increase participation at global level in the digital revolution, what we can do to protect privacy and intellectual property, and how we can ensure cyber security. ... [The] G-20 is also assuming responsibility for the world of tomorrow and beyond – by pursuing climate protection, by implementing the ever so important 2030 Agenda, and by shaping digitalization and strengthening global health."¹⁰⁶

With a prominent focus on the digital transformation, G-20 representatives met to discuss the digital economy on April 2017 in Düsseldorf, Germany; two months before the main June meeting.¹⁰⁷ The G-20 ministers who were responsible for the digital economy talks discussed how to improve global digital economic development, while bridging digital divides in data security, skills, and structure. The G-20 ministers recognized the digital economy's growth is possible through industry and market-led standards and based on the principles of openness, transparency, and consensus.¹⁰⁸ G-20 members' standards should not limit competition, innovation, or trade barriers.¹⁰⁹ The standards for digital economy growth should also promote security and trust in ICT usage. Trust has been a reoccurring topic for the G-20, which is essential for fully utilizing the digital economy's potential and success and discussed in April's digital economy meeting.¹¹⁰ G-20 ministers agreed their efforts to address ICT security risks, threats, and vulnerabilities includes strengthened trust in order to capitalize the potential of the digital economy.¹¹¹

During July's Hamburg Summit, G-20 leaders encouraged Member States to "closely monitor" the developments in digital finance, which includes taking into consideration cross-border issues.¹¹² The G-20 members affirmed such monitoring activity is instrumental to assess if, when, and how to intervene on potential risks.¹¹³ G-20 members are aware that the malicious use of ICTs could harm financial services on both international and national levels and such attacks undermines confidence and security.¹¹⁴ G-20 members are also considering the future, at least with the 2030 Agenda for Sustainable Development, Internet usage expansion on a national level to all people by 2025, and improved common digital trade measurements with the aim to foster informed and evidence-based policy ideas.¹¹⁵

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ "Addressing digitalisation at global level," Group of Twenty - Germany, http://www.g20.org/Content/EN/Artikel/2017/01_en/2017-01-12-digitalkonferenz-bmwi_en.html (Accessed July 23, 2017).

¹⁰⁵ "Speech by Federal Chancellor Angela Merkel at the G20 Dialogue Forum with Non Governmental Organisations (C20) in Hamburg on 19 June 2017," Group of Twenty - Germany, https://www.g20.org/Content/EN/Reden/2017/2017-06-19-bk-merkel-c20_en.html?nn=2186566 (Accessed July 23, 2017).

¹⁰⁶ Ibid.

¹⁰⁷ "G20 Digital Economy Ministerial Declaration: Shaping Digitalisation for an Interconnected World," University of Toronto, 07 April 2017, <http://www.g20.utoronto.ca/2017/170407-digitalization.html#fr5> (Accessed July 23, 2017).

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² "Annex to G20 Leaders Declaration: G20 Hamburg Action Plan," Group of Twenty, http://www.g20.org/Content/DE/Anlagen/G7_G20/2017-g20-hamburg-action-plan-en.pdf?blob=publicationFile&v=4 (Accessed July 23, 2017).

¹¹³ Ibid.

¹¹⁴ Ibid.

¹¹⁵ "Annex to G20 Leaders Declaration: Hamburg Update: Taking forward the G20 Action Plan on the 2030 Agenda for

The leaders signed on to promote the digital economy for women and girls through education, employment, and entrepreneurial opportunities; this agreement also has a special focus for low-income and developing States.¹¹⁶

The digital economy for Argentina's G-20 Summit in 2018 will include digital economy discussion. The G-20 ministers in the April 2017 meeting disclosed the 2018 Argentina Summit "will discuss international public policy issues related to privacy and security in the digital economy."¹¹⁷

Conclusion

As German Economic Affairs Minister Brigitte Zypries said ahead of the first G-20 Digital Ministers meeting in April 2017, "Digital progress does not end at national borders."¹¹⁸ The "digital economy" may have a broad definition, but that is because there is a wide range of economic activity involved. The activities in a digital economy include "using digitized information and knowledge as the key factor of production, modern information networks as an important activity space, and the effective use of [ICT] as an important driver of productivity growth and economic structural optimization."¹¹⁹ With the Internet, cloud computing, data, and the Internet of Things (IoT) to analyze, collect, store, and share digital information, economic activities have modernized.¹²⁰ As a result of the digital economy's high growth, innovation, and application to various economic sectors, it has been important for the G-20 to address its challenges.¹²¹ A common challenge appears to be trust, based on reports from the OECD and within the G-20 meetings. G-20 documents have showed increased awareness that trust is a reoccurring subject that must be strengthened, especially as the digital economy rapidly grows and potentially fall into security threats and vulnerabilities.

