



## Corporate Climate Leadership and U.S. Foreign Policy: The Case Study of Google

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**Abstract** - This paper examines how Google functions as an indirect diplomatic actor by advancing U.S. environmental diplomacy through its green technology initiatives. As global environmental awareness has increased, environmental leadership has become a central pillar of U.S. foreign policy; simultaneously, private-sector innovation and international reach have created new points of intersection between corporate action and federal diplomatic objectives.

Through a qualitative analysis of Google's renewable energy strategy, data-center decarbonization efforts, AI-supported climate tools, and global partnerships, this study evaluates how the company's environmental agenda—embodied in its technological decisions—aligns with and strengthens U.S. climate diplomacy.

Ultimately, the paper argues that Google's green technology ecosystem, while not a formal tool of U.S. environmental leadership, has become significant in advancing diplomatic standing, even as it raises new questions about the role of private multinational corporations in shaping global climate governance.

### BACKGROUND

In 1962, Rachel Carson's *Silent Spring* introduced foundational ideas about chemical contamination in the environment—including food-chain bioaccumulation, generational transfer, and storage in fatty tissues. Carson's work captured the attention of President John F. Kennedy and a large segment of the American public. Today, it is widely credited as "a catalyst" for the national environmental movement that followed.<sup>1</sup>

During the 1970s, American public awareness of ongoing issues like air and water pollution, toxic waste, and chemical harm surged—leading to the rapid spread of social movements addressing such problems. On April 22, 1970, the first Earth Day was celebrated. It was a nationwide demonstration in the U.S., focused on raising awareness of environmental issues<sup>2</sup>. As a result of the surge in activism, the Environmental Protection Agency was established by the government in December of that year<sup>3</sup>—with President Nixon declaring "clean air, clean water, [and] open spaces,"<sup>4</sup> as vital birthrights for American citizens, and emphasizing immediate action to counteract previous environmental harm.

This domestic surge in environmental consciousness laid the groundwork for the U.S. to emerge as a global leader in

environmental diplomacy. In 1972, the United States participated in the United Nations Conference on the Human Environment (UNCHE), also known as the Stockholm Conference. Despite facing criticism for the negative environmental impact of the Vietnam War, the U.S. played a central role in shaping the conference outcomes, including the formation of UNEP—the first global environmental response coordination group.

Furthermore, the conference achieved the establishment of the Stockholm Declaration (officially the Declaration of the United Nations Conference on the Human Environment). This declaration is considered a major achievement in international environmental law, marking the first time the UN formally addressed environmental concerns. The declaration established 26 guiding principles for the environment, specifically its management and treatment. In addition to the declaration, an action plan was formed, broken down into 109 recommendations regarding environmental assessment, management, and international support of these activities.<sup>5</sup>

The UN also endorsed four environment-related proposals from the United States at the Stockholm Conference. One of these proposals was for a \$100 million environmental fund to support global environmental initiatives, and another was for an international convention to address ocean dumping<sup>6</sup>, which was hosted in London in 1972, and prohibited the dumping of

hazardous materials such as radioactive waste and most heavy metals, as well as regulating other wastes.<sup>7</sup>

In 1973, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was signed in Washington, D.C. by 21 nations, including the United States, to ensure the protection of wild animals and plants from threatening trade.<sup>8</sup> Other impactful pieces of legislation passed during this period include: The Clean Air Act, which played a large role in the elimination of lead from gasoline and a 90% reduction in sulfur levels;<sup>9</sup> and the Clean Water Act, which increased the share of rivers safe for fishing by approximately 12% in about 30 years.<sup>10</sup>

The trend of environmental diplomacy continued in the 1980s, highlighted by the U.S. signing the Vienna Convention for the Protection of the Ozone Layer in 1985. This international treaty laid out the framework for the Montreal Protocol in 1987, whose formation was partially a result of leadership and negotiation from the U.S.<sup>11</sup> The Montreal Protocol called for the production



and consumption of ozone-depleting substances to be phased out completely. Despite scientific uncertainty on the amount of reductions needed, and internal opposition from the EPA due to their anti-European Community (the second negotiating party) stance, authority in the U.S. government made the decision to push the treaty aggressively,<sup>12</sup> and it was eventually signed by 46 countries.<sup>13</sup>

Today, the Montreal Protocol is the only treaty to receive universal ratification, which has led to a reported compliance rate of 98%. The EPA estimates that for Americans born between 1890 and 2100, approximately 443 million cases of skin cancer, 2.3 million skin cancer deaths, and more than 63 million cases of cataracts will be avoided.<sup>14</sup> Additionally, the elimination of ozone-depleting substances has led to the avoidance of over 135 billion gigatons of carbon dioxide already, and a near-complete ozone layer recovery is expected around 2050.<sup>15</sup> The Montreal Protocol—driven in large part by U.S. negotiation and commitment—cemented America’s reputation as a global force in environmental agreements.

