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U.S. National Security and Climate Change

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U.S. NATIONAL SECURITY AND CLIMATE CHANGE

Alexandra E. Koch, Nicole K. Carle, and Gregory P. Noone [†]

Abstract

As sea temperatures rise and natural disasters intensify, it is critical that the U.S. national security strategy actively include plans to account for global climate change and address the complex environmental and humanitarian challenges that parallel and are driven by rising temperatures, such as resource scarcity, forced displacement, and regional instability. Climate change acts as a "threat multiplier for instability" in some of the most volatile regions of the world and can contribute to rising tensions even in historically stable regions. Climate change can also lead to increased vulnerability of military infrastructure and logistics, undermine military readiness, and demand a growing

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amount of military resources. This article discusses the important nexus between climate change and national security, analyzes how the last six U.S. presidential administrations perceived and acted upon climate change as a national security issue, and considers why and how the growing threat of climate change can be further addressed in future U.S. national security discussions and strategies.

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I. INTRODUCTION

Over the past three decades, the framing of climate change as a national security threat has developed significantly, and has evolved through changes in U.S. continuously presidential administrations.¹ In analyzing the nexus between climate policies and U.S. national security from the past six U.S. presidential administrations, this article lays out the critical national security threats that climate change poses, and identifies how such challenges have been articulated and addressed at different points in recent U.S. history. This article concludes with takeaways for future U.S. national security policy toward climate change and considerations of possible next steps.

II. CLIMATE CHANGE RELATED THREATS TO NATIONAL SECURITY

There are varying arguments based on scientific research as to the speed and scope of climate change,² but its existence is a threat to all life on our planet is manifest.³ This article is not intended to debate the science of climate change but is instead intended to discuss the national security ramifications of its consequences. There are a number of particular threats to U.S. national security that come with increasing temperatures and rising sea levels. These include, but are not limited to, those related to regional and international security;⁴ the spread of diseases and epidemics;⁵ demand for U.S. aid and support globally;⁶ the physical impact to military readiness around the world;⁷ and the U.S.

- Spencer Weart, Rapid Climate Change, THE DISCOVERY OF GLOBAL WARMING, https://history.aip.org/climate/rapid.htm [https://perma.cc/ 2JNA-ACXQ] (May 2023).
- Climate Change, WORLD HEALTH ORG. [WHO] (Oct. 12, 2023), https://www.who.int/news-room/fact-sheets/detail/climate-change-andhealth [https://perma.cc/P8TV-DBHG].
- Karya Naz Balkiz, Climate Change and Global Security: What's at Stake, TRTWORLD, https://www.trtworld.com/magazine/climate-change-andglobal-security-what-s-at-stake-51710 [https://perma.cc/284J-SV5Q].
- Sally Nicholas, What is the Link Between Climate Change and Infectious Disease?, WELCOME (Nov. 23, 2023), https://wellcome.org/news/whatlink-between-climate-change-and-infectious-disease [https://perma.cc/ QG2L-BGGM].
- Christopher Flavelle, Rich Nations Cut Aid for Climate Shocks, Even as Risks Grew, N.Y. TIMES (Nov. 2, 2023), https://www.nytimes.com/2023/ 11/02/climate/climate-aid-developing-countries-un.html [https://perma .cc/4SFU-A5K4].
- 7. AMERICAN PHYSIOLOGICAL SOCIETY, Climate Change Threatens Military Readiness, NEWSWISE (June 8, 2023, 7:00 AM), https://www.newswise.

^{1.} See generally Alicia Orr, Presidential Views of Climate Change as a National Security Concern (2021).

military's ability to detect threats and defend American interests at home and abroad. $^{\rm 8}$

Climate change has not always been identified or articulated as a pressing *national security* concern for the United States. While it was mentioned in some military reports and national security strategies beginning in the 1980s,⁹ in the early 2000s administrations began to recognize the need to address climate change as a threat to military preparedness and global stability. The Obama Administration was the first to address the issue as such publicly and with vigor.¹⁰

In 2007, eleven retired flag officers warned in a report, National Security and the Threat of Climate Change, that climate change "accelerated traditional security threats."¹¹ The report recommended defining climate change as a national security threat and integrating the consequences of such a threat into military planning. The report also highlighted how climate change acts as a "threat multiplier for instability in some of the most volatile regions of the world" and will add to tensions even in stable regions of the world.¹² The authors emphasized the need "to take sensible action, integrate it (climate change) into national security frameworks, and to build the necessary capacity and resilience to address it responsibly in the future."¹³ At the time of the report, climate-related national security risks had been identified by the White House and numerous federal agencies, including Department of Defense, Department of Homeland Security, Department of Energy, and Government Accountability Office, but the authors stressed that "the risks associated with climate change should be viewed with more urgency and may already be causing problems."¹⁴

com/articles/climate-change-threatens-military-readiness [https://perma. cc/LD2T-GFVE].

^{8.} See White House, Findings From Select Federal Reports: The National Security Implications of a Changing Climate 9-10 (2015).

Dana Nuccitelli, The Long History of Climate Change Security Risks, YALE CLIMATE CONNECTIONS (Apr. 8, 2019), https://yaleclimate connections.org/2019/04/the-long-history-of-climate-change-securityrisks/ [https://perma.cc/SRU7-W68E].

See, e.g., Press Release, White House, Presidential Memorandum – Climate Change and Nat'l Sec. (Sept. 21, 2016), https://obama whitehouse.archives.gov/the-press-office/2016/09/21/presidentialmemorandum-climate-change-and-national-security [https://perma.cc/ 4XQK-N8PD].

^{11.} Sean Peoples, National Security and the Threat of Climate Change, WILSON CTR., https://www.wilsoncenter.org/event/national-securityand-the-threat-climate-change [https://perma.cc/68EA-KKPS].

^{12.} Id.

^{13.} Id.

^{14.} See id.; The Heat Is On: Is Climate Change a Threat to National Security, WILSON CTR. (June 25, 2014), https://wilsoncenter.org/article/the-heatclimate-change-threat-to-national-security [https://perma.cc/9KPR-

III. INSTABILITY AND GEOPOLITICAL TENSIONS

Climate change can lead directly to global instability and increasing geopolitical tensions. It can contribute to forced migration and resource scarcity in certain regions,¹⁵ potentially intensifying conflicts and requiring military interventions or humanitarian assistance missions. The United States Office of the Director of National Intelligence (ODNI) warned that climate change will only continue to exacerbate existing geopolitical tensions and lead to increased "hot" conflicts around the globe.¹⁶ These tensions come not only from a competition of resources and state interests, but also from other types of conflict related to migration and refugees.¹⁷

A. Competition for Resources

Growing deserts, shrinking coastlines, and melting ice caps intensify competition for natural resources. As deserts expand, arable land diminishes, leading to increased competition for fertile soil and freshwater resources necessary for agriculture.¹⁸ Simultaneously, shrinking coastlines due to rising sea-levels expose coastal communities to resource disputes, as valuable land and fisheries become scarcer.¹⁹ The melting ice caps in polar regions unlock new opportunities for resource extraction, such as oil, gas, and minerals, leading to a fierce geopolitical competition among nations for control of these valuable assets.²⁰ In fact, a 2008 U.S. Geological Survey predicted that the competition in the Arctic would be for access to an estimated "90 billion barrels of oil, 1,669 trillion cubic feet of natural gas, and 44 billion

- 15. Lawrence Huang, *Climate Migration 101: An Explainer*, MIGRATION POL'Y INST. (Nov. 16, 2023), https://www.migrationpolicy.org/article/climate-migration-101-explainer [https://perma.cc/HF9Z-ML3G].
- 16. NAT'L INTEL. COUNCIL, GLOBAL TRENDS: PARADOX OF PROGRESS 22 (Jan. 2017).
- 17. Off. of the Dir. of Nat'l Intel., Climate Change and International Responses Increasing Challenges to US National Security Through 2040 10 (2021).
- See Expanding Deserts, U.S. DEP'T OF AGRIC., https://www.ars.usda.gov/ plains-area/las-cruces-nm/range-management-research/docs/expandingdeserts/ [https://perma.cc/5LTQ-WQA3](Aug. 13, 2016).
- Press Release, Security Council, Climate Change-induced Sea-Level Rise Direct Threat to Millions Around the World, Secretary-General Tells Sec. Council, U.N. Press Release SC/15199 (Feb. 14, 2023).
- Matthew Gross, Geopolitical Competition in the Arctic Circle, HARV. INT'L REV. (Dec. 2, 2020), https://hir.harvard.edu/the-arctic-circle/ [https://perma.cc/P739-788B].

⁵H7H]; Moses Jackson et. al., National Security and Climate Change: What Do We Need to Know?, WILSON CTR., https://www.wilsoncenter. org/event/national-security-and-climate-change-what-do-we-need-toknow [https://perma.cc/8JFK-B7DZ].

barrels of natural gas liquids."²¹ The former U.S. Secretary of State Mike Pompeo stated that the Arctic in particular "has become an arena for power and for competition."²² This competition between regional powers will not only be for land, oil, and mineral resources as glaciers melt and the environment changes, but also for new trade routes, such as between Europe and Asia, as oceans expand.²³ The overall result of this increased competition for resources prompted by environmental changes due to climate change can heighten tensions and contribute to rising conflict and forced displacement.²⁴ These intersecting challenges underscore the urgent need for international cooperation and sustainable resource management practices to mitigate conflicts and ensure equitable distribution of vital resources in a changing climate.