Committee Directive

Delegates are to be prepared to understand their Member State's stance from the latest G-20 Hamburg Summit. Considering the events from the latest G-20 Summit in Hamburg, delegates must should familiarize their respective Member State's progress and setbacks with digital security. What lessons in digital security did your Member State learn following one or a few security incidents that may be beneficial for the G-20's economic security? Were there national-level digital strategies to ensure the Internal for all? Did your Member State utilize incentives to boost investment efforts? What policies are still needed or in development in addressing digital infrastructure? Delegates should discover the consumer protections that have been initiated and discuss if sharing incident and policy experiences would be a good practice within the G-20. Could Member States find an approach to integrate other sectors, such as agriculture and education, to boost and enhance the digital economy?

Sustainable Development," Group of Twenty, http://www.g20.org/Content/DE/Anlagen/G7_G20/2017-g20-hamburg-upade-en.pdf?_blob=publicationFile&v=6 (Accessed July 23, 2017).

¹¹⁶ Ibid.

¹¹⁷ *G-20 Digital Economy Ministerial Conference*. United Nations Conference on Trade and Development. http://unctad.org/meetings/en/Contribution/dtl_eWeek2017c02-G20_en.pdf (Accessed July 24, 2017).

¹¹⁸ Zypries: "We want everybody to reap the benefits of digitalisation," Group of Twenty - Germany, <https://www.de.digital/DIGITAL/Redaktion/EN/Meldungen/2017/2017-04-06-zypries-we-want-everybody-to-reap-the-benefits-of-digitalisation.html> (Accessed July 23, 2017).

¹¹⁹ "G20 Digital Economy Development and Cooperation Initiative," University of Toronto, <http://www.g20.utoronto.ca/2016/g20-digital-economy-development-and-cooperation.pdf> (Accessed July 23, 2017).

¹²⁰ Ibid.

¹²¹ Ibid.

Technical Appendix Guide

Topic I: Developing a Post-Paris Agreement Global Energy Policy

“Climate Smart Financing for Rural MSMEs: Enabling Policy Frameworks,” G-20 Global Partnerships for Financial Inclusion (GPFI), <http://www.gpfi.org/publications/g20-gpfi-policy-paper-climate-smart-financing-rural-msmes>

The document published on behalf of the G-20 GPFI was created under the co-chair of Germany and Turkey with contributions by India, Italy, Canada, and Australia. This report was in response to the challenges to Member States that are developing rural and agricultural areas into more climate smart settings. Given the ability of Micro, small, and Medium Enterprises (MSMEs) ability to absorb harsh losses and economic effects of these new investments. It outlines the challenges, adaption guidelines and the financial needs that these systems require. In addition to this information, the report also analyzes the current shortcomings in data, and finance centers within these areas.

“Green Finance Progress Report,” United Nations Environment, http://unepinquiry.org/wp-content/uploads/2017/07/Green_Finance_Progress_Report_2017.pdf

The Finance Study Group is co-led by the banking officials from the Bank of China and the Bank of the United Kingdom. In the two years since its inception their reports have aided the G-20 in analyzing the increases in green finance and the investments associated with climate change policies. Their most recent report was published in July of 2017 as they were required to submit their research for the G-20 Leaders Summit in Hamburg. This report focuses on different policy implementation strategies that have been started in different Member States. In addition to this, it offers an overview of the improvements seen within the year since the last report was published, as well as information regarding trends, success rates and failures. In their references, they have a collection of great information and research sources for many Member States that they used in compiling their report.

Investing in Climate, Investing in Growth. Organization for Economic Co-operation and Development Publishing, Paris. <http://dx.doi.org/10.1787/9789254273528-en>

Listed under the list of the formal International Organizations Reports, the Organization for Economic Co-operation and Development (OECD) submitted a report on investment changes as climate policy growth increases. This extensive report outlines the development of the fiscal environment as well as the mobilization of capital and bank resources to address climate change policy. It addresses energy production, developments in agriculture, forestry, and international cooperation. Chapter six and seven address the policy implementations of developing Member States as well as Member States who are transitioning their industrial and technological sectors.

