

United Nations Framework on Climate Change
The Impact of Climate Change on Human Health
United States of America

Improving Human Health Affected by Climate Change

The subject of human health when speaking on climate change is often ignored, as many specifically focus on finding viable solutions to slow the known, physical components of global warming, such as sea level rise. The increasing temperature of Earth is cited as the specific cause to the rise of communicable diseases, famine, cancer, and more. Only recently has the world directed attention to the true dangers climate change has on humanity. The United States has recently taken an offense approach to combatting the public health risks behind climate change, beginning with our Environmental Protection Agency's release of significant findings and a conference on health in April of 2016.¹ As revealed in the report, the most threatening factors to the United States is rising heat and air quality, but this is not the same for around the world.² High levels of carbon dioxide, released in the United States as well as China, have the most devastating effects on the health of Asian and African peoples.

Seeing as the United States is the second largest polluter internationally, we are prepared to make drastic changes to energy consumption, as well as finding innovative and sustainable energy alternatives. Within the US, transportation has recently surpassed energy production in the greatest polluters, so finding technology to reduce pollutants is essential. Specifically, we would like to utilize Microbe Biofuel Engineering, which utilizes carbon capture as well as microorganisms to create a natural liquid fuel. Carbon dioxide would be extracted from the air through the use of air capture technologies, storing this gas in underground cavities. Utilizing carbon capture would result in sixty-five percent extraction from current carbon polluters in the United States, and reduce CO₂ levels.³ Through the use of this CCS technology, carbon dioxide would be stored in reservoirs temporarily before they are placed in pressurized containers for microbe conversion. Microorganisms would digest and later defecate new materials, such as oxygen and organic compounds, with the help of minimal electric stimulation. Not only would the use of this multistep technology result in lower carbon levels, but it would also directly lead to greater oxygenation as well as a competitive market for non-polluting fuel. This technology is currently being developed at the Massachusetts Institute of Technology, and their project is estimated to be implemented by 2018.⁴ Furthermore, the United States would also like to raise a new initiative to reduce the number of polluting automobiles by placing significant taxes on cars to lower gas-consuming vehicle purchasing, forcing companies to convert to microbe fuel based automobiles. Additionally, we would like to fund the use of photovoltaic technology within public transportation through the use of PV Trains.⁵ This new transportation method is currently being discussed within the European Union, specifically within Italy to be implemented. Using photovoltaic cells, which more efficiently capture and store solar energy, trains would become battery-based and rely only on solar energy to operate. This technology has a future being implemented in areas of high traffic, such as Los Angeles, where solar-energy is accessible and will reduce the deplorable amount of emissions released everyday by motor vehicles. Simply converting to energy-efficient technology within our own country will have a beneficial effect on

health at home and abroad, where reduced levels of emissions will lead to lower cases of asthma and reaching goals set by the Paris Agreement to slow increasing temperature levels.

Internationally, the United States is prepared to aid nations who have suffered the most from the effects of climate change. Changes within the transportation sector can be applied to developed countries around the world, as well as their specific technologies can be used to combat consumption universally. Specifically within developing countries, those who are usually the most at risk of health risks, the United States would like to implement the Slingshot water purifier. Using any fuel source, even cow dung, various forms of infected water can be processed and purified in this compact, affordable device.⁶ Slingshot is in the early stages of implementation in South Africa, and the United States would like to implement this on a larger scale to stop the spread of communicable diseases and provide drinkable water to areas of desertification where famine is a major threat. In addition to avoiding the lack of water in areas of drought, the United States would like to implement CRISPR technology to create more adaptive vegetables. Using targeted genome editing, a microscopic “copy and paste” action will occur, slightly editing vegetables like corn, tomatoes, and potatoes to fight against bacteria.⁷ This technology is significantly different than the current TALEN system currently used for genetically-modified organisms within the United States. CRISPR technology is less controversial, as it uses pieces of the vegetable’s own DNA, rather than introducing new chromosomes; this significant change makes introducing genes of another organism, such as a codfish or pesticides, highly difficult. Furthermore, the United States would like to provide funding to international reforestation, the most natural way of reducing carbon dioxide and purifying air for both human and animal health. Through the Great Green Wall Initiative in the Sahara Desert, as well as the Three North Shelter Forest Program in the Gobi Desert, simply planting trees specific to that climate has proven to counter desertification, resulting in improved human health.⁸ The reforestation process has proven to be successful internationally, as seen in Burkina Faso and Kenya, where the Billion Tree Campaign has helped reestablish ecosystems within the area. Specifically, the United States would like to plant deciduous trees, as recommended by the World Agroforestry Center. In order to implement reforestation in the United States, we would like to work off of China’s legislation requiring each citizen to plant three trees a year. Through this simple action, it is estimated that deforestation over the last ten years will be counteracted and the health of billions improved.⁹ Additionally, the United States would like to distribute specific materials to humans most threatened by the affects of pollution and smog. In order to aid these people, the US would like to urge the international community and the World Health Organization to fund the distribution of Vogmasks, which are protective, carbon dioxide filtering face masks.¹⁰ Supplying this simple device to populations in high areas of pollution will decrease asthma rates, as well as prevent against the distribution of bacteria and infectious diseases.

