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Sustainable Development Law & Policy

Exploring How Today's Development Affects Future Generations Around the Globe

In This Issue:

Climate Change in the New Decade

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American University Washington College of Law

Program on Environmental and Energy Law

EDITORS' NOTE

Dear Readers,

The *Sustainable Development Law & Policy Brief (SDLP)* is celebrating twenty-one years of legal scholarship on issues related to environmental, energy, and international development law. We are honored to be the Editors-in-Chief at this pivotal moment in *SDLP's* history. Over the past twenty-one years, *SDLP* has addressed cutting-edge legal issues developing within international environmental law. This year is no different, as the COVID-19 Pandemic has impacted our communities, we rose to the challenge to continue to publish articles that push the limits of legal theory and policy, while giving a space for students to be involved in the conversation.

This issue champions solutions to climate change. From the Future of Securities Enforcement in Climate Change Litigation to Analyzing Regional Ocean Planning, the challenges presented in this issue are on the brink of a new era of climate litigation. While the articles have presented domestic solutions, these challenges are of a global nature and will have broader implications for decades to come. Our first article analyzes the importance of securities regulation in shaping the outcomes in climate change litigation. Our second article outlines different approaches to regional ocean planning while making the case for forward looking, climate-focused plans to combat climate change. These articles present hopeful and practical approaches because the solutions provided are creative uses of already-existing mechanisms.

We would like to thank all the article and feature authors for their insights and dedication to raising important legal issues. We would also like to thank the professors, e-board, staff, and publisher of *SDLP* for making this publication possible. *SDLP* is a team endeavor, so everyone's effort is so appreciated. Finally, we would like to thank our readers, whose involvement and investment in *SDLP* are the reasons that we have been able to create this publication for twenty years.

Sincerely,

Keanu Bader and Alexis Bauman

Features:

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About SDLP

The Sustainable Development Law & Policy Brief (ISSN 1552-3721) is a student-run initiative at American University Washington College of Law that is published twice each academic year. The *Brief* embraces an interdisciplinary focus to provide a broad view of current legal, political, and social developments. It was founded to provide a forum for those interested in promoting sustainable economic development, conservation, environmental justice, and biodiversity throughout the world.

Because our publication focuses on reconciling the tensions found within our ecosystem, it spans a broad range of environmental issues such as sustainable development; trade; renewable energy; environmental justice; air, water, and noise regulation; climate change; land use, conservation, and property rights; resource use and regulation; and animal protection.

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'At What Cost?':
The Future of Securities Enforcement in Climate Change Litigation

*by Angela Washington**

Part I: Asking Why

Ask Why? Twenty years ago, Houston's Enron Corporation launched its *Ask Why*? advertising campaign.[1] The television commercials featured dizzying abstract images against synthesized chamber music, and a narrator bellowing the phrase, "Ask why."[2] Having transformed its image "from a staid gas pipeline company to a high-tech trading firm," Enron curated the story that it was 'defiant,' a 'nonconformist,' and a 'visionary' in the energy industry, and Wall Street listened.[3]

The conditions that allowed Enron to flourish also gave rise to the perfect storm that led to its fall.[4] The federal government deregulated the energy industry in the 1990s due, in part, to Enron's lobbying efforts.[5] With newfound liberalization and a thirst for adaptation, the trading firm led the charge into new markets, starting with futures contracts in oil, gas and electricity. [6] It seemed that Enron was the answer to concerns surrounding the volatile market at the time, and the firm promised predictability to investors while it assumed the risks.[7] But Enron's rapid growth imploded amidst the bear market of 2000-02, and after the company faced mounds of allegations of corporate malfeasance, it was Senator Joseph Lieberman, Governmental Affairs Committee Chair, who said, "[a]nd we've got to ask the question – why?"[8]

The Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley) was enacted in response to the Enron scandal.[9] The Act's aims were to, *inter alia*, strengthen corporate governance rules and increase accountability and disclosure requirements for corporations.[10] In particular, encouraging transparency from executives, accountants, and auditors with regards to their company's financial standing.[11] Sarbanes-Oxley created a criminal penalty for CEOs and CFOs who knowingly certified false reports—up to a $1 million fine, 10 years in prison, or both.[12] Some argued that the Act was an overreaction at the time, but for the victims of the Enron scandal, accurate reporting and more fulsome disclosure requirements could have shielded them from economic devastation.[13]

Today, there is a growing tide of business leaders concerned with the effects of climate change on infrastructure necessary to support the global economy.[14] When the Commodity Futures Trading Commission (CFTC) issued its report, *Managing Climate Risk in the U.S. Financial System*,[15] it was amidst a historic wildfire season that saw the destruction of 3.4 million acres in residential and business property and the forced migration of thousands of people across California, Washington State, and Colorado.[16] The report's findings confirmed what business analysts have been saying for decades: climate change poses a grave, systemic threat to financial markets.[17]

Although mostly voluntary in the United States, the predominant narrative among the investor community has been that credible, accurate reporting of market risks in the form of sustainability disclosures can lead to a competitive advantage.[18] For example, the Obama Administration, in a move to keep up with the European Union, encouraged companies to sign the American Business Act on Climate Pledge.[19] In it, 154 companies agreed to act upon the Paris Agreement's objectives to establish a long-term framework for reducing greenhouse gas (GHG) emissions and transitioning to low-carbon-based investments.[20]

This year Larry Fink, the CEO of the world's largest asset manager, BlackRock, made an emboldened plea to encourage companies to rethink their carbon footprints. He stated that BlackRock would begin exiting certain investments they deemed were not financially prudent and "present[ed] a high sustainability-related risk."[21] Perhaps he was worried that when a record 631 global investors, representing 37 trillion in assets, urged their governments to amplify efforts against climate change, American firms were noticeably absent from the table.[22]

Investment firms and their clientele have sought to influence companies' policies toward sustainable development by easing access to environmental, social, and governance (ESG) disclosures.[23] To achieve this objective, Enron and the corporate governance scandals that followed it contain important lessons about informational rights that should be applied to the legal strategies in recent climate change litigation.[24] Climate equity is the basis from which all other sociopolitical issues derive, and the existing tensions between companies' interests in protecting proprietary information and the right to invest intelligently must be reconciled.

Federal and state securities enforcement and regulation is a legal area ripe to address climate change concerns.[25] Legal protections for investors against corporate securities mismanagement—primarily fraudulent misrepresentations and omissions that violate disclosure requirements in the purchase or sale of securities—will be essential to profitable economic activity in the fossil fuels sector.[26] Dually concerning, environmental degradation caused by fossil fuel industries' short-term, opportunistic resource extraction jeopardizes the

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market economy; therefore, a company's financial health depends on forthright calculations of climate-related risks.[27]

Sustainability disclosures occupy an important space between the seemingly opposed interests of industry and environmental protectionism. The breadth of remedies available in securities law is a critical tool that has been underutilized by federal securities regulators to date.[28] Furthermore, there is evidence that states' securities enforcement is also bolstering consumer protections against fraud and breaches of warranty and merchantability.[29] Investors (and consumers for that matter[30]) desire to know how companies will prepare their business operations to mitigate environmental impacts through the deployment of enhanced technologies in their practices and policy directives. Here, strict securities enforcement has the potential to transform the climate change movement by advancing the rights of shareholders to understand the ESG risks associated with investment opportunities. With informed decision-making, those industries embracing the harmonious interplay between sustainability and economic development are the profitable investments for our planet.[31] The existential threat of climate change, often masked by the "fairy tale of eternal economic growth," has raised ethical and moral issues too profound to ignore. [32] Corporations have a duty to be transparent about climate change impacts, and we have a right to know what they are.

Part II: Disclosing What They Know

Businesses have an inherent interest—as well as a functioning role—in the relationship between climate change and global anthropogenic CO2 emissions from certain energy extractive activities, including the industrial processes involved in the burning of fossil fuels, deforestation, oil and gas drilling, and mining operations.[33] Extreme weather events are poised to devastate economic sectors and lead to dire consequences for safety, food security, and public health.[34] These consequences on industries and the greater economy can be referred to as climate risks. "Climate risks" are the unanticipated ways that climate change can destabilize financial markets and cause significant reductions in asset valuations.[35] Effects can include physical damage to facilities, influences on consumer demand, new regulatory costs and incentives, and detriments to human productivity and the supply chain.[36] As expected, ninety-three percent of U.S. business leaders consider climate change-related risks when making investment decisions.[37] Presented with the scientific and legal developments associated with climate change litigation, confronting the financial risks associated with climate change—and mitigating those impacts—is the only choice for businesses to successfully sustain operations.[38]

In coastal regions that have been devastated by extreme weather, extractive industries have become the targets of commercial lawsuits for misleading consumers and investors in their representations—or omissions—about climate change impacts.[39] While an evolving area, these cases are falling into two buckets of coverage. First, to protect consumers, the allegations against public corporations like Shell, ExxonMobil, Koch Industries, and BP are that they have known for decades about the industry's contributions to climate change, and have colluded in affirmative campaigns to deceive the public.[40] Second, with respect to supporting investor decision-making, executives may stand to face liability under securities law for not disclosing a "material" risks in financial reporting.[41]

While presently true that more companies are voluntarily sharing this information,[42] there are still several statutory and regulatory hurdles to getting climate-related data and risk analysis.[43] How ESG or sustainability topics in businesses' operations are disclosed is anticipated to be one of the defining market valuation factors that investors remain committed to pursuing. Investors want insights into how a particular company plans to manage the risks related to ESG topics.[44] The challenge to the analysis, however, is that investors are not convinced that they are able to use existing sustainability disclosures to guide their investment decisions because unlike other Securities and Exchange Commission (SEC)-mandated financial disclosures, sustainability disclosures do not conform to a common set of standards.[45] Just as essential to understanding the upfront material costs associated with the investment, clear reporting of environmental practices and impacts across the supply chain will influence delivery of products to consumers.[46] With that knowledge, essential to the calculus is how companies plan to embed this data into their long-term business strategies. Thus, transparent and verifiable standards for reporting and disclosure allow for accurate and reliable evaluation of a company's performance.[47] Without it, investors and companies cannot prepare for the "heightened risks in an increasingly resource-constrained world."[48]