In 2005, the Kyoto Protocol entered into force. Proposed in 1997, it set greenhouse gas emission reduction targets for the 192 signing parties, a defined objective to reduce emissions by an average of 5% below 1990 levels by 2012, and included a rigorous monitoring, review, and verification system. It also included a party compliance mechanism which ensured transparency and accountability through a compliance committee and enforcement measures, including consequences such as restriction of emission trading.<sup>16</sup> Despite this, the protocol is widely considered a failure. The binding nature of the protocol did not appeal to certain parties, nor the fact that certain high-emission nations such as India and China were not initially required to reduce their emissions due to their classification as developing nations.<sup>17</sup> In turn, the United States, the world’s largest emitter at the time, never ratified the protocol and formally rejected it in 2001, with President George W. Bush citing concerns for the economic impact the protocol would have on the nation.<sup>18</sup>

In 2012, the agreement’s initial commitment period expired, and with this came the entrance of the Paris Agreement just three years later in 2016. The main objective of the agreement was to limit global warming to “Well below 2°C above pre-industrial levels”, as well as an aspirational target of 1.5°C.<sup>19</sup> Features of the agreement that appealed to the United States included the national determination of emission targets, and the inclusion of rigorous transparency rather than legal binding—a perceived improvement from the Kyoto Protocol. But, it was made clear that the Republican Party stood in opposition to this agreement for the economic well-being of the nation, and that the potential arrival of a Republican (Donald Trump) president

would likely jeopardize participation. Thus, the United States, under the democratic

Obama administration, prioritized formally joining the agreement, and was key in organizing and negotiating the agreement.<sup>20</sup> In 2016, both President Obama and Chinese President Xi Jinping announced their intent to formally ratify the agreement<sup>21</sup>—symbolizing a joint commitment and a newfound spark in the U.S.-China bilateral relationship. Through forging an alliance with China, the U.S. once again demonstrated its capacity to shape high-level climate diplomacy and orchestrate cooperation between the world’s largest emitters.

However, under the Trump administration in 2017, the U.S. announced its plan to withdraw from the agreement, questioning its effectiveness and President Trump labeling it “a scheme to redistribute wealth from rich to poor countries.”<sup>22</sup> The withdrawal was filed on

November 4, 2019, the earliest possible date, and was made official one year later on November 4, 2020. On January 20, 2021, Democratic President Joe Biden’s first day in office, he signed an executive order to rejoin the Paris Agreement<sup>23</sup>. On January 20th, 2025, Trump, back as President, formally submitted a withdrawal notification for the second time, which is pending to be made official on January 20th, 2026.<sup>24</sup> Through these recent and drastic changes observed in the U.S.’s environmental policy, it is important to acknowledge the significant domestic-political stakes involved in U.S. climate diplomacy and international cooperation as a whole.

In recent years, the U.S. has increasingly exerted technology-driven influence on climate policy, even as conservative leaders have demonstrated reluctance to fully embrace these initiatives. With domestic green tech production ranging from electric vehicles to smart thermostats, and the implementation of laws such as the “Inflation Reduction Act”—which is focused on domestic energy production and clean energy initiatives<sup>25</sup>—the U.S. has positioned itself to be a leading exporter and example in the global green tech industry, reinforcing its influence in energy transitions across the world.

Additionally, the involvement of private American major tech firms in these operations has grown significantly, correlating to the increasing importance and demand for green tech in

U.S. governmental and international affairs. Among these firms is Google, with sustainability efforts spanning international data centers, clean energy deals with foreign governments, and globally impactful climate-focused tools. They have emerged as key actors in the broader ecosystem of U.S. green diplomacy.



## LITERATURE REVIEW

Prior scholarship examining U.S. foreign affairs has established a clear connection between environmental leadership and diplomatic leverage. For example, Hale and Hultman (2020) conducted research that suggested an “all in” climate diplomacy strategy under the Biden-Harris administration.<sup>26</sup> The foundation of this strategy derives from their finding that non-federal

actors moving to phase out greenhouse gases resultantly heighten the bar for the federal government’s actions. In the case of the United States, they explain that going “all in”, or mainstreaming climate policy among non-federal actors, such as cities, states, businesses, and civil society, who account for over half the nation’s emissions, would allow the United States to leverage such major climate action in international discussion. This would enable the U.S. to set more ambitious global targets and enhance its credibility in environmental negotiations. Such credibility contributes to the country’s soft power, defined by Harvard University Distinguished Service Professor Joseph Nye as “the ability to affect others to obtain the outcomes one wants through attraction and persuasion rather than coercion or payment.”<sup>27</sup>

There are also studies that center around the idea that the use of environmental leadership in diplomacy has brought economic benefits for the United States. Specifically, Yu (2020) proposed that a revitalized climate diplomacy strategy, which incorporates climate assistance more frequently, could have results similar to the Obama Administration’s Global Climate

Change Initiative, which led to U.S. environmental experts advancing climate policy objectives around the globe, and built significant political and economic connections.<sup>28</sup> This leads to the question, what is green technology’s role in diplomacy?

