

**THE FOLLY OF OVER-RELIANCE ON SCIENTIFIC DEVELOPMENT TO
SOLVE ANTHROPOGENIC ENVIRONMENTAL DEVASTATION**

Climate Change Law, Research & Writing (Spring 2023): Final Paper

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I. Introduction

Hubris has been the pivotal point of downfall in many stories about man versus nature. In Greek myth, Icarus thought himself invincible and flew too close to the sun at his own peril.¹ Moving out of mythologies and into historical records, Napoleon Bonaparte in his conquest of the Russian tundra found only defeat, and eventually exile, as his military prowess was doomed against the forces of mother nature in winter.² These are cautionary tales society tells to warn against the pitfalls of human pride when facing nature. This jarring reality that nature eventually wins seems to be forgotten today in our attempt to manage climate change.

Instead of focusing on legal measures to prevent and mitigate the impact of climate change, this paper argues that the international and domestic communities seem absorbed by the fable of scientific success, although so far, this is only a myth. Climate change presents both an existential and immediately present threat in the world today, as developed in the first section. The need to address climate change now is evident in scientific consensus and declarations by both national and

1. Bethany Williams, *How the Mighty Fall: The Hubris of 6 Greek Heroes*, THE COLLECTOR (Oct. 23, 2021), <https://www.thecollector.com/greek-heroes-hubris/>.

2. National Geographic Society, *Napoleon Invades Russia*, NATIONAL GEOGRAPHIC, (May 20, 2022), <https://education.nationalgeographic.org/resource/napoleon-invades-russia/>.



international leadership. Despite this recognized immediate danger, as outlined in the second section, past and present collective inaction has diminished options to combat climate change. Moreover, the threat is now so extensive that humanity can no longer rely on any one method alone, but instead must develop a more integrated approach of various strategies, including, but not exclusively, technological development. As developed in the last section, for such strategies transcending scientific advancement alone, America may best be served by looking to what other countries have accomplished with their social programs enabled by their legal system.

American environmental policy and legal understanding is marred by a pervasive reliance on future technologies to solve today's environmental disasters. With little time left to address climate change, this paper argues that the United States can learn from other nations' legal policies how to supplement scientific advancements.

II. Urgency to Act: The Science Behind the International and Domestic Legal Framework

The Paris Agreement³ states the clear need for an “effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge” in its fourth line of declarations.⁴ This imperative is well-supported by evidence⁵. The scientific community warns of global feedback systems, integrated relationships among natural processes that can continually amplify climate change and its effects, worsening the balance maintaining the modern climate on Earth.⁶ These cycles have a calculated limit before a cascade event called a climate tipping point occurs and correction of the climate becomes impossible in the foreseeable future. A lag effect in anthropogenic emission changes also necessitates early action. Our Earth's limit is being reached swiftly at our current rate of environmental devastation.

3. Paris Agreement, opened for signature Dec. 12, 2015, T.I.A.S. No. 16-1104, <https://www.state.gov/wp-content/uploads/2021/05/16-1104-Environment-and-Conservation-Multilateral-Paris-Agreement.pdf>.

4. *Id.*

5. Lindsay Maizland, *Global Climate Agreements: Successes and Failures*, COUNCIL ON FOREIGN RELATIONS (Nov. 30, 2021), <https://www.cfr.org/background/global-climate-agreements-successes-and-failures>.

6. See, e.g., Intergovernmental Panel on Climate Change, "Chapter 1: Framing and Context," in IPCC, *Global Warming of 1.5°C: Summary for Policymakers*, Special Report (2018), <https://www.ipcc.ch/sr15/chapter/chapter-1/>.



