THE NEED TO REFOCUS INTERNATIONAL EFFORTS ON TRADITIONAL AIR POLLUTANTS

In 2017, Angela Merkel, then German Chancellor, closed the Group of 20 (G20) meeting in Hamburg by stating she "deplored" the United States for planning to leave the Paris Climate Agreement. Theresa May, then British Prime Minister, stated she was "dismayed" (Dewan and Halasz, 2017). While Germany and the United Kingdom decried America's position on climate change, it became clear that the Paris Agreement was not essential for U.S. progress on climate emissions, as the U.S. has continued to be a world leader in reductions—with the largest absolute decline in energy-related carbon dioxide emissions of any country in the world in 2019 (IEA, 2020).

Much can and should be made of how the flawed Paris Agreement—which President Biden reentered—and more broadly, the overweening international focus on climate, distracts and detracts from issues of critical importance across the board, ranging from prosperity to energy to security, with exceedingly little to show for meeting any climate goals. In fact, it has become abundantly clear that the voluntary energy disarmament of the west in the name of climate ambition has empowered our adversaries and continues to finance Putin's aggression in Ukraine, all while failing to deliver on its emissions-related promises. The ongoing energy and security crises—that have prompted even Germany to take a critical look at its own climate strategy—serve as a painfully obvious reminder of the danger of an excessive emphasis on climate issues and failure to address other threats. However, the damage that the myopic focus on climate change has done even within the environmental sphere is often overlooked, diverting attention and resources from critical avenues for real progress.

As in the case of the 2017 G20, the attention generated by Germany's and the U.K.'s climate posturing also served to obscure and deflect attention from their own environmental shortcomings, including their environmental air quality requirements for traditional air pollution—that is, criteria air pollutants[1] and air toxics[2] that directly impact public health and ecosystems and that have been regulated for decades in the United States (EPA, 2021d; EPA, 2020). Simply put, traditional air pollutants are all air pollutants other than greenhouse gases. Germany has no national regulatory standard for ground-level ozone (i.e., smog), and Germany and the United Kingdom both have less stringent standards than the United States for fine particulate matter ($PM_{2.5}$ or soot) (WHO, 2019). Meanwhile, the United States has unquestionably led on addressing traditional air pollution, spending billions of dollars to reduce air pollution and improve the health of Americans and the people of the world. Over the past 30 years, the United States has reduced concentrations of the core six traditional pollutants by over 77 percent and established regulations for 187 air toxics for over 90 percent of emissions from 30 priority pollutants for urban areas (together,

[1] Criteria air pollutants are six common air pollutants that are found all over the United States that can harm a person's health and the environment. Criteria pollutants include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$) and sulfur dioxide (SO_2).

[2] Air toxics or hazardous air pollutants are those pollutants that are known or suspected to cause cancer or other serious health effects.

traditional air pollutants). At the same time, our energy production has increased by 44 percent, and our economy has grown by 3.5 times (EPA, 2021c; Kaye, 2017).

In contrast, as of 2017, while the United States was one of the top 10 nations with the lowest air pollution, Germany and the U.K. did not rank in the top 10, and less than 40 percent of the U.K. population and 10 percent of Germany's population live in areas below the World Health Organization's (WHO) 2005 acceptable limit for $PM_{2.5}$. (Gould and Mosher, 2017; Bernard and Kazmin, 2018).[3]

Why, then, was the U.S. subject to such open international scorn from our allies? This environmental posturing reveals how international dialogue on environmental action has become dominated by an excessive focus on climate. Trapped in this dynamic, the U.S. expends a great deal of influence, interest, and treasure to allow other countries, including our adversaries as well as our allies, to claim leadership on environmental issues while producing very little environmental progress beyond vague, unenforceable promises on climate. At the same time, these countries often openly ignore other avenues for immediate, measurable impacts to improve the health and wellbeing of their citizens and those far beyond their borders, including Americans—like traditional air pollution. This is bad for the U.S. and bad for the environment. The U.S. should not cede the international dialogue and allow other nations to use insufficient, unenforceable climate promises to skirt clear opportunities for much-needed environmental progress. The failure to hold other nations accountable for traditional pollutants puts the United States at a competitive disadvantage.