Firstly, green technology, as defined by the United Nations Conference on Trade and Development, is “technology that has the potential to significantly improve environmental performance relative to other technologies.”<sup>29</sup> Globally, research has shown it to be a fundamental aspect of diplomacy and governmental operations. Nath (2024) found that in China, it stimulates technological competition with nations such as the United States, and has provided economic benefits through creating a new market domestically and internationally.<sup>30</sup> Green technology has also allowed for China to play a greater role in these discussions. Sainarayan and Nazareth (2024) evaluated India’s climate diplomacy, and green technology was found to play a major part in increased foreign investment.<sup>31</sup> It has also allowed India to continue/restimulate trade relationships globally, and strengthen their position in the established market of green technology through increased technology transfer.

Research from Renewable Energy World authors (2023) shows the United States to be no different than these nations in terms of use of green technology for global influence and/or benefits.<sup>32</sup> It is described that the rise of electric vehicles has led to new global markets being dominated by the United States, an industry propelled by the Inflation Reduction Act.

Consequently, early global dependence on the U.S. by nations lacking electric vehicle production has been established, allowing for credibility and soft power. Another example is the case of solar technology. Sohal (2024) explains that Central Asia’s decision to develop its domestic energy capabilities in order to no longer rely on Russia has given the U.S. the opportunity to strategically support the initiative, which has already begun through a \$39 million regional energy development plan—and may potentially lead to the U.S. establishing influence in a vital area.<sup>33</sup>

As seen in previously mentioned research, a theme that persists is the intersection and involvement of private companies in American environmental governance. The United States is home to numerous climate tech unicorns, and current research predicts the industry market size to increase by over two hundred billion by 2034.<sup>34</sup> Current examples of private-public climate tech collaboration, specifically corporations receiving funding from the U.S. Department of Energy, include Cambio<sup>35</sup>, Tesla<sup>36</sup>, and Plug Power<sup>37</sup>. Klein and Mikaelsson (2023) describe the role of businesses in climate governance as more important than ever before, adding that sustainable goals and net-zero pledges possess tremendous economic and environmental impact, and are vital in achieving national goals such as those of the Paris Agreement.<sup>38</sup>

However, their research also adds that a risky driving factor of private sector sustainability is “to safeguard business continuity.” Thorpe (2025) expands on this, stating that as “profit-seeking ventures”, many businesses engage in private climate governance activities for the sake of preventing supply chain disruptions, damage to capital, and delayed production—all potentially caused by climate change.<sup>39</sup> Additionally, through environmentally-friendly branding and surface-level climate consciousness, companies believe their public image will benefit, with some studies pointing toward customers being more likely to support such businesses. The lack of altruism in company motives is enforced by research findings that financial motives tend to “override” environmental initiatives.

Ringe and Gözlügöl (2022) discuss another contradiction, stating that despite the growing need for private contribution in American sustainability, private corporations themselves are primarily responsible for U.S. emission tallies—such as Hilcorp Energy Co., the largest methane emitter in the country. Additionally, many private corporations appeal to government /



publicly influenced climate goals through the sale of oil and gas assets, creating a false impression of

sustainable practice and reduced GHG emissions—a practice often referred to as “brown spinning”.<sup>40</sup> Lino et al. (2021) also point out that transparency and emission reporting among private companies is significantly lower than public companies.<sup>41</sup>

Google, on the other hand, is widely regarded by researchers as a standout corporation in climate-related operations. Ge (2024) notes that Google’s unique approach to sustainability, which includes the goal of achieving net-zero operations across all operations by 2030, first-hand action to do so, and investments in other parties, has been effective in reducing emissions, and its production of climate technology will result in billions of Kilowatt-hours and dollars being saved annually. However, Ge does also note that benefits such as carbon credit income and financial gain are made available to Google through sustainable action action.<sup>42</sup> Perera (2023) extends the optimism, mentioning the “groundbreaking” use of artificial intelligence (AI) and data analytics to monitor and optimize energy use and expedite efficient reporting, and how Google addresses the contradictions that arise from brown spinning, focusing on 24/7 carbon-free energy beyond direct operations through their “Beyond Value Chain Mitigation” initiative.<sup>43</sup>

In terms of specific international action, a study by Copenhagen Economics (2021) notes that Google's goal of matching its data centres’ emissions through renewable energy purchases has led to 24 power purchase agreements (PPAs) being signed in Europe, stimulating the continent’s economy, and supporting climate tech innovation outside of the U.S.<sup>44</sup> Overall, the majority of scholarship leans toward a positive evaluation of Google’s climate efforts—however, the rise of AI has brought about skeptics, with Rice (2025) noting that its introduction has led to a 48% increase in Google data centre emissions (2019-2023).<sup>45</sup> It is also added that the annual sustainability reports provided by Google lack disaggregation, meaning the energy and water usage tied to individual services, such as AI, is not specified.