Such was the argument in *New York v. ExxonMobil*,[49] in which the State of New York alleged that "ExxonMobil made various material written and oral misrepresentations and omissions that tended to mislead the public" about the way it internally priced risks related to global climate change.[50] Specifically, ExxonMobil made the alleged misrepresentations in its *Outlook for Energy*, *Managing the Risks*, and *Energy and Climate* annual publications and reports.[51]

The New York attorney general (AG) brought the charges under the Martin Act.[52] This New York state law gives the AG broad authority to investigate publicly-held companies for financial fraud if the company trades securities in New York.[53] However, the court held that New York failed to prove by a preponderance of the evidence that ExxonMobil had *materially* misled its investors concerning how it calculated the costs of climate change.[54] The court reasoned that none of the projections of proxy costs of carbon and GHG costs would have influenced investment decisions based on those projected costs.[55]

When the *#ExxonKnew* campaign started to gain traction, the parallels of the controversy with the Enron scandal were striking.[56] The Enron scandal raised public consciousness with respect to corporate governance principles, generating demand for more aggressive regulation of public companies and

facilitation of information sharing.[57] Similarly, the ExxonMobil case prompted thinking around how SEC's disclosure requirements can also serve to supply security holders and the securities market with materially necessary information about environmental liabilities and obligations.[58] The framework of corporate and securities law that developed after Enron can lead to a promising strategy that 1.) imposes affirmative legal duties on public companies to understand the implications of climate change; and 2.) encourage adoption of climate change policies and practices that are accountable to investors and promote transparency in the financial markets through "full and fair disclosure."[59]

That the climate risk represents a "material" risk—and is thus subject to compulsory disclosure under the Securities and Exchange Act of 1934—is essential to having a claim under the Act.[60] Specifically, Rule 10b-5 (10b-5) prohibits a range of unscrupulous practices (e.g., use of deceptive devices, misleading statements, etc.) relating to fraud or misrepresentation in the purchase or sale of securities.[61]

Although 10b-5 does not delineate the elements of breach, the Supreme Court has identified six elements necessary to find a violation of the Act: (1) a material misrepresentation or omission; (2) intent; (3) a connection between the misrepresentation or omission involving the purchase or sale of a registered security; (4) reliance upon the misrepresentation or omission; (5) economic loss; and (6) loss causation.[62] Violations of the provisions of 10b-5 can result in the SEC seeking civil penalties, such as fines and injunctions, or barring a person from serving in his or her position as a corporate officer or director.[63] The Department of Justice (DOJ) may also file criminal charges under the Act.[64] Importantly, 10b-5 creates a private cause of action.[65]

10b-5 is a formidable tool in climate liability litigation because of the breadth of its coverage.[66] First, federal enforcement authority for 10b-5, and generally the universe of federal securities acts,[67] is based in the engagement of the proscribed fraudulent act in interstate commerce. However, it has mostly been understood as a formality to create federal jurisdiction as the over-the-counter or national securities exchanges leads to the jurisdictional test being easily satisfied.[68] Even if the defendant only engaged in intrastate business, 10b-5 can reach the action because stock of any company is a "security" and is thus broadly construed.[69]

Additionally, the SEC has authority to require periodic reporting of certain information by regulated entities with publicly traded securities.[70] The disclosure reporting requirement has become a legal area of ballooning interest as companies feel pressure from investment firms to accurately assess climate risks—and implement accordingly—to lessen the impact on fossil fuel industries over time.[71] Among those interested, business leaders, investors, and activists, have sought for more guidance and regulation from the SEC concerning how periodic disclosure requirements[72] should apply to climate risks and reporting of information under federal securities laws and regulations.[73]

In 2010, the SEC addressed these requests in in a pivotal guidance document articulating the disclosure known as the Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A).[74] The SEC's guidance was intended to have registrants and those reviewing disclosure filings on its Electronic Data Gathering, Analysis, and Retrieval system (commonly referred to as "EDGAR"[75]) better understand how the impact of climate change may be relevant to the statements provided in the MD&A disclosure.[76] That is why when the SEC proposed amendments to modernize MD&A, critics felt the agency had weakened the position it took in the original guidance, and criticized the SEC for failing to take the opportunity to standardize disclosure requirements related to climate change.[77]

Although the State of New York's case against *ExxonMobil* did not proceed, other state actions are being pursued against the company on similar claims. Massachusetts, for example, has adjusted its legal strategy based on the New York lawsuit's dismissal.[78] Washington, D.C. filed a lawsuit against ExxonMobil, as well as BP, Chevron, and Shell, in which it accuses the oil companies of engaging in a decades-long coordinated campaign to mislead the public by downplaying the climate change-related science to keep their businesses profitable.[79] Further, Delaware's and Minnesota's suits have named the American Petroleum Institute—the largest oil and gas trade association in the United States—as a defendant in addition to the major fossil fuel companies.[80] There is potential for such high-profile litigation in the states to generate "do the right thing" consumerism and encourage investors to proactively incentivize sustainable development in their resolutions.

Part III: Leveling the (Corporate) Playing Field

First, Prioritize Climate Deception Enforcement Efforts. One advantage that state regulators can leverage is that they may be able to bring actions in situations where corporate actors' misstatements or omissions were merely negligent, or the law imposes strict scrutiny liability, whereas 10b-5 has a scienter requirement.[81] Notably, the Martin Act (under which New York's AG brought suit) is among the blue sky laws regulating the offer, sale, and purchase of securities that does not require proof of intent to defraud.[82]

In addition, state attorneys general's (AG's) have broad discretionary authority to issue civil investigative demands for companies' internal documentation. In Massachusetts's investigation against ExxonMobil, the amended complaint was filed on the heels of New York's dismissal.[83] Massachusetts' suit goes broader than New York's and alleges that ExxonMobil deceived investors *and* consumers, whereas New York's claims only concerned securities law violations.[84] However, the amended complaint also excludes one of the investor deception claims – specifically, the proxy cost of carbon allegations – that New York's state court rebuffed.[85]

The Massachusetts AG wisely adjusted its legal strategy in response, but other states should take caution to not use New York

as the metric for how future climate deception cases will fare in the courts.[86] Similarities exist between these climate deception suits and what culminated in a historic settlement against tobacco giant Philip Morris.[87] Although a seemingly distant memory, the "Big Tobacco" litigation had a rocky start.[88] Essential to the broader movement is that state regulatory agencies continue to demonstrate a willingness to pull resources to pursue these claims in the first place and to continue to test legal theories in these early days of climate deception jurisprudence.

Securities litigation will continue to shape corporate social responsibility despite legal burdens and governance challenges. Indeed, as discussed in Part II and above, state regulators are playing an essential role in the securities enforcement regime[89]—by bringing the cases that the SEC and DOJ cannot or will not.[90] In the absence of federal enforcement, state regulators and private litigants have been forced to rise to the challenge to target companies that fail to accurately disclose climate risks in their portfolios.

The Sierra Club is among those that have accused the SEC of shirking at their duties to shareholders and instead shifting enforcement responsibilities to state regulators.[91] In its complaint, the Sierra Club alleges that the SEC has been captured by industry and refuses to produce documents under FOIA which would show their reasoning for allowing companies to omit climate-related shareholder resolutions.[92] Sierra Club's argument is that the SEC's interests coincide with corporate polluters rather than defending climate-related shareholder resolutions that are aimed at reducing pollution and adopting corporate sustainability and climate goals.[93] With the state attorneys general's engagement on climate deception, it is also time for the SEC to flex its regulatory authority in this area.[94]

Second, Clarify Climate Change-Related Financial Disclosures. Relatedly, with the increase in climate-related litigation in the past few years, investors are searching for ways to independently equalize or level their bargaining position by adopting resolutions on a company-specific basis through the SEC's shareholder proposal rule—Rule 14a-8 ("14a-8").[95] This rule has allowed shareholders to introduce proposals that seek to address social policy concerns on ESG topics, so long as certain ownership and procedural requirements are met.[96] 14a-8 has received support from a number of mainstream institutional investors, despite declines in the number of ESG proposals submitted and voted on.[97] For instance, in 2017, a majority of the shareholders at Occidental Petroleum and ExxonMobil approved shareholder proposals requesting more robust disclosure on the potential effects of climate change.[98]

In a different political environment, the SEC would treat sustainability disclosures as importantly as other financial disclosures, and thus, as necessary to intelligently evaluating trends, events, or uncertainties that are likely to materially impact a given corporation's capital, sales, or revenue.[99] Only with a common set of disclosure standards can investors make meaningful decisions based on their economic interests.[100] Moreover, this balancing of investors' bargaining position entails stricter enforcement of securities laws and regulations to deter corporate malfeasance. The Volkswagen litigation offers hope in this respect.

The SEC charged Volkswagen executives under section 10(b)[101] and defrauding U.S. investors by making deceptive claims about the environmental impact of the company's "clean diesel" fleet after it was discovered that Volkswagen had been cheating on federal emissions tests.[102] The SEC's complaint came more than two years after Volkswagen pleaded guilty to misleading the Environmental Protection Agency and U.S. customers about whether its automobiles (e.g., VW, Audi, and Porsche) were diesel vehicles that complied with U.S. emissions standards.[103] That settlement requires Volkswagen to pay into a multibillion dollar mitigation trust fund that will replace diesel emissions sources with cleaner technology and offset the emissions of nitrogen oxides caused by Volkswagen's violations.[104] If the SEC's case is successful, Volkswagen's former CEO could be barred from serving as an officer or a director for any SEC-registered company and participating in future stock offerings; ordered to return any "ill-gotten gains" or earnings he may have received from stock sales during the emissions scandal period; and become subject to other civil penalties.[105]

Third, Develop Climate Risk Stress Tests. The Enron scandal changed securities and financial regulation substantially. The event demonstrated the necessity of regulations to foreclosing the prior loopholes in accounting practices found in fraudulent financial reporting.[106] Before Enron, the government had not done enough to protect public investors. Now, as observed in the #ExxonKnew and Volkswagen cases, this work is not done. Duties to disclose material information to investors under securities law and regulation can reject the "greed is good" framework in favor of environmental conservationism, while also protecting investors and consumers. But to disclose with integrity, the short and long-term physical and transitional risks must be calculated to give financial institutions a fighting chance to "course-correct."[107]

Among the recommendations in the CFTC report, the panel calls for a coordinated effort among federal and state regulators to assess the impacts of climate change on financial markets in the form of 'stress tests.'[108] To effectively measure climate risks, crucially, the United States ought to oversee common data collection practices and methodologies to guide both the public and private sectors.[109] The report provides that standardization across definitions and classifications can help promote transparency, and better enable financial institutions to mitigate climate risks through integration into their long-term management frameworks.[110]

Economist Lord Nicholas Stern noted, "Climate change is a result of the greatest market failure the world has seen."[111] The underenforcement of disclosure violations can erode trust by sending a message that those with the deep pockets win. The urgency of the climate crisis and its immediate economic impacts implores public companies—and the federal and state authorities that regulate them—to provide climate change information that materially relates to investment decisions. Financial disclosures

in tandem with a science-based climate change narrative in sustainability disclosures can resist the countervailing view that accepts "business as usual" operations in favor of economic and environmental justice.