TRADITIONAL AIR POLLUTION IS AN AVENUE FOR NEEDED ENVIRONMENTAL ACCOUNTABILITY AND PROGRESS

Addressing air pollution is an excellent place to start. In contrast to the complex and expansive nature of addressing climate emissions, the path to mitigating traditional pollutants is clear and proven, while the harms of failure are immediate and measurable. According to the WHO, $PM_{2.5}$ alone caused an estimated 4.2 million deaths worldwide in 2016, and particulate matter has been found to impact rainfall and monsoon intensities, resulting in significant agricultural, water reservoir, and biodiversity impacts (WHO, 2018; Seddon et al., 2019). Importantly, the failure to prioritize traditional air pollution cannot be justified by dismissing it as a localized issue compared to global climate change; this is a false dichotomy. For example, China's air pollution is not just China's problem or even just a problem for other nations in its vicinity. Traditional air pollution has a global impact. China's traditional air pollution continues to harm not only its own citizens but also Americans (Lin et al., 2017, 2943-2970). Mercury from China's coal-fired power plants[4]—which they keep building even after their climate commitments—and ground-level ozone pollution (i.e., smog) is so bad in Asia that it crosses the Pacific Ocean and lands in the United States (Conniff, 2016; Stanway, 2021). China is the largest emitter of mercury—which has been linked to fetal and child development problems—in the world, and in 2011 was the cause of 14 percent of the mercury found in the Great Lakes (Bradsher and Barbosa, 2006; Asanova-Taylor, 2012).

[3] To note, on September 22, 2021, the WHO released updated air quality guidelines. The WHO air quality guidelines and the information provided is based on the previous version of the WHO air quality guidelines. World Health Organization. (2021). WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. World Health Organization (WHO, 2021).

[4] To note, mercury from Chinese power plants also permeates into seafood like tuna, that Americans consume and thus also impacts American health. (Conniff, 2016).

One study concluded that:

> the increase in Asian anthropogenic [i.e., man-made] emissions is the major driver of rising background [Ozone] O_3 over the [Western United States] WUS for both spring and summer in the past decades, with a lesser contribution from methane increases over this period. The tripling of Asian NOx emissions since 1990 contributes up to 65% of modeled springtime background O_3 increases over the [Western United States] WUS, outpacing O_3 decreases resulting from 50% US NOx emission controls (Asanova-Taylor, 2012).

In short, this study shows that the environmental controls Americans are paying for are being undermined and canceled out by Asian pollution. Not only is this bad for American health, but it also requires American companies to install even more environmental controls to mitigate Asian pollution.

While many countries have benefitted from the shift in international environmental dialogue, no country has benefited from the transition to climate change more than China. China, historically seen as a laggard in environmental protection, is lauded for its non-descript commitments on climate change, with some even calling China a "leader on climate change" even as its greenhouse gas emissions have tripled since 1990 and now account for 27 percent of the world's total—more than the developed world combined ("Game Changer," 2021; Maizland, 2021; Larsen et al., 2019). The international community cannot let China's already lackluster climate ambitions—like its Paris commitment to begin climate reductions by 2030—obscure China's open failure on other environmental protection measures across the board. This is the same China whose cities recently had smog levels equivalent to Los Angeles in the 1990s, one of the most polluted eras for one of the most polluted cities in the United States (Cooperative Institute, 2018). The U.S. must resist the sole focus on greenhouse gases and climate and push to include traditional environmental measures in the international dialogue to ensure those countries meet our air quality standards. This will allow the U.S. to further leverage its strong environmental record, both in practice and regulations, across issues on the world stage and lead international progress on environmental matters of critical importance that are being largely ignored.