While the current body of scholarship provides extensive insight into the role of environmental leadership, both private and public, in U.S. diplomacy, and underscores Google’s unique position among private actors advancing climate goals, several critical gaps remain to be addressed. Existing research rarely examines the implications of Google’s sustainability efforts within the framework of U.S. environmental diplomacy. Specifically, there is limited analysis of how Google’s growing influence in green technology may reinforce or complicate American soft power and international climate leadership. This paper seeks to fill that gap by evaluating Google not just as a

sustainability leader, but as a potential instrument of U.S. foreign policy, examining both the diplomatic value and strategic risks of its deepening role in global climate governance.

## **U.S. ENVIRONMENTAL DIPLOMACY AS GLOBAL STRATEGY**

Since the early 2000s, the U.S. has increasingly positioned environmental diplomacy as a crucial diplomatic issue. Similarly, other countries—including China and major European nations—have also recognized the environment as an international affair that requires a diplomatic effort. Thus, nations have engaged in environmental commitments, projects, and geopolitical interactions that, alongside increasing environmental awareness, have magnified the significance of environmental diplomacy. It has grown from a niche issue to a central diplomatic arena, and through intersections with the economy, public policy, and technological innovation, the U.S. has been able to use environmental diplomacy to assert moral and technological leadership across the world.

One major way in which the U.S. has been able to capitalize on the opportunities of environmental diplomacy is through fostering collaboration and cooperation through green technology, emphasizing the “above all” nature of the environment to form alliances with nations that are perceived as competitors in other aspects (the economy, global security, etc.). A key example is the International Solar Alliance, or the ISA. Conceptualized in 2015 at COP21 (where the Paris Agreement also came from), the initiative was led by France and India in an effort to implement solar energy solutions globally to fight climate change. Today, over 90 countries, including the U.S., U.K., Japan, Germany, and the U.A.E, are members. Through joint efforts by members and stakeholders, the ISA focuses on the introduction/increased application of solar technology in agriculture, waste management, mobility and storage, heating/cooling technology, and green hydrogen. They also work on scaling the production of mini grids and rooftop grids, building solar grids, and making power development affordable.<sup>46</sup>

For the United States, the ISA serves as a massive opportunity to promote and introduce domestic solar technology to other nations involved. As of December 2024, the U.S. ranks third globally in solar manufacturing, and over \$36 billion worth of investments have been made in the industry over the past two years.<sup>47</sup> With solar manufacturing growing the way it has, and American companies such as First Solar emerging as a dominant global leader with quarterly revenue as high as \$1.5 billion,<sup>48</sup> joining and engaging in the network of the ISA is a straightforward situation. Other U.S. firms, including tech companies like Google, have also contributed indirectly to



such global efforts by developing AI and data tools that optimize solar grid deployment and monitor energy efficiency across regions.

Another major alliance that has come through environmental diplomacy and technological focus is with India, specifically the U.S.-India Strategic Clean Energy Partnership Ministerial (SCEP). The partnership works on driving clean energy innovation, strengthening energy security, and accelerating clean energy transitions.<sup>49</sup> Preceding the establishment of SCEP, the U.S. and India also collaborated on the Renewable Energy Technology Action Platform (RETAP), the National Centre for Hydrogen Safety in India, and formed a partnership during the 2nd International Conference on Green Hydrogen.<sup>50</sup> Considering the close relationship that the two countries have, including a serious defense partnership, a joint initiative addressing defense, technology, and trade (the U.S.-India Catalyzing Opportunities for Military Partnership, Accelerated Commerce & Technology), and a deal that boosts intelligence sharing (The Basic

Exchange and Cooperation Agreement), environmental diplomacy and technological collaboration has allowed the U.S. to further strengthen its relationship with India—the fourth largest economy in the world, the fastest growing economy in the world,<sup>51</sup> and a top five global military power.<sup>52</sup> U.S. private sector actors, including firms like Google with a presence in India, also support this clean energy transition by expanding smart infrastructure and cloud-based climate analytics.

The Asia-Pacific Partnership on Clean Development and Climate (APP), which existed from 2005 to 2011, was credited to be one of the first instances of climate-based alliance between the United States and China. Also including Australia, Canada, India, Japan, and South Korea—the APP members represented over half of the world’s total emissions, with the U.S. and China being the top two emitters.<sup>53</sup> Despite a complicated relationship between the two, including shaky trade relations and a disputed accidental bombing, the growing importance of environmental reform was enough to bring the technological powerhouses to work with APP on “the development, deployment and transfer of cleaner, more efficient technologies,” proving the significance of environmental diplomacy, and potentially revealing technology to be a mutual form of environmental problem solving. This type of diplomacy is increasingly supported by American tech giants whose innovations, such as Google’s net-zero data centres, reinforce U.S. leadership even in collaborative efforts with rivals.