The Earth relies on several cycles to maintain an environment habitable for the life that currently resides on it. Several of these cycles are taught to kids in schools across the country, like the water cycle and the carbon cycle. Each of these various vast processes play their own parts in making the air breathable, water potable, and even the climate stable. These cycles can be disrupted in ways that, once past a certain point of damage, perpetuate environmental collapse on their own without any more human intervention. These are positive climate feedbacks, as the effect of this damage is to sustain continuing environmental harm on its own and thus the output of these systems have the same effect as the input causing them. For example, one such feedback loop involves global ice cover. As ice melts at our poles due to anthropogenic climate change, the reflectivity of Earth's surface decreases due to the fact that ice reflects more energy back out and away from itself than typical ground or sea surfaces. Thus, as this effect takes hold, the planet's surface retains more solar radiation as the ice gradually melts. This helps to raise the climate further, which melts more ice at the poles, and on and on it goes.⁷

Furthermore, conservative estimates calculate that based upon climate goals laid out by the Paris Agreement, humankind is on track to pass a point-of-no-return for humanity's carbon emissions within the next 22 years, even with the most aggressive climate change policies. It is important to note that this study focuses on the Paris Agreement goal of limiting global temperature rise to a 2 degree Celsius increase by the end of the current century. Thus, this study isn't proclaiming that the world is ending. However, this 2 degree change still stands to cause much disruption in humanity's food supply, habitable areas of Earth, and general environmental cohesion with our planet.⁸

The Intergovernmental Panel on Climate Change, a research-based branch of the United Nations, further backs these scientific findings in their latest report in 2023. The report directly states,

Global warming is *more likely than not* to reach 1.5°C between 2021 and 2040 even under the very low [greenhouse gas] emission scenarios [...], and *likely or very likely* to exceed 1.5°C under higher emissions scenarios [...]. Societal choices and actions implemented in this decade determine

7. Michael E. Mann and Henrik Selin, *Feedback mechanisms and climate sensitivity*, ENCYCLOPÆDIA BRITANNICA (2023), <https://www.britannica.com/science/global-warming/Feedback-mechanisms-and-climate-sensitivity>.

8. Vivan Sorab, *Too Little, Too Late? Carbon Emissions and the Point of No Return*, YALE ENVIRONMENT REVIEW (Oct. 29, 2019), <https://environment-review.yale.edu/too-little-too-late-carbon-emissions-and-point-no-return>.



the extent to which medium- and long-term pathways will deliver higher or lower climate resilient development (*italics in the original*).⁹

To summarize, we are almost certainly going to be witnessing even more severe environmental devastation due to climate change soon, and one of our only hopes to lessen the harms borne of our own impact is to institute societal change toward environmentally conscious planning. The details of the damage we are to witness resulting from this calamity are also outlined in the report. Just a few issues we stand to face according to the report include more frequent and intense weather and climate extremes, further biodiversity loss, a reduction in food and water security, an adverse effect on human health, and economic damages in sectors like agriculture, forestry, fishery, energy, and tourism.¹⁰

Furthermore, even if the human race were to miraculously eliminate the presence of our current contributing factors, a lag effect would still nonetheless result in the continuation of mounting effects of climate change over the subsequent several decades as emissions from previous decades continue to alter the environment and climate on our planet.¹¹ Carbon dioxide is estimated to remain in the atmosphere after being emitted for 100 years or more, resulting in a continuing effect long after the greenhouse gas was actually emitted.¹² The presence of this lag effect means that climate change is not a spout, to be turned on and off, but rather an avalanche to which we may easily contribute more force, adding to its impact, but stand to be buried under the consequences if we don't stop building its influence. The sooner we can reduce climate change's impact on our planet, the sooner we can deal with the effects of this uncontrollable inertia of climate change and the more of a chance we stand to reduce suffering until the effects of climate change have finally been reduced to negligible levels.

The United States government has already come to acknowledge these risks and the damage they threaten to impose on the populace. In Juliana v. United States, the federal court, in countering a motion to dismiss, accepted the plaintiff's base

9. Intergovernmental Panel on Climate Change, SYNTHESIS REPORT OF THE IPCC SIXTH ASSESSMENT REPORT (AR6) (Mar. 20, 2023), pg. 56, https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf.

10. *Id.* at 12-16.

11. Nick Cunningham and Danielle Parillo, *Protecting the Homeland: The Rising Costs of Inaction on Climate Change*, AMERICAN SECURITY PROJECT (2013), https://www-jstor-org.authenticate.library.duq.edu/stable/resrep06039?searchText=America+inaction+climate+change&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3DAmerica%2Binaction%2Bclimate%2Bchange&ab_segments=0%2Fbasic_search_gsv2%2Fcontrol&refreqid=fastly-default%3Ad4706f474e25aa59a19db04367551b75.