ENDNOTES

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[2] Ask why (Enron), YOUTUBE, https://www.youtube.com/watch?v=4S9uTEJVumc (last visited July 15, 2020).

[3] *Oh, The Games Enron Played*, U. PENN WHARTON SCH. (Nov. 21, 2001), https://knowledge.wharton.upenn.edu/article/oh-the-games-enron-played/# [hereinafter *The Games Enron Played*].21, 2001), https://knowledge.wharton.upenn.edu/article/oh-the-games-enron-played/#.

[4] *See* C. William Thomas, *The Rise and Fall of Enron*, J. ACCT. (Apr. 1, 2002), https://www.journalofaccountancy.com/issues/2002/apr/theriseandfallofenron.html (citing deregulation in financial markets as the key to Enron's success and subsequent failure).

[5] *See Once a New-Economy Trailblazer, Now Beleaguered and Bankrupt*, NAT'L PUB. RADIO (Jan. 22, 2002), https://legacy.npr.org/news/specials/enron/history.html (noting Enron's role in energy deregulation) [hereinafter *Beleaguered*].

[6] *See* Matt Preuss, *Investor Letter: Enron – Ask Why.*, FOUNDERS FORWARD, https://visible.vc/blog/investor-letter-enron-ask-why/ (republishing Enron's 2000 letter to investors discussing the company's competitive advantages).

[7] *See id.*

[8] *Beleaguered*, *supra* note 5.

[9] *See* Rosemary Carlson, *The Enron Scandal That Prompted the Sarbanes-Oxley Act*, THE BALANCE SMALL BUS. (last updated Nov. 16, 2019) https://www.thebalancesmb.com/sarbanes-oxley-act-and-the-enron-scandal-393497 (describing the Sarbanes-Oxley Act's legislative history and motivations).

[10] *See* Pub. L. No. 107-204, 116 Stat 745 §§ 401, 403, 407-09 (improving accuracy, reliability, and timeliness of corporate disclosures).

[11] Carlson, *supra* note 9.

[12] 18 U.S.C.A. § 1350(c)(1) (West) (2002).

[13] *See, e.g.*, Larry E. Ribstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1, 57–59 (2002) (noting the role and strength of state based corporate governance system and cautioning federalizing corporate governance); *History: Famous Cases & Criminals, Enron*, FED. BUREAU INVESTIGATION, https://www.fbi.gov/history/famous-cases/enron (last visited July 7, 2020) (noting more than $164 million seized by the Enron Task Force and $90 million forfeited to compensate Enron's victims); *cf. The Games Enron Played*, *supra* note 3 (emphasizing importance of reporting to Enron shareholders).

[14] *See Sustainability Disclosure: Getting Ahead of the Curve*, DELOITTE GLOBAL (2016) (arguing that sustainability reporting assists organizations in meeting objectives because of investor and capital market interests); *see also* Letter from AttorneyAttorneyAtt'yAttorney Bruce G. Leto, Stradley Ronon Stevens & Young, LLP to U.S. Sec. & Exch. Comm'n (Oct. 15, 2014) (noting Franklin Resources, Inc's intention to reject shareholder resolutions on climate change matters).

[15] Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission, *Managing Climate Risk in the U.S. Financial System* (2020).

[16] Jacob Passy, *As Wildfires Burn the West Coast, Residents Face Another Challenge: High Prices Pushing People Out of Urban Centers*, MARKETWATCH (Sept. 26, 2020, 6:01 AM), https://www.marketwatch.com/story/as-wildfires-burn-up-the-west-coast-where-should-displaced-residents-move-2020-09-21 (describing the housing and climate change related migration crises).

[17] Coral Davenport & Jeanna Smialek, *Federal Report Warns of Financial Havoc from Climate Change*, N.Y. TIMES (Sept. 8, 2020), https://www.nytimes.com/2020/09/08/climate/climate-change-financial-markets.html (likening the financial risks associated with the coronavirus pandemic and global warming, including related events such as regional wildfires and flooding;flooding to those observed in the 2008 financial crisis).

[18] DELOITTE GLOBAL, *supra* note 14 (reporting that seventy-three percent of investors take environmental, social, and governance issues into account in their investment analysis and decisions).

[19] American Business Act on Climate Pledge, White House, https://obamawhitehouse.archives.gov/climate-change/pledge (noting the Obama Administration's push for U.S. businesses to conduct climate mitigation actions).

[20] *Id.*

[21] Andrew Ross Sorkin, *BlackRock C.E.O. Larry Fink: Climate Crisis Will Reshape Finance*, N.Y. TIMES (Feb. 24, 2020), https://www.nytimes.com/2020/01/14/business/dealbook/larry-fink-blackrock-climate-change.html (explaining that "[t]he evidence on climate risk is compelling investors to reassess core assumptions about modern finance.").

[22] *Id.*

[23] *See generally* Richard Alsop et al., *Shareholder Proposals 2019—ESG No-Action Letter Trends and Strategies*, HARV. L. SCH. F. CORP. GOVERNANCE (Mar. 25, 2020) (reporting that companies excluded shareholder proposals related to environmental, sustainability, and climate change more than any other environmental, social, and governance (ESG) topic).

[24] *See* cases cited *infra* notes 81–83.

[25] *See* Press Release, U.S. Sec. & Exchange Comm'n, SEC Charges Volkswagen, Former CEO with Defrauding Bond Investors During "Clean Diesel" Emissions Fraud (Mar. 14, 2019), https://www.sec.gov/news/press-release/2019-34, for an example of how securities enforcement can address climate change concerns.

[26] *See c.f.*, Erin Cox & Gregory S. Schneider, *Energy Companies Abandon Long-Delayed Atlantic Coast Pipeline*, WASH. POST (July 5, 2020, 7:07 PM), https://www.washingtonpost.com/local/virginia-politics/atlantic-coast-pipeline-canceled/2020/07/05/da1c0f40-bef5-11ea-b178-bb7b05b94af1_story.html (reporting that litigation linked to the Keystone XL pipeline heightened litigation risk, extended the project's timeline, and ballooned the estimated costs by $3 billion dollars from when the project had started).

[27] *But see* Marian L. Tupy, *Julian Simon Was Right: A Half-Century of Population Growth, Increasing Prosperity, and Falling Commodity Prices*, CATO INST. (Feb. 16, 2018), https://www.cato.org/publications/economic-development-bulletin/julian-simon-was-right-half-century-population-growth?queryID=68bf8ed2763ce66a949343c8cbb85729 (rejecting the belief that increases in growth and development deplete natural resources, as evidenced by the fall in commodity prices over time if adjusted for inflation).

[28] Securities regulators bring more than twice the number of enforcement actions than the SEC brought. Andrew K. Jennings, *State Securities Enforcement* (Working Paper) (May 3, 2020); *see cf. Seila Law LLC v. Consumer Financial Protection Bureau*, 140 S. Ct. 2183 (2020) (holding that for-cause removal restriction protecting CFPB's sole director violates the separation of powers).

[29] *See* Karen Savage, *2019: The Year Climate Litigation Hit High Gear*, THE CLIMATE DOCKET (Dec. 30, 2019) (noting that the oil industry has fought to have their cases heard in federal courts as opposed to state courts because it has historically received more favorable treatment there).

[30] *See* Sonya Sachdeva et al., *Green Consumerism: Moral Motivations to a Sustainable Future*, 6 CURRENT OP. PSYCHOL. 60, 62-63 (2015) (finding preference among consumers to purchase "sustainable" products).

[31] *See* H.R. 3623, Climate Risk Disclosure Act of 2019, 116th Cong. § 6 (2019) (requiring the SEC to issue rules that apply climate principles); *see also* DELOITTE, *SUPRA* note 13, at 3 (indicating that transparency to stakeholders and legal authorities of market risks is important to investors).

[32] Jonathan Herz, *The Fairy Tale of Eternal Economic Growth: Swedish Activist Greta Thunberg Brings Attention to the Need to Steward our Planet*, ENVTL. & ENERGY STUDY INST. (Oct. 11, 2019), https://www.eesi.org/articles/view/the-fairy-tale-of-eternal-economic-growth.

[33] *See* IPCC CLIMATE CHANGE 2014 SYNTHESIS REPORT SUMMARY FOR POLICYMAKERS 5 (2014) (explaining that fossil fuel combustion and industrial processes contributed seventy-eight percent of the total GHG emissions from 1970 to 2010).

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Swallowing the Rule:
Why FERC's "Immediate Need Exemption" Frustrates Competitive and Climate-Smart Electricity Sector Transmission Planning under Order No. 1000

*By Philip Killeen**

Last year, the Federal Energy Regulatory Commission (FERC) commendably initiated an investigation into whether three regional transmission organizations (RTOs) were improperly supervising the electrical grid infrastructure development process.[1] ISO-New England (ISO-NE), PJM Interconnection (PJM), and Southwest Power Pool (SPP) (collectively, the "Investigation Subjects") are misusing the narrow "Immediate Need Exemption" ("INE") to standard competitive bidding processes for electricity transmission infrastructure planning in a manner that rewards inefficient and expensive projects at the cost of innovative and climate smart solutions. This Article argues that the Investigation Subjects' use of INE is inconsistent with FERC's duties under the Federal Power Act (FPA)[2] to ensure just and reasonable—and not unduly discriminatory—rates and practices in interstate transmission markets. This is because INE foregoes substantial consumer savings, unnecessarily restricts new developers from participating in competitive project solicitations, and frustrates states' legitimate policy preferences for reducing electricity sector GHG emissions.