In addition to forming alliances and asserting leaderships, environmental diplomacy has risen to become what sets the guidelines and norms in global environmental operations—both

private and public. A prime example is the Paris Agreement. Formed through United Nations’ diplomacy and international cooperation, the agreement allows involved parties to determine their own contributions, entailing that domestic action is under each nation’s own judgement. However, the agreement follows the singular objective of limiting climate change “well below 2 degrees celsius”, enforces transparency, and is binding—ensuring the commitment of 195 parties.<sup>54</sup> With all countries striving to achieve this united goal and comply with these standardized regulations, environmental diplomacy brings a ripple effect where common, shared domestic contributing factors, such as coal and natural gas usage, are addressed with similar restrictions across the globe.

For example, over 24% of global coal power operating capacity has a planned closure or phaseout commitment, with over 60 countries having cut plans to build coal plants since the agreement was put into action.<sup>55</sup> Similarly, 66 countries have been recognized as working toward the adoption of zero-emission vehicles, including the entirety of the European Union committing to ban the sale of new fossil-fuel cars by 2035.<sup>56</sup> Through these commitments and actions, the private sector and global economy have experienced an overbearing necessity to change for the sake of compliance. In the automotive industry, major names—such as Honda, Hyundai, and

Ford—have made either a complete or significant commitment to EV production and sales within the next 20 years. These sweeping shifts underscore how environmental diplomacy now functions as a global regulatory force, transcending borders and infiltrating the corporate world.

For the United States, environmental diplomacy has allowed for the promotion and establishment of American norms in global interaction. An early example is the previously described Montreal Protocol. Today, we see such leveraging in trade agreements. As the second-largest trading nation in the world, the United States is a partner of interest to the majority of the globe, and thus, is able to influence the agreements it sets. The State Department’s Office of Environmental Quality, defined to “develop and implement U.S. foreign policy to protect air, food, soil, and biota from pollution,”<sup>57</sup> currently has 13 environmental chapters in trade agreements set with 19 different countries.<sup>58</sup> Though varying in specificity, the chapters highlight numerous multilateral agreements and form an agreement to uphold them in trade interactions.

Environmental aid has also been a strategic way to broaden U.S. influence and norms.

The Power Africa initiative, which ran from 2013 to 2025, successfully increased access to sustainable power in Africa, with billions of dollars poured into the project.<sup>59</sup> However, the initiative was not just a partnership between the U.S. and 6

African nations, but also included the African private sector and over 100 U.S. companies. One vital aspect of the initiative was to expand the opportunities for American corporations in the region, leading to the initiative supporting \$26.4 billion worth of deals and what was expected to be \$21 billion in upcoming projects.<sup>60</sup> These contributions created a space for the U.S. in the African economy, naturally allowing for more influence.

Numerous changes in African private sector operations also followed. For example, independent transaction advisers were hired by Power Africa and sent to local ministries to oversee and expedite negotiations—a relatively foreign process which resulted in significant investments. Additionally, large U.S.-based agencies such as The Overseas Private Investment Corporation (OPIC) (now DFC) and The Millennium Challenge Corporation (MCC) committed over \$1 billion each, alongside providing export grants and early-stage grants—all of which were somewhat rare in the African private sector.<sup>61</sup> Consequently, a new dependence on the U.S. and its financial procedures was introduced through the implementation of an initiative aimed at improving energy accessibility and sustainability, underscoring the indirect potential of environmental diplomacy.

## **CASE STUDY: GOOGLE**

### **GOOGLE'S CLIMATE STRATEGY**

A relatively early actor, Google's now-renowned sustainability efforts began in 2007, with the company making a public commitment to being carbon neutral. Today, they have made major achievements toward that objective, and are aiming to run completely on carbon-free energy and to replenish 120% of the water its operations consume—both by 2030.<sup>62</sup> The basis of their sustainability strategy relies on four “key areas”: the circular economy, consumer hardware, water stewardship, and nature and biodiversity. The circular economy, by definition, is “a system where materials never become waste and nature is regenerated.”<sup>63</sup> To achieve this, Google has established three circularity principles – to “design out waste and pollution,” “keep products and materials in use,” and “promote safe and healthy materials.”<sup>64</sup> One change in their operations that contributes significantly toward these principles is zero-waste data centres. In 2016, Google made the announcement that it would increase landfill diversion to 100% in all its data centres, ensuring maximum reuse, refurbishment, and recycling in its operations. The first centre to reach this goal was in Oklahoma, and by the end of the year, six of fourteen sites had done so, and all sites were diverting at least 86% of waste.<sup>65</sup> Today, Google has 29 worldwide centres and continues to work toward its zero-waste goal. One of the newest data centres, located in Denmark, has operated as zero-waste from day one.<sup>66</sup> In addition to improving waste efficiency in data centres, circularity in the 180+ campuses and offices has been a focal point. To cut food waste and achieve their goal of zero food waste to landfills,

Google has reduced the depth of cafeteria bowls by an inch—leading to a reported 30-70% food waste reduction.<sup>67</sup> They also use donating, composting, and AI support to advance their progress. They have eliminated the purchase of single-use plastics across offices and have focused on procuring salvaged and reused materials in construction projects. For example, over 530,000 lbs of drywall waste were recycled during the construction of the Charleston East campus.<sup>68</sup> In terms of consumer hardware, an emphasis has been put on recycled materials, reduced plastics, and making repair/reuse easier for consumers.<sup>69</sup> This includes using post-consumer recycled plastic for 70% of the Google Nest audio enclosure, and making a full range of spare parts for Pixel 2 through Pixel 6 Pro products.