12. *Id.* at 6.



claims that the government's actions in regards to climate change have created a danger to citizens, that the government knew of this danger, and that the government's deliberate indifference caused a failure to prevent the damage.¹³ The Juliana plaintiffs brought this suit forward in recognition of the EPA's duty to regulate carbon dioxide emissions for the benefit of public health.¹⁴ The problem regarding mitigating climate change in America lies not in whether our leadership recognizes the issues existence, but rather whether they choose to act upon the issue that they most certainly see to safeguard the nation's populace. This deliberate indifference and dereliction of duty by the United States government is precisely what is fueling a mounting urgency as the Earth swiftly approaches further debilitating effects of climate change.

III. US Legal Framework – Insufficiencies

The issue of addressing climate change, due to its rapidly shrinking deadline, can therefore not be adequately approached with technological advancement alone, as path dependency, the understanding of a gradual development of science through reliance on past achievements to inform future research, restricts the pace at which breakthroughs are achieved. The urgency with which we must address climate change necessitates humanity making do with the tools we currently have at our disposal in our current planning and policy-crafting. Recent steps have been taken to use the technology we already do have and transition away from greenhouse gas emission sources, though America has been especially slow in action from its leadership in tackling environmental needs. Even the legislation we do pass often comes at a cost, and with so much at stake and the clock ticking down, half-measures are simply not enough. This looming threat cannot be held off till we are better equipped and more scientifically advanced to address it at some later date. When it comes down to it, we are facing a calamity that requires great collective action within the next dozen years or so.

One of the largest American environmental bills that passed recently was the Inflation Reduction Act of 2022. Though this law was a major win for the preservation of the global future with \$369 billion in spending coming from this act to increase clean energy manufacturing, build more environmentally friendly vehicles, capture and store atmospheric carbon, and transition industrial and residential sources of emissions to clean electricity, among various other environmental projects, this act still requires the Department of Interior to sell various leases for oil and gas rights,

13. Juliana v. U.S., 217 F. Supp. 3d 1224, 1272 (D. Or. 2016), rev'd and remanded, 947 F.3d 1159 (9th Cir. 2020)

14. *Id.*



including in the Gulf of Mexico¹⁵. Even our steps forward today to mitigate climate change involve steps back.

Additionally, the victory of the passage of the Inflation Reduction Act of 2022¹⁶ comes on the coattails of the failure to pass the Recovering America's Wildlife Act¹⁷ that same year. This bill would have provided funding for species recovery and habitat conservation in America and supported Native American efforts to manage and maintain American wildlife.⁷ Despite bipartisan support, this bill was cut just before it came to a vote in 2022, as Congress couldn't reach a consensus on how to pay for it. Officials across both political parties agree on the need for this environmental measure, but because of the intricacies of bureaucracy America can't even succeed in taking action where we concur that it is sorely needed.

Another bill that has a longer record of suffering a similar fate as the Recovering America's Wildlife Act and that has seen little to no traction in the United States is the Climate Change Education Act. This bill would establish a climate change education program by the National Oceanic and Atmospheric Administration and create various grants to incentivize climate change education in state educational agencies for grades 4 through 12 and institutions of higher education.¹⁸ This bill designed to teach the United States populace about climate change science and literacy was first introduced in 2007 during the 110th Congress.¹⁹ It also was introduced in the 111th Congress, 113th Congress, 114th Congress, and so on. Most recently, it was introduced again in 2021 during the 117th Congress.²⁰ Our government's inability to agree on the passage of a bill to simply educate United States' students on the workings of this threat despite the repeated opportunities is indicative of a failure to secure the future of our nation and the world on which we reside.

Furthermore, judicial pursuits by private individuals and collectives have often failed to change environmental policy and procedure set by the United States

15. Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 781 (2022).