Background

Congress enacted the FPA in 1935, vesting FERC with authority to regulate the wholesale sale and transmission of electricity in interstate commerce.[3] Pursuant to this authority, FERC was tasked with ensuring all rates received by public utilities for the transmission or sale of electricity under its jurisdiction (and all regulations affecting such rates) be "just and reasonable" and not "grant any undue preference or advantage" or "maintain any unreasonable differences in rates, charges, service, facilities . . . between localities or . . . classes of service."[4]

FERC initially fulfilled this mandate by granting electrical utilities monopoly franchises to generate, transmit, and distribute electricity to a captive customer base in return for a guaranteed rate of return based on their cost of service.[5] This initial approach allowed utilities to unnecessarily maximize investments in grid infrastructure to ensure a higher guaranteed rate of return based on their cost-of-service.[6] Recognizing this trend, FERC introduced a series of Orders beginning in the late 20th century, predicated on the understanding that elements of the electricity sector could achieve more efficient (and therefore more "just and reasonable") outcomes for consumers by introducing new technologies and competition.[7]

One such example is Order No. 1000.[8] The Order introduced three new requirements for transmission planning: (1) each public utility transmission provider must join a transmission planning region that proactively identifies the need for transmission on a region wide basis;[9] (2) such transmission planning regions must identify and plan for transmission needs driven by public policy, including the climate-related priorities of the states in which the individual utilities are located;[10] and (3) neighboring transmission planning regions must "coordinate" with each other to evaluate whether interregional transmission facilities could more efficiently or cost-effectively address identified transmission needs.[11] Acknowledging that new developers may be more capable of providing these solutions than incumbent utilities, FERC also stipulated that public utility transmission providers must remove from their tariffs any "federal right of first refusal," which grants an incumbent utility the right to build any new transmission facilities called for in regional transmission planning.[12] In so doing, FERC explicitly sought to foster competition between incumbents and new developers in soliciting bids for transmission infrastructure projects called for in regional planning.[13]

Unfortunately, however, these benefits are undermined by INE—an exception threatening to swallow the rule prohibiting the incumbents' right of first refusal for transmission projects. In their Order No. 1000 compliance filings, the Investigation Subjects each proposed a "limited exemption for immediate need reliability projects," whereby an RTO would be given discretion to determine whether there is sufficient time for a transmission project called for in its regional transmission planning to be competitively awarded.[14] By approving these proposals, FERC created a class of transmission projects to be built by incumbent transmission developers that were exempt from the competitive bidding project solicitation process.[15] This decision balanced the fact that INE would act as a barrier to potentially competitive transmission resources provided by new developers and that "it is not in the economic self-interest" of incumbent utilities to expand transmission infrastructure to permit access to competing sources of supply.[16] On the other hand, FERC recognized potential delays in the competitive bidding process for transmission projects could adversely affect an RTO's ability to ensure grid reliability.[17]

1. As Applied, INE is Unjust and Unreasonable Because It Foregoes Substantial Consumer Savings

Eight years of experience with INE demonstrates that FERC has not appropriately balanced reliability concerns with

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consumer costs. Since implementation of Order 1000, RTOs have invested approximately $17 billion per year in transmission investments, with annual investment growth ranging from 10–16%.[18] However, as a result of INE, RTOs have completed only thirty-one competitive transmission project solicitations, merely twenty-one of which have actually resulted in competitive projects.[19] Put differently, 97% of all FERC-jurisdictional transmission investments occur outside the competitive process in which new developers may compete.[20]

Research suggests increased use of competitive transmission project solicitations could reduce investment costs by an estimated 25% while increasing investment cost-effectiveness.[21] To date, the average cost of transmission project proposals selected in competitive solicitations fell 40% below the initial project cost estimates prepared by ISOs and RTOs and the lowest cost offers from incumbent transmission developers.[22] By capitalizing on these lower project costs, RTOs could save electricity consumers $8 billion over five years.[23]

2. INE is Unduly Discriminatory Because its Eligibility Criteria Unnecessarily Restricts New Developers From Participating in Competitive Project Solicitations

To ensure that INE was used only in limited circumstances, FERC established criteria limiting a RTO's discretion to grant the exemption; the most important of which required the project to be needed within three years to resolve the reliability concern.[24] FERC determined that the appropriate date to calculate whether a transmission project qualifies for INE is the date that the reliability need must be *addressed*, rather than the date when the project is actually *in-service*. [25]

This three-year criterion has been applied as a rubber stamp in the Investigation Subjects' markets, allowing incumbent transmission developers to circumvent competitive project solicitations. Since implementation of Order No. 1000, all thirty of ISO-NE's transmission projects were designated as needed for grid reliability within the next three years.[26] Accordingly, each qualified for INE and was awarded to incumbent transmission developers without a competitive solicitation.[27] However, of these thirty projects, twenty-four (80%) were not in-service within three years.[28] Similarly, SPP designated a project for INE in 2018 based on its determination that the project was "needed" by 2020, yet had an expected in-service date in 2023.[29] Meanwhile, none of SPP's other INE projects have gone in to service, including those with "need-by" dates in the past.[30] Finally, of the thirty-nine transmission projects designated by PJM for INE in 2014, only 72% have gone into service within three years of their "need-by" dates.[31]

The fact that so many transmission projects in these regions qualify as time-sensitive, yet not sensitive enough to *actually be built on time*, suggests that incumbent transmission developers are not using INE to ensure grid reliability, but rather as an anti-competitive measure preventing the participation of new developers. The "immediate need" of these projects is further undermined by the RTOs' repeated assertions that their grids continue to operate reliably with existing transmission infrastructure.[32]

3. INE Violates the FPA Because It Frustrates States' Legitimate Policy Preference for Low Emissions Electricity Generation

Order No. 1000 requires RTOs to proactively identify and plan for region wide transmission needs driven by public policy.[33] This, FERC concludes, will help ensure that the rates, terms, and conditions for wholesale sales and transmission of electricity are just and reasonable and not unduly discriminatory against stakeholders unrepresented among incumbent utilities.[34] Many states are seeking to reduce electricity sector greenhouse gas (GHG) emissions by implementing Renewable Portfolio Standard ("RPS") policies that seek to transition from fossil fuel to renewable-based electricity generation.[35] In ISO-NE, each constituent state has implemented RPS policies, with 2020 targets ranging from 10% to 59% of electricity supplied from renewable energy.[36] Washington, D.C. and ten of the thirteen states comprising PJM's membership have implemented RPS programs.[37] Finally, nine of SPP's fourteen member states have also implemented RPS programs.[38]

Eliminating the federal right of first refusal serves states' RPS policies because it forces RTOs to consider proposals from new developers that provide ancillary environmental benefits. FERC's definition of new (or "nonincumbent") transmission developers includes entities that propose transmission projects outside of their existing retail distribution service territory or that lack a distribution service territory altogether.[39] A transmission project developer from a neighboring RTO and an owner of battery storage infrastructure that is capable of providing transmission services would therefore both qualify as "nonincumbent" transmission developers. [40]

Regionally interconnected transmission networks and battery storage technologies are particularly important for variable renewable energy resources because they transmit electricity between different markets and help diversify a region's resource mix, helping address some of the challenges associated with intermittency and curtailment.[41] With a nationally interconnected grid, the United States could reduce power sector GHG emissions by 80% relative to 1990 levels through renewable energy and natural gas without the need for battery storage or an increase in the levelized cost of electricity.[42] Most importantly, regionally interconnected transmission markets allow states to source in-state electricity consumption from renewable energy, and thereby meet RPS targets, when intrastate generation facilities are otherwise insufficient.[43] However, because INE has substantially frustrated the ability of these new developers to participate in transmission infrastructure planning, it effectively negates FERC's intent in Order No. 1000 to facilitate state public policy goals in the electricity sector.

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Accounting for Climate Change in United States' Regional Ocean Planning:

Comparing the Obama and Trump National Ocean Policies to a Climate-Forward Approach

*Taylor Goelz**

Introduction

In 2010, President Obama signed Executive Order 13547, *Stewardship of the Ocean, Our Coasts, and the Great Lakes,* which established the first detailed United States National Ocean Policy ("NOP") to guide the management and sustainable use of the United States' ocean, coasts and Great Lakes.[1] The goal of this comprehensive policy was to compel government at all levels (federal, state, local and in coordination with Tribal governments) to better coordinate and think holistically about U.S. ocean and coastal management, in terms of the impacts to ecosystem health (e.g., sustainability of fisheries) as well as human health (e.g., honoring the U.S.'s maritime heritage, supporting sustainable ocean uses and access).[2] Crucially, the Obama NOP highlighted the need to ". . . provide for adaptive management to enhance our understanding of and capacity to respond to climate change. . . ."[3]

One of the ways in which the Obama NOP endeavored to foster adaptive management and planning for the benefit of climate change was through its directive to establish Regional Planning Bodies ("RPBs") in nine regions of the United States.[4] These bodies were directed to bring together federal agencies, states, and federally recognized Tribes to better coordinate ocean planning and management in these regions and take into consideration regional-level needs and objectives.[5] During the Obama Administration, both the Northeast[6] and Mid-Atlantic RPBs developed final Ocean Plans for their regions, which were accepted at the national level.[7]

In 2018, the Trump Administration revoked the Obama era NOP and instituted its own NOP through Executive Order 13840, *Executive Order Regarding the Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States*.[8] This revised national strategy emphasizes economic and security interests and opportunities regarding the nation's ocean and coasts; ecosystem health and wellbeing is not a high priority within this policy, and the term "climate change" is not used.[9] The Trump NOP disbanded the RPBs, negated the Northeast and Mid-Atlantic Ocean Plans that had been submitted and approved, and removed requirements for federal participation in any ongoing regional ocean planning endeavors.[10] Agencies are allowed to continue working on regional ocean plans, but it is no longer required.[11]

While there are many differences between these NOP's, this article will aim to compare the two policies in terms of their approach to regional ocean planning, specifically how these policies incorporate climate resilience into regional ocean planning. Throughout this article, "marine spatial planning" and "regional ocean planning" will be used interchangeably, since the RPB approach is a specific example of the application of marine spatial planning. Section I will provide a background on climate change's impacts on the ocean and the role that marine spatial planning ("MSP") could play in increasing climate resilience. Section II will provide a brief background of the history of marine spatial planning in the U.S. up until the Obama Administration. Section III will describe and compare the Obama and Trump NOP's in terms of their regional ocean planning initiatives. Section IV will compare these two policies to an "ideal" standard, e.g., what would climate-resilient regional ocean planning look like in the U.S.? Finally, Section V concludes that despite the success of regional ocean planning in the Northeast and Mid-Atlantic, further regional ocean planning efforts are stalled by lack of federal investment and coordination. The hope of creating climate-forward marine spatial planning relies on a renewed federal mandate for U.S. regions to partake in regional ocean planning. As this paper will demonstrate, the framework for climate-resilient ocean and coastal planning exists within the U.S. Despite current federal resistance, existing regional ocean planning bodies still have significant power to set an example and take a climate-resilient marine spatial planning approach to protect elements of both ecosystem and human health and wellbeing.

