



General Assembly Plenary Topic Background Guide

Topic 1: Adjusting to Climate Change¹

24 September, 2017

When former UN Secretary-General Ban Ki-moon took office in January 2007, he began to call attention to the implications of climate change. For example, in March 2007, he argued that climate change has the same importance as war:

Today, war continues to threaten countless men, women and children across the globe. It is the source of untold suffering and loss. And the majority of the UN's work still focuses on preventing and ending conflict. But the danger posed by war to all of humanity – and to our planet – is at least matched by the climate crisis and global warming.

According to Ban Ki-moon, climate change is “likely to become a major driver of war and conflict” as natural disasters, rising ocean levels, droughts, land degradation and other effects of climate change lead to job loss, poverty, decreasing agricultural yields, the spread of disease, and mass migration.²

Since the release of the fourth assessment of the Intergovernmental Panel on Climate Change (IPCC) in 2007, coupled with the release of the fifth assessment of the IPCC in 2013-14, climate change has become more widely understood. Scientists worldwide agree that it is happening, that it is primarily anthropogenic (caused by humans), and that it is overwhelmingly the effect of greenhouse gas emissions, caused by the burning of fossil fuels such as coal, petroleum, and natural gas.

There is also a strong scientific consensus that the effects of climate change are already apparent in severe weather patterns and that the long-range effects climate change will include rising sea levels, increasingly severe weather, and increasing desertification. Hurricane Harvey, which struck Houston, TX in August 2017, provides one example of how climate change is already affecting people and states. Although it would be inaccurate to say that anthropogenic climate change “caused” Harvey, as climate scientists point out, climate change did exacerbate the hurricane by creating record high water temperatures (a key factor in the formation of hurricanes), which brought unprecedented levels of rainfall to Houston during Hurricane.³

Today, the question is, how will individuals, states, and international organizations adapt to climate change? Part of the challenge is to reduce GHG emissions, but that is not enough. Even if states curb their emissions, past emissions will continue to warm the earth for years.⁴ Thus states must begin now to adapt to climate change. This will require unprecedented international cooperation and a rethinking of many aspects of social and economic life, including where people live and what they eat. In addition, it will require stronger commitment to the

¹ This document was written by Karen Adams, Nicholas Potratz, and Kedra Hildebrand, with contributions from David Knobel. Copyright 2017 by Karen Adams.

² UN News Centre, “Ban Ki-moon calls on new generation to take better care of Planet Earth than his own,” March 1, 2007, available at <http://www.un.org/apps/news/story.asp?NewsID=21720&Cr=global&Cr1=warming>

³ Robinson Meyer, “Did Climate Change Intensify Hurricane Harvey?” *The Atlantic*, 27 August 2017, <https://www.theatlantic.com/science/archive/2017/08/did-climate-change-intensify-hurricane-harvey/538158/>.

⁴ Intergovernmental Panel on Climate Change (IPCC), “Long-term Climate Change: Projections, Commitments and Irreversibility,” *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 20 September 2013, p. 88, available at http://www.climatechange2013.org/images/uploads/WGIAR5_WGI-12Doc2b_FinalDraft_Chapter12.pdf

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newly created Sustainable Development Goals.

History and Current Events

Today's consensus about the phenomenon of climate change took over a century to form. In 1896, a scientist noted that carbon dioxide levels were increasing in the Earth's atmosphere.⁵ In 1931, an American physicist named E.O. Hulbert published a paper linking rising carbon dioxide levels with rising temperatures. According to Hulbert, when humans release carbon dioxide and other greenhouse gases into the atmosphere, the Earth is warmed because the sun's rays are reflected back to Earth by the gases. In 1951, however, the American Meteorological Society's *Compendium of Meteorology* contended that an increase in carbon dioxide would not increase the Earth's temperature.⁶

Climate change did not receive sustained international attention until the 1980s.⁷ In 1988, in response to growing scientific evidence of global warming, the UN Environmental Programme (UNEP) created the Intergovernmental Panel on Climate Change (IPCC). In the early 1990s, the IPCC issued its first report, which demonstrated that the earth's temperature had risen 0.5 degrees Celsius in the previous half century.⁸