16. *Id.*

17. S.2372, 117th Cong. (2022). For a more in-depth look at the travails surrounding the passage of such an act, see, e.g., , Lane Kisonak, *Long Crises, Short Crises, and Public Investment in State Fish and Wildlife Conservation*, 35 NAT. RES. & ENV. 31, 34 (Winter 2021) (discussing the legislative history of other iterations of the bill), as well as Benji Jones, *Recovering America's Wildlife Act died last year in Congress, but lawmakers may soon get another shot*, VOX (Jan. 11, 2023), <https://www.vox.com/22961304/recovering-americas-wildlife-act-congress-2023>.

18. S. 966, 117th Cong. (2021).

19. The Campaign for Climate Literacy, BRIEF HISTORY OF THE CLIMATE CHANGE EDUCATION ACT (2021), <https://climate-literacy.org/federal-policy/the-climate-change-education-act/>.

20. *Id.*



government where they fail to act on concerns resulting from the presence of climate change. In Funk v. Wolf,²¹ petitioners used Article I, Section 27 of the Pennsylvania Constitution²² to attempt to compel research and a comprehensive plan pertaining to CO₂ emissions and other climate change contributors from the Pennsylvania state government. The court in this case stated that section of the constitution referenced does not give the right to disturb the legislative scheme as the General Assembly is the body to balance environmental and social concerns. In essence, this decision made clear that private lawsuits were blocked as an avenue to change climate policy and that legislative bodies must be primarily relied upon to dictate such policy and the allocation of resources toward research in the field of climate change, and that promises to protect the environment for the people of America could not compel these bodies to change their stances, or lack thereof. That a document as powerful as a state constitution could not bind legislative bodies to work further towards conservation and climate change mitigation efforts shows that our elected officials in executive and legislative seats must be relied upon, and perhaps more carefully chosen, in these matters, as the people have few routes to hold them accountable for lack of progress in the development of environmental rights.

In a recent 6 to 3 vote in West Virginia v. Environmental Protection Agency, the United States Supreme Court also further restricted the governmental options available to combat climate change.²³ The court in this case held a hearing regarding a petition by a few states to block the EPA from installing heightened regulations regarding power plant emissions across the United States.²⁴ The court ruled that such a regulation is presumptively invalid unless Congress expressly authorized it under the major questions doctrine, as such regulations stand to be transformative to the national economy and these large impacts require Congressional direction, not that of an agency.²⁵ With Congress's ongoing dysfunction and stagnation toward actionable legislation regarding climate change, however, this decision effectively cut off the Environmental Protection Agency from regulating emissions in such a way as to mitigate climate change in any meaningful capacity, eliminating another avenue by which American leadership can pursue its duty to preserve the current and future health and security of its citizenry.

Our governmental heads in the United States have shown not only a reluctance to address climate change, but even a deliberate ignorance to its workings. Dana

21. Funk v. Wolf, 144 A.3d 228 (Pa. Commw. Ct. 2016).
22. PA. CONST. art. I, § 27 (2023).
23. West Virginia v. EPA, 142 S. Ct. 2587 (2022).
24. *Id.*
25. *Id.*



Neacșu, an associate professor who researches environmental law and the Director of the Duquesne Center for Legal Information and the Allegheny County Law Library, implied that, in a field as knowledge and expertise-based as climate science, human beings can be more inclined toward intellectual comfort through emotional and political outbursts rather than applying the effort to educate themselves on the matter.²⁶ Such a facet of human nature may be in part to blame for the lack of action in American leadership in mitigating and adapting to climate change. In Massachusetts v. Environmental Protection Agency, the United States Supreme Court oversaw proceedings regarding an appeal of a petition to hold the EPA responsible for the regulation of various greenhouse gas emissions.²⁷ Though the court ultimately decided to remand the petition to the EPA by the narrow margin of a 5 to 4 decision, dialogue from the oral argument is quite telling as to the seriousness with which the late Justice Antonin Scalia took the impending crises resulting from climate change. During an exchange in which an environmental lawyer representing the petitioners was explaining how greenhouse gasses work and how they impact human beings, Scalia had this to say, “[Stratosphere], troposphere, whatever. I told you before I’m not a scientist. [Laughter]. That’s why I don’t want to have to deal with global warming, to tell you the truth.”²⁸ Keep in mind that the Justice could have requested to hear from an independent expert in the field, but chose instead to simply emphasize his disdain for the topic matter in general by highlighting his lack of knowledge in the field.