I. Climate Change and the Ocean

The global impacts of climate change have been increasingly realized since the first Intergovernmental Panel on Climate Change ("IPCC") Assessment Report was released in 1990.[12] The discussion of climate change impacts since this time, however, has been largely restricted to terrestrial ecosystems, e.g., increased rainfall, more severe wildfires, longer and more substantial droughts, etc. The discussion shifted to focus on the

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unique impacts of climate change on the ocean with the 2019 release of the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.[13] The Report highlights several ocean-specific climate impacts, including rising sea levels, ocean acidification, marine animal biomass and fish catch decline, and risks to low-lying islands and coasts.[14] When considering these and other climate change impacts on the ocean, it's important to understand that climate change will both exacerbate current stresses to the ocean (e.g., increase likelihood of outbreaks of marine disease) and create new, additional stresses (e.g., rising sea surface temperatures).[15]

The IPCC report highlighted challenges that climate change specifically creates for national and international ocean governance. For example, as fish species move due to warming waters, previously agreed upon fisheries management and governance structures will need to be amended.[16] The reduction of sea ice in the Arctic has implications for shipping corridors and global trade agreements.[17] Sea level rise will infringe on the ability of citizens to recreate at public beaches, resulting in necessary changes to coastal zoning laws.[18] Climate change will require "ambitious adaptation" through "transformative governance" in order to reduce risks.[19]

One of the suggested policy and legal mechanisms by which countries can be more adaptive with their coastal and ocean governance is through marine spatial planning. Derived from land use planning and municipal zoning laws, marine spatial planning is a "place-based regulation of allowable ocean uses" that outlines where in ocean and coastal spaces certain activities are allowed.[20] There are many goals to MSP, including spatially separating mismatched or misaligned uses of the ocean (e.g., swimming areas overlapping shipping lanes) and reducing competition and crowding, but MSP is notable because of its innate environmental goals.[21] Core to most all MSP initiatives is the inclusion of ecosystem health, habitat, and biodiversity protection considerations into plans.[22] This is accomplished through special protections and even the restriction of human use or access in certain ocean regions.[23] Despite the inclusive, holistic perspective of MSP, the applicability of this approach to consider climate change in ocean and coastal management is not guaranteed. The concept of marine spatial planning was not originally derived with climate change in mind, and thus, it does not necessarily contain the features that would make this governance approach transformative.[24] With certain adaptations, however, many countries around the world have addressed climate change adaptation and resilience within the context of marine spatial planning.[25] The level of incorporation of climate concerns and the success of many of these plans is yet to be determined, but these examples demonstrate that incorporating climate concerns into MSP is possible from a single ecosystem-based level (e.g., Great Barrier Reef, Australia) to an international level (European Union Marine Spatial Planning Framework).[26]

II. Marine Spatial Planning in the United States

While many countries have adopted marine spatial planning into their ocean and coastal management strategies, broad applications of MSP have been limited in the U.S. and hampered by the "complex mosaic of legal authorities" that constitutes U.S. ocean and coastal law and policy.[27] U.S. waters are divided into sections of state and federal jurisdiction, which can make comprehensive planning and determination of appropriate ocean uses more difficult. State waters, where coastal states have jurisdiction over ocean and coastal management, were designated through the Submerged Lands Act of 1953.[28] Control extends out three nautical miles from shore for all states, except Texas and the Gulf Coast of Florida, which, for historical reasons, have state waters that extend out to nine nautical miles.[29] State control over these waters, however, is not absolute; the U.S. federal government has jurisdiction in state waters in matters related to commerce regulation, navigation, power generation, national defense, and international affairs.[30] From the state waters boundary, federal jurisdiction extends out to 200 nautical miles from the shore, making up the boundaries of the U.S. Exclusive Economic Zone.[31] Despite this legal separation, states and the federal government have often tried to work together on ocean management issues, like through the management of highly migratory fish species, which affect multiple states or transcend state/federal boundaries.[32]

While this federal-state division has worked well for business-as-usual ocean and coastal management, experts acknowledged in the early 2000s that a more comprehensive governance approach was necessary as ocean and coastal spaces became more utilized and conflicts continued to occur.[33] The need for a comprehensive, transformative governance approach only increases when considering the complexities of climate change.[34] The multi-scale nature of the impacts of climate change on the ocean and coasts means that existing governance systems will need to transform at every level, from local to federal.[35]

Over the last 20 years, the U.S. federal government has attempted to create more order in ocean and coastal management, to varying degrees of success. The idea of national ocean planning originated under the George W. Bush administration with the Oceans Act of 2000, which created a Commission on Ocean Policy and directed this Commission to create a report on the state of U.S. ocean and coastal management.[36] The subsequent report, *An Ocean Blueprint for the 21st Century*, recommended "balanced and practical proposals for the establishment of a comprehensive and coordinated ocean policy for our nation."[37] While climate change was mentioned throughout the report, the emphasis within the report was on increasing our understanding of the impacts of climate change, not on creating climate resilient policies.[38] Regarding ocean and coastal planning, the report called for the creation of regional ocean councils to focus on ocean and coastal opportunities and concerns at a regional level.[39] Some of the prescribed functions

of these regional councils highlighted a role for regional stakeholders and priorities in ocean and coastal planning.[40] Lastly, the report highlighted the need for a more coordinated approach for management of federal waters.[41]

III. Obama and Trump Administration National Ocean Policies - Regional Planning Approach

The W. Bush Administration set the stage for national ocean planning in the U.S. and recognized that more coordination would be necessary at the regional and federal levels as the U.S. ocean space became more crowded. This charge was taken up by both the Obama and Trump Administrations, but with key differences in terms of their approach, objectives, and goals of U.S. ocean and coastal management. Critically, however, neither approach made climate resilience a central organizing component in either federal or regional ocean planning efforts.

A. Regional Ocean Planning and Climate Resilience under Obama's National Ocean Policy

The Obama Administration created the first-ever NOP through Executive Order 13547.[42] Executive Orders are not law, but they have been utilized by every president since George Washington to manage operations and set direction for the federal government.[43] As defined in Article II of the Constitution, the president, as Chief Executive and administrative director, has the ability to "issue instructions and orders to executive officers concerning the performance of their duties."[44] In this instance, E.O. 13547 used Obama's executive power, aiming to improve interagency collaboration related to ocean use and planning. Critically, however, the NOP's directive of interagency cooperation and collaboration in the U.S. ocean space did not "create any new regulations, supersede current regulations, or modify any agency's established mission, jurisdiction, or authority… [and] [did] not redirect congressionally-appropriated funds, or direct agencies to divert funds from existing programs."[45] The legal foundation, then, of the Obama NOP was tenuous; although Executive Orders are codified under Title 3 of the Code of Federal Regulations, they can be overturned by subsequent administrations (as occurred in this instance when the Trump Administration came into office).[46]

This push for improved coordination under the Obama NOP was a recognition of the need for more comprehensive ocean and coastal planning *and* an awareness of differing regional objectives and circumstances within the U.S. These dual emphases were enacted through the creation of Regional Planning Bodies ("RPBs").[47] The Obama NOP established nine regions for targeted coastal planning covering all the U.S. ocean and coastal space.[48] Five regions established RPBs in 2012: the Pacific Islands, West Coast, Caribbean, Northeast, and Mid-Atlantic.[49] Four regions proposed as potential planning areas by the National Ocean Council ("NOC"), the South Atlantic, Great Lakes, Gulf of Mexico, and Alaska/Arctic region, chose to not establish separate RPBs, but instead continued to pursue regional planning through existing bodies.[50] The goal of the RPBs was to bring together federal, state, local, and Tribal governments along with fishery management councils, ocean users, and scientists to accomplish more collaborative coastal and marine spatial planning and, specifically, create marine plans for their regions.[51] The regional focus of these groups was intended to help avoid the development of a "one-size-fits-all" federal ocean approach and plan; the guidelines for the to-be-developed plans were flexible and RPBs were encouraged to consider specific regional challenges, describe ideal future conditions, provide direction specifically to federal agencies, and develop their own goals and accomplishments.[52] Plans developed at the regional levels through RPBs were subject to public comment and were required to be approved by the NOC to obtain a national consistency certification.[53] Crucially, these plans would not supersede any federal management actions or direct the action of federal agencies; the plans were envisioned as coordination and planning tools, not as sets of legally enforceable policies.[54]

Plans from the Northeast and Mid-Atlantic regions were developed and approved by the NOC in 2016.[55] One of the most significant accomplishments of these plans was the development of Northeast and Mid-Atlantic data portals, where thousands of layers of data were made publicly available to visualize and make more explicit the many uses of the ocean (e.g., marine life distributions, fishing grounds, recreational areas, shipping lanes, proposed renewable energy sites, etc.).[56] The increased availability of data and a more holistic approach to coastal management described in both plans, however, did not translate to climate resilient management strategies. This disconnect between recognition of the implications of marine spatial planning for addressing climate change and yet not using MSP to actively consider climate-resilient planning strategies had been evident since the release of Executive Order 13547; neither the E.O. nor the Regional Ocean Plans were "clear regarding precisely how ocean zoning can contribute to climate change adaptation and increased resilience."[57]

Both Regional Ocean Plans discussed the impacts of climate change, but discussion primarily focused on the need to gather more data to understand ocean and coastal impacts of climate change.[58] For example, within the Mid-Atlantic Plan, the RPB highlighted the impact that climate change is having on marine species and habitat distributions.[59] The RPB further recognized that shifts caused by climate change would need to be represented on their regional maps, but there was no concrete discussion of any direct management adjustments that would need to be undertaken due to these shifts.[60] The Northeast Plan did mention the need to "provide for adaptive management to enhance our understanding of and capacity to respond to climate change."[61] The actions outlined in the plan, however, were restricted to recommendations to gather more data for the purpose of improving scientific forecasting models for decision making.[62] Thus, while climate change was mentioned in the Northeast and Mid-Atlantic Regional Ocean Plans, the primary management "need" or action was restricted to suggesting that more data collection is needed versus implementing adaptive management.