In the most recent report issued by the IPCC (2013-2014), the IPCC presented evidence that climate change is primarily the result of human GHG emissions. According to the hundreds of scientists who contributed to the report, "[h]uman influence on the climate system is clear. This is evident from the increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and understanding of the climate system."⁹ According to climatologists who authored the report, confidence that humans have caused climate change has increased since the IPCC issued the fourth report in 2007. Specifically, the "IPCC is now 95 percent certain that humans are the main cause of current global warming."¹⁰

According to the IPCC, when fossil fuels are burned for energy, they release methane, nitrous oxide, and carbon dioxide (CO₂) into the atmosphere. Concentrations of the carbon dioxide, methane, and nitrous oxide in the atmosphere have all increased since 1750 due to human activity. CO₂ alone has increased by 40% since pre-industrial times.¹¹ This increase creates a "greenhouse effect" that causes temperatures to rise, makes weather patterns more severe, and raises sea levels. Fossil fuel combustion and cement manufacturing account for about 91% of human-caused CO₂ emissions. Land use change (mostly deforestation) is responsible for the remaining

⁵ Ginger L. Gist, "Global Climate Change: Components and Consequences," *Journal of Environmental Health*, 61:5 (December 1999), p. 4.

⁶ Janet Conley, "Timeline: A Science is Born," *Daily Report*, September 17, 2007, available at http://www.dailyreportonline.com/PubArticleDRO.jsp?id=1202552213600&Timeline_A_science_is_born&slreturn=20130830232204

⁷ Karen Mingst and Margaret Karns, *The United Nations in the 21st Century*, 3rd edition, (Boulder: Westview, 2007), p. 215.

⁸ Conley, "Timeline: A Science is Born." The full report is available at <http://www.ipcc.ch/ipccreports/assessments-reports.htm>

⁹ Intergovernmental Panel on Climate Change (IPCC), "12th Session of Working Group 1: Approved Summary for Policy Makers," 27 September 2013, available at <http://enb.iisd.org/vol12/enb12581e.html>.

¹⁰ IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, R.K. Pachauri and L.A. Meyer (eds.), (Geneva: IPCC, 2014), p. v, available at <https://www.ipcc.ch/report/ar5/syr/>.

¹¹ IPCC, "12th Session of Working Group 1."

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9%.¹² According to the US Department of Energy (DOE), coal and petroleum are responsible for about 27 percent and 33 percent of CO₂ emissions respectively, while natural gas is responsible for another 22 percent.¹³

In its 2014 report, the IPCC documented the effects climate change has already had worldwide, including:

- Changing precipitation and melting snow and ice, which alter hydrological systems and impact water quality and quantity
- Increased incidences of weather extremes, including floods, drought, and, as a result of drought, desertification
- Shifting geographical ranges, seasonal activities, migration patterns, and species interactions for land-based, freshwater, and marine species, as well as climate-related extinctions of a few species
- Negative impacts (decreases) on crop yields that outweigh positive impacts (increases) in crop yields in high-latitude regions
- Increased rate of heat-related deaths and decreased rate of cold-related deaths in some regions, as well as changes to the distribution of waterborne illnesses and from local rainfall and temperature changes.

In addition, the IPCC predicts:

- Rising sea levels, causing coastal erosion and necessitating resettlement of urban populations to occur in the future
- Further risk of death injury and ill-health due to sea level rise, high temperatures, and extreme weather events such as flooding and extreme heat
- Greater food insecurity and problems in food supply
- Damage to key resources and infrastructure, such as water supply, electricity, and emergency services.

