

Climate Change: Background Guide



Secretary-General Ban Ki-Moon visited Antarctica to observe the effects of climate change.

Topic Background

Humans have an impact on the environment. We need shelter and housing; this means cutting down trees in order to make wood. We need food to eat; this means hunting animals, harvesting plants, and fishing the oceans. We need water to drink; this means controlling lakes, rivers, and seas.

But we also want to drive cars, fly airplanes, and steer ships; this requires oil and gas, and this creates pollution. We want to manufacture goods made out of steel and plastic and other materials; this creates more pollution.

Smaller forests and jungles, fewer animals, lack of water, more pollution – humans are changing the environment, and the human population is growing. The effect that humans have on the environment, particularly the atmosphere or climate, is called “man-made climate change.”

Specifically, human activity is actually making the world warmer. When humans create pollution, that pollution is actually trapped within the Earth’s atmosphere. As more and more pollution is trapped, the world gets warmer. This pollution includes carbon dioxide and is referred to as “carbon emissions.” When pollution is trapped, it’s like being stuck in a room where the heat is getting turned up; this is referred to as the “greenhouse effect.” There’s one type of human activity that is causing so much pollution: the burning of “fossil fuels,” particularly oil, gas, and coal.

The Earth actually has a natural way of preventing climate change. Forests and oceans can actually absorb carbon dioxide; they are called “carbon sinks.” However, human

activity includes cutting down forests and polluting the oceans, which means less carbon dioxide gets absorbed.

Humans are increasing pollution – carbon emissions – while at the same time, destroying forests and oceans – carbon sinks. As a result, there's more carbon and other greenhouse gases in the atmosphere, and global temperatures are rising. This has been going on for years.

Because of climate change, there are more natural disasters, such as droughts, tropical cyclones, and floods.¹ These natural disasters occur usually when regional temperatures increase, causing the number of intense storms to be more frequent. The United Nations has stated that the number of recorded natural disasters doubled from 200 to 400 annually. Due to climate change, the increased frequencies of floods, droughts, and other natural disasters led to 36 million people being displaced in 2008.² In addition, many people are internally displaced because of other slow-paced environmental degradation circumstances such as desertification and the submersion of islands.

Additionally, as the global temperature increases, people have been subjected to heat waves and droughts. Farmers struggle with failed crops, water dependent industries struggle with producing because a reduced water supply causes a high demand. Heat wave victims suffered from heat stroke, asthma, and other illnesses.

People have even lost their homes because of climate change. According to the United Nation, more than 10 million people were displaced due to floods in 2011 alone. More than 400,000 have been displaced because of landslides. Other climate change-related natural disasters have led to violent conflict over supplies, poverty, and health deterioration.³

Climate change is also causing ocean water levels to rise. As a result, islands are literally disappearing into the water. Entire island countries, such as the Maldives, will disappear because of climate change.

Climate change is the “perfect problem” because it is a “slow-moving crisis.” It doesn't seem like an urgent problem, so governments have little incentive to address it. But as the problem gets worse, it becomes inevitable – at some point, there will be no way to stop climate change and prevent temperatures from increasing. Climate change is a problem that makes other problems worse – natural disasters, drought, hunger, refugees, and conflict. And this particular problem threatens the existence of entire countries – and if it's not addresses, it threatens the very existence of humankind.

¹ “Effects of Climate Change” NASA. <http://climate.nasa.gov/effects/>

² “Climate Change” United Nations. <http://www.un.org/en/globalissues/climatechange/>

³ “Refugees” UN High Commissioner for Refugees. <http://www.unhcr.org/pages/49c3646c125.html>

Past International Action

The nature of this topic is relevant to SDG 13: Combat Climate Change.⁴ These development goals emphasize the need for sustainable development and prevention of loss of environmental resources through the creation of the United Nations Framework Convention on Climate Change (UNFCCC).

The UNFCCC is an intergovernmental treaty focusing on climate change.⁵ Ratified by 192 countries since 1994, the UNFCCC addresses the issue through implementing subsidiary departments with the Conference of the Parties (COP) which are regular meetings convening the convention. For example, the Global Environment Facility (GEF) is a financial mechanism that provides financial aid for LEDCs (Less Economically Developed Countries) in order for the LEDCs to uphold the convention's requirements. An addition to the treaty is the Kyoto Protocol, this protocol focuses on reducing greenhouse gas emissions to fight climate change.⁶

In 1994, the joint UNEP (United Nations Environmental Program) and OCHA (UN Office for Coordination of Humanitarian Affairs) Environment Unit is responsible for preparation and humanitarian response coordination efforts in environmental disasters. This unit develops long term strategies for natural disaster recovery and raises awareness about environmental topics such as climate change. The environment unit does disaster risk reduction (DRR) activities with local governments such as improving early warnings for environmental disasters. In addition, the unit coordinates response efforts through implementing procedures for emergency volunteers. Also, there are non-governmental organizations which provide humanitarian aid and response efforts for climate change related natural disasters.⁷

In 2015, world leaders met in Paris for the 21st "Conference of Parties" under the UNFCCC. They reached a landmark agreement, with many countries agreeing to place a limit on their carbon emissions; this is referred to as the "Paris Agreement." However, non-governmental organizations (NGOs) were critical of the agreement because it did not specify enforcement; countries agree to reduce emissions, but did not agree to any penalties if they exceeded their limits.