Through the utilization of promising new technologies, the United States truly believes we can change our ways of energy-consumption at home to help those abroad.

United Nations Framework on Climate Change
Climate Refugees
United States of America

Aiding Climate Refugees and Preventing Further Displacement Due to Climate Change

Climate change and the growth of climate refugees is one of the most pressing humanitarian crises estimated to occur in the near future, with over 13 million threatened within the United States, and over 250 million internationally by 2050. With this minatory crisis occurring in the near future, the United States believes it is imperative that these environmental migrants are defined within the United Nations, as currently refugees are exclusively outlined as one who escapes war, persecution, or other political conflicts.¹¹ It is crucial to the United States that these refugees are clarified immediately within the Conference of Parties 22.¹² In addition to this, the United States would like to primarily focus on preventing further climate refugees by stabilizing communities, as well as preparing for future disaster through our CRRI plan, or Climate Refugee Rebuilding Initiative. Within the United States, we have set up extensive disaster preparedness protocol through our Federal Emergency Management Agency (FEMA) as outlined through our National Response Framework.¹³ Within this framework, action against disaster is divided into Prevention, Protection, Mitigation, Response, and Recovery.¹⁴ The United States' NRF is one of the most conclusive and detailed plans for managing disasters throughout the international community, as it covers duties for all Americans. We believe that our NRF is a model example for countries drafting their own National Disaster Emergency Response Plans, as maintaining a thorough procedure against national and international threats is key to preventing future climate refugees.

The United States' Climate Refugee Rebuilding Initiative is divided in to two separate plans specifically to aid current climate refugees, and ensure that no more will be forced to move due to climate effects. Currently, the United States provides Temporary Protective Status to those fleeing climate change internationally. Under this status, refugees can retain work permits as well as protection if their home country remains in unsafe conditions.¹⁵ We would like to similarly implement this protocol to developed countries internationally to accept climate refugees, as many have no hope or their home has been washed away. Although this is not a first choice for many countries, enforcing TPS can provide temporary relief as communities are being rebuilt. Additionally, the United States finds it crucial that temporary housing be addressed after disasters to prevent homelessness and slum growth. To combat this, the US believes that government grants should be temporarily given out to families willing to house refugees within developing countries, where funds are most available. Grants should be given out on a three to six month basis, as shelters during short-term climate threats or during rebuilding. This reduces the need for fast yet unstable housing being built, which many countries often result to during times of disaster stress. If grants cannot be applied in a nation due to lack of economic funding, it is crucial that non-governmental organizations provide stable aid to these nations. Specifically, the US would like to utilize flat-pack solar powered housing for a quick, yet sturdy shelter for developing nations. These refugee shelters were created through the joint efforts of IKEA as well as the UNHCR, and with adequate funding, can be implemented in threatened communities.

Requiring no tools and at an affordable price, up to five people can obtain shelter in each home from climate-change initiated disasters.¹⁶ The United States encourages the international funding to this project as action is taken to rebuild permanent housing with the help of USAID. In addition to the efforts through CRRI, we also support the growth of the Climate Services for Resilient Development to urge countries to create early-warning systems and clearly outlined evacuation routes.¹⁷ The CS4RD works to create a public-private partnership, encouraging private enterprises to supply climate services, such as readily available response systems as well as scientific data and training to respond and rebuild. The implementation the CS4RD program internationally is key to providing support to nations, such as Haiti, with the help of the private sector.¹⁸