ADDRESSING AIR POLLUTION BEGINS WITH TRANSPARENCY

The U.S. has set an example in pollution monitoring and achieving cleaner air. America's significant decrease in air pollution is well-documented, but information on air quality in other countries is not as easy to obtain. Few, if any, countries have the same monitoring, reporting, and regulating regime as the United States. However, where information is available for comparisons on air quality, the United States is always at or near the top.

For example, the Financial Times looked at what percentage of a country's population is above the WHO safe level for $PM_{2.5}$ as of 2016 (Bernard and Kazmin, 2018). While over 70 percent of Americans live in areas safer than the WHO standard, nearly 90 percent of China's population is exposed to over 3 times the WHO limit, and over 40 percent of Indians are exposed to over five times the limit. To help put the $PM_{2.5}$ levels in context, many "developed" nations also fail to meet air quality standards. As previously noted, less than 10 percent of Germany's population lives in areas that comply with WHO's 2005 acceptable standards.

While implementation and enforcement of environmental laws and regulations fall short in many countries, the United States leads the way with over 4,000 domestic ambient air monitoring stations (EPA, 2021a). This does not include all the air quality monitors located at manufacturing facilities, power plants, and other sources all around the country. These stations monitor traditional pollution emissions and provide that information to federal and state regulators and the public. These monitors are used to determine the level of the requirements within states and their manufacturing facilities. To note, the United States' vast number of air toxic monitors is unique, making full data comparisons with other countries impossible (EPA, 2021b). For example, the European Environment Agency's "Air quality in Europe—2020 report" does not mention air quality monitoring of hazardous air pollutants (HAPs or air toxins) (González Ortiz et al.,2020, 1-164).

Importantly, the U.S. has also taken steps to elevate the importance of air quality on an international stage. In addition to the domestic air quality monitors, U.S. embassies and consulates in more than 50 cities and over 3 dozen countries around the world have air quality monitors. That data is made publicly available (U.S. Embassy in Kuwait, 2020). These American monitors do not by themselves impose any regulatory requirements on other countries, but they can still have an effect abroad; after the U.S. Embassy in Beijing shamed the People's Republic by establishing air quality monitors in 2008 and made that information available to its people, China developed stronger pollution standards (U.S. Embassy in Kuwait, 2020).

While the United States has been a consistent leader over the decades on international environmental issues, international organizations play a role in the oversight of traditional air pollution. Recent actions described below by the United Nations Environment Programme (UNEP) and the WHO are encouraging, but their voluntary programs remain aspirational and non-binding.

The UNEP is the largest global environmental authority that sets the global environmental agenda and serves as an advocate for the global environment (UN Environment Programme). However, UNEP is a part of the UN, which suffers from inefficiencies, red tape, and structural problems, and thus is severely limited in what they can do unilaterally (McGreal, 2015).

According to the UNEP, as of 2017, "too often, implementation and enforcement of environmental laws and regulations fall short of what is required to address environmental challenges" (Bruch et al., 2019, 1-306).

As part of its environmental program, on February 10, 2020, UNEP launched a voluntary international air quality monitoring system with over 4,000 voluntary monitors worldwide (UN Environment Programme, 2020). However, according to the 2021 UNEP air quality report, while "air quality monitoring is expanding through a variety of approaches, [] many countries still lack reliable, routine networks" (UN Environment Programme, 2021).

The WHO also puts out multiple recommendations and reports on air quality and provides air quality guideline values for various types of traditional air pollution as well as the standards for each country for some traditional air pollutants (WHO, 2019). In late 2018, the WHO held the First WHO Global Conference on Air Pollution and Health. As part of the conference, the parties agreed to an "aspirational goal of reducing the number of deaths from air pollution by two-thirds by 2030" (International Institute for Sustainable Development, 2018). It is still unclear how this aspirational goal will be met or to what extent countries will make binding commitments in the future. This stands in stark contrast to the

international pressure to obtain more and more commitments related to mitigating the more nebulous effects of climate change.