Despite the limited action-focused discussion on climate change in the Obama era Regional Ocean Plans, these plans and the coordination and collaboration behind them represented a step forward in U.S. regional ocean planning. For the first time, federal agencies were required to work with state, local, and tribal partners to accomplish ocean management goals based on human *and* ecosystem health requirements.[63] These advancements were hindered, but not completely derailed, by the issuance of the Trump Administration's NOP.

B. Regional Ocean Planning and Climate Resilience under Trump's National Ocean Policy

The Trump Administration NOP differs in many significant ways from the approach under the Obama Administration. These changes have had direct impacts on MSP and regional ocean planning efforts in the U.S. Once in office, President Trump rescinded Obama's Executive Order 13547 with his own Executive Order 13840. One of the most significant changes from the Obama era E.O. was the reorganization of the Ocean Policy Committee (formally the National Ocean Council under Obama); the number of subcommittees was reduced and all work was organized through two subcommittees: the Subcommittee on Ocean Science and Technology and the Ocean Resources Management Subcommittee.[64] Critically, Trump's E.O. outlining his administration's priorities for U.S. ocean and coasts does not mention the phrase "climate change".[65] In fact, none of the major proposed initiatives under the Trump NOP, specifically the White House Summit on Partnerships in Ocean Science and Technology and the Presidential Memorandum directing federal agencies to map the U.S. Exclusive Economic Zone, uses the phrase "climate change".[66] Instead, all facets of the Trump NOP prioritize economic and security interests related to the ocean over environmental interests and concerns.[67] These revised priorities extend to the changes made to regional ocean planning efforts under the Trump NOP.

Trump's executive order lessened the emphasis on collaboration and coordination between federal agencies and state, local, and tribal partners related to ocean and coastal management.[68] While federal agency involvement in interagency and inter-jurisdictional management actions was not prohibited under the new executive order, the lack of administration support for these time consuming, but important, processes "has stalled efforts for more inclusive and comprehensive marine planning."[69] This piece-meal approach to ocean and coastal management resulted in two significant changes to the regional ocean planning efforts initiated under the Obama Administration (other than eliminating any mention of climate change). First and most significantly, the five Regional Planning Bodies established for Pacific Islands, West Coast, Caribbean, Northeast, and Mid-Atlantic regions under the Obama Administration NOP were eliminated, with the White House claiming these bodies were "duplicative" and "unnecessary" from the federal level.[70]

Due to the retreat of the federal government, regional ocean planning since 2018 has been driven by the states and progress continues to be made. For example, when the Northeast Regional Planning Body was dissolved by the Trump executive order, the former RPB members were absorbed into the Northeast Regional Ocean Council Ocean Planning Committee ("NROCOPC").[71] The NROCOPC's Work Plan for 2019-2020 discusses the committee's actions and strategic priorities, including hosting ocean planning meetings twice a year to identify and advance regional ocean planning and management priorities, including the impacts of climate change.[72] Regions like the Northeast and the Mid-Atlantic where these regional planning networks had already existed prior to the Obama Administration have been able to continue regional planning efforts despite the Trump E.O. Other areas, however, were using federal support to drive the creation of regional ocean planning efforts and the lack of this support has been a major setback to comprehensive, climate-forward, ocean planning.[73]

The second significant change related to regional ocean planning under the Trump Administration was that the two Regional Ocean Plans submitted by the Mid-Atlantic and Northeast regions and approved by the Obama Administration were nullified.[74] While these plans were not action-focused in terms of incorporating climate resilience, they represented the first federally recognized and endorsed attempts to plan more holistically within the U.S.'s ocean and coastal space. Under the Trump NOP, there is no replacement for these plans. The new Trump OPC is instead focused on data gathering and sharing.[75] This emphasis is the reason why the ocean data portals created in association with the Northeast's and Mid-Atlantic's Regional Ocean Plans were not eliminated; the OPC is using these portals as a way to support the Administration's emphasis on regional data sharing.[76] While data sharing can support regional MSP, these efforts by the Trump OPC are not intended to help advance these processes.

Thus, the federal progress in regional ocean planning that was made under the Obama Administration's NOP has been almost completely halted; any current leadership on ocean and coastal planning is occurring at the regional or state level. While the Obama regional ocean planning did mention climate change and efforts to incorporate impacts of climate change into regional plans (e.g., recognition that fish habitats will shift), these discussions were preliminary; there were no concrete actions outlined for how MSP could become more climate-resilient within regional ocean planning. If ocean and coastal planning efforts in the U.S. are to facilitate a management approach that would truly constitute transformative governance in the sense of the IPCC Oceans Report, these efforts need to be more climate-forward.[77] Approaches to create more climate-forward regional ocean planning exist through shifts in MSP approaches, including building in flexibility through anticipatory and dynamic zoning, increasing the use of protected areas in the ocean, and better incorporating local coastal actors into the MSP sphere.

IV. Creating and Implementing Climate-Forward and Resilient Regional Ocean Planning in the United States

Although climate change impacts on the ocean are felt on a global scale, implementing climate-forward ocean and coastal spatial planning within the U.S. is most appropriate at the regional level.[78] A regional perspective allows the differing impacts of climate change (e.g., fish species shifts, warming ocean temperatures) to be better understood and accounted for within planning and management. The regional scope also matches the legal, policy, and management authority of the area impacted and limits the fragmentation of habitats and ecosystems in terms of management jurisdiction.[79] A regional perspective also allows for the incorporation and consideration of multiple types and scales of knowledge. In creating the data portal for the Northeast Region, the Northeast Ocean Plan specifically highlighted the importance of incorporating tribal data on the impacts of changing conditions on marine habitats and resources that are of importance to tribes.[80] Duff (2017) highlighted the important role that local actors play in regional ocean planning, discussing how local authorities may better understand what management plans or policies would be acceptable in the local context and how they can provide data on the local impacts of climate change.[81]

A. Dynamic and Anticipatory Zoning

All the tools for climate-resilient coastal and marine spatial planning exist within the basic structure of the RPBs developed under the Obama Administration. The scopes of the RPBs are broad enough, all relevant stakeholder groups are involved, and there is a focus on data sharing and coordination to develop a comprehensive approach to ocean management.[82] To make MSP in the U.S. more climate-resilient, however, the motivation behind MSP must be transformed. Instead of viewing MSP and regional ocean planning in general as an approach to deal with conflicting uses of ocean space, it must be viewed as a mechanism to implement flexible, adaptive, and comprehensive climate policies and plans. The idea of adaptive MSP is itself contradictory; zoning in the coastal and ocean space is meant to help reduce conflict and promote clarity by setting concrete boundaries on where different uses of the ocean and coasts are allowed/prohibited.[83]

Dynamic ocean zoning, where shifts in zones are part of their design, is one suggested method that can maintain the clarity of different allowed uses while planning for climate-related shifts.[84] The complexity and fluidity of ocean and coastal areas makes dynamic zoning a reasonable option even without considering climate change; the non-static nature of ocean spaces calls for a more flexible approach that is not necessary in traditional land-based zoning scenarios. Additionally, dynamic zoning in ocean spaces already exists and is being used to enhance endangered species protections and reduce fisheries bycatch.[85] For example, protected species like turtles migrate throughout the year, meaning that areas where long-line fishers interact with turtles shifts both temporally and spatially.[86] Dynamic ocean governance systems could use the known data about what factors trigger turtle migration (e.g., temperature and chlorophyll levels) and automatically open and close fisheries based on this information to reduce bycatch and protect the species.[87] Similar mechanisms could be put into marine zoning plans to incorporate known or predicted environmental or human use impacts or shifts due to climate change.

Comprehensive, enforceable ocean zoning is currently limited within the United States. Asking the existing efforts to be dynamic is an even greater challenge. Marine spatial planning efforts, like the Obama Administration's NOP, provide suggestions for ocean use, but do not create ocean zones, are not enforceable, and do not place new legal requirements or restrictions on agencies.[88] The multi-tiered nature of ocean governance in the U.S. makes comprehensive zoning and enforcing any such zones more challenging. Existing zoning attempts have tended to focus on a single sector, such as Rhode Island's Special Area Management Plan (SAMP), which attempted to streamline the regulation process and create zones for offshore wind turbines (itself, an effort to include climate considerations in the state's ocean planning efforts through alternative energy development).[89] Even this SAMP, however, is not completely enforceable and manageable by Rhode Island itself because the SAMP area extends up to 27 miles beyond Rhode Island's EEZ, far beyond the 3 mile state water boundaries.[90] The creation of the SAMP also was not dynamic; it took two years for the plan to be created and submitted to federal agencies, and three additional years to publish the report.[91] Rhode Island, however, has utilized two mechanisms to ensure that the goals and guidelines of the SAMP are honored outside of state waters; the federal consistency requirements and Geographic Location Description (GLD) options within the Coastal Zone Management Act (CZMA).[92] These two mechanisms could provide potential climate-related ocean zoning, although the dynamic nature of both of these processes is still questionable.