The second step of the Climate Refugee rebuilding Initiative is preventing more at-risk people from becoming climate refugees through sustainable agriculture and preventing major disasters through natural barriers. Seeing as most climate refugees are extremely impoverished, it is key that we focus on securing economies and food levels.¹⁹ The United States fully promotes reforestation as a solution for the agricultural and environmental concerns, as replanting specific varieties of trees in threatened areas will increase in economical growth and also prevent communities from migrating due to loss of land.²⁰ Within areas affected by desertification and arid climates, planting leguminous trees and shrubs work as buffering components to protect communities from wind erosion. Simply planting legume trees will result in crop protection as well as protection for communities affected by sand movement.²¹ In addition to this, utilizing biochar is key to preventing the salinization of farm land. Through reusing and preserving biochar, or plant-made charcoal, salt levels can be decreased significantly and farming can prosper without the risk of wasting water or losing vital carbon and nitrogen within soil.²² In coastal areas, the reforestation of mangrove trees would provide habitats with ecosystem growth, preventing potential climate refugees from migrating due to economic needs. Additionally, mangrove forests provide barriers against tidal erosions on coastlines, as they have prospered for millions of years along the coast of Bangladesh.²³ This cost-effective solution can be implemented on an international level, and has the potential to sharply decrease numbers of climate refugees in the future. With the growth of ecosystems on the coastlines, jobs are secured with stabilization of fishing and transportation. In more arid environments, anything to block thermal stress and high winds is key to preserving food supplies.

With the United States' Climate Refugee Rebuilding Initiative, not only will the international community become better equipped for this new wave of refugees, but will prevent future instability and migration through stabilizing communities.

United Nations Framework on Climate Change
Steps to Enforce the Paris Agreement and Further Reduce Green House Gas Emissions
United States of America

Finding Innovative Solutions for Enforcing the Paris Agreement

In November 2015, the Paris Agreement was drafted at the Conference of Parties 21 as the first successful legally binding document on climate change. Since its agreement, over 87 countries have ratified the document within their nations, representing over 61% of global emissions.²⁴ Despite such a high number of ratified countries, the question of how to ensure this document is enforced internationally has yet to be solved. The United States of America fully supports efforts to reduce green house emissions worldwide, as we are on the forefront of technological development in order to reduce our percentage of carbon emissions. Working with China, United States of America ratified the Paris Agreement in a joint agreement to decrease our combined 39% of global emissions.²⁵ In order to properly execute the measures within the Paris Agreement, the United States has implemented specific measures to curb emissions by hydrofluorocarbons, as well as by the airline industry.²⁶ As decided through COP21, the United States' Intended Nationally Determined Contribution pledged to reduce greenhouse gas emissions by 26% by 2025. In order to execute this plan nationally, and to reduce emissions by 80% by 2050, the United States has implemented gradually reducing energy initiatives, beginning with the Clean Power Plan. In an effort to reduce pollution, the Clean Power Plan establishes national standards on fossil fuels to protect the American people as well as increase communication between government bodies and corporations.²⁷ Our CPP is our first step in establishing strong regulations on climate change.

The key to enforcing the Paris Agreement is international transparency and commitment to the laws set through joint accountability. The United States is fully prepared to uphold the Paris Agreement, as we previously failed the international community after the Kyoto Protocol, where our lack of action led to increased greenhouse gas emissions and distrust in future actions against climate change. For the prosperity of both our world and humanity, we see that it is time to enforce and be the leader towards clean energy. In order to uphold our promise, the United States has created monumental agreements with countries like China, where we promised to reduce greenhouse gas emissions by 26% by 2025. With Brazil, we promised to help fund and work together to increase renewable energy, as well as restore 12 million hectares of Amazonian forest by 2050 as well. Additionally, we were essential to amending the Montreal Protocol in 2015 to ban hydrofluorocarbons, which have 23,000 times the same effect carbon dioxide has on the ozone, with the collaboration of Canada and Mexico.²⁸ Our most recent accomplishment secured the Tropical Rainforest Alliance 2020, which works with over eighty corporations and countries to reduce deforestation, which is directly affected by the production of beef, palm oil, soy, pulp, and paper.²⁹

In addition to promoting accountability within the Paris Agreement, finding affordable, groundbreaking technologies is essential to ensuring all countries will have the ability to transition to clean energy. Within the United States, significant funding has been allocated to our ARPA-E, which researches and funds innovative technologies for promoting efficiency within

energy and fuel. Although this organization is currently at a national level, the United States believes that through further advancements in new technology, the projects within ARPA-E can be implemented at an international level. One such technology we would like to advocate for is Thermokinetic Coolants, which are a successful alternatives to hydrofluorocarbons created by Pennsylvania State University. Utilizing sound waves, this compact device separates cold and hot energy, and cools helium levels to be used as sufficient coolants. This simple device has the potential to be distributed at an international level, as well as be used in the private sector rather than HFCs. In addition to this technology, the United States would also like to further implement Carbon Capture technologies although with significant changes. Previously, carbon dioxide polluting plants have utilized carbon capture while also still letting off increased levels of the pollutants. As these companies capture carbon, they are releasing at a higher amount, while also using fossil fuels to generate power to capture carbon in the first place. This has become a notable problem within this technology, which we would like to change by requiring clean energy only to operate carbon capture and reduce federal grants to companies who use CC but still generate pollutants. It is imperative that this subject is addressed within our solution, in order to uphold the transparency of the Paris Agreement.

