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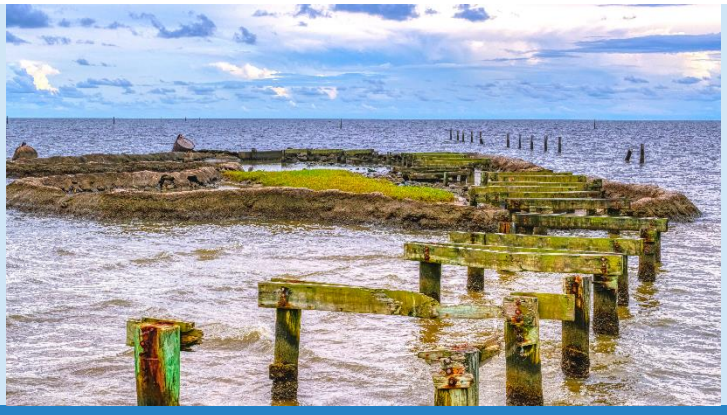

Climate Ambition and Sustainability Action

October 2020 **Analytical Brief**

Climate Change and the United States of America

Appeal from a Youth Representative

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Key messages >>>

- Decisions made during this decade will determine the degree of impacts of climate change for the rest of this century. United States is key to international leadership on climate ambition and action and there is much that the country's citizens can do. The United States government needs to quickly take action to protect the country and this planet as we enter a new and unprecedented post COVID-19 era.
- United States, which has produced the most emissions in the world since the Industrial Age wants to walk away from the Paris Climate Commitments. Pressure on the government and companies in the country is crucial in addressing climate change through appropriate mitigation and adaptation responses.
- Transportation and electricity based economic sectors are responsible for almost a total of 60 per cent of greenhouse gas emissions in the United States, so the primary focus of mitigation efforts should be decreasing the emissions of these two sectors. Research highlights that the United States produces over half of its electricity from outdated coal power plants that release pollutants and greenhouse gases into the atmosphere. A crucial step in achieving a low carbon supply of electricity is phasing out coal through carbon taxes, relocate coal workers, and de-risk clean energy investments.
- In terms of nature-based solutions to climate change, United States, through the forests of the Pacific Northwest and Southeast could double their storage of carbon if timber managers lengthen the time between harvests and allowed older trees to remain standing.
- Proactive adaptation require economic investments but new infrastructure and capital stock turnover create an opportunity for low-cost and proactive adaptation. Reactive adaptation can contribute to mitigation through demand signals which can alter markets due to changing the preferences and actions of consumers.

Framing the Issue

The most pressing danger to the world is climate change, and the actions taken during this defining decade will change everyone's future. Unlike other issues, the unrelenting threat of climate change does not spare anyone, regardless of their background. Climate change is a long-term shift in the state of the climate due to human activity that alters the global atmosphere and natural climate variability. Scientists attribute climate change to the greenhouse effect, which uses greenhouse gases to trap heat radiating toward space. Human activities, like burning coal, clearing forests, and increasing livestock, emit greenhouse gases, which cause the surface temperature of the Earth to rise. The Intergovernmental Panel on Climate Change (IPCC) finds that the global mean surface temperatures for 2081–2100 relative to 1986–2005 is projected to likely be in range of 0.3°C–1.7°C (RCP2.6), 1.1°C–2.6°C (RCP4.5), 1.4°C–3.1°C (RCP6.0), 2.6°C–4.8°C (RCP8.5). Additional consequences of these activities include extreme weather, higher sea levels, poor human health, decreased biodiversity, damaged infrastructure, and economic losses. According to the World Health Organization (WHO), approximately 12.6 million deaths per year are caused by avoidable environmental risk factors, and climate change's direct damage to health will cost USD 2–4 billion by 2030. In response to these threats, today's youth has been demanding for action. Millions of young people all over the world marched in global climate protests in September of 2019. This protest was the first time that the youth, on such an enormous scale, united in demanding action against climate change. United States, which has produced the most emissions in the world since the Industrial Age wants to walk away from the Paris Climate Commitments. Turning the youth momentum into pressure on the government and companies is crucial in addressing climate change through appropriate mitigation and adaptation responses.

Mitigation: Decarbonization of Energy Systems and Nature-based Solutions

According to the Environmental Protection Agency (EPA), transportation and electricity based economic sectors are responsible for almost a total of 60 percent of greenhouse gas emissions in the United States, so the primary focus of mitigation efforts should be decreasing the emissions of these two sectors. The transportation sector generates the highest amount of emissions among economic sectors as 90 per cent of the fuel used in transportation is petroleum-based and the sector accounts for nearly a third of carbon emissions in the United States, raising vehicle and fuel economy is essential for mitigation. The United Nations Emissions Gap Report for 2019 recommends that the United States strengthens national vehicle and fuel economy standards in order for new cars to have zero emissions by 2030. An even loftier goa for future would be to completely decarbonize transport by substituting fuel for clean power like hydrogen or bioenergy. To prompt this substitution, the economy needs to shift away from fuel by eliminating fossil fuel subsidies and increasing investment in public transport.