B. Rise in Refugees and Internally Displaced Persons (IDPs)

As a consequence of increased competition over natural resources and increasingly extreme and unpredictable weather patterns, climate change exacerbates the already precarious situation for refugees, migrants, and internally displaced persons (IDPs) around the world. The aforementioned increase in temperatures, prolonged droughts, and extreme weather events, are displacing millions from their homes each year. Between 2021 and 2022, there was a 45% increase in the total number of IDPs due to natural disasters.²⁵ For example, in sub-Saharan Africa, climate change is leading to food insecurity as the sustained droughts and subsequent effects on the ability to farm,²⁶ combined with

- 21. U.S. GEOLOGICAL SURV., CIRCUM-ARCTIC RESOURCE APPRAISAL: ESTIMATES OF UNDISCOVERED OIL AND GAS NORTH OF THE ARCTIC CIRCLE 1 (2008).
- Charlie Duxbury, The 5 Most Important Races for the Arctic, POLITICO (Jan. 1, 2020, 5:52 PM), https://www.politico.eu/article/5-races-for-thearctic-trade-resources-supremacy-tourism-salvation/?ref=hir.harvard.edu [https://perma.cc/8RDJ-2M95].
- Charlie Duxbury, The 5 Most Important Races for the Arctic, POLITICO (Jan. 1, 2020, 5:52 PM), https://www.politico.eu/article/5-races-for-thearctic-trade-resources-supremacy-tourism-salvation/?ref=hir.harvard.edu [https://perma.cc/8RDJ-2M95].
- Press Release, Security Council, Massive Displacement, Greater Competition for Scarce Resources Cited as Major Risks in Security Council Debate on Climate-Related Threats, U.N. Press Release SC/13677 (Jan. 25, 2019).
- 25. Environmental Migration, MIGRATION DATA PORTAL, https://migration dataportal.org/themes/environmental_migration_and_statistics [https://perma.cc/U3RZ-FQ8Z] (Dec. 20, 2023).
- 26. Changes in rainfall patterns and the predictability of such, as well as growing "[ar]rid and semiarid regions," are expected to lead to significant drops in crop yields over the next few decades. Liette Connolly-Boutin & Barry Smit, *Climate Change, Food Security, and Livelihoods in Sub-Saharan Africa*, 16 REG'L ENV'T CHANGE 385, 387 (2016).

the lack of access to international markets and other government support programs, forces communities, especially rural ones, to migrate elsewhere to access basic needs, whether to cities within their country or to other states entirely.²⁷ In fact, sub-Saharan Africa, the Middle East, and North Africa had the highest numbers of IDPs in 2022 according to a 2023 report by the Internal Displacement Monitoring Center.²⁸ Additionally, sea-level rise threatens coastal communities, forcing them to abandon their homes and seek refuge elsewhere.²⁹ It should be noted that those who are forced to abandon their homes and communities and migrate elsewhere in response to climate related disasters are not refugees in the legal sense of the term. "Climate migrants are not offered refugee status under the 1951 Refugee Convention,³⁰ which provides legal protection only to people fleeing persecution due to their race, religion, nationality, political opinion or particular social group."³¹

C. Rise in Political Instability and Violence

In addition to promoting competition over resources, migration spurred by climate change can exacerbate existing political tensions and instability, particularly in states that are already struggling with poverty, corruption, and weak governance, likely creating conditions that are ripe for conflict and violence.³² The influx of climate migrants and IDPs will inevitably place stress on host communities and states, as population increases lead to competition for basic resources and access to income. Such shifts in population and demographics may fuel social unrest and result in possible humanitarian crises when host communities are unable to support the sudden increase in population.

Individuals escaping climate change threats have little chance of returning to their home communities, as climate change is likely to continue to undermine the livability of various at-risk communities globally. Approximately 71% of all internationally recognized refugees

^{27.} See generally id.

^{28.} Internal Displacement Monitoring Center [IDMC], Internal Displacement and Food Security, at 8 (2023).

^{29.} Climate Change Indicators: Costal Flooding, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/climate-indicators/climate-change-indicators-coastal-flooding [https://perma.cc/424C-F7FR] (Nov. 1, 2023).

Julie Watson, Climate Change is Already Fueling Global Migration. The World Isn't Ready to Meet People's Changing Needs, Experts Say, PBS (July 28, 2022, 2:14 PM), https://www.pbs.org/newshour/world/climatechange-is-already-fueling-global-migration-the-world-isnt-ready-to-meetpeoples-needs-experts-say [https://perma.cc/86HY-55YS].

^{31.} Id.

^{32.} MICHAEL WERZ & LAURA CONLEY, CLIMATE CHANGE, MIGRATION, AND CONFLICT: ADDRESSING COMPLEX CRISIS SCENARIOS IN THE 21ST CENTURY 3 (2012).

are now hosted in low- and middle-income states and are increasingly likely to stay permanently, relying on host country resources and other international aid.³³ This reliance creates both economic and social stress for host states, which causes "host fatigue."³⁴ The result is a growing population that requires an increase in public resources, causing an increased burden on the already-strained state.³⁵

Groups that capitalize on instability and unemployed individuals include terrorist organizations and other non-state armed groups, both of which exist in North Africa, a region at the frontline of climate change and the global migration crisis.³⁶ It is critical to emphasize that migration itself does not directly correlate or, more importantly, lead to an increased threat from terrorism.³⁷ What *is* being studied is that host countries are more likely to experience terrorist activities due to a combination of factors that are exacerbated by an unmanageable number of migrants. Such factors include poor conditions in refugee camps and unfavorable living conditions, such as overcrowding and lack of access to a sustainable income.³⁸ The situation is made worse because "[h]ost states . . . are often reluctant to extend public services or citizenship."³⁹ Overall, factors like integration policies, state capacity, and host country treatment play a crucial role in shaping the relationship between migration and terrorism.⁴⁰

Violence *against* migrants is also a concern stemming from climateinduced migration. Migrants can become victims of terrorism and hate crimes, particularly when the native population reacts with fear and

- Press Release, General Assembly, Burden of Hosting Refugees, Chronic UNHCR Budget Shortages Highlighted, as Third Comm. Continues Discussion on Refugees, U.N. Press Release SHC/3719 (Nov. 13, 2002).
- 35. Ahmed, supra note 33.
- 36. WERZ & CONLEY, supra note 32, at 6.
- 37. This article in no way suggests that migrants are a direct security threat or that migrants are more likely to be terrorists. Migrants and refugees are often a scapegoat and should not hold any blame for the crisis. See e.g., Tobias Böhmelt et al., Can Terrorism Abroad Influence Migration Attitudes at Home?, 64 AM. J. POL SCI. 437, 438 (2020).
- See Vesna Stanković Pejnović, Connection Between Terrorism and Migration, in Sec. F. 2016 419, 422 (2016).
- 39. Zachary Laub et al., A System Under Strain, COUNCIL ON FOREIGN REL., https://cfr.org/refugee-crisis/#!/credits [https://perma.cc/K6KF-2UJZ].
- 40. Marc Helbling & Daniel Meierrieks, *Terrorism and Migration: An Overview*, 52 BRIT. J. POL. SCI. 977, 983 (2022).

^{33.} It should also be noted that increased reliance on international aid is being met with increasing donor fatigue. Sharmarke Ahmed, A Perfect Storm of Crises: Why Refugee-Hosting Countries Need More Support, ICMPD (Mar. 15, 2023), https://www.icmpd.org/blog/2023/a-perfect-storm-ofcrises-why-refugee-hosting-countries-need-more-support [https://perma .cc/XJ29-JBMZ]

hostility to increased immigration.⁴¹ This is especially relevant to rightwing terrorism, which often stems from nativism and xenophobia.⁴² Empirical evidence suggests that a higher number of refugees and non-European immigrants are associated with increased right-wing terrorist activity in Western European countries. For instance, studies conducted in Germany indicate a correlation between immigration and right-wing violence, particularly during periods of heightened immigration, such as in the 1990s and post-2015.43 In the United States, specifically, as immigration continues to rise, politicians are capitalizing on this anti-immigrant sentiment and spurring dangerous rhetoric, oftentimes leading to an increase in violence and hate crimes.⁴⁴ On a broader scale, this violent rhetoric can lead to eruptions of violence, often coupled with the commission of atrocity crimes against the marginalized groups, both domestically and internationally.⁴⁵ This dynamic can create a cycle of violence where attacks against foreigners in host states increase the risk of retaliatory terrorism by foreign populations.46

D. International Relations and Collective Responsibility

In addition to growing geopolitical tensions over resources and refugees, the ODNI report also predicts increasing geopolitical tensions between states over shared responsibility to reduce greenhouse gas emissions and compliance with the 2015 Paris Agreement.⁴⁷