The IPCC also states that two factors make individuals more vulnerable to these current and future effects of climate change. First, uneven development processes, which create vulnerabilities in “[p]eople who are socially, economically, culturally, politically, institutionally, or otherwise marginalized.” Second, people who live in certain ecosystems and human systems (e.g. some forms of infrastructure) that are particularly vulnerable to heat waves, droughts, floods, cyclones, and wildfires are particularly vulnerable.¹⁴

Of course, all countries and regions of the world will be affected, both directly by the changes listed above and indirectly by the disruptions in other parts of the world. The industries, cities, and countries that will, however, be most directly affected are

generally those in coastal and river flood plains, those whose economies are closely linked with climate-sensitive resources, and those in areas prone to extreme weather events, especially where rapid urbanisation is occurring. ... Poor communities can be especially vulnerable, in particular those concentrated in high-

¹² Intergovernmental Panel on Climate Change (IPCC), “Carbon and Other Biogeochemical Cycles” chapter 6 in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013, p. 131, available at http://www.climatechange2013.org/images/uploads/WGIAR5_WGI-12Doc2b_FinalDraft_Chapter06.pdf

¹³ US Department of Energy, *International Energy Outlook 2017*, 14 September 2017, available at <https://www.eia.gov/outlooks/ieo/index.php>.

¹⁴ IPCC, “Summary for Policy Makers” in *Climate Change 2014: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, (Geneva: IPCC, 2014), pp. 6-8, 12-13, <https://www.ipcc.ch/report/ar5/wg2/>.

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risk areas. They tend to have more limited adaptive capacities, and are more dependent on climate-sensitive resources such as local water and food supplies.¹⁵

According to a study in *Environment and Urbanization*, two-thirds of the world's largest cities are in coastal areas. Moreover,

180 countries have populations in low-elevation coastal zones, and about 70 percent of those have urban areas of more than 5 million people that are under threat. Among them: Tokyo; New York; Mumbai, India; Shanghai, China; Jakarta, Indonesia; and Dhaka, Bangladesh.¹⁶

If the 634 million people who reside threatened coastal areas relocate, they will move to other parts of the world. Because many cities will be affected simultaneously, the disruption is likely to be far greater than the effects of a severe storm, such as Hurricane Harvey, in one city, such as Houston. Because coastal areas will be affected over some period of time, there will be opportunities to prepare for and carry out systematic resettlements that are impossible after sudden storms. But because of the number of affected areas, it will nevertheless be difficult to encourage people to move, provide them with shelter, provide them with services such as education and health care, and help them feel welcome in new places.

Ecological and economic interdependence will also magnify the effects of climate change in areas that are less directly affected. As the IPCC explains, "climate change impacts spread from directly impacted areas and sectors to other areas and sectors through extensive and complex linkages."¹⁷ Birds provide a good example of this; as populations fall off and migration patterns change, farmers in areas less directly affected by climate change will be indirectly affected by the loss of birds to pollinate their crops.

Health is another area of vulnerability and interdependence. According to the IPCC, climate change will affect the health of millions of people, especially those with low adaptive capabilities such as children, the elderly, and people living in less-developed countries. Among the anticipated effects are increased malnutrition, storm-related deaths (including deaths from heatwaves), diarrhea (due to water poor quality), asthma and other respiratory diseases (due to poor air quality), and changing patterns of infectious diseases such as influenza.¹⁸

Given the already-occurring and likely effects of climate change – as well as their possible political repercussions, such as war – the IPCC and other international bodies have begun to consider what changes humans can make to (1) mitigate climate change by reducing GHG emissions and thereby diminish the effects of climate change and (2) adapt to climate change to reduce suffering, dislocation, and conflict as much as possible.

Reducing GHG Emissions

According to the IPCC, "past emissions are estimated to involve some unavoidable warming ...even if atmospheric greenhouse gas concentrations remain at 2000 levels. [Thus t]here are some impacts for which adaptation is the only available and appropriate response."¹⁹ Nevertheless, it would be helpful for future generations to reduce GHG emissions as much as possible. UN Member States have been trying to do so since 1992 and have adopted several agreements on the issue.

¹⁵ IPCC, "Summary for Policy Makers," *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, (Geneva: IPCC, 2007), pp. 11-12, available at <https://www.ipcc.ch/report/ar4/>.

¹⁶ Thomas Wagner, "Cities at Risk of Rising Sea Levels," Associated Press, 27 March 2007, available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/03/27/AR2007032701871.html>

¹⁷ IPCC, "Summary for Policy Makers," *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 12.

¹⁸ IPCC, "Summary for Policy Makers," *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 12.

¹⁹ IPCC, "Summary for Policy Makers," *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 19.