Another essential step in mitigation is to decarbonize electricity consuming sectors. United Nations recommends for the United States to introduce regulations for achieving electricity supply that is 100 percent carbon-free. By regulating power plants, energy standards, and carbon regulations, the government discourages carbon-producing energy, which catalyzes the transition to clean energy. The Union of Concerned Scientists found that United States can reduce current power plant emissions by 60 per cent, which would save consumers USD 440 billion per year. This reduction would, by 2020, result in annual savings of USD 350 per family. Research highlights that the United States produces over half of its electricity from outdated coal power plants that release pollutants and greenhouse gases into the atmosphere. So, a crucial step in

achieving a low carbon supply of electricity is phasing out coal through carbon taxes, relocate coal workers, and de-risk clean energy investments.

The most straightforward option for mitigation through carbon sequestration is through forests. The United States, through the forests of the Pacific Northwest and Southeast could double their storage of carbon if timber managers lengthen the time between harvests and allowed older trees to remain standing. Other options could be carbon capture and storage which involves capturing the carbon, transport to a storage location, and long-term isolation from the atmosphere.

Need for Reactive and Proactive Adaptation

Mitigation alone cannot sufficiently protect the Earth from climate change as, due to earth's inertia, climate change would occur even if greenhouse emissions are reduced in this century. Through reactive adaptation, populations change their practices by doing things like rationing water, changing crop types, conserving energy, using renewable energy, and restricting transportation to optimize the resources threatened by climate change. Reactive adaptation can contribute to mitigation by altering markets due to changing preferences of consumers. For example, changing consumer habits will force the fashion and food industries to improve their practices. Apparel and footwear alone in the United States makes up almost USD 380 billion of the global USD 2.5 trillion fashion industry. If shoppers in the United States stop supporting fast fashion and use their buying power to support eco-friendly companies, other brands will stop feeding consumerism and adapt sustainable practices. Similarly, a nationwide shift towards a plant-based diet will change the food industry's production and encourage grocery stores to increase plant-based options; agriculture produced 667 million metric tons in 2018, and meats make up 56.6 per cent of greenhouse gases contributions in the average American diet.

It is also important to preemptively plan for climate change through the government by creating flexible proactive adaptation strategies. The five general stages of proactive adaptation include awareness, assessment, planning, implementation, and monitoring and evaluation. Although the first three phases are underway in the United States, on-the-ground implementation is still limited. Insufficient funding often hinders adaptation. Annual adaptation costs are estimated to be from tens to hundreds of billions, but new infrastructure investments and capital stock turnover create an opportunity for low-cost and proactive adaptation.

Appeal for Climate Action Now

Climate change is a very imminent threat and has already begun to alter the world. According to new models, 20%–50% of the Atlantic, Pacific and Indian basins have already been affected by climate change. Decisions made during this decade will determine the degree of impacts of climate change for the rest of this century, with some effects, like rising sea levels, lasting for thousands of years to come. To make the world a better place for future generations, actions at all levels are needed: global, national, sub-national, community and individual. To most effectively confront climate change, global action is needed for which the international community needs to unite as the least common denominator will lead to inadequate climate action impacting the most vulnerable disproportionately.

United States is key to international leadership on climate ambition and action and there is much that the country's citizens can do. The United States government needs to quickly take action to protect the country and this planet as we enter a new and unprecedented post COVID-19 era. Policies and political will are essential to implementing mitigation and adaptation strategies for which pressure groups are needed for pro-climate lobbying and information dissemination. Influencing public opinion and attitudes

is also key to creating needed changes. Those who work in related fields, especially in science, should actively find or create new solutions or advocate for existing ones, which can be done through research, to inform and guide these policies. There is much that the youth in United States can do to protect their future. As pressure groups, they have a powerful voice that can influence businesses and the American government. Through community and school initiatives, youth can campaign and also implement strategies for their schools. Youth can also harness their consumer power to influence and shape businesses practices so that companies are accountable.

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Analytical Brief on Climate Ambition and Sustainability Action

The analytical brief series, brought out jointly by the World Sustainable Development Forum and the Protect our Planet Movement, seeks to highlight a topical issue relevant to the realization of the sustainable development goals and ambitious climate actions.

About WSDF

The World Sustainable Development Forum (WSDF) is a not- for-profit organization incorporated separately in Europe, Norway and the U.S. Its North American arm WSDF-NA, headquartered in Washington, DC carries 501c3 tax exempt status. WSDF is a global initiative to promote and mobilize global action for effective implementation of both the Paris agreement on climate change and the Sustainable Development Goals (SDGs) adopted by the UN General Assembly. WSDF's relevance and role lies in acting as a facilitator for helping with implementation of actions required under these two sets of agreements.

About POP Movement

Protect our Planet (POP) Movement believes that the impacts of climate change will not affect a single country but the planet, in its entirety. POP believes that the power of the youth of the world will unite and to address this challenge. POP believes that the time to act is now and that knowledge is the true currency of changing the future.

World Sustainable Development Forum WSDF

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