- 41. Wesley S. McCann & Francis D. Boateng, An Analysis of Hate Crime Victimization Amongst Immigrants, 47 AM. J. CRIM. JUST. 795, 798 (2021).
- 42. James A. Piazza, *The Determinants of Domestic Right-Wing Terrorism* in the USA, 34 CONFLICT MGMT. & PEACE SCI. 52, 60 (2017).
- 43. Celina Hübner, "Never again"? The Rise of Right-Wing Terrorism in Germany, POL. VIOLENCE AT A GLANCE (Mar. 31, 2020), https://political violenceataglance.org/2020/03/31/never-again-the-rise-of-right-wing-terrorism-in-germany/ [https://perma.cc/ND3S-CSXM].
- 44. Kristian Hernandez, Anti-Immigrant Rhetoric Spiked in This Election. Here's Why It's Dangerous, THE CTR. FOR PUB. INTEGRITY (Nov. 4, 2022), https://publicintegrity.org/politics/elections/anti-immigrant-rhetoricspiked-in-this-election-heres-why-its-dangerous/ [https://perma.cc/SRX7 -PKQB]. The United States, which hosts a majority of its immigrants and refugees from Mexico and South America, has experienced an increase in hate crime towards immigrants and those of Latin descent. MICHAEL SHIVELY ET AL., UNDERSTANDING TRENDS IN HATE CRIMES AGAINST IMMIGRANTS AND HISPANIC-AMERICANS 1 (2013)
- See, e.g., Daniel L. Byman, How Hateful Rhetoric Connects to Real-world Violence, BROOKINGS (Apr. 9, 2021), https://brookings.edu/articles/howhateful-rhetoric-connects-to-real-world-violence/ [https://perma.cc/C535 -PVTY].
- 46. Helbling & Meierrieks, *supra* note 40, at 984.
- 47. Off. of the Dir. of Nat'l Intel., Climate Change and International Responses Increasing Challenges to US National Security Through 2040 1 (2021).

The 2015 Paris Agreement, adopted during the United Nations Climate Change Conference (COP21), is a landmark international treaty aimed at combating climate change. Its primary goal is to limit global warming to well below two degrees Celsius above pre-industrial levels, with an aspirational target of limiting the increase to one and a half degrees Celsius, by promoting actions to reduce greenhouse gas emissions and enhance climate resilience.⁴⁸ The United States rejoined the agreement in 2020 following President Joe Biden's inauguration.⁴⁹

The collective responsibility to carry out the requirements of the agreement has sparked disagreement over the division of burden (i.e., who is going to act and by how much?). This prompted former U.S. President Donald Trump to withdraw the United States from the agreement in 2017, citing concerns about damage to the U.S. economy.⁵⁰ There are disagreements, particularly between the developed and developing economies, over who should take on larger shares of the burden to reach the goals of the agreement.⁵¹ Of many, the main concern is over transitioning economies lowering emissions and the effect it would have on certain industries. Developing countries, including China and India, often argue they should be afforded leniency in allowing them to pollute in order to industrialize the same way the developed countries of the Global North did before global temperatures rose.⁵² Some have argued that "[e]quity demands that developed countries - the source of most past and current emissions of greenhouse [gasses] – act first to reduce emissions.³³ Others, including former U.S. President Bush, argued that developing countries should do their fair

^{48.} Paris Agreement, Nov. 4, 20216, art. 2(1)(a), 3156 U.N.T.S. 79.

Press Release, Antony Blinken, 71st Sec'y of State, The U.S. Officially Rejoins the Paris Agreement (Feb. 19, 2021), https://www.state.gov/theunited-states-officially-rejoins-the-paris-agreement/ [https://perma.cc/ JXW9-JMF5].

^{50.} See President Trump Announces U.S. Withdrawal from the Paris Climate Accord, TRUMP WHITE HOUSE (June 1, 2017), https://trumpwhite house.archives.gov/articles/president-trump-announces-u-s-withdrawal-paris-climate-accord/ [https://perma.cc/V565-TNBT].

^{51.} Robert Falkner, The Paris Agreement and the New Logic of International Climate Politics, 92 INT'L AFF. 1107, 1110 (2016).

^{52.} See Maxine Joselow et al., How China, the World's Top Polluter, Avoids Paying for Climate Damage, WASH. POST (Nov. 23, 2022, 7:49 AM), https://washingtonpost.com/climate-environment/2022/11/23/chinaclimate-finance-cop27/ [https://perma.cc/P4LW-Y8Q7]; see also Vedika Sud, India Says It's a 'Victim' of Global Warming 'Not a Contributor' as It Rejects Net Zero Emissions Target, CNN, https://cnn.com/2021/10/ 27/asia/india-net-zero-target-intl/index.html [https://perma.cc/V7CQ-32NH] (Oct. 28, 2021, 6:25 AM).

^{53.} WILLIAM CHANDLER ET AL., CLIMATE CHANGE MITIGATION IN DEVELOPING COUNTRIES: BRAZIL, CHINA, INDIA, MEXICO, SOUTH AFRICA, AND TURKEY ii (2020).

share to reduce or limit emissions. President Bush rejected the 1997 Kyoto Protocol in 2001, citing its inequitable treatment of states.⁵⁴

The debates and tensions over collective responsibility in the global community also reveal the undeniable pressure on the United States, as an industrialized economy, to increasingly reduce emissions in order to stymie the physical effects of climate change itself and remain cognizant of the threats from other developed and developing countries in this arena. The domestic politics of responding to climate change is beyond the scope of this article. However, the United States is looked upon as a world leader and must respond accordingly to maintain its position as such.⁵⁵ As the need to reduce emissions becomes more dire, the United States will be forced to adjust its economy and modernize its energy sector in order to retain its preeminent global position.⁵⁶

E. Increased Demand for International (and American) Aid

Paradoxically, the states predicted to be most heavily affected by the impacts of climate change are often those least equipped to mount effective responses.⁵⁷ Many of these vulnerable nations, often located in low-income regions, lack the financial resources, technological infrastructure, and institutional capacity to adapt to or mitigate the effects of a changing climate.⁵⁸ These states often face a compounding set of challenges, including extreme weather events, rising sea-levels, food and water scarcity, and health risks, all of which strain their already limited resources and resilience.⁵⁹ For instance,

- Id.; Julian Borger, Bush Kills Global Warming Treaty, THE GUARDIAN (Mar. 29, 2001, 3:28), https://www.theguardian.com/environment/2001/ mar/29/globalwarming.usnews [https://perma.cc/64EH-83HX].
- 55. See generally Stephen M. Walt, Could the United States Still Lead the World if It Wanted To?, FOREIGN POLICY (July 15, 2021, 4:04 PM), https://foreignpolicy.com/2021/07/15/could-the-united-states-still-leadthe-world-if-it-wanted-to/ [https://perma.cc/L32P-RBWU].
- See The Climate Crisis: Working Together for Future Generations, U.S. DEP'T OF STATE, https://www.state.gov/policy-issues/climate-crisis/ [https://perma.cc/HYE6-XEWK].
- 57. On the Frontline of Climate Crisis, Worlds Most Vulnerable Nations Suffer Disproportionately, U.N., https://www.un.org/ohrlls/news/ frontline-climate-crisis-worlds-most-vulnerable-nations-sufferdisproportionately [https://perma.cc/L4SE-4KDX].
- Navin Singh Khadka, Climate Change: Low-Income Countries 'Can't Keep up' with Impacts, BBC (Aug. 7, 2021), https://www.bbc.com/news /world-58080083 [https://perma.cc/SXQ4-AMJH].
- On the Frontline of Climate Crisis, supra note 57; Which Countries Are Most Threatened by and Vulnerable to Climate Change, IBERDROLA (Jan. 25, 2024), https://www.iberdrola.com/sustainability/top-countries-mostaffected-by-climate-change [https://perma.cc/ND2Q-U928]; Ahmed, supra note 33.

African states are likely to be the most vulnerable to multiple stresses, with up to 250 million people projected to suffer from water and food insecurity and, in low-lying areas, a rising sea level. As little as 1 percent of Africa's land is located in low-lying coastal zones but this land supports 12 percent of its urban population.⁶⁰

As a result, to prevent destabilizing mass migrations and potential internal and region conflicts, addressing the disparity in climate resilience and response capacity is a crucial aspect of U.S. national security as well as an issue of social and environmental justice. Furthermore, the global nature of climate change means that even the best efforts of states may be insufficient without concerted international cooperation and assistance, including that of the United States.⁶¹

F. Undermining of Military Readiness

Severe storms, flash floods, and other increasingly devastating natural disasters affect not only American citizens, but American military readiness as well.⁶² Climate change can lead to increased vulnerability of military infrastructure, such as runways, ports, and communication systems, to extreme weather events.⁶³ This vulnerability can disrupt training exercises, logistics, and deployment capabilities.⁶⁴ Billions of U.S. dollars have gone into repairing infrastructure, with Tyndall Air Force Base in Florida and Marine Corps Base Camp Lejeune in North Carolina being two examples of bases requiring significant assistance.⁶⁵ Bases abroad are just as impacted as those within the fifty states, including the base in Seoul, South Korea, a country that recently experienced its heaviest rainfall in 80 years.⁶⁶ Even more so, melting permafrost and rising sea levels in Alaska "have led to increased erosion affecting radar sites providing early warning

- 63. See id. at 6.
- $64. \quad Id. \ {\rm at} \ 5{\rm -}6.$
- 65. Id. at 6.