They also announced that by 2025, packaging would be plastic-free and that at least 50% of all plastic in hardware would be recycled plastic.<sup>70</sup> To enhance water use responsibility and achieve its 120% replenishment goal, Google has implemented new technology, ecological design, and increased investments in water stewardship practices. As a result, they have been able to replenish 64% of 2024 operations' freshwater consumption.<sup>71</sup> Lastly, to better their impact on nature and promote biodiversity, Google has dedicated itself to incorporating habitats and green spaces in its architecture. In 2024, Google reported the rehabilitation of 74 acres of habitat and the planting of approximately 5200 native trees on campuses. As per Google's sustainability operations page, this has led to positive interactions with local fauna—bringing over 70 bird species back to their habitat at the Bay View Campus (Mountain View, California), and at their St John's Terminal building in New York City, an “11 species never before documented on green roofs in the city.” All in all, the tech giant has taken notable individual steps to establish itself in the world of sustainability and environmental protection, and as the trend continues, Google finds itself innovating with the use of AI to bolster its development.

### **GOOGLE'S ALIGNMENT WITH U.S. DIPLOMACY**

The key question is whether there are any concrete cases of Google leveraging its environmental commitments—given sustainability's recognized role in diplomacy and the company's global reach—to advance U.S. diplomatic influence. Reflecting on previous scholarship, it is important to acknowledge that Google's “diplomatic edge” has already been examined in a general focus. In Campaign For Accountability's Google Transparency Project, they found, in a detailed review of Google's cooperation with the U.S. State Department, that their trips and work have aligned directly with the foreign policy establishment under the Obama administration.<sup>72</sup> Examples include Cuba, where in 2014, Google executives, including Eric Schmidt, ex-CEO and Executive Chairman at the time, traveled



and conducted a series of meetings with major figures in the country's internet provision, just months before the Obama administration restored full diplomatic relations and reduced the restrictions on U.S. companies' abilities to provide Cuba with internet services. Over the following five years, a string of deals between Google and Cuba occurred. Another case is in Iraq in 2009, where Schmidt, alongside other tech executives, traveled under a State Department-sponsored visit. They met with the Iraqi foreign minister and minister of communications, and the next day, it was announced that Google, the U.S., and Iraq would be partnering up to establish a YouTube channel for the Iraqi Government. The channel exists to this day, and videos are published almost daily –allowing Google, and inherently the U.S., a direct connection to the Government of Iraq that transcends politics and serves as a reason for communication. The theme continues in North Korea. Just two weeks after Schmidt and former U.S. ambassador to the U.N. Bill Richardson made a visit,

Google Earth made satellite imagery of North Korea publicly available, and within five years, it became the dominant search engine among the few internet users, mainly specially authorized government figures. Thus, Google has inserted itself in a position of dependence in the country, where the government relies on the engine in all its internet operations. Though these cases do not pertain to green technology, they clearly demonstrate coordination between Google and the U.S. government in establishing and advancing global influence.

Another non-green technology case of unique diplomatic interest is the information inequality and American dominance surrounding Google News, detailed in a 2008 paper by Elad Segev of Keele University. The paper establishes that a significant portion of America's global dominance derives from its media channels, which are supported by and influence global economic structures and institutions.<sup>73</sup> Of these media channels, Google News has risen to be one of the powerful and continues to grow, with over 150 million visits daily in 2025.<sup>74</sup> The paper finds that the Google News algorithm prioritizes "authoritative" and popular sources, 60% of which are American or British. Thus, global users are often subjected to consuming news through the U.S. media frames. In fact, the same U.S. issues, such as the Iraq War and nuclear programs of Iran and North Korea, dominate news across the twelve available languages. In terms of interconnections in the Google News network, the USA was linked to 54 other countries, whereas African countries had practically no direct interconnections, only appearing in the network through the U.N. In Google News' "World News" section, consisting of the top 20 stories each day, African, South American, and Southeast Asian countries rarely made any appearances over the course of six months. Overall, the findings

of this paper demonstrate how Google can and has used its extremely large global platform as a vehicle for U.S. symbolic dominance and globalize U.S. foreign policy discourse.