THE WAY FORWARD

Though the U.S. leadership on the issue and the initial international steps show movement in a positive direction, the U.S. has the opportunity to take more decisive, targeted action. To ensure that traditional air pollutants are provided the appropriate focus on the international environmental stage, the United States should:

- Advocate for binding environmental provisions for traditional transboundary air pollutants when negotiating any multilateral or bilateral treaty with environmental provisions, including requiring other countries to provide traditional air pollution information on a public database that can be accessed at any time and subject to verification at a level that is equivalent to what is currently required within the United States; and
- Ensure that funds provided by the United States to other countries for air pollution decrease traditional air pollution, including requiring the use of U.S. Environmental Protection Agency-certified air quality monitors.

While America has taken major steps to improve international air pollution, more can still be done to protect Americans. Multiple agencies are involved in international environmental policies, including the Environmental Protection Agency, Department of State, Department of Energy, U.S. Agency for International Development, and White House Council on Environmental Quality.

One of the major accomplishments on international environmental issues has come as part of the United States' successful partnership with other North American countries through mechanisms such as the North American Commission for Environmental Cooperation established under the North American Free Trade Agreement and strengthened in the United States-Mexico-Canada (USMCA) Free Trade Agreement and Environmental Cooperation Agreement (ECA) (EPA, 2021e). Articles 24.27 and 24.28 of USMCA and Article 5(5) of the ECA allow for any citizen or group of any USMCA or ECA country to file a submission asserting that any of the countries are failing to effectively enforce its environmental laws (USTR, 2021, p.129).

ECAs can ensure fair trade by having a dual impact by preventing the export of American jobs and opportunities as well as environmental degradation. By adding ECAs into binding trade agreements, the United States can better ensure that other countries abide by their commitments and provide American citizens and companies recourse if other countries do not meet their commitments. Importantly, meaningful international trade agreements ensure that American businesses and workers have a level playing field as we ensure environmental protection.

This method of international negotiations is preferred to the continuation of unmeasurable non-binding aspirational climate commitments such as with China in 2014, the 2015 Paris Climate Agreement, and then again recently with China (The White House, 2014; U.S. Department of State, 2021). China has shown that it does not respect nonbinding aspirational climate commitments, as exemplified by its decision to quickly make up for its 2016 temporary ban of new coal power plants by building three times more coal power capacity in 2020 than the rest of the world combined (Maizland, 2021). China also has shown its lack of interest in separate climate negotiations by rebuffing the Biden Administration's

climate envoy, John Kerry, stating that any climate negotiations must be part of general negotiations. Clearly, the Chinese plan to use climate commitments to evade having to make changes in other priority areas for the United States (Hua, 2021). While China vacillates between vague platitudes to open defiance on climate issues, the advantage it gains from the United States' strategic failure on this issue is painfully clear.

Not only have these agreements been non-binding, but the United States has also committed to more stringent requirements that have resulted in additional regulatory requirements and financial commitments that have cost American companies and citizens millions, if not billions, of dollars.[5]

In addition to formal treaty negotiations with other countries that include environmental provisions, the United States participates in multiple ad hoc bilateral and multilateral meetings with other countries. These discussions and any agreements that arise out of them are encouraging but are usually nonbinding and aspirational, such as the First WHO Global Conference on Air Pollution and Health.

Combined with the lack of binding commitments, international organizations have continued their focus on climate change, and the Biden Administration has shifted America's international environmental focus predominantly to climate change. Over the past decade—except during the Trump Administration—the United States' international environmental discussion has been subsumed by climate change. Under Presidents Obama and Biden, in addition to absorbing the incredible economic cost of ambitious climate goals, the U.S. has also committed to providing billions in funding for "developing" countries—China included—to continue to increase emissions through an unaccountable UN Green Climate Fund (GCF). President Obama committed $3 billion of American taxpayer dollars to the GCF—without congressional authorization. President Biden made expanding U.S. commitment to global climate financing a key priority from the beginning of his presidency and committed to working with Congress to provide $3 billion to the GCF annually (The White House, 2021). The House of Representatives recently advanced legislation that would fund the GCF to the tune of $8 billion over the next 2 years, ironically in the name of competition with China, which would benefit (EO 14008, 2021; U.S. House of Representatives, 2022). This is above and beyond the billions of dollars that America spends on other programs related to climate change (GAO, 2018).