^{60.} WERZ & CONLEY, supra note 32, at 3.

^{61.} More on collective responsibility in the section on International Relations and Collective Responsibility. It is mentioned here as well to stress how the impact of climate change on more vulnerable regions will require U.S. resources and more from the international community, removing focus from other more conventional threats. *See supra* Section III(D).

^{62.} DEP'T OF DEFENSE, CLIMATE RISK ANALYSIS 4–6 (2021).

^{66.} David Choi, US Military Issues Warning as Heavy Rains, Deadly Flooding Continue in South Korea, STARS & STRIPES (Aug. 9, 2022), https:// stripes.com/theaters/asia_pacific/2022-08-09/rains-south-korea-seoulroads-rivers-7-dead-6924828.html [https://perma.cc/DKD3-KHFA].

and communication," further impacting military preparedness to respond to threats. 67

The physical effects of climate change not only directly threaten bases and other installations, but often also require states to use their militaries and military resources to address other repercussions of the changing climate. States around the world have deployed military forces to "spur rain after weeks of drought," dispose of marine life that had "died due to rising water temperatures and pollution," and undergo massive search and rescue missions following natural disasters.⁶⁸ This necessary use of resources diverts militaries' abilities, including that of the United States, to focus on more conventional and foreign threats.⁶⁹

Climate change is an "accelerant of instability or conflict," highlighting the operational challenges that will confront the United States military and partner militaries amid a rising sea level, growing extreme weather events, and other anticipated effects of climate change.⁷⁰

IV. U.S. NATIONAL SECURITY POLICY ON CLIMATE CHANGE: PAST SIX PRESIDENTIAL ADMINISTRATIONS' APPROACHES TO CLIMATE CHANGE ON ITS OWN AND AS A NATIONAL SECURITY THREAT

As previously articulated, climate change and national security are inextricably linked. Environmentalism may have been a cornerstone of many previous administrations, but only in the early twenty-first century did policies on climate change and national security begin to merge.⁷¹

The series of National Security Strategies released by each of the past six presidential administrations (1990–2022), including current U.S. President Joe Biden, reveal a notable evolution of U.S. administrations' articulation of climate change as a national security

- 70. WERZ & CONLEY, supra note 32, at 5.
- 71. See Nuccitelli, supra note 9.

^{67.} GOV'T ACCOUNTABILITY OFF., CLIMATE CHANGE RISKS TO NATIONAL SECURITY 1 (2022).

^{68.} Countries that have been required to use military resources to combat the impact of climate change include the United States, as well as Poland, Mexico, Switzerland, China, India, Iran, Pakistan, Uganda, the United Arab Emirates, and nearly a dozen other European countries. Erin Sikorsky, *The World's Militaries Aren't Ready for Climate Change*, FOREIGN POL'Y (Sep. 22, 2022, 8:00 AM), https://foreignpolicy.com/2022/09/22/militaries-climate-change-security-threats-strategy-floods-fires/ [https://perma.cc/2QHF-9WPY].

See Noel King, Climate Change Is a Risk to National Security, the Pentagon Says, NPR, https://www.npr.org/2021/10/26/1049222045/thepentagon-says-climate-change-is-having-a-negative-impact-on-nationalsecurit [https://perma.cc/9G3L-JW95] (Oct. 26, 2021, 6:09 PM).

threat across decades and within Democratic and Republican administrations. Recent history reveals an interesting shift over time from a U.S. interest in climate change (or simply the environment) as a *means* to another national security objective, such as energy security and dominance or economic growth, to the need to combat climate change as a U.S. national security objective in of itself.⁷² The recent history also reveals a deeply partian split, with recent Democratic Presidents spending more space on the topic of climate change as a national security threat than Republican counterparts in their National Security Strategies.⁷³ While the number of times climate change is mentioned in such public documents does not conclude anything concrete other than space on the page, it does signal the extent to which climate change is a part of, and integrated into, a president's national security approach. What results from this partisan divide is an inconsistent U.S. approach to climate policy. This poses a serious challenge to addressing the threat of climate change, which requires long-term, sustained action and trust between and among partners and adversary states, all of whom must be engaged to effectively spur global impact.

Traditionally, with some notable exceptions, U.S. national security has transcended partisan politics and elected officials from both major parties have done what they thought was best for the United States of America.⁷⁴ Ideally, every administration, regardless of political party, will continue to recognize climate change and its nexus with national security in the transition from one U.S. president to the next. U.S. engagement and leadership on climate change will be impossible if there isn't a long-term national security approach to climate change that transcends partisan lines.

^{72.} Compare WHITE HOUSE, NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT 15 (1994) ("[O]ur current decision regarding the environment will affect the magnitude of its security risks over at least a comparable period of time, if not longer"), with WHITE HOUSE, NATIONAL SECURITY STRATEGY 27–28 (2022) ("The climate crisis is the existential challenge of our time. A warming planet endangers Americans and people around the world—risking food and water supplies, public health, and infrastructure and our national security. Without immediate global action to reduce emissions, scientists tell us we will soon exceed 1.5 degrees of warming, locking in further extreme heat and weather, rising sea levels, and catastrophic biodiversity loss.").

^{73.} See Infra Figure A.

^{74.} See, e.g., Hawk Carlisle, Beating Core of Bipartisanship Still Remains, NAT'L DEF. (Sept. 2, 2020), https://www.nationaldefensemagazine.org/ articles/2020/9/2/beating-core-of-bipartisanship-still-remains [https:// perma.cc/D6DV-ULH7].

A. George H.W. Bush Administration

1. Environmental Policy

George H.W. Bush is well-known for his Administration's environmental protection efforts.⁷⁵ Specifically, his cap-and-trade policies are known for creating a market-based approach to reducing pollution and receiving bipartisan support.⁷⁶ These market schemes set a cap on emissions and allowed companies to buy and sell pollution permits, and were a key part of the Clean Air Act Amendments of 1990, which aimed to reduce air pollution by requiring the use of cleaner fuels and technologies.⁷⁷ Furthermore, in 1989, Bush issued an order that led to the creation of the U.S. Global Change Research Program,⁷⁸ which produces expert reports on how climate change is affecting the United States.⁷⁹ In 1992, he signed the United Nations Framework Convention on Climate Change, which created a process for states to work together to understand and respond to climate change.⁸⁰

2. National Security and Climate Change Policy

The elder Bush Administration's national security concerns in regard to the environment were predominantly linked to the economic health of America, with the 1993 National Security Strategy stating, "[e]conomic growth and environmental protection can be made complementary objectives to be pursued together."⁸¹ As such, the environment (not climate change) occupied a minor but explicit spot in the national security strategy documents, and Bush remained highly

- 75. See Scott Waldman & E&E News, Bush Had a Lasting Impact on Climate and Air Policy, SCI. AM. (Dec. 3, 2018), https://scientificamerican.com/ article/bush-had-a-lasting-impact-on-climate-and-air-policy/ [https:// perma.cc/58J8-DZFY]; Amaury Laporte, Remembering George H.W. Bush, the "Environmental President," EESI (Dec. 5, 2018), https://www. eesi.org/articles/view/remembering-george-h.w.-bush-the-environmentalpresident [https://perma.cc/PQN5-HVRL].
- Amaury Laporte, Remembering George H.W. Bush, the "Environmental President," EESI (Dec. 5, 2018), https://www.eesi.org/articles/view/ remembering-george-h.w.-bush-the-environmental-president [https:// perma.cc/FHE3-XF8R].
- 1990 Clean Air Act Amendment Summary, EPA, https://www.epa.gov/ clean-air-act-overview/1990-clean-air-act-amendment-summary [https:// perma.cc/CXJ9-E73G].
- Matthew E. Khan, George H.W. Bush Understood That Markets and the Environment Weren't Enemies, PBS (Dec. 4, 2018, 7:18 PM), https:// pbs.org/newshour/economy/george-h-w-bush-understood-that-marketsand-the-environment-werent-enemies [https://perma.cc/QJV4-5X6G].
- 79. Id.
- 80. Id.
- WHITE HOUSE, NATIONAL SECURITY STRATEGY OF THE UNITED STATES 12 (1993) [hereinafter NSS 1993].

focused on the connection of a stable environment to a stable economy.⁸² The 1993National Security Strategy unequivocally claims. "[e]nvironmental degradation is one of the most pressing global problems."⁸³ In regard to global cooperation, the strategy documents emphasize degradation of the environment as an issue the United States cannot solve alone.⁸⁴ However, the security strategy does not call for active cooperation on this issue with other states, but rather emphasizes the responsibility of the U.S. to live up to standards it has set for itself and for other countries to do the same or raise their own standards as necessary.⁸⁵ This focus on individual national action rather than a collaborative effort sequestered U.S. efforts to combat climate change. It was acknowledged as a common fight, but one each state would tackle separately.86