### GOOGLE'S GREEN TECH IN INTERNATIONAL COOPERATION

In terms of green technology specifically, the most concrete intersection between Google and U.S. diplomatic efforts at the moment exists in the form of summits and conversations. More prevalent are the Conference of the Parties (COP), held every year to assess climate change. At COP26, held in 2021, the US Special Presidential Envoy for Climate launched the First Movers Coalition. The coalition targets reducing emissions from the 20 biggest countries in the world, of which half the reductions are supposed to come from the "innovations, technologies that are not yet at scale."<sup>75</sup> With 102 members, including Amazon, Apple, and of course, Google, the coalition's hope for technological advancement to reduce emissions will rely on the contributions of its members. Google is specifically cited to be working on carbon removal, a task also assigned to French company Capgemini, U.K. company Drax, Emirates Global Aluminium, Microsoft, and more.<sup>76</sup> Through this coalition, Google is not only working to address its own environmental concerns, but also those of the United States and all the global coalition members, directly reflecting U.S. diplomatic strategy regarding the environment through environmental technology and solutions. At COP29, held in Azerbaijan, attendees included Azerbaijani president Ilham Aliyev, Brazilian environment minister Marina Silva, UN secretary general Antonio Guterres, World Bank president Ajay Banga, and many other prominent global scientists, governments, and industry leaders.<sup>77</sup> In a Google published report of the Conference, key strategies regarding the importance of technology in fighting climate change included: measuring business performance, optimizing operations and supply chains, identifying cleaner business models, and building more sustainably.<sup>78</sup> The report also identified how Google is striving to enhance its involvement in each of these aspects, such as through Carbon Sense Suite, a footprint tracking tool that French personal care corporation L'Oreal uses to understand the environmental impact of its technological decisions. Such tools being used on a global scale by major companies represent how Google truly stands in a position of power with respect to their operations and the implementation of what they create, aligning with global goals, which are often dictated by the United States.

A more unique way in which Google's green technology has played into U.S. diplomacy is seen in the formation of the U.S.-EU Trade and Technology Council in 2022. The Council centralizes around "supporting transatlantic relations" and stimulating economic growth between the regions, involving the



EU and U.S. government.<sup>79</sup> However, Google played a major role in its establishment. Specifically, Karan Bhatia, Google's Vice President of Government Affairs & Public Policy, wrote a blog in April 2021 urging President Joe Biden to accept the EU's proposal to set up the council. He cited reasons such as a fraying relationship and the ability to cooperate on promoting third-world technology access, but also that alignment between the US and EU in technology would allow for enhanced work toward tackling climate change—implying green-tech support across the regions.<sup>80</sup> Upon agreement of the council, the working group of “Best Practices on Green Public Procurement” was formed, and in 2024, a workshop “on the Promotion of Good Quality Jobs for a Successful, Just and Inclusive Green Economy” was held. This reflects how valued the environment and sustainability are within the EU-U.S. trade technology council, and considering Bhatia's early blog, this significance likely derived as a result of Google's encouragement, combined with their established leadership in green technology.

Looking at the potential future contributions green technology by Google could have in U.S. diplomatic efforts, the Advanced Flood Hub technology is notable. Flood Hub was designed by Google to address environmental concerns of flooding, specifically to identify regional flood risk through satellite map projection, and allow for flood forecasting via inundation history maps. Following severe flooding in Nigeria in 2024, non-profit GiveDirectly used Flood Hub, alongside funding from Google, to help provide support and relief. Specifically, GiveDirectly was able to provide 7,500 with cash support to secure food and protect their assets.<sup>81</sup> Simultaneously, the U.S. government provided over \$6.5 million in relief funding to other organizations.<sup>82</sup> A similar situation was seen in Bangladesh in 2024, where GiveDirectly employed Flood Hub, and specifically the forecasting feature, to provide families in high-risk areas with cash to purchase essentials and secure their property in anticipation of flood season.

Later, USAID provided \$350,000 in humanitarian assistance for the communities most impacted by these floods.<sup>83</sup> Through the synchronized action between Google/employers of Google technology and the U.S. government, it is clear that certain foreign environmental concerns are of similar priorities to both organizations—and that Google's support extends American foreign policy and intentions. Though there is no cited coordination, there most definitely is potential in the future for Google to become a direct and official partner of the U.S. government in environmental relief, especially as Google technologies like Flood Hub continue to advance and demonstrate success.

## RISKS AND CONTRADICTIONS

Risks and contradictions linger within Google's increasing position of influence over U.S. diplomacy. The first is the fact that, as a private corporation, Google is likely to prioritize economics over public interest. Naturally, acting privately disrupts the values of diplomacy and cooperation. In 2023, the Brazilian government ordered that Google halt a campaign against a speech bill. The bill would establish fines and deadlines for removing misinformation and hate speech from social networks, and demand increased transparency from tech companies—both of

which would incur major costs to companies like Google. Brazilian government officials credited the legislation as a solution to propaganda and promoted safety by preventing online discourse.