The federal consistency requirement of the CZMA requires that "federal actions that are reasonably likely to affect any land or water use or natural resource of the coastal zone be consistent with enforceable policies of a State's federally-approved coastal management program."[93] Essentially, any federal activities that impact a state's coastal management plan can be reviewed by the states for consistency, giving the states a strong voice in federal agency decision making.[94] The power of the states during these federal consistency reviews, however, has oftentimes been tested and can result in years-long legal cases where consistency is contested.[95] The dynamism of federal consistency proceedings could be increased if states create state federal consistency lists (which identify which federal agencies, licenses, permits or financial assistance activities will be subject to federal consistency reviews if they occur in state waters) or GLD's (where states can extend their entire coastal zone plan into federal waters if there are "reasonably foreseeable" coastal effects from this area of ocean on the state, thus making all federal activities subject to consistency reviews, even outside

state waters).[96] Within federal consistency processes, states need to outline effects from federal activities that are beyond general assertions and assumptions; a state needs to "describe a causal connection of how an impact outside the coastal zone could result in a coastal effect."[97]

There are causal linkages that states could use to consider climate change impacts under federal consistency/GLD's requirements, but the assurance of success is far from guaranteed. Following the Massachusetts v. Environmental Protection Agency, 549 U.S. 497 (2007), argument, coastal states could argue "any federal activity that allows for an increase in greenhouse gas emissions is inconsistent with existing priorities contained in approved coastal management plans."[98] For a more direct link, states could also focus on the threat of offshore oil and gas drilling operations to coastal management priorities beyond emissions (e.g., Deepwater Horizon).[99] While dynamic zoning for climate change seems far off in U.S. ocean planning, there are existing mechanisms by which states in particular can begin asserting their local capacity to adapt and plan for climate change if federal disinterest continues.

In addition to legal mechanisms, existing data portals created through the RPBs already collect and share essential fundamental ocean variable data, which would allow dynamic zoning to be established across a region.[100] Future regional planning efforts, however, would need to be more progressive in their data usage beyond data informing scientific models to characterize and predict the impact of climate change within the region; RPBs under Obama recognized the usefulness of data to plan for climate change, but were hesitant to make decisions without more and better data.[101] The rapid pace of climate change limits the logic behind this reasoning. In order to be most effective in accounting for impacts of climate change, governments and policy makers have to become more comfortable with working with best available data when setting predictive dynamic zoning policies and determining the zones themselves (both in terms of the geographic location and the time frame). The combination, however, of dynamic zoning with anticipatory zoning is one proposed mechanism that aims to balance using data for current decision making versus planning and adapting for the future.

Viewed through the lens of climate-forward marine spatial planning, anticipatory zoning allows RPBs or other similar bodies to zone an area based on anticipated future needs/impacts/realities.[102] Combined with dynamic zoning, this approach could allow RPBs to use available data to anticipate where climate change impacts are likely to influence fisheries, shipping lanes, recreation areas, etc., but have the freedom to continue to update predicted zones based on newly available data or model predictions. Craig (2012) outlines the National Oceanic and Atmospheric Administration's (NOAA) Arctic fishery policy as an example of how anticipatory zoning is implemented and how it can be designed while considering climate change. In 2009, NOAA's North Pacific Fisheries Management Council established a Fisheries Management Plan (FMP) for federal Arctic waters around Alaska.[103] Within this FMP, the Council specifically ruled that this Arctic Management Area would be closed to commercial fishing until there was enough information to initiate a planning process.[104] The ruling, which effectively created a no-take zone, anticipates that there will be a time in the future that Arctic fisheries will be commercially viable and is planning for that reality. The FMP later links these commercial fishery changes directly to climate change and states that any future considerations by the Council regarding commercial fishing will need to include analyses of "the synergistic effects of fishing under climate change scenarios," highlighting the dynamic nature of the zoning actions.[105] The usefulness of anticipatory zoning for climate-forward marine spatial planning could extend beyond fisheries. Coastal development policies could rezone coastal areas when taking into account sea level rise predictions, limiting future development in areas that will likely be inundated in the future.[106] Shifting wind patterns and ocean currents could influence the siting and zoning of wind turbines, especially considering the time scale necessary to approve and build these projects.[107] This adaptive and flexible zoning approach could also be used to plan for stricter protections in ecologically valuable ocean spaces (e.g., areas of high biodiversity, essential fish habitat, endangered or protected species' habitat) or ocean spaces that are particularly vulnerable to climate change (e.g., coral reefs or estuaries).[108]

B. Marine Spatial Planning to Protect Valuable and Vulnerable Ocean Spaces from Climate Change Impacts

Not all ocean areas or ecosystems will not feel the impact of climate change equally; certain ocean spaces have been found to be more susceptible to climate change impacts.[109] Another approach that could make marine spatial planning more climate-resilient would be to disproportionately add protections to the most vulnerable of ocean spaces, establishing marine protected areas (MPAs) or other strict protections (e.g., no-discharge areas) to maintain, and possibly restore, these ecosystems.[110] The determination of what areas or ecosystems will "survive" from this climate-focused zoning protection could derive from consideration of both ecosystem services (e.g., areas of high biodiversity, species richness, presence of endangered species, natural resilience to climate change) and economic benefits (e.g., coral reef contributions to tourism of a region in addition to their unique susceptibility to climate change impacts).[111]

Governments and nonprofits have supported the idea of climate-resilient MPAs, both arguing that protecting the most vulnerable areas could preserve these ecologically and economically valuable areas and provide opportunities for place-based governance and decision-making.[112] Thus, within a regional approach to MSP in the U.S., there are opportunities for individual autonomy in determining what areas would benefit from additional protection and these more restrictive zones can be incorporated into or necessarily adjust existing plans. The federal government, however, could provide coordination, consistency, and help regions establish goals through the existing National System of Marine Protected Areas of the United States

of America.[113] Created through an Executive Order under President George W. Bush, the purpose of the National System is to "strengthen and connect the nation's diverse marine protected area programs...to more effectively protect the nation's natural and cultural marine heritage and living marine resources."[114] While the Framework for the National System mentions the benefits of a connected MPA network for climate resilience, climate is not a driver or focus.[115] The MPA Center, which organizes the National System, could help regional planning efforts create room in MSP for resilience planning using MPAs by setting targets/creating metrics for what these areas should look like in the future (i.e., five year, ten year, twenty year time frames).[116] These targets, however, will necessarily need to take into consideration local perspectives to be most effective and useful. Increasing the role of local actors into the MSP process is the final approach considered in this paper on how MSP can be more climate-resilient.

C. Incorporating Local Perspectives for Climate-Resilient Marine Spatial Planning

Throughout the MSP literature and the accounts from MSP practitioners, the value of the planning process, the act of collaborating, thinking through possible solutions, and working together to create a more holistic vision of the use of ocean space, is emphasized over the resulting plans.[117] Considering this in the context of climate-forward MSP in the U.S., it is crucial to include a wide range of individuals who are addressing climate change from different perspectives into the planning process. Despite the key role they play on the front lines of ocean-related climate adaptation and resilience, local interests have been underrepresented in previous regional planning initiatives.[118] Including local perspectives is essential if MSP is to become more climate-forward.

Although both the Mid-Atlantic and Northeast Ocean Plans discussed the value of incorporating local perspectives, the importance of local perspectives and knowledge was related primarily to understanding recreational uses of ocean spaces.[119] Any further role for local voices and perspectives in regional ocean planning was not clear.[120] A natural framing for the incorporation of local perspectives within a climate-forward regional ocean planning perspective is providing insight into how climate change is differentially impacting their local communities (e.g., levels of sea level rise, areas where harmful algal blooms are common). Knowledge of local impacts of climate change is essential for the development of any ocean planning tools or management plans to help these plans be less reactionary (e.g., future overlap of a popular recreation site with new fish migration patterns, or shipping and navigation lanes).[121] Literature on creating planning tools for climate change emphasize the need to have local information and input on usefulness, and regional ocean planning could put this emphasis into practice to enhance the depth of regional ocean plans and provide local stakeholders with a greater voice.[122] Additionally, related to protecting "valuable" ecosystems with marine protected areas, regional ocean planning could "institutionalize asking state, regional, local groups whether and how certain ocean expanses might be afforded greater environmental protection," e.g., determining what ocean spaces localities feel they need to protect and suggestions for how to accomplish that based on local knowledge.[123] Although the addition of local perspectives might delay planning efforts, it will help bring an applied climate resilience and adaptation focus to these otherwise broad, overarching, and lofty regional ocean plans.

V. Conclusion

The use of regional ocean planning and coastal and marine spatial planning in general has advanced drastically over the last twenty years in the United States. Governments at the local, state, regional, and national level have recognized that a holistic planning approach allows the U.S. to make the most of its expansive exclusive economic zone from both an ecological and economic perspective. While this holistic planning perspective had begun to address climate change under the Obama Administration, any further incorporation of climate change into MSP has been hampered by a lack of federal interest and investment in regional ocean planning overall from the Trump Administration. Regional ocean planning efforts cannot be expected to create forward looking climate-focused ocean plans when they lack support and participation from the federal government in regional ocean planning efforts. Creating climate-forward MSP in the U.S. relies first on a renewed federal mandate for regions to partake in regional ocean planning. Additionally, the focus on planning, data, collection, and modeling is not consistent with the ever pressing need to begin implementing climate solutions through policies or ocean zoning as the climate changes in front of our eyes. With the proper support and a more aggressive legal implementation, there is no reason why MSP cannot be a governance tool to promote climate-focused U.S. ocean and coastal policies and plans.

Endnotes

1 Exec. Order No. 13,547, 75 Fed. Reg. 43023 (July 22, 2010).
2 *Id.* at 43023-24.
3 *Id.*
4 National Ocean Council, *National Ocean Policy Implementation Plan,* 3-4, 22-24, (April 2013), https://obamawhitehouse.archives.gov/sites/default/files/national_ocean_policy_implementation_plan.pdf.
5 *Id.* at 23-24.
6 Northeast Regional Planning Body, *Northeast Ocean Plan,* (2016), https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/NortheastOceanPlan_October2016.pdf.
7 Mid-Atlantic Regional Planning Body, *Mid-Atlantic Regional Ocean Action Plan,* (2016), https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/MidARegionalOceanActionPlan_November2016.pdf.
8 Exec. Order No. 13,840, 83 Fed. Reg. 29431 (June, 22 2018).