B. William J. Clinton Administration

1. Environmental Policy

Under the Clinton Administration, climate policy witnessed notable developments. Under Clinton's leadership, the United States eventually signed the Kyoto Protocol in 1998, committing to reduce greenhouse gas emissions.⁸⁷ But, because it was not ratified by the Senate, the United States did not become a party to the Protocol.⁸⁸ However, President Clinton initiated early efforts to address climate change domestically. In June 1993, the United States signed the Biodiversity Treaty and, one year later, the Desertification Convention.⁸⁹ His

- 83. NSS 1993, *supra* note 81, at 11.
- 84. Id. at 11–12.
- 85. See id. at 12
- 86. Id.
- United States Signs the Kyoto Protocol, U.S. DEP'T OF STATE (Nov. 12, 1998), https://1997-2001.state.gov/global/global_issues/climate/fs-us_ sign_kyoto_981112.html [https://perma.cc/XW8A-7GY2]; President Clinton Signs Climate Treaty, EDF (Nov. 12, 1998), https://edf.org/ media/president-clinton-signs-climate-treaty [https://perma.cc/5WH6-MPB3].
- Christie Aschwanden, A Lesson from Kyoto's Failure: Don't Let Congress Touch a Climate Deal, FIVETHIRTYEIGHT (Dec. 4, 2015, 7:00 AM), https://fivethirtyeight.com/features/a-lesson-from-kyotos-failure-dontlet-congress-touch-a-climate-deal/ [https://perma.cc/8XBN-ZL8A].
- 89. Convention on Biological Diversity, UNTC, https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8&chapter =27 [https://perma.cc/748A-BYTH]; United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, UNTC, https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-10& chapter=27&clang=_en [https://perma.cc/KA5X-YGLU].

^{82.} Khan, supra note 78.

Administration also launched the Climate Change Technology Initiative to promote research and development of clean energy technologies.⁹⁰ Additionally, his Administration sought to improve energy efficiency, expand the use of renewable energy sources, and reduce emissions from vehicles.⁹¹ Clinton's climate policy laid important groundwork for later efforts to address climate change and set the stage for more comprehensive actions under subsequent administrations, including his successor, President George W. Bush,⁹² who initiated some early steps towards reducing emissions from power plants.⁹³

2. National Security and Climate Change Policy

President Clinton's 2001 National Security Strategy states, "[o]ur natural security must be seen as part of our national security."⁹⁴ Over the course of Clinton's two administrations, the articulation of climate change and environmental degradation as a national security issue shifted. Early articulations of U.S. national security strategy by the Administration acknowledged the impact of environmental change on various sources of instability, including migration and population growth.⁹⁵ But in 1995, the Administration began to articulate this issue as a *global* issue that requires global solutions: "Strategies dealing with environmental issues of this magnitude will require partnerships between governments and nongovernmental organizations, cooperation between nations and regions, and a commitment to a strategically focused, long-term policy for emerging environmental risks."⁹⁶ In the 1997 National Security Strategy, the Administration asserted "[e]nvironmental threats do not heed national borders and can pose long-term dangers to our security and well-being . . . We must work closely with other countries to respond aggressively to these and other

^{90.} Press Release, The White House, Climate Change Tech. Initiative: \$4.0 Billion in Tax Incentives (Feb. 3, 2000), https://clintonwhitehouse4 .archives.gov/WH/New/html/20000204_9.html [https://perma.cc/ YQ4V-GTFZ].

^{91.} Id.

^{92.} Executive Summary – Clear Skies Initiative, THE WHITE HOUSE (Feb. 14, 2002), https://georgewbush-whitehouse.archives.gov/news/releases/2002 /02/clearskies.html [https://perma.cc/4XP2-X579].

Amy Royden, U.S. Climate Change Policy Under President Clinton: A Look Back, 32 GOLDEN GATE UNIV. L. REV. 415, 440 –46 (2022); Executive Summary-Clear Skies Initiative, supra note 92.

^{94.} WHITE HOUSE, A NATIONAL SECURITY STRATEGY FOR A GOLDEN AGE (2000) [hereinafter NSS 2001].

^{95.} NSS 1993, *supra* note 81, at 9.

WHITE HOUSE, NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT 18 (1995) [hereinafter NSS 1995].

environmental threats."⁹⁷ Toward the late 1990s, President Clinton's call for collaboration was complicated by the U.S. demand for developing countries to take on their own responsibilities as well: "The Kyoto Agreement was a major step forward in controlling the greenhouse gasses that are causing climate change, but its success depends on meaningful participation by key developing nations as well as the industrialized nations of the world. Rapid economic growth in China and India makes their participation essential to the global effort to control greenhouse gasses."⁹⁸ The document continues, "[w]e will not submit the Kyoto agreement for ratification until key developing nations have agreed to participate meaningfully in efforts to address global warming."⁹⁹

C. George W. Bush Administration Policy

1. Environmental Policy

President George W. Bush's climate policy sought to make progress towards reducing emissions but was marked by the removal of the United States' signature from the Kyoto Protocol, claiming it was unrealistic.¹⁰⁰ The withdrawal signaled a lack of support for international efforts and commitment to environmental goals, and generated substantial international debate and criticism.¹⁰¹ Overall, the Administration, which often tried to relax environmental regulations,¹⁰² has been criticized for lacking the urgency and commitment needed to address pressing environmental challenges.¹⁰³ Moreover, although his Administration began in 2001, only in 2005 did President Bush publicly admit that humans are directly responsible for greenhouse gas emissions and causing climate change.¹⁰⁴

- 100. See Press Release, The White House, President Bush Addresses Global Climate Change (June 11, 2001, 11:10 AM), https://georgewbushwhitehouse.archives.gov/news/releases/2001/06/20010611-2.html [https://perma.cc/N9EB-FKR4].
- 101. See Luke Burbank, Bush Views Shift on Climate Change, NPR (Feb. 1, 2007, 1:00 PM), https://www.npr.org/templates/story/story.php?storyId =7115660 [https://perma.cc/SE75-TX4].
- 102. Suzanne Goldenberg, The Worst of Times: Bush's Environmental Legacy Examined, THE GUARDIAN (Jan. 16, 2009, 10:45), https://theguardian. com/politics/2009/jan/16/greenpolitics-georgebush [https://perma.cc/ 8NMM-BARS].
- 103. Id.
- 104. Burbank, supra note 101.

^{97.} WHITE HOUSE, NATIONAL SECURITY STRATEGY FOR A NEW CENTURY (1997) [hereinafter NSS 1997].

WHITE HOUSE, A NATIONAL SECURITY STRATEGY FOR A NEW CENTURY 45 (1998) [hereinafter NSS 1998].

^{99.} Id. at 14.

Despite this, the Bush Administration championed what they referred to as the "Clear Skies Initiative," aimed at reducing power plant emissions.¹⁰⁵ But the Initiative faced criticism for being less stringent than previous regulations due to the fact that it did not propose mandatory caps.¹⁰⁶ The Administration also pushed forward other measures seeking to accelerate the development and deployment of advanced technologies for energy production and conservation.¹⁰⁷ Despite the emphasis on voluntary measures, the Bush Administration's approach to climate change generated mixed reactions, both domestically and internationally, as it seemingly took action on climate change, but arguably lacked real strength.¹⁰⁸

2. National Security and Climate Change Policy

Reference to the changes and degradation of the environment remained quite light across the two National Security Strategies released during the George W. Bush Administration.¹⁰⁹ Protection of the environment was not articulated as a core national security issue in of itself, but rather was considered more narrowly as a tool to further separate, but related, American interests, such as economic growth.¹¹⁰ The 2002 National Security Strategy stated, "[e]conomic growth should be accompanied by global efforts to stabilize greenhouse gas concentrations associated with this growth."¹¹¹ In regard to approaching this issue alongside partners, it is primarily China, with one mention of India, who are discussed.¹¹² The 2002 National Security Strategy notes that part of the U.S. strategy to reduce greenhouse gas emissions is to "assist developing countries, especially the major greenhouse gas

- 107. Press Release, The White House, Fact Sheet: President Bush is Addressing Climate Change (June 30, 2005), https://georgewbush-white house.archives.gov/news/releases/2005/06/20050630-16.html [https:// perma.cc/8PAM-JS86].
- 108. Reaction to Bush on Climate Change, REUTERS (Aug. 9, 2007, 3:10 PM), https://www.reuters.com/article/idUSL31733321/ [https://perma.cc/ 4XML-DTT9]; Armin Rosencranz, U.S. Climate Change Policy Under G.W. Bush, 32 GOLDEN GATE U. L. REV. 479, 488–90 (2002).
- 109. WHITE HOUSE, THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 20 (2002) [hereinafter NSS 2002]; see WHITE HOUSE, THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA (2006) [hereinafter NSS 2006].
- NSS 2002, supra note 109, at 19–20; see NSS 2006, supra note 109, at 36– 47.
- 111. NSS 2002, supra note 109.
- 112. Id. at 19–20, 26–27.