IV. Possible Solutions – Looking at Foreign and International Legal Approaches

Climate change is an issue that impacts all of humanity globally. Thus, every nation has been forced to address it in their own ways. Many countries have accomplished much to help prevent climate change through social programs that focus on the reduction of human impact on the world around us and education to reinforce environmentally conscious living in individuals. It may be best to look to the successful examples of people and governments around the globe and include their strongest examples of environmental programs into American policy. Though these social programs also cannot hope to save us from ecological collapse on their own, a more integrated approach involving these social changes and modern green

26. Dana Neacșu, *The aesthetic ideology of Juliana v. United States and its impact on environmentally engaged citizenship*, JOURNAL OF ENVIRONMENTAL STUDIES AND SCIENCES, 12(1), 29 (Nov 24, 2021). Available at: <https://doi.org/10.1007/s13412-021-00731-z>.

27. Massachusetts v. EPA, 549 U.S. 497, 127 S. Ct. 1438 (2007).

28. ORAL ARGUMENT IN MASSACHUSETTS V. ENVIRONMENTAL PROTECTION AGENCY, Oyez, <https://www.oyez.org/cases/2006/05-1120> (last visited May 1, 2023).



technology working in conjunction may be our best, and possibly only, hope in this fight.

The most basic measure America could stand to benefit from in this field is to compile a comprehensive national plan to address climate change and research the matter further. Japan has already implemented a program to do just this through its Climate Change Adaption Act.²⁹ As part of the act, Japan declared a national governmental responsibility to increase the understanding of the importance of climate change for businesses and the general public.³⁰ This legislation further addresses the nuisances present in addressing climate change by requiring localities within the nation to create systems to collect, organize, analyze, and provide information on the impacts of climate change and ways to adapt to the crisis in their specific areas.³¹

A variety of recycling practices around the world provide great lessons to America on what way to guide social norms to aid environmental efforts. Switzerland, for example, has focused on waste reduction from its citizens through a simple economic incentive. The Swiss are given free recycling by their government, but must purchase official garbage bags to get rid of nonrecyclable waste. Though quite basic in concept, this method of recycling incentivization has resulted in a decrease of nonrecyclable waste per person by 90 kilos in Switzerland when compared to waste calculations from 20 years ago.³² Certain municipalities within the United States have already begun implementing measures like this where additional garbage beyond a set amount causes additional charges, incentivizing individuals to maintain a specified rate of waste disposal.³³ For example, residents of Austin, Texas are issued 30-, 60-, or 90-gallon garbage cans and any garbage bags that they dispose of after these cans fill up costs the resident a 2-dollar per garbage bag sticker fee.³⁴ If residents have to pay more for garbage bags beyond a set cap, the hope is that residents recycle as much as possible to reduce these costs as much as possible. If enforced on a wider scale across America, the impact of such a program could prove

29. CLIMATE CHANGE ADAPTATION ACT, ACT NO. 50, (June 13, 2018), <https://leap.unep.org/countries/jp/national-legislation/climate-change-adaptation-act-no-50>.

30. *Id.*

31. *Id.*

32. Pablo García-Rubio, *5 best recycling practices from around the world*, BBVA (2020), <https://www.bbva.com/en/sustainability/5-best-recycling-practices-from-around-the-world/>.

33. Heather Behnke, Kathleen Bennett, and Amy Du Vall, *101 RECYCLING: ANYTHING BUT GARBAGE*, BUFFALO ENVIRONMENTAL LAW JOURNAL, 5 Buff. Envtl. L.J. 101, 18 (1997).

34. *Id.* at 19



deeply meaningful in the battle to mitigate climate change and maintain human survival and dignity.