Possible Solutions

The issue of climate change related natural disasters is relevant to sustainable development goal 13: to combat climate change. It is acknowledged by the United Nations that climate change will destroy the Earth. Already, there are three major sub issues with climate change related natural disasters such as economic development, increased risk of droughts and floods, and combatting higher temperatures.

⁴ "United Nations Millennium Development Goals" United Nations. <http://www.un.org/millenniumgoals/envIRON.shtml>

⁵ "Climate Change Newsroom" UN Convention on Climate Change. <http://newsroom.unfccc.int>

⁶ "Environmental Emergencies" UN OCHA. <http://www.unocha.org/what-we-do/coordination-tools/environmental-emergencies>

⁷ "Disaster Preparedness" AmeriCares. <http://www.americares.org/global-health/health-initiatives/disaster-preparedness.html>

Firstly, economic development is needed in countries which have suffered from natural disasters. Financial aid is needed in LEDCs to rebuild long term assets such as businesses and to provide humanitarian aid for survivors. An example would be Typhoon Haiyan in the Philippines. According to the post 2015 development framework for the United Nations, annual typhoons caused the poverty rate in Rizal, a poor province, to double from 5.5 percent to 9.5 percent in 2009. Furthermore, regional development banks provide financial loans for the Philippines in order to rebuild infrastructure. ⁸After Typhoon Haiyan, the Asian Development Bank (ADB) offered various grants and loans to the Filipino government. Besides providing loans, the ADB also is involved in mitigation efforts. The ADB opened an office in the Philippines to coordinate the usage of loans and provide strategic advice on the reconstruction of infrastructure.

Also, mitigation efforts have been conducted through assessment tools developed by the UNEP in climate change related disasters such as floods in Jamaica. The creation of disaster risk reduction tools can possibly prevent future impacts of both climate change and natural disasters. Jamaica suffers from frequent floods and tropical cyclones due to higher temperatures, as a result, Jamaica uses the Risk and Vulnerability Assessment Methodology Development Project (RiVAMP) by UNEP. ⁹The RiVAMP initiative led to the Government of Jamaica publishing a scientific report detailing the importance of the environment and climate related hazards. In fact, the UNEP provides training on RiVAMP methodology throughout the world where the RiVAMP tool is used. The tool has aided the assessment and evaluation of climate change factors such as higher temperatures, while highlighting the environmental impacts of such future climate change related disasters.

Climate change itself is a major problem. One of UNEP's projects is the Climate Technology Center and Network (CTCN).¹⁰ The CTCN provides low carbon and climate friendly solutions in both MEDCs and LEDCs. For example, the CTCN offers three main services: technical assistance, developing access to knowledge on low carbon technology, and establishing a network for environmental experts in both private and public institutions. While providing technical assistance, the CTCN conducts assessments on technology efficiency and implements planning documents such as energy strategies. Also, the CTCN provides webinars and workshops to help identify suitable technology options in LEDCs. Within the network, members coordinate workshops and tutorials among stakeholders and other environmental experts. Thus, the CTCN works hard to reduce greenhouse gas emissions around the world through improving capacity building and increasing investments in climate technology initiatives.

Overall, delegates should focus on implementing mitigation and adaptation efforts towards the issue of climate change related natural disasters. Delegates could focus on

⁸ "Typhoon Haiyan" Asian Development Bank (ADB). <http://www.adb.org/countries/philippines/typhoon-haiyan-adbs-response>

⁹ "Disaster Risk Reduction" UNEP. <http://www.unep.org/disastersandconflicts/Introduction/DisasterRiskReduction/Capacitydevelopmentandtechnicalassistance/RiVAMPinJamaica/tabid/105927/Default.aspx>

¹⁰ "About CTCN" CTCN. <http://www.ctc-n.org/about-ctcn>

creating assessment tools tailored for climate change in order to evaluate the status of their countries' ecosystems and the efficiency of natural disaster emergency services. Besides UNEP programs, delegates could propose the idea of independent research institutions to conduct further research on climate resilient technology.

Further Research

<http://www.unep.org/climatechange/> United Nations Environmental Program (UNEP)

<http://www.unocha.org/what-we-do/coordination-tools/environmental-emergencies>
UN Office for the Coordination of Humanitarian Affairs, Environmental Unit

<http://www.unmillenniumproject.org/goals/gti.htm#goal7> Millennium Goal 7: Ensure Environmental Sustainability

<http://www.nature.org/ourinitiatives/urgentissues/global-warming-climate-change/index.htm?intc=nature.tnav.how.list> Nature Conservancy Organization