^{105.} Executive Summary-Clear Skies Initiative, supra note 92.

^{106.} See Bruce Barcott, Changing All the Rules, N.Y TIMES (Apr. 4, 2004), https://www.nytimes.com/2004/04/04/magazine/changing-all-the-rules .html [https://perma.cc/Q33G-DQN7].

emitters such as China and India, so that they will have the tools and resources to join this effort and be able to grow along a cleaner and better path."113 Just four years later in President Bush's second and final 2006 National Security Strategy, the environment was framed again as a tool to bring China closer in with the United States.¹¹⁴ On discussing East Asia and China specifically, the 2006 National Security Strategy states "[w]e will work to increase our cooperation to combat pandemics and reverse environmental degradation."115 disease Separately, the 2006 strategy document notes the United States joined with Australia, China, India, Japan, and the Republic of Korea in forming the Asia-Pacific Partnership for Clean Development and Climate to "accelerate deployment of clean technologies to enhance energy security, reduce poverty, and reduce pollution."¹¹⁶ Beyond references to the Asia-Pacific, collaboration on the issue of environment was not a focus of the Administration in either the 2002 or 2006 National Security Strategy, with the 2006 document acknowledging "[w]e have also faced challenges in forging consensus with other major nations on the most effective measures to protect the environment."¹¹⁷

D. Barack H. Obama Administration Policy

1. Environmental Policy

President Obama's Climate Action Plan, unveiled in 2013, marked a significant departure from prior U.S. presidents in addressing climate change.¹¹⁸ The plan aimed to reduce greenhouse gas emissions and promote clean energy solutions.¹¹⁹ A cornerstone of the policy was the Clean Power Plan, which sought to limit carbon emissions from power plants.¹²⁰ President Obama also emphasized energy efficiency, with initiatives aimed at making buildings and appliances more energy efficient.¹²¹ The plan committed to doubling electricity generation from

- 114. NSS 2006, supra note 109, at 41–42.
- 115. NSS 2006, supra note 109.
- 116. Id. at 27.
- 117. Id. at 36.
- 118. Press Release, The White House, Fact Sheet: President Obama's Action Plan (June 25, 2013), https://obamawhitehouse.archives.gov/the-pressoffice/2013/06/25/fact-sheet-president-obama-s-climate-action-plan [https://perma.cc/3WTR-45SU].
- 119. See generally id.
- 120. See generally Climate Change and President Obama's Action Plan, THE WHITE HOUSE: PRESIDENT BARACK OBAMA, https://obamawhitehouse. archives.gov/president-obama-climate-action-plan [https://perma.cc/ Y4EY-ZSRV].
- 121. Id.

^{113.} Id.

renewable sources such as wind and solar by 2020.¹²² Furthermore, it set a goal to reduce emissions in the United States by 32% below 2005 levels by 2030, aligning with international efforts to combat climate change.¹²³ By addressing emissions from various sectors and promoting clean energy, Obama's Climate Action Plan laid a foundation for the United States to play a more proactive role in global climate action and reduce its environmental impact.¹²⁴

2. National Security and Climate Change Policy

A notable departure from past administrations' approaches to climate change within U.S. national security strategy, the Obama Administration chose to situate climate change within the National Security Strategies alongside all of the other top-priority, conventional national security issues, including violent extremism, nuclear proliferation, terrorism, and cybersecurity.¹²⁵ In so doing, and in explicit ways throughout the strategy documents, the Obama Administration made a direct link between U.S. efforts and success to address climate change and the protection of vital U.S. interests.¹²⁶ The 2010 National Security Strategy claimed, "the nation that leads the world in building a clean energy economy will enjoy a substantial economic and security advantage."¹²⁷ Several years later, the 2015 National Security Strategy asserted that "Climate change is an urgent and growing threat to our national security."¹²⁸ In the 2015 National Security Strategy, the Administration also listed climate change as one of eight efforts that "address the top strategic risks to our interests."¹²⁹ Alongside climate change were also threats or attacks against U.S. citizens abroad and our allies, proliferation or use of weapons of mass destruction, and

- 127. NSS 2010, supra note 126, at 30.
- 128. NSS 2015, supra note 126, at 12.
- 129. Id. at 2.

^{122.} Id.

^{123.} Id.

^{124.} Id.

^{125.} Derek Reveron, Obama's National Security Strategy Unfolding, ATLANTIC COUNCIL (July 16, 2009), https://www.atlanticcouncil.org/blogs/newatlanticist/obamas-national-security-strategy-unfolding/ [https://perma. cc/HX5A-CBAW].

^{126.} WHITE HOUSE, NATIONAL SECURITY STRATEGY 8 (2010) [hereinafter NSS 2010]; WHITE HOUSE, NATIONAL SECURITY STRATEGY 7 (2015) [hereinafter NSS 2015].

global economic crisis or slowdown. $^{\rm 130}$ Climate change became a national security threat in its own right. $^{\rm 131}$

In regard to U.S. collaboration with other states on the issue of climate change, the Obama Administration concluded that all states must play a part and take responsibility for their own actions. The 2010 National Security Strategy stated, "there is no effective solution to climate change that does not depend upon all nations taking responsibility for their own actions and for the planet we will leave behind . . . We accept the principle of common but differentiated responses and respective capabilities, but will insist that any approach draws upon each nation taking responsibility for its own actions."¹³² In addition to underscoring collaboration and the need for all states to play their part, noting China in particular,¹³³ the Obama Administration also underscored America's unilateral leadership in this domain, stating, "America is leading efforts at home and with the international community to confront this challenge."¹³⁴

Beginning in 2014, the Government Accountability Office began making recommendations for how the government could better protect both military and civilian infrastructure and improve the nation's climate resilience, arguing that climate change is a significant national security threat that requires a whole-of-government approach to address.¹³⁵

In 2015, the Obama Administration released a report¹³⁶ drawing from other Federal reports that addressed the national security implications of climate change.¹³⁷ The report concluded that "[c]limate change is an urgent and growing threat to U.S. national security, contributing to increased weather extremes, which worsen refugee flows

- 132. NSS 2010, *supra* note 126, at 47.
- 133. Id. at 43.
- 134. NSS 2015, *supra* note 126, at 12.
- 135. See generally GOV'T ACCOUNTABILITY OFF, supra note 67.
- 136. See White House, Findings from Select Federal Reports: The National Security Implications of a Changing Climate 3 (2015).
- 137. Id.

^{130.} All eight top strategic risks to American interests were: (1) "catastrophic attack on the U.S. homeland or critical infrastructure"; (2) "threats or attacks against U.S. citizens abroad and our allies"; (3) "global economic crisis or widespread economic slowdown"; (4) "proliferation and/or use of weapons of mass destruction"; (5) "severe global infectious disease outbreaks"; (6) "climate change"; (7) "major energy market disruptions"; and (8) "significant security consequences associated with weak or failing states (including mass atroci[]ties, regional spillover, and transnational organized crime)." *Id.*

^{131.} In both of President Obama's National Security Strategies (2010 and 2015), Climate Change had its own section (2015) or subsection (2010) for the first time. *Id.* at 12; NSS 2010, *supra* note 126, at 47.

and conflicts over basic resources like food and water."¹³⁸ The report also noted that climate change may overwhelm the capacities of critical infrastructure, causing widespread disruption of essential services across the country.¹³⁹ The report described the vast geopolitical impacts of climate change anticipated by the intelligence community, including sea level rise, increasing temperatures, food and water scarcity, the proliferation of disease vectors, and the risk of mass migration.¹⁴⁰ The report also noted that climate change, energy security, and economic stability are inextricably linked.¹⁴¹ Some of the more enduring climatesecurity policies have come in the form of budget authorizations housed within broader fiscal authorization acts for the defense and intelligence communities.¹⁴²

E. Donald J. Trump Administration Policy

1. Environmental Policy

Trump Administration made significant changes to The environmental regulations during President Trump's tenure. Overall, the Administration pursued a deregulatory agenda that extended into the rules protecting the nation's natural resources.¹⁴³ The Brookings Institute tracked 74 actions the Administration took to weaken protection.¹⁴⁴ More specifically, environmental the Trump Administration replaced the Clean Power Plan, redefined critical terms under the Endangered Species Act, lifted oil and natural gas extraction bans, weakened the Coal Ash Rule, and revised mercury and air toxic standards, among other changes.¹⁴⁵ Lastly, as mentioned previously, the

- 141. Id.
- 142. See, e.g., John Conger, Climate Security Provisions in the FY24 National Defense Authorization Act, CLIMATE & SEC. (Dec. 23, 2023), https://climateandsecurity.org/2023/12/climate-security-provisions-in-the-fy24-national-defense-authorization-act/ [https://perma.cc/D7NJ-3A9P].
- 143. Examining Some of Trump's Deregulation Efforts: Lessons from the Brookings Regulatory Tracker, BROOKINGS (Mar. 8, 2022), https://www.brookings.edu/articles/examining-some-of-trumps-deregulation-efforts-lessons-from-the-brookings-regulatory-tracker/ [https://perma.cc/G2DS-YULF].
- 144. Samantha Gross, What is the Trump Administration's Track Record on the Environment?, THE BROOKINGS INST. (Aug. 4, 2020), https://www. brookings.edu/articles/what-is-the-trump-administrations-track-recordon-the-environment/ [https://perma.cc/W3BC-9GFK].
- 145. Cayli Baker, The Trump Administration's Major Environmental Deregulations, THE BROOKINGS INST. (Dec. 15, 2020), https://www.brookings.edu/articles/the-trump-administrations-major-environmental-deregulations/ [https://perma.cc/XW82-W32L].