Another international measure for America to consider can be found in the European Union. America has targeted businesses that handle hazardous waste through measures like the Resource Conservation and Recovery Act and businesses that could threaten endangered species through the Endangered Species Act.³⁵ Each of these acts has a specific target. However, America has not presented a more general and widely applicable environmental regulation to apply to all businesses. The European Union, on the other hand, has passed a directive that blankets all businesses, big or small, and forces them to hold to basic environmental standards. Directive 2004/35/CE requires all member states of the European Union to implement fines on any businesses that cause environmental damage.³⁶ Though the bill gives flexibility for each member to determine exactly how to enforce this directive, it imposes a strict liability for costs of preventative or remedial actions necessitated by a business's environmental impacts.³⁷ It also imposes responsibilities on all businesses to take preventative measures themselves and inform authorities of any environmental damage or imminent threat of such damage.³⁸

It was previously mentioned in this paper that the United States had failed to pass the Climate Change Education Act several times. The passage of this act, or perhaps an even more rigorous climate change education bill, would stand to benefit the United States greatly in combatting climate change. Brazil has already beaten the United States in instituting such a measure to educate their citizenry. The CONAMA Resolution 422 established a standard of environmental education across Brazil and formalized a governmental responsibility to promote such an education in 2010.³⁹ The United Nations also holds the parties to the United Nations Framework Convention on Climate Change to a responsibility to, “[p]romote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-

35. Valerie Pinkerton, *Environmental Law: Regulations Every Business Should Know*, PRIORI LEGAL (2016), <https://www.priorilegal.com/blog/environmental-law-regulations-business>.

36. Directive 2004/35/CE of the European Parliament and of the Council, 2004 O.J. (L 143) 56, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32004L0035&qid=1676407720481>.

37. *Id.*

38. *Id.*

39. CONAMA RESOLUTION 422 (Mar 23, 2010), <https://www.braziliannr.com/brazilian-environmental-legislation/conama-resolution-42210/>.



governmental organizations.”⁴⁰ Furthermore, the European Union has typically led the field on climate change education. In following with this history, on June 2022 the Council of the European Union adopted its recommendation on learning for the green transition and sustainable development.⁴¹ This document set policy for integrating applicable climate literacy into all levels of education in member nations of Europe.⁴² It also laid forth areas in which the EU planned to invest in order to incentivize this manner of education.⁴³ Any of these examples could provide a beneficial model to which the United States could strive towards in its legislation and policy. This list is also not exhaustive. Several countries across the world have instituted programs and policy to promote knowledge of environmental science and anthropogenic climate change among their citizenry that have overtaken current measures implemented by the leadership in the United States.

The European Union has also become unique among the countries of the world for the enforceability of some of its climate change goals. Originally introduced through the European Clean New Deal in 2019, this goal for the European Union to become climate neutral by 2050 entered into force as a legally binding obligation on July 21, 2021.⁴⁴ Outlined as an additional goal in the same document is a total greenhouse gas emissions reduction target of 55% by 2030 in comparison to 1990 emissions.⁴⁵ Such standards of reducing climate impact across several countries on such a rapid timeline through legally binding regulations could provide the swift societal adaptation necessary to mitigate the massive risks climate change current poses. Though more intensive than the environmental law present in the majority of countries, regulations like this, if applied here in the United States, could push the rapid societal shift towards a more sustainable model that is necessary to protect the health and future of its citizens.

A last approach found in other countries that America may pursue to combat the effects of climate change is more organizational in nature. Nonetheless, this

40. United Nations, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (1992), pg. 6, <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

41. COUNCIL RECOMMENDATION OF 16 JUNE 2022 ON LEARNING FOR THE GREEN TRANSITION AND SUSTAINABLE DEVELOPMENT (June 16, 2022), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022H0627%2801%29>.

42. *Id.*

43. *Id.*

44. Jenny Gesley, *European Union: European Climate Law on Achieving Climate Neutrality by 2050 Enters into Force*, LIBRARY OF CONGRESS (2021), <https://www.loc.gov/item/global-legal-monitor/2021-08-31/european-union-european-climate-law-on-achieving-climate-neutrality-by-2050-enters-into-force/>.