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In 1992, the General Assembly (GA) convened a World Summit in Rio de Janeiro, Brazil. At the conference, known as the Earth Summit, 154 UN Member States signed the Framework Convention on Climate Change (FCCC). Parties to the FCCC agreed to

[stabilize] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [man-made] interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.²⁰

Specifically, FCCC signatories agreed to monitor and reduce their greenhouse emissions, and to cooperate to share information about and technology to address climate change. In addition, developed states pledged to “aim to” reduce their greenhouse emissions, especially carbon dioxide, “with the aim of returning individually jointly to their 1990 levels.” Furthermore, the most developed states agreed to provide financial assistance to help less-developed states reduce their emissions.²¹

The rationale for expecting different levels of commitment from states at different levels of development was that, “economic and social development and poverty eradication are the first overriding priorities of the developing country Parties,” and therefore, they could not be expected to fulfill the FCCC requirements without help from developed countries.²² Moreover, historically the US and other developed countries have been the largest emitters of greenhouse gasses (GHG). In 2000, the US was responsible for 20 percent of all GHG emissions, while the 25 European Union states were responsible for 14 percent. China’s emissions have grown over the past decade and a half, as it has developed and used more electricity, which it produces primarily by burning coal. In 2000, China contributed 15 percent of GHGs. The other top-five emitters were Russia and India, each with 6 percent of the world total. Together, just 25 countries accounted for 83 percent of global emissions.²³

As of 2017, China has become the largest emitter of GHGs, representing 30% of GHG emissions. One should note, however, that a number developed countries still remain at the top. The United States emits 15% of the world’s greenhouse gases, and countries in the EU emit around 9%.²⁴ The emissions of most developed states (and many states in the Middle-East) are also much higher per capita than the emissions of China.²⁵

The FCCC entered into force on March 21, 1994. As of 2017, 196 states, including the US, and the EU as a regional organization (197 parties total) have ratified it.²⁶ Nearly universal ratification is not, however, a good indicator of state commitment to the FCCC, which is vague and non-binding.

²⁰ “United Nations Framework Convention on Climate Change,” Article 2, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>

²¹ United Nations Framework Convention on Climate Change,” Article 4.

²² United Nations Framework Convention on Climate Change,” Article 4.

²³ Kevin A. Baumert, et al., “Navigating the Numbers: Greenhouse Gas Data and International Climate Policy,” World Resources Institute, 2005, p. 10, available at http://pdf.wri.org/navigating_numbers.pdf; United States Environmental Protection Agency, “Global Greenhouse Gas Emissions Data,” available at <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data#Country>, accessed 5 September 2017.

²⁴ United States Environmental Protection Agency, “Global Greenhouse Gas Emissions Data.”

²⁵ World Bank, “CO2 Emissions (Metric Tons Per Capita),” available at <http://data.worldbank.org/indicator/EN.ATM.CO2E.PC>, accessed 5 September 2017.

²⁶ United Nations Framework Convention on Climate Change, “Status of Ratification,” available at http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php, accessed 5 September 2017.

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In 1997, some parties to the FCCC negotiated and signed a more binding agreement, known as the Kyoto Protocol to the FCCC. In the agreement, developed states promised to reduce emissions to 95 percent of 1990 levels by 2012.²⁷ By the end of its first commitment period in 2012, 192 states ratified the Protocol.²⁸ Among the states that did not ratify the Kyoto Protocol was the US, which objected to its application to developed states only.²⁹

In 2012, UN Member States agreed to a second commitment period for the Kyoto Protocol called the Doha Amendment. Under the amendment, 37 states agreed to a new set of commitments set to expire in 2020. Of the developed states with commitments in the original commitment period, all developed countries except Russia, Japan, and New Zealand agreed to new targets. As of now, only 80 of the necessary 144 ratifications for the amendment to enter into force have been submitted to the UN, despite being more than halfway through the commitment period.³⁰

One reason the Doha Amendments may not have received many ratifications is that states shifted their focus to the Paris Climate Agreement. Unlike Kyoto and Doha, which set targets for primarily developed states, the Paris Accords established targets for nearly every state to limit emissions and prevent temperatures from rising more than 1.5° C (3.6° F). The 1.5° target was selected because it is the threshold at which scientists predict that the effects of climate change will be irreversible. In addition, the agreement is supposed to “strengthen the ability of countries to deal with the impacts of climate change,” particularly via financial assistance and capacity-building from developed countries to developing countries.