^{138.} *Id.* at 8.

^{139.} Id. at 3.

^{140.} *Id.* at 7–8.

Trump Administration withdrew from the Paris Climate Accords, cut energy-related CO2 emissions by 12% from 2005 to 2018, and approved the Keystone XL and Dakota Access pipelines, among other moves.¹⁴⁶ The legacy of the Trump Administration's approach to the environment, however, is limited, with as many as 83% of the Administration's environmental measures being overturned in court.¹⁴⁷

2. National Security and Climate Change Policy

In President Trump's sole 2017 National Security Strategy, climate change was not explicitly referenced and the discussion on environmental degradation and protection of the environment remained largely absent.¹⁴⁸ Consideration of the natural environment was referenced in the 2017 strategy document mostly in the context of ensuring U.S. energy dominance and security and safe development of energy resources.¹⁴⁹ The 2017 National Security Strategy stated, "[w]e are committed to supporting energy initiatives that will attract investments, safeguard the environment, strengthen our energy security, and unlock the enormous potential of our shared region."¹⁵⁰ Consideration of collaboration with other states on the topic of climate change was also absent from the strategy document.¹⁵¹

F. Joseph R. Biden Administration Policy

1. Environmental Policy

The Biden Administration has taken an ambitious approach towards addressing climate change and unequivocally stresses that climate change is a national security issue.¹⁵² The Administration has released several reports¹⁵³ specifically on climate change and national

- 149. Id.
- 150. *Id.* at 22–23.
- 151. See NSS 2017, supra note 148.
- 152. See, e.g., Press Release, White House, Fact Sheet: Prioritizing Climate in Foreign Policy and National Security (Oct. 21, 2021), https://white house.gov/briefing-room/statements-releases/2021/10/21/fact-sheetprioritizing-climate-in-foreign-policy-and-national-security/ [https:// perma.cc/LP24-P59N] [hereinafter Prioritizing Climate in Foreign Policy and National Security].
- 153. See, e.g., DEP'T OF DEF., supra note 62; see also DEP'T OF HOMELAND SEC., DHS STRATEGIC FRAMEWORK FOR ADDRESSING CLIMATE CHANGE (2021); see also WHITE HOUSE, REPORT ON THE IMPACT OF CLIMATE

^{146.} Energy & Environment, TRUMP WHITE HOUSE, https://trumpwhitehouse. archives.gov/issues/energy-environment/ [https://perma.cc/X5HH-RXZY].

^{147.} Baker, *supra* note 145.

^{148.} See White House, NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA (2017) [hereinafter NSS 2017].

security, and the reports highlight the ways in which the warming world is beginning to significantly challenge stability worldwide.¹⁵⁴ The reports, issued by the departments of Homeland Security and Defense, the National Security Council, and Director of National Intelligence, mark the first time that the nation's security agencies collectively communicated the climate risks they face.¹⁵⁵ The National Intelligence Estimate, the first to look exclusively at the issue of climate, said that risks to American national security will only grow in the years to come.¹⁵⁶ The Department of Homeland Security said it will start making climate change a focus of its preparedness grants for state and local governments and will incorporate the changing science into the guidance it provides to the public and private sectors.¹⁵⁷ The report concludes that climate change is an urgent and growing threat to U.S. national security, contributing to increased weather extremes that worsen refugee flows and conflicts over basic resources like food and water.¹⁵⁸ The report also notes that climate change may overwhelm the capacities of critical infrastructure, causing widespread disruption of essential services across the country.¹⁵⁹

On his first day in office, President Biden re-joined the Paris Accords, demonstrating a commitment to working with world leaders to reduce emissions and signaling a change from past policy.¹⁶⁰ Later in 2021, President Biden launched the National Climate Task Force, consisting of cabinet secretaries and heads of agencies, and began its work to simultaneously create jobs and reduce emissions.¹⁶¹ The task force takes an aggressive approach to reducing emissions, signaling the Administration's approach to climate change and economic justice.¹⁶²

- 156. Off. of the Dir. of Nat'l Intel., *supra* note 47, at 2.
- 157. DEP'T OF HOMELAND SEC., supra note 153, at 11-12.
- 158. Id. at 13.
- 159. Id.
- 160. Exec. Order No. 13990, 87 FR § 23453 (Jan. 20, 2021).
- 161. Lisa Friedman, Biden's Climate Task Force Opens for Business, Aiming to Restore 'Credibility', N.Y. TIMES, https://www.nytimes.com/2021/02/ 11/climate/biden-climate-change.html [https://perma.cc/PEY3-LLK5] (Mar. 2, 2021).

CHANGE ON IMMIGRATION (2021); see also OFF. OF THE DIR. OF NAT'L INTEL., supra note 47.

^{154.} Prioritizing Climate in Foreign Policy and National Security, *supra* note 152.

^{155.} Id.

^{162.} Id.

2. National Security and Climate Change Policy

The Biden Administration, in its 2021 Interim National Security Strategy Guidance and its full 2022 National Security Strategy, made climate change a central focus in the U.S. national security strategy.¹⁶³ The Administration emphasized climate change as a threat shared with other nations while suggesting the need for U.S. leadership in this domain, including the provision of U.S. support to other states to mitigate and slow the effects of climate change.¹⁶⁴ The 2022 National Security Strategy stated, "[o]f all of the shared problems we face, climate change is the greatest and potentially existential for all nations."¹⁶⁵ In outlining "shared challenges that cross borders," one of the two primary strategic challenges the United States faces, the 2022 National Security Strategy explicitly mentioned climate change as one of those key challenges and claimed, "[t]hese shared challenges are not marginal issues that are secondary to geopolitics.¹⁶⁶ They are at the very core of national and international security and must be treated as such. By their very nature, these challenges require governments to cooperate if they are to solve them."¹⁶⁷

The emphasis on collaboration and the need for U.S. support for other states to confront the regional effect of climate change is a cornerstone of the Administration's approach.¹⁶⁸ It specifically references the need for collaboration on climate change with U.S. neighbors,¹⁶⁹ African nations,¹⁷⁰ South Asian regional partners,¹⁷¹ and China.¹⁷² The 2022 National Security Strategy also outlined that lowincome and lower-middle income states may need U.S. assistance for mitigation and adaptation efforts, noting an \$11 billion pledge by the United States in annual climate funding.¹⁷³ Climate change is also discussed as a direct threat to U.S. interests on U.S. shores, rather than a national threat solely because consequences to climate change breed

- 168. See generally id.; NSS 2021, supra note 163, at 8.
- 169. NSS 2021, supra note 163, at 10.
- 170. See id. at 11.
- 171. NSS 2022, supra note 163, at 38.
- 172. NSS 2021, *supra* note 163, at 21.
- 173. NSS 2022, supra note 163, at 28.

^{163.} WHITE HOUSE, NATIONAL SECURITY STRATEGY 27–28 (2022) [hereinafter NSS 2022]; WHITE HOUSE, NATIONAL SECURITY STRATEGY 9 (2021) [hereinafter NSS 2021].

^{164.} NSS 2022, supra note 163, at 8-12; NSS 2021, supra note 163, at 27.

^{165.} NSS 2022 *supra* note 163 at 9.

^{166.} Id. at 6.

^{167.} Id.

instability elsewhere.¹⁷⁴ In discussing the worsening effects of climate and humanitarian emergencies, the strategy document noted this included "more powerful wildfires and hurricanes in the United States" along with "flooding in Europe, rising sea levels in Oceania, water scarcity in the Middle East, melting ice in the Arctic, and drought and deadly temperatures in sub-Saharan Africa."¹⁷⁵ The Administration sees U.S. efforts domestically on climate change as critical to achieving legitimacy internationally, claiming, "[g]lobal action begins at home . . . We're integrating climate change into our national security planning and policies. This domestic work is key to our international credibility, and to getting other countries to up their own ambition and action."¹⁷⁶

The Biden Administration has departed from prior U.S. approaches to climate change as a national security threat in that it places explicit responsibility and ownership on the United States to address the challenge of climate change domestically and internationally and to motivate other states to do the same.¹⁷⁷ In articulating America's role in combating climate-related risks, the Biden Administration stated "[t]he United States is galvanizing the world and incentivizing further action" on the climate crisis.¹⁷⁸

V. MOVING FORWARD

To remain a world military leader, the United States must continue to adapt to address climate change threats as a number of foreign militaries have begun to do. The Japanese Ministry of Defense has developed a response strategy on climate change that includes the reinforcement of bases and other facilities against climate change effects such as sea level rise and extreme weather.¹⁷⁹ The strategy also includes provisions for climate change response at the strategic, operational, and tactical levels.¹⁸⁰ Perhaps more crucially, the response strategy also includes the reinforcement of the humanitarian assistance and disaster relief posture in response to more frequent and widespread disasters due

- 178. Id.
- 179. MINISTRY OF DEF., RESPONSE STRATEGY ON CLIMATE CHANGE 13–14 (2022), https://www.mod.go.jp/j/approach/agenda/meeting/ kikouhendou/pdf/taishosenryaku_202208_e.pdf.
- 180. Friedman, supra note 161; Exec. Order No. 13990, 87 FR § 23453 (Jan. 20, 2021).