The United States would also like to focus on smart grid systems, as the lack of advanced energy grids has led to the loss of mass amounts of renewable energy and negative power prices in countries like Germany. Overall, conclusive conversions and development of more equipped power grids will allow sustainable energy sources to be the most cost-effective option and eliminate the need for fossil fuels. Utilizing the internet and globalization, international and national based super grids are necessary to promote real-time economic benefits and reduce energy consumption. To create this new system, funds first need to be allocated to renovate current, out-dated grids as seen in China and the United States. To do this, the United States suggests that a heavy carbon tax be placed on current plants that fail to convert to carbon capture or do not make significant advances in converting to solar, wind, or other natural energy sources. In addition to this, carbon cap and trade will be placed to create revenue and benefit companies that do adhere to carbon limits set by their governments. Using carbon cap and trade, corporations will receive specific government allowances to use towards investments, resulting in not only new revenue off of these allowances, but also lower pollution levels.³⁰ As corporations are gradually pushed towards sustainable energy, prior taxes will be able to connect these new plants together to use towards producing energy with no waste. In real time using the smart grid, companies and citizens alike can become conscious of energy-decisions and reduce green house gases with Google Power Meters implemented. These power meters reveal and communicate data on consumption, and can be beneficial for communities and homeowners to reduce their carbon footprint. Already, this innovative grid technology has been implemented in American homes, prospering in areas like California where more citizens are seeing the benefits of smart grids.³¹

- ¹ <http://www.apha.org/topics-and-issues/climate-change>
- ² <https://www.epa.gov/newsreleases/epa-administrator-announces-new-report-impacts-climate-change-public-health>
- ³ <https://www.iea.org/publications/freepublications/publication/technologyroadmapcarboncaptureandstorage.pdf>
- ⁴ <https://arpa-e.energy.gov/sites/default/files/0206-1543%20MIT%20-%20Bioprocess%20and%20Microbe%20Engineering%20for%20Total%20Carbon%20Utilization.pdf>
- ⁵ http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=2061&docType=pdf
- ⁶ <http://science.howstuffworks.com/environmental/green-tech/remediation/slingshot-water-purifier1.htm>
- ⁷ <https://www.technologyreview.com/s/600765/10-breakthrough-technologies-2016-precise-gene-editing-in-plants/>
- ⁸ http://www.greatgreenwallinitiative.org/sites/default/files/publications/harmonized_strategy_GGWSSI-EN_.pdf
- ⁹ <http://gudbai.de/zips/our-choice-a-plan-to-solve-the-climate-crisis-al-gore.pdf>
- ¹⁰ <http://www.vogmask.com>
- ¹¹ <http://www.unhcr.org/en-us/climate-change-and-disasters.html>
- ¹² <http://globalenergyinitiative.org/environment/116-dawn-of-the-climate-refugees.html>
- ¹³ <https://www.fema.gov/media-library/assets/documents/117791>
- ¹⁴ https://www.fema.gov/media-library-data/1466014682982-9bcf8245ba4c60c120aa915abe74e15d/National_Response_Framework3rd.pdf
- ¹⁵ <http://www.migrationpolicy.org/article/temporary-protected-status-united-states-grant-humanitarian-relief-less-permanent>
- ¹⁶ <http://weburbanist.com/2013/10/27/deconstructing-the-1000-ikea-flat-pack-refugee-shelter/>
- ¹⁷ <https://www.whitehouse.gov/the-press-office/2015/06/09/fact-sheet-launching-public-private-partnership-empower-climate-resilient>
- ¹⁸ wh.gov/the-record/climate
- ¹⁹ <https://legacy.scu.edu/illuminate/?b=619&c=23840>
- ²⁰ <http://www.fao.org/docrep/T0178E/T0178E03.htm>
- ²¹ <http://permaculturenews.org/2008/09/29/nitrogen-fixing-trees-the-multipurpose-pioneers/>
- ²² <http://www.biochar-international.org/biochar>
- ²³ mangrove.org
- ²⁴ <http://climateanalytics.org/hot-topics/ratification-tracker-projections.html>

²⁵ <https://www.fas.org/sgp/crs/misc/IN10568.pdf>

²⁶ <https://www.whitehouse.gov/blog/2016/09/03/president-obama-united-states-formally-enters-paris-agreement>

²⁷ <https://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan>

²⁸ <http://www.state.gov/r/pa/prs/ps/2015/04/240730.htm>

²⁹ <https://www.tfa2020.org>

³⁰ <https://www.edf.org/climate/how-cap-and-trade-works>

³¹ <http://www.cpuc.ca.gov/General.aspx?id=4853>