The agreement was initially lauded for its universal membership, as 197 states signed the document and agreed to become parties to the agreement. As of September 2017, 160 of those countries have ratified the agreement. The agreement entered into force in November 2016 after it met the requirement for 55 countries representing at least 55% of GHG emissions to ratify the agreement.³¹

Still, some have pointed out that the Agreement suffers from significant impediments. For one, even if states meet their current targets in the Paris Agreement, the world will not limit rising temperatures to 1.5° C as states had hoped.³² To be sure, parties to the agreement are expected to meet recurrently in the future to adjust the targets, but this will require an increased willingness amongst states to limit their emissions even further. This may be difficult given that part of the reason the agreement likely passed was that states were allowed to set their own targets. As one observer noted at the time “while every country [was] required to put forward a plan, there [was] no legal requirement dictating how, or how much, countries should cut emissions.”³³

Second, although the agreement states that developed countries should provide at least \$100 billion of aid to developing countries in an effort to mitigate climate change, these statements were included only in the Preamble

²⁷ “Kyoto Protocol to the United Nations Framework Convention on Climate Change,” 1998, Article 3 and Article 6, available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf>

²⁸ United Nations Framework Convention on Climate Change, “Status of Ratification of the Kyoto Protocol,” available at http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php, accessed 24 September 2017.

²⁹ George W. Bush, “Text of a Letter from the President to Senators Hagel, Helms, Craig, and Roberts,” White House News Release, March 13, 2001, available at <https://georgewbush-whitehouse.archives.gov/news/releases/2001/03/20010314.html>.

³⁰ UNFCCC, “Status of the Doha Amendment,” http://unfccc.int/kyoto_protocol/doha_amendment/items/7362.php.

³¹ UNFCCC, “The Paris Agreement,” http://unfccc.int/paris_agreement/items/9485.php.

³² Adam Frank, “Paris Climate Agreement: Success Or Failure?” *NPR* [Opinion], 12 January 2016, <http://www.npr.org/sections/13.7/2016/01/12/462753762/paris-climate-agreement-success-or-failure>

³³ Coral Davenport, “Nations Approve Landmark Climate Accord in Paris,” *New York Times*, 12 December 2015, http://www.nytimes.com/2015/12/13/world/europe/climate-change-accord-paris.html?_r=0

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of the document. Thus, they are not legally binding on parties to the agreement.³⁴ If the international response to climate change does not change, adaptation will become even more necessary to address the effects of climate change than it already is, given current projections of rising global temperatures.

Adapting to Climate Change

Responses to climate change can be divided into two types: reactive and preventative. Reactive measures respond to the disasters spawned by climate change. For example, in September 2008, the UN “appealed for nearly \$108 million for an estimated 800,000 people in Haiti in need of humanitarian aid, to deal with a series of devastating tropical storms and hurricanes.”³⁵ The UN’s work to negotiate and implement the UNFCCC and Kyoto Protocol are examples of preventative measures. Despite international efforts such as these, states will also need to take preventative measures at the national level as well.

Since the planet will continue to warm even if currently planned GHG emissions reductions succeed, it is vital for countries to begin now to prepare for the most significant effects of climate change. According to the IPCC, “adaptation alone is not expected to cope with all the projected effects of climate change, and especially not over the long term as most impacts increase in magnitude.”³⁶ Still, effective adaptation would reduce the effects as much as possible.