^{174.} See id. at 27.

^{175.} Id. at 9.

^{176.} Id. at 27.

^{177.} NSS 2021, *supra* note 163, at 8–12; *see generally* NSS 2022, *supra* note 163.

to climate change.¹⁸¹ South Korea's military is also taking a range of measures to address climate change and reduce its carbon footprint.¹⁸² These measures include deploying electric aircraft, shifting to hydrogen fuel, increasing renewable energy sources, establishing a climate change risk management system, and incorporating energy system climate resilience into adaptation plans.¹⁸³ The European Union is also strengthening its command and control structures, in particular the Military Planning and Conduct Capability, to ensure that it can act rapidly and effectively in response to crises.¹⁸⁴ This is not to say that the United States has failed to make significant progress in this regard —the Pentagon has a dedicated office for climate change¹⁸⁵ but it will need to continue to need to develop new technology and tactical strategies around the world to address the increasing threats from climate change.¹⁸⁶

VI. WHAT IS NEXT FOR THE UNITED STATES TO CONSIDER?

To continue to address national threats from climate change, military strategy must prepare to address new military conflicts stemming from migrant flows, and U.S. national security policy must increasingly address traditional but complex environmental and humanitarian challenges, such as resource scarcity, forced displacement, and regional instability driven by the consequences of climate change.¹⁸⁷ This necessitates a multifaceted approach that combines military preparedness with national security priorities, diplomatic efforts, international cooperation, and sustainable development initiatives to promote resilience and mitigate the global security risks associated with climate change.

- Id.; Korea Climate Resilience Policy Indicator, IEA (Aug. 16, 2021), https://www.iea.org/articles/korea-climate-resilience-policy-indicator [https://perma.cc/958L-ZLLG].
- 184. A Strategic Compass for Security and Defence, at 3, 7371/22 (Mar. 21, 2022).
- Daniel Cusick, Meet the Pentagon's Climate Team, E&E NEWS (Nov. 14, 2022, 7:04 AM), https://www.eenews.net/articles/meet-the-pentagonsclimate-team/ [https://perma.cc/NG3K-VY8C].
- 186. Patrick Tucker, 'We Need to Own the Heat the Way We Now Own Night,' Pentagon Climate Leader Says, DEFENSE ONE (Aug. 24, 2022), https:// defenseone.com/threats/2022/08/we-need-own-heat-way-we-now-ownnight-pentagon-says/376260/ [https://perma.cc/9GX6-G3TP].
- 187. Off. of the Dir. of Nat'l Intel., supra note 47, at 13–15.

^{181.} Id. at 4.

^{182.} Felix Kim, Electric Aircraft, Hydrogen are Tools in South Korea's Climate Strategy, INDO PAC. DEF. F. (Dec. 11, 2021), https://ipdefense forum.com/2021/12/electric-aircraft-hydrogen-are-tools-in-south-koreasclimate-strategy/ [https://perma.cc/6FCX-K6YK].

This article has articulated that climate change must be acutely considered in all U.S. national security discussions and strategies. Addressing climate change and its effects must be a core pillar of future national security strategies despite the party in the White House or in control of Congress and apart from the ever-evolving political landscape. Climate change poses a long-term and global threat that transcends political divisions and requires sustained bipartisan and international cooperation for effective mitigation and adaptation efforts.

VII. CONCLUSION

The consequences of climate change are increasingly immediate, farreaching, and deeply intertwined with the national security of states, including the United States.¹⁸⁸ Climate change, the ensuing deterioration of the environment, and unpredictable natural disasters undermine military readiness and place an increasing strain on military resources. Climate disasters also breed instability, create geopolitical tensions through competition of resources, and increase demand and need for foreign aid. Subsequently, such disasters also spur a rise in refugees and climate migrants, grow political tensions and create instability, and increase violence and breakout conflicts that risk broader regional fighting and spillover effects.¹⁸⁹ These effects are increasingly threatening the national security of the United States and are beginning to reach American shores.¹⁹⁰ Climate change is increasingly affecting communities in Latin America, paving the way for increased immigration into the United States.¹⁹¹ Moreover, the United States is beginning to have its own IDPs—for example, the residents of Isle de Jean Charles are the first Americans forced to relocate due to rising sea levels.¹⁹² Internal climate-related disasters are wreaking havoc on a growing number of communities as well, threatening further migration trends.¹⁹³ Climate change is compounding

^{188.} See White House, Findings from Select Federal Reports: The NATIONAL SECURITY IMPLICATIONS OF A CHANGING CLIMATE 2–3 (2015).

^{189.} See id.

^{190.} See generally NSS 2021, supra note 163; see also NSS 2022, supra note 163.

^{191.} Mariana E. Franco, Climate Change, Violence Changing Migration Patterns in the Americas, AXIOS (Apr. 6, 2023), https://www.axios. com/2023/04/06/latin-america-carribean-migration-patterns [https:// perma.cc/7EWL-PBB2].

^{192.} Robynne Boyd, The People of the Isle de Jean Carles are Louisiana's First Climate Refugees—But They Won't Be the Last, NRDC (Sep. 23, 2019), https://nrdc.org/stories/people-isle-jean-charles-are-louisianasfirst-climate-refugees-they-wont-be-last [https://perma.cc/592U-DPJY].

^{193.} Drought in the midwest caused saltwater to infiltrate the Mississippi River and impact New Orleans' drinking water. See, e.g., Jacey Fortin,

the challenges faced by already vulnerable populations, highlighting the urgent need for coordinated and committed global efforts to mitigate its effects and build resilience within communities at risk. The continued understanding and articulation of climate change and its effects as a national security threat to the United States will be critical for long term national and global security.

Figure A: Administrations' Average Mentions of Climate Change Per National Security Strategy

Description: Displays the number of times climate change is referenced as a national security threat in the national security strategies of all six U.S. presidential administrations since 1990.

POTUS	Climate Change referenced as a National Security Threat in the National Security Strategies	Climate Change referenced as a National Security Threat per each published National Security Strategies
George H.W. Bush	4 ¹⁹⁴	1.33^{195}
William J. Clinton	20^{196}	2.857^{197}

Battling a Water Crisis: Bottles, Barges and Maybe a Quarter Billion-Dollar Pipe, N.Y. TIMES (Sept. 29, 2023), https://www.nytimes.com/ 2023/09/29/us/new-orleans-saltwater-intrusion.html [https://perma.cc/ 7V8P-E3P8].

- 194. See generally WHITE HOUSE, NATIONAL SECURITY STRATEGY (1990) [hereinafter NSS 1990]; see also WHITE HOUSE, NATIONAL SECURITY STRATEGY 2, 22 (1991) [hereinafter NSS 1991]; see also NSS 1993, supra note 81, at 11–12.
- 195. NSS 1990, supranote 194; NSS 1991, supranote 194; NSS 1993, supranote 81.
- 196. NSS 2001, supra note 94; WHITE HOUSE, NATIONAL SECURITY STRATEGY FOR A NEW CENTURY 13 (1999) [hereinafter NSS 2000]; see generally NSS 1998 supra note 98; NSS 1997 supra note 97; WHITE HOUSE, NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT 7, 26, 31(1996) [hereinafter NSS 1996]; NSS 1995, supra note 96; WHITE HOUSE, NATIONAL SECURITY STRATEGY OF ENGAGEMENT AND ENLARGEMENT 15,18 (1994) [hereinafter NSS 1994].
- 197. NSS 2001, supra note 94; NSS 2000, supra note 196; NSS 1998 supra note 98; NSS 1997 supra note 97; NSS 1996, supra note 196; NSS 1995, supra note 96; NSS 1994, supra note 196.

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George W. Bush	1^{198}	0.5^{199}
Barack H. Obama	36^{200}	18201
Donald J. Trump	0202	0 ²⁰³
Joseph R. Biden	34^{204}	17^{205}

- 201. NSS 2015, supra note 126; NSS 2010, supra note 126.
- $202.\ See$ NSS 2017, supra note 148.
- 203. Id.
- 204. See generally NSS 2022, supra note 163; see also NSS 2021, supra note 163.
- 205. NSS 2022, supra note 163; NSS 2021, supra note 163.

^{198.} See generally NSS 2002, supra note 109; see also NSS 2006, supra note 109.

^{199.} NSS 2002, supra note 109; NSS 2006, supra note 109.

^{200.} See generally NSS 2015, supra note 126; see also NSS 2010, supra note 126.