Mark Elder, Kentario Tamura, Naoki Mori, Eric Zusman, Tetsuo Yoshida. “Implications of the 2017 G-20 Summit in Hamburg, Germany for Climate Change Green Finance and Sustainable Development Goals.” Institute for Global Environmental Strategies, <http://pub.iges.or.jp/pub/implications-2017-g20-summit-hamburg-germany>

Within this briefing by the Institute for Global Environmental Strategies, they assess the consequences and effects of all the policy agreements concerning climate change, green finance, and the Sustainable Development Goals. By recounting the time since the Hangzhou summit and the Hamburg summit the report offers an overall assessment on the closing statements of the G-20. Additionally, it offers conclusions and what steps should be taken in policy implementation and a historical analysis of past policies.

"G-20 Leaders Declaration: Shaping an interconnected world," The European Commission, http://europa.eu/rapid/press-release_STATEMENT-17-1960_en.htm

This is the official statement released at the end of the G-20 summit in Hamburg, Germany. Within the

document is the theme of “shaping an interconnected world,” which serves as their motivation to convene on these world issues. While they reaffirmed the Paris Climate Conference, they also detail their recommitment to apply new policy through the lens of the 2030 Agenda for Sustainable Development Goals. In addition to this they reaffirmed that energy and climate policy is also about providing an improvement for sustainable livelihoods.

II: The Digital Economy and Cyber Security

A/70/174. *Report of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security*. The United Nations. 22 July 2015.
http://www.un.org/ga/search/view_doc.asp?symbol=A/70/174

In July 2015, the United Nations (UN) published a report examining the information and telecommunications field to determine existing or potential threats by Member States' usage of information and communication technologies (ICTs). The report "significantly expands" the discussion of the topic and how Member States should cooperate to prevent ICT security risks. An important recommendation, among many, is Member States should not support or conduct intentional ICT activity that harms the use or operation of critical infrastructure.

"G20/OECD INFE REPORT: Ensuring financial education and consumer protection for all in the digital age," Global Partnership for Financial Inclusion, <http://www.gpfi.org/publications/g20oecd-infe-report-ensuring-financial-education-and-consumer-protection-all-digital-age>

For the G-20 Hamburg summit, this report discusses on the topic of digital technologies and digital financial services, or DFS. The usage of DFS ranges from digital currency, mobile financial services, and branchless banking, has become a popular topic. The report goes through the positives, negatives, consumer protections, and themes to address when it comes to another aspect of the digital economy.

G-20 Digital Economy Ministerial Conference. Group of Twenty.
http://www.bmwi.de/Redaktion/DE/Downloads/G/g20-digital-economy-ministerial-declaration-english-version.pdf?__blob=publicationFile&v=12Gro

With Germany hosting the G-20 summit, it was decided to host the first ministerial meeting to solely address the digital economy. This document lists several facts about the digital economy along with the intentions, progress, and goals of the first digital economy meeting from Düsseldorf, Germany. Numerous recommendations are also highlighted to better address concerns within the digital economy.

"Interconnected global economy to become more robust," Group of Twenty,
http://www.g20.org/Content/EN/Artikel/2017/03_en/2017-03-16-g20-finanzministertreffen_en.html

This article recaps a meeting with finance ministers and central bank governors of the G-20 members as they sought to address crisis prevention in the financial sector. The G-20 representatives also discussed the challenges of digitalization and boosting investments into Africa's infrastructure. The G-20 members also discussed their economic progress.

"Digitalization for All: Future-Oriented Policies for a Globally Connected World," Group of Twenty,
http://www.b20germany.org/fileadmin/user_upload/documents/B20/B20_Digitalization_Policy_Paper_2017.pdf

One of the G-20 working groups, the B20 Digitalization Taskforce, published a series of recommendations on the topic of digitalization. The policy paper details recommendations on cyber security improvements, cross-border data flows, and encouraging public dialogue. According to Klaus Helmrich, chair of the B20 Digitalization Taskforce, the G-20 should take a stand against risks and vulnerabilities affecting digital protectionism and increase legal frameworks.