According to the IPCC, “the array of potential adaptive responses available to human societies is very large, ranging from purely technological (e.g., sea defences), through behavioural (e.g., altered food and recreational choices), to managerial (e.g., altered farm practices) and to policy (e.g., planning regulations).”³⁷

In a report from 2012, the IPCC suggested several specific practices, however, including: (1) Building a culture of safety, meaning that states should educate their citizens on climate change and who and what within their borders climate change will affect. This also involves creating early warning systems and channels for such systems to reach the public. (2) Reducing climate-related disaster risk by ensuring that states take measures like protecting ecosystems, ensuring safe infrastructure and building codes, and reducing vulnerabilities through development and poverty reduction. (3) Transferring and sharing risk via means like establishing insurance programs for buildings, property, and crops. (4) Managing the impacts of climate change, such as creating mechanisms to respond to disasters.³⁸

Some states have already begun to adapt. For instance, as the IPCC notes:

[C]limate change is considered in the design of infrastructure projects such as coastal defence in the Maldives and The Netherlands, and the Confederation Bridge in Canada. Other examples include prevention of glacial lake outburst flooding in Nepal, and policies and strategies such as water management in Australia and government responses to heatwaves in, for example, some European countries.³⁹

³⁴ Coral Davenport, “Nations Approve Landmark Climate Accord in Paris.”

³⁵ “UN seeks almost \$108 million for Haiti floods,” *USA Today*, September 11, 2008.

³⁶ IPCC, “Summary for Policy Makers,” *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 19.

³⁷ IPCC, “Summary for Policy Makers,” *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 19.

³⁸ IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (Cambridge: Cambridge University Press, 2012), pp. 362-75; available at http://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf

³⁹ IPCC, “Summary for Policy Makers,” *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 19.

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Denmark has become a leader in creating innovated climate change technology that reduces countries' dependencies on fossil fuels.⁴⁰ Sweden has issued new dietary guidelines that consider both the nutrition content of food and its carbon footprint; according to Swedish researchers, "25 percent of the emissions produced by people in industrialized nations can be traced to the food they eat."⁴¹

According to the IPCC, how countries adapt will depend on factors "that directly shape the health of populations such as education, health care, public health initiatives and infrastructure and economic development." Thus less-developed countries will have the hardest time adapting and will, therefore, experience the most profound effects on human life and health. In fact, climate change is likely to delay or even reverse their development. In 2014, the IPCC stated that "it is *very likely* that climate change can slow the pace of progress towards sustainable development." Thus, the IPCC further noted that "climate change could impede achievement of the Millennium Development Goals."⁴²

The sustainable Development Goals (SDGs), which include climate action as one of their key targets, had not yet replaced the former MDGs when the IPCC made these statements. Still, unless states go beyond their current commitments under the Paris Accord, climate change will likely have a negative impact on the achievement of the SDGs.⁴³ This, in turn, would reduce less-developed countries' ability to adapt to climate change and increase the pressures on developed countries to help refugees and resolve resource conflicts. Particularly given the difficulty of achieving cooperation on climate change mitigation, this makes assistance to developing countries for adaptation vital to the success of sustainable development, as well as additional adaptation measures in the future.

According to the IPCC, "there are formidable environmental, economic, informational, social, attitudinal and behavioural barriers to the implementation of adaptation." In addition, there is the problem of incorporating current scientific knowledge about climate change into existing ideas of sustainable development. According to the IPCC, "few plans for promoting sustainability have explicitly included either adapting to climate change impacts, or promoting adaptive capacity."⁴⁴

Previous Committee Work on This Topic

Each year, the General Assembly holds a high-level plenary meeting attended by heads of state. In 2007, for the first time, the GA devoted a plenary session to climate change. Before the meeting, General Assembly President Sheika Haya Rashed Al Khalifa said, "[w]e will need political action if we are to protect our environment, secure our planet and safeguard our future for our children and generations to come. This is one of the greatest challenges of our time."⁴⁵ In accordance with the IPCC report, Al Khalifa called for climate change to no longer be considered strictly an environmental issue, but rather a matter of sustainable development.⁴⁶

⁴⁰ Ministry of Foreign Affairs Denmark, "Danish Cleantech Solutions – driving export and attracting foreign investments," available at <http://en.cop15.dk/denmark/s+efforts/danish+cleantech+solutions>

⁴¹ Elisabeth Rosenthal, "To Cut Global Warming, Swedes Study Their Plates," *New York Times*, 22 October 2009, available at <http://www.nytimes.com/2009/10/23/science/earth/23degrees.html?mcubz=1>.

⁴² IPCC, "Summary for Policy Makers," *Climate Change 2014: Impacts, Adaptation and Vulnerability*, p. 18.