Embracing this sort of short-sighted climate vision has meant sacrificing American power, influence, and treasure on toothless agreements and creating self-inflicted wounds. Beyond rejecting detrimental agreements in the name of climate, we can improve our international environmental dialogue by holding countries accountable for where they are on traditional pollution and not allowing a focus on climate change to absolve responsibility for meaningful action on traditional pollutants that cost lives every day. By pursuing only beneficial, enforceable agreements and elevating air pollution in the international dialogue, the U.S. can shine a light on the critical issue and assert an important aspect of our ongoing environmental leadership to our allies and adversaries alike.

Notably, while China has been consistently unreliable on environmental commitments, Beijing has already been shamed into some action with the simple addition of transparency with American air monitors. Though China continues to be the worst offender on traditional air pollution, it has continued to take voluntary steps to assert its positive progress on the

[5] *See e.g.,* 2017 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act (OMB, 2019).

issue. Over the past couple of years, China released their short-term "blue sky defense battle" and long-term "beautiful China" plans to try and decrease traditional air pollution, including requiring all cities to achieve an annual concentration of $PM_{2.5}$ below 35 micrograms per cubic meter ($\mu g/m^3$) (the Interim Target-1 level recommended by WHO) (Lu et al., 2020, 1423-1431). It is in the U.S. interest not to allow climate focus—and resultant weak and detrimental agreements with China—to overshadow this important issue. Combining transparency with meaningful progress where it falls within the broader interest of the U.S. will demonstrate U.S. leadership and strengthen the global commitment to this life-saving issue.

CURRENT POLICY DIRECTION AND FUTURE OPPORTUNITIES

The United States has an enormous opportunity to improve the American economy and security as well as lead meaningful worldwide environmental progress by shifting the international environmental narrative back to traditional air pollution.

Unfortunately, it is telling that in the introduction to the Biden Administration's inaugural trade policy agenda, the Biden Administration does not discuss traditional air pollution at all; it merely states

> [t]hrough bilateral and multilateral engagement, the Biden Administration will seek to build consensus on how trade policies may address the climate crisis, bolster sustainable renewable energy supply chains, end unfair trade practices, discourage regulatory arbitrage, and foster innovation and creativity (USTR, 2021, p.1).

The Biden Administration has shown little regard or concern for prioritizing traditional air pollution, as evidenced by its statements, White House staffing decisions (such as the creation of an international climate advisor), executive orders, and international environmental dialogues. But there is an opportunity to ensure traditional air pollution is included and to continue to be a world leader on air pollution.

Instead of only focusing on distant, vague, and costly climate change goals, we must push other countries to collect and provide their traditional air pollution data publicly, thus adding pressure for them to take immediate action to clean up their air to prevent the immediate harms from traditional air pollution. The United States can assist countries by providing technical assistance and funding for these monitors as long as the countries agree to publish the information publicly and without interference.

Instead of just providing billions of dollars more to the obscurity of the GCF to fund other nations' unenforceable climate promises, countries should provide funding for traditional air pollution controls and monitoring, ensuring that those countries are doing what they need to do to clean up those pollutants that are causing cancer and other health impacts today.

A major opportunity is to continue the success of the USMCA and ECA and require similar, if not stronger, language for future trade agreements. This would allow American citizens who are harmed by traditional pollution to force other countries to meet any environmental commitments that they make.

The United States stands at a time where we can use our international influence to ensure other countries meet our world-leading environmental standards and controls. We have

and continue to be a leader on environmental protection. We must not allow other countries to escape their obligations to their citizens and the rest of the world by ignoring traditional air pollution.

AUTHOR BIOGRAPHIES

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