Google's public policy department responded with a list of arguments against the bill, as well as a message on its homepage claiming that the bill could increase confusion on the interpretation of information. Following threats from the Brazilian government of hourly \$200,000 fines, Google removed the message and article.<sup>84</sup>

This brings up the additional risk that Google is unsuitable as a diplomat, as it is too vulnerable to foreign government influence. Google is subject to the local laws of where it operates, and therefore finds itself frequently submitting to local government demands. In France, Google was fined \$272 million for failing to comply with commitments toward compensating news publishers for content under a European Union copyright directive.<sup>85</sup> In Austria, Google Analytics Operations was deemed inadequate due to a lack of safeguards preventing US intelligence services from accessing the data.<sup>86</sup>

Acting too heavily in American interests is also a concern, failing to balance allegiance with compromise in a diplomatic manner. In May of 2025, Google was sued by Mexico for changing the “Gulf of Mexico” to the “Gulf of America” on American Google Maps in accordance with an executive order from President Trump. Mexican President Claudia Sheinbaum contended that the order does not apply to the entire Gulf.<sup>87</sup> Segev's Google News paper also applies to this idea. Google and China have also been known to have a rather complicated relationship.

Google first launched its Chinese engine in 2006. Although they had to comply with Chinese internet restrictions, which included censorship of certain search results, they made the decision to publicly acknowledge such censorship by providing users with a notice that some search results have been removed. Naturally, the Chinese government stood in opposition to this. However, a major hack attack in 2010 led to a major change in Google's stance. They announced that they would no longer be willing to censor results and would work

with the Chinese government to see if it would be possible to operate in the country without search result removal.

No agreement was made, and thus the search engine was abandoned. Following the major success of Chinese-grown internet services such as WeChat and Didi, the Chinese government blocked practically all Google services.<sup>88</sup> However, the development of AI technology has provided Google with an opportunity to break back into China.

Here lies another potential risk: AI, and specifically its carbon impact. As previously established, Google's net-zero carbon objectives have been challenged by the rise of AI usage, which has an undeniable carbon footprint. Considering the plethora of international agreements Google has been involved in directly relating to and potentially existing on the basis of Google's sustainable operations, it would not be unfair to surmise the possibility of AI corrupting some of these agreements. However, this situation does not seemingly pose a threat in the specific situation of Google's most frequently integrated AI companion, Gemini. Google reports a medium text query generates approximately 0.03 grams of carbon dioxide equivalent.<sup>89</sup> For context, the lower range of estimates for ChatGPT usage is still 83x greater than this value for Gemini.<sup>90</sup> Nonetheless, doubts do exist: Sustainability by Numbers writer Hannah Ritchie surmises that Google's report fails to factor in external networking, energy used by end users, and the energy use of training AI.<sup>91</sup> With such uncertainty and a lack of long-term analysis, the AI industry is still on the tipping scale, and may become a make-or-break factor for Google's global presence—a major diplomatic risk. The lack of obligated transparency and limited access to user data highlighted by Ritchie and previous literature covering brown spinning embolden the line drawn between private actors and the U.S. government, demonstrating how such barriers define the contrast in critical information management.

## FINAL THOUGHTS AND FUTURE RESEARCH SUGGESTIONS

Can the U.S. rely on Google without undermining its credibility? Though indefinite, the information synthesized in this article sets the tone that the soft power of sustainability is real, but vulnerable. Green tech has a clear and defined role in official U.S. diplomacy, and the potential for intersection and leveraging of Google, which has defined itself globally through green technology, does indeed hold true value. Previous examples of collaboration demonstrate that the government and corporations can successfully advance international strategy and objectives. Nevertheless, Google's ultimate interests, management, and limits as a corporation

hold complexity and risk that must be thoroughly navigated in order to avoid tarnished diplomatic relationships.

To gain a more coherent understanding of how the private sector's unique approach to building global presence and connections can be leveraged and paired with U.S. diplomacy, future research that more deeply evaluates the impact of Google's policy decisions would be of aid. Additionally, similar studies focusing on other major firms like Tesla, Amazon, and Microsoft would create a more rounded understanding.

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## DATA VISUALIZATION

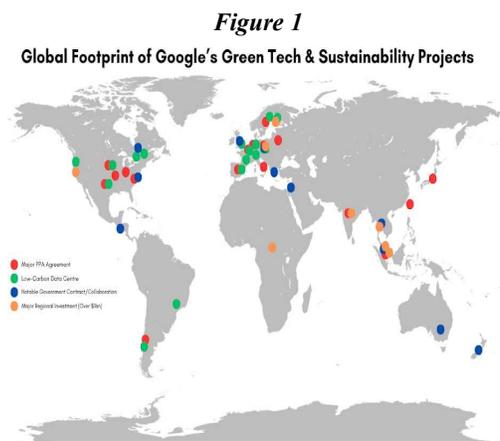


Figure 1 compiles data from multiple sources, including Google Sustainability Reports (2023), the International Energy Agency (IEA, 2022), and the U.S. Department of State (2023), to illustrate the scope of Google's green tech presence globally.