⁴³ United Nations, "Sustainable Development Goals," <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

⁴⁴ IPCC, "Summary for Policy Makers," *Climate Change 2007: Impacts, Adaptation and Vulnerability*, pp. 19-20.

⁴⁵ UN News Centre, "In first plenary on climate change, General Assembly to seek speedy action," 30 July 2007, available at <http://www.un.org/apps/news/story.asp?NewsID=23364&Cr=climate&Cr1=change>

⁴⁶ UN General Assembly, "Addressing Climate Change: The United Nations and the World at Work," February 2008, p. 4, available at <http://www.un.org/ga/president/62/ThematicDebates/statements/CCsummaryFINAL.pdf>

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In July 2008, the GA held an informal meeting on “Climate Change and the Most Vulnerable Countries – the Imperative to Act.” At this meeting, President d’Escoto Brackmann, underscored that climate change is “inherently a sustainable development issue.”⁴⁷ The President went on to stress that not enough is being done to assist the most vulnerable countries including the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island states (SIDS). Furthermore, he called on developing countries to do their part by implementing previously agreed upon limits to curb emissions, helping create effective mechanisms for technology transfers to the developing world, and providing sufficient resources for effective climate funding. Much of the discussion in the informal meeting called on developed countries to recognize and aid those countries most effected by climate change and least able to act.

In June 2009, the GA unanimously adopted Resolution 63/281, *Climate change and its possible security implications*. In the resolution, the GA expressed concern about the possible security implications of climate change, especially for the developing world, and asked Secretary-General Ban to submit to the upcoming session a comprehensive report on those implications. The GA also “invited the major organs of the United Nations, including the Security Council, to intensify their efforts to address the challenge, as appropriate and within their respective mandates.”⁴⁸

In May 2013, the GA held a thematic debate entitled “Sustainable Development and Climate Change: Practical Solutions in the Energy-Water Nexus.” During the debate, states recognized the importance of water and energy in meeting future development goals, such as food security. The panel recognized that climate change will put greater stress on meeting development goals, specifically as it brings greater challenges for meeting energy and water needs in developing states. As a response, the panel emphasized the important role that dealing with climate change will have in future development goals, and affirmed the need for a new legally binding climate change agreement that states should adopt by 2015 before work towards new development goals begins.⁴⁹

For the 68th Session of the General Assembly (2013), the President of the General Assembly selected developing a “a new post-2015 development agenda to succeed the current Millennium Development Goals” as the session’s theme. As members of Asia-Pacific countries (many of which represent small island nations that are threatened by rising sea levels) spoke at the General Assembly towards the end of September 2013, they emphasized the need for integrating adaptation and reducing GHG into the post-2015 development agenda. For instance, Deputy Prime Minister Vete Palakua Sakaio of Tuvalu, stated that “[c]limate change is no longer an environmental or political issue...It is a borderless human security issue. Everybody must act to urgently reduce GHG (greenhouse gas) emissions and provide adaptation.”⁵⁰

In September 2015, the General Assembly adopted a new set of 17 Sustainable Development Goals to replace the former Millennium Development Goals, which ended in 2015. The new goals, similar to the MDGs, focus on promoting poverty reduction around the globe, but also incorporate the need for environmental sustainability. Goal 13 is specifically calls for states to “take urgent action to combat climate change and its impacts.” Still, states will need to promote the integration of mitigation and adaptation into other SDG targets, such

⁴⁷ UN General Assembly, “Climate Change and the Most Vulnerable Countries – the Imperative to Act: Summary,” 8 July 2008, available at <http://www.un.org/ga/president/62/letters/ccactsummary210708.pdf>

⁴⁸ UN General Assembly, “General Assembly, Expressing Deep Concern, Invites Major United Nations Organs to Intensify Efforts in Addressing Security Implications of Climate Change,” GA/10830, June 3, 2009, available at <http://www.un.org/News/Press/docs/2009/ga10830.doc.htm>

⁴⁹ UN General Assembly, “Thematic Debate Sustainable Development and Climate Change: Practical Solutions in the Energy-Water Nexus,” 16 May 2013, available at <http://www.un.org/en/ga/president/67/issues/climatechange/Sustainable%20Development%20and%20Climate%20Change%20Briefing%20Note%20on%20Panel%20Discussions.pdf>

⁵⁰ UN News Centre, “Asia-Pacific nations at UN call for urgent global approach to mitigate climate change,” 28 September 2013, available at <http://www.un.org/apps/news/story.asp?NewsID=46125&Cr=climate+change&Cr1=#.Ukhp0D-2ZWU>.