45. *Id.*



approach formalizes an understanding of the magnitude of threat climate change poses. Many foreign countries have installed in their governmental structure what is roughly the equivalent of an executive department (like the Department of Labor or the Department of State in the United States) directly addressing the threat of climate change, both in title and function. The Indian government created the Ministry of Environment, Forest and Climate Change in 1985 to prevent and control pollution, protect the environment, and ensure the regeneration of environmentally degraded areas, among other functions.⁴⁶ The government of Singapore formed the Ministry of Sustainability and the Environment in 1972 to focus on, among other goals, climate resilience.⁴⁷ America's closest equivalents to these governmental bodies would be the Department of the Interior and the Environmental Protection Agency. The first of these government entities has equivalent power within the governmental structure to these foreign ministries, but doesn't exactly share the same purpose. The Department of the Interior covers the wide-ranging jurisdiction of domestic affairs not otherwise assigned to a department.⁴⁸ This does include the climate crisis, but primarily in the realm of domestic resource and environmental sustainability and as the department wears many hats, it is considered one issue of many under its jurisdiction.⁴⁹ The other American government entity previously emphasized, the Environmental Protection Agency, shares many of the goals and responsibilities of these foreign ministries, but as an agency rather than a department, it does not wield equivalent political power within its respective country, the United States.⁵⁰ America would better dedicate itself to the commitment of protecting the planet and mitigating climate change by creating a new department or elevating a lower governmental agency to a department role that would specifically address matters involving climate change, sustainability, and environmental conservation. This new department would not necessarily even conflict with the Department of Interior's current role of domestic resource management. The People's Republic of China found jurisdictional room for both a Ministry of Natural Resources and a Ministry of Ecology and Environment,

46. *Introduction*, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (May 19, 2022), <https://moef.gov.in/en/about-the-ministry/introduction-8/>.

47. *About MSE*, MINISTRY OF SUSTAINABILITY AND THE ENVIRONMENT SINGAPORE (Apr 28, 2023), <https://www.mse.gov.sg/about-us/>.

48. *History of the Department of the Interior*, U.S. DEPARTMENT OF THE INTERIOR, <https://www.doi.gov/whoweare/history>.

49. *Id.*

50. *Our Mission and What We Do*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (June 13, 2022), <https://www.epa.gov/aboutepa/our-mission-and-what-we-do>.



where the former functions as a domestic resource management body⁵¹ and the latter functions as an environmental protection arm of the government that prevents pollution and funds environmental research⁵².

V. *Conclusion*

Technology has provided many opportunities to combat climate change and mitigate our impact on the planet.⁵³ From the capture and storage of carbon to remote communications that reduce the need for transportation to more efficient lightbulbs and household appliances, our due to the fragility of the planet's natural processes and the impact we have already had on it, as modern technology has afforded us the ability to lessen the harm we cause to Earth. However, well as our relative inaction to act upon the damage we cause to stop it, we no longer have the time to wait for science to hand us the answers we need to stop climate change from causing irreparable devastation. There is a limited timeline to address climate change before unimaginable devastation becomes unavoidable. The average American citizen has had too few avenues to pursue accountability in our government officials in their lack of attention toward the matter, and so the country has remained stagnate on its environmental policies.

In short, we must institute supplemental measures, such as social programs, that can aid us in maintaining the future livability of our environment. In order to succeed in this endeavor, legislators must be put into office who are willing to protect our future by regulating energy consumption and waste disposal. We can look to other countries that have already put such programs and policies in place, such as Switzerland and the European Union. The alternative is a continuation of our current hubris. This is a tale told throughout history that only foretells humanity's fall, unless we take from the lessons of the past and proactively work toward a better future.

51. Xinhua, *China to set up ministry of natural resources*, THE STATE COUNCIL THE PEOPLE'S REPUBLIC OF CHINA (Mar 13, 2018), https://english.www.gov.cn/state_council/ministries/2018/03/13/content_281476076304160.htm.

52. *Mandates*, MINISTRY OF ECOLOGY AND ENVIRONMENT THE PEOPLE'S REPUBLIC OF CHINA (2022), http://english.mee.gov.cn/About_MEE/Mandates/.

53. For a brief review, see, e.g., *Climate change: Seven technology solutions that could help solve crisis*, SKY NEWS (Aug. 17, 2021), <https://news.sky.com/story/climate-change-seven-technology-solutions-that-could-help-solve-crisis-12056397>.