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as ending hunger and reducing poverty, if they want to ensure that developing states will be able to adapt to climate change. Ensuring that states adhere to development assistance and mitigation requirements in the Paris Agreement will play a vital role in attaining sustainable development under the SDGs, though, given the limitations noted above, states may need to create even bolder binding commitments to both mitigation and adaptation assistance.⁵¹

Conclusion

Already states failed to meet their first Kyoto commitments, and the next goals may have just as much difficulty. What can the GA do to contribute to progress in reducing GHGs and helping states develop the capabilities they need to adapt to climate change?

In developing your country's position on this issue, consider the following questions:

- Is your state a developed country or a developing country?
- What are its current and historical greenhouse gas emissions?
- Has your state signed and ratified the FCCC Kyoto Protocol and Paris Agreement? Why or why not? If so, has it met its emission targets? Why or why not? Has it supported calls for a new commitment?
- Is your country suffering from problems related to climate change? How has it dealt with these problems? Has it received assistance? What are the likely long-term effects of climate change in your country?
- How can and should the General Assembly encourage states to adapt to climate change? What is the right mix of emissions reduction and adaptation? What kind of adaptation is most needed?
- Given the connection between level of development and ability to adapt, should the GA revise the SDGs to not just include climate goals, but to integrate climate change adaptation into other goals? If so, which goals should be amended, and how?

Recommended Reading

Intergovernmental Panel on Climate Change (IPCC). "IPCC Fifth Assessment Report 2004." 2014. Available at <https://www.ipcc.ch/report/ar5/>.

This is the most detailed statement of the climate change problem and possible policy responses. The "Summary for Policy Makers" of the 2014 report provides a concise statement of the challenges in each world region. The Full report, especially the report on adaptation, provides detailed insights into the challenges and potential strategies for promoting adaptation.

Intergovernmental Panel on Climate Change. "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation," 2012. Available at http://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf.

Sections 6.4 and 6.5 of this document detail strategies suggested by the IPCC for dealing with climate change in more detail. Chapter 7 provides an overview of international law, efforts at creating integrated international responses to climate change, and potential strategies for an international response.

School of Geography and the Environment. "UNDP Climate Change Country Profiles." Available at http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/adaptation/undp_climate_changecountryprofiles.html.

This website provides country-level climate data summaries on 52 developing countries. It was created to help bridge the information gap on climate change for developing countries.

⁵¹ United Nations, "Sustainable Development Goals;" ⁵¹ IPCC, *Climate Change 2014: Impacts, Adaptation and Vulnerability*, pp. 18, 56, 61.

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United Nations. "Gateway to the UN System's Work on Climate Change: Examples of UN Projects." Available at <http://www.un.org/climatechange/projects.shtml>.

This website provides country-specific examples of UN work on renewable energy projects.

United Nations. "Sustainable Development goals. Available at <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

This is the official UN Sustainable Development Goals website. It includes links to each of the goals, as well as press releases, news, and other information related to the SDGs.

UN Framework Convention on Climate Change. "Essential Background: The Convention and the Protocol." Available at http://unfccc.int/essential_background/items/2877.php , accessed 30 September 2013

This website provides access to background information and the texts of the FCCC and Kyoto Protocol, as well as a list of states that have ratified each treaty. It also lists GHG data from reports given by states.

Coral Davenport, "Nations Approve Landmark Climate Accord in Paris," New York Times, 12 December 2015, http://www.nytimes.com/2015/12/13/world/europe/climate-change-accord-paris.html?_r=0

This article from the New York Times provides a brief but useful overview of the agreement. See also the UNFCCC website at <http://unfccc.int/2860.php#>, which discusses meetings and provides links to information on recent and upcoming negotiations related to climate change, especially the Paris agreement.