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Climate Migration Beyond the Refugee Framework: Creating Bridges Between Human Rights and International Climate Law

*Mara Elisa Andrade**

Introduction

The climate crisis is an existential threat facing life on Earth. It is increasing the frequency of extreme weather events, intensifying floods and droughts, warming oceans, raising sea levels, eroding coastlines, and disrupting ecosystems.[1] The synergies between these impacts jeopardize livelihoods and disrupt societies—exacerbating inequalities, vulnerabilities and poverty.[2] Aware of such impacts, the 1990 Intergovernmental Panel on Climate Change ("IPCC") First Report predicted "the greatest effect of climate change may be those on human migration."[3]

This essay presents a brief overview of the complex nature of climate-related migration. In doing so, it departs from the critical analysis of framing individuals affected by the phenomena as climate refugees, arguing instead that such status is too narrow in scope. Rather, this essay discusses current proposals for a comprehensive and cooperative approach that highlights the interface between the fields of human rights and climate change law.

I. Challenges Designating Individuals Displaced by Climate Change as "Refugees"

Designating individuals displaced by climate-related events as refugees imposes obligations on receiving States to provide for the safety and welfare of those individuals, including the duty to uphold internationally-established human rights standards and the prohibition of refoulement.[4] However, refugee designation has limited applicability in the context of climate-related migration.[5]

Article 1(A)(2) of the 1951 Convention on Refugees,[6] and amendments by its 1967 Protocol,[7] legally defines "refugees" as a person fleeing his country of nationality or residence out of a "well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion."[8]

Based on this definition, the first problem with framing climate migrants as refugees is that most climate-related migration occurs within a State's borders.[9] Additionally, establishing persecution involves showing serious human rights violations accompanied by a discriminatory element.[10] Climate change does not necessarily entail deliberate and intentional harm inflicted by the State on specific individuals or groups on a discriminatory basis or in ways serious enough to meet the persecution standard.[11] As Jane McAdam[12] explains, "although adverse climate impacts such as rising sea levels, salination, and increases in the frequency and severity of extreme weather events (e.g. storms, cyclones, and floods) are harmful, and in some cases fatal, they do not meet the threshold of 'persecution' as this is currently understood in international and domestic law". There is a material legal difference between the "'mere' non-realization of a right"[13] on one hand, and the serious and persistent breach of human rights motivated by "an attribute — real or perceived — of the person being persecuted" on the other.[14]

The standard requirement to establish States as "persecutors" is also hard to meet because the States facing the most dire impacts of climate change are the most poorly positioned to address its effects[15] or adequately uphold human rights standards in the face of magnified crises. Therefore, even if climate hazards and harms are serious enough to amount to persecution, it is unlikely that the State of origin constitutes a persecutor, unless the "government consciously withheld or obstructed assistance in order to punish or marginalize"[16] individuals or groups on discriminatory grounds.

Finally, because the "refugee" designation hinges on proof of persecution, categorizing individuals as climate refugees requires focusing attention on causation, which raises an issue of justice.[17] States that have contributed the most to the climate change are not the ones facing the most pressing obstacles to dealing with the devastating consequences of the crisis—meaning the costs of their actions are borne disproportionately by others.[18] Furthermore, climate change causes migration by amplifying preexisting vulnerabilities rather than by serving as a distinctive cause of migration, making it hard to single out climate change as the predominant cause of human movements.[19]

II. Proposals to Address Climate-Related Migration

To overcome these difficulties, some commentators call for a new treaty, under the umbrella of the United Nations Framework Convention on Climate Change ("UNFCCC"), capable of taking into consideration the complex and unique nature of climate-induced migration.[20] Others note there is little appetite in international relations for a new binding instrument

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on climate refugees because of concerns over territorial integrity and national security.[21]

To fill this "normative gap"[22] in international law, commentators suggest shifting the focus of the analysis from causation to the needs of those displaced by climate change.[23] This would enable better use of existing frameworks under human rights and climate change law, and would enhance international cooperation.[24]

A. Incorporating Climate Related Migration Into The Broad Human Rights' Approach

In 1998, the UN High Commissioner for Refugees adopted the Guiding Principles on Internal Displacement ("GPID"),[25]which served as a major first step to bringing climate migrants under the protection of human rights laws by setting human rights standards for internal displacements. Extending human rights' protections for internal displacements is particularly important as climate change intensifies and most climate related displacement remain within national borders. In 2017, the global number of people internally displaced by disasters (18 million people) outstripped those displaced by conflict (11 million)[26]—highlighting the growing need to develop a legal framework for internal migration.

From an institutional perspective, the Inter-Agency Standing Committee ("IASC")[27] created by the United Nations ("UN") General Assembly Resolution 46/182, has a mandate to ensure preparedness and response efforts, emergency relief, and other assistance measures for humanitarian crises that might involve climate-related disasters. Furthermore, the Hyogo Framework for Action (2005 to 2015)[28] and the 2015 Sendai Framework for Disaster Risk Reduction[29] have brought additional improvements regarding sudden-onset climate impacts and disaster/risk management. The Hyogo Framework for Action sets strategies for building resilience, while the Sendai Framework provides express guidance on climate induced disasters. Both also set human rights standards.

B. Addressing Climate Related Migration With Existing Norms under International Climate Change Law

To complement the human rights approach to climate induced migration, scholars[30] suggest using the UNFCCC[31] — specifically articles 3 and 4.8 of the 1992 Convention.[32] International climate change law provides great latitude to boost cooperation and bring attention to the needs of countries most vulnerable to climate change. This approach is reflected on the 2007 Bali Action Plan,[33] the 2010 Cancún Agreement,[34] the Warsaw International Mechanism,[35] and the Paris Agreement,[36] which all embrace concerns over climate migration and displacement.

International climate change law offers important norms for integrating climate migration into all four structural pillars of the climate regime: mitigation, adaptation, finance, and oversight.[37] For instance, effective mitigation could keep climate impacts within a manageable scale, while adaptation measures could prevent displacement, build resilience, and protect vulnerable communities. Recognizing that climate migration belongs to the field of international climate change law, numerous countries embraced commitments on migration and displacement in their NDC's under the Paris Climate Agreement.[38]

Conclusion

As the devastating impacts of climate change exacerbate preexisting vulnerabilities and socioeconomic stressors — directly affecting the enjoyment of human rights and influencing human mobility within and across borders[39] — it is important to integrate human rights law into the legal framework for climate-related migration. Doing so will expand the conversation beyond the narrow scope of international refugee law.

Amplifying the legal response to encompass both human rights and climate change legal regimes could reinforce legal systems while enhancing efforts to prevent displacement from happening in the first place. It would also create a collective duty to protect vulnerable communities disproportionally affected by climate change's pervasive impacts.

Human rights law invites us to shift the focus away from the complex causation inquiries of migration and displacement, leaning instead towards the unique needs of individual communities affected by natural disasters. Additionally, international climate change law complements the approach by providing for a persuasive narrative towards greater international cooperation and solidarity between States, which could improve attainment of international mitigation and adaptation goals.

Endnotes

1 Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report 7–8 (Rajendra K. Pachauri et al. eds., 2015).

2 Stephane Hallegatte et al., Shock Waves: Managing the Impacts of Climate Change on Poverty 36–38 (2016) (finding shocks to price of goods, destruction of assets from natural disasters, death and illness due to environmental and climate conditions, and employment opportunity converge to push people into poverty).

3 Intergovernmental Panel on Climate Change, Climate Change: The 1990 and 1992 IPCC Assessments (1992).

4 The Refugee Convention embraces non-refoulement in Article 33, which prohibits a receiving State from expelling or returning a person to a country where his or her freedom or life would be threatened based on race, religion, nationality, membership of a particular social group, or political opinion. Convention Relating to the Status of Refugees, art. 33, July 12, 1951, 189 U.N.T.S. 137 [hereinafter Convention on Refugees]; *see also* Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, art. 3, Dec. 10, 1984, T.I.A.S. No. 94-1120.1, 1465 U.N.T.S. 85 [hereinafter Convention Against Torture] (prohibiting refoulment where a person faces the possibility of torture).

5 Jane McAdam, Climate Change, Forced Migration, and International Law 43 (2012) (noting that the requirement of cross-border movement will be difficult to establish considering most climate migration will be internal, and probing the difficulty of demonstrating "climate change" as "persecution").

6 Convention on Refugees, *supra* note 4, art. 1(A)(2).

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[34] U.S. Gov't Accountability Off., GAO-18-188, Climate Related Risks: SEC Has Taken Steps to Clarify Disclosure Requirements 9 (2018) (focusing on floods, droughts, hurricanes, tornadoes as most substantial climate risks); *see also* Abraham Lustgarten, *Climate Change Will Force a New American Migration*, ProPublica (Sept. 15, 2020, 5:00 AM) https://www.propublica.org/article/climate-change-will-force-a-new-american-migration (arguing that the worsening of climate change will make certain areas of the country uninhabitable, forcing many to move, which can only exacerbate existing wealth inequalities); Christopher Flavelle, *Climate Change Tied to Pregnancy Risks, Affecting Black Mothers Most*, N.Y. Times (June 18, 2020), https://www.nytimes.com/2020/06/18/climate/climate-change-pregnancy-study.html (finding that higher exposure to air pollution leads to an increased risk of premature birth and greater likelihood of stillbirths).

[35] Veena Ramani, Ceres, *Addressing Climate as a Systemic Risk: A Call to Action for Financial Regulators*, Harv. L. Sch. F. Corp. Governance (June 28, 2020) (citing disruptions in the labor force, supply chains, and structural shifts in the economy as major "climate risks" that could have significant consequences on assert valuations, global financial markets, and global economic stability).

[36] *Id. See also* Kevin L. Doran & Elias L. Quinn, *Climate Change Risk Disclosure: A Sector by Sector Analysis of SEC 10-K Filings from 1995-2008*, N.C. J. Int'l L. & Com. Reg., Spring 2009, at 123.

[37] Doran, *supra* note 35, at 102.

[38] *See* Press Release, London Sch. Econ., New study estimates global warming of 2.5 centigrade degrees by 2100 would put at risk trillions of dollars of world's financial assets (Apr. 4, 2016), https://www.lse.ac.uk/GranthamInstitute/news/us2-5-trillion-of-the-worlds-financial-assets-would-be-at-risk-from-the-impacts-of-climate-change-if-global-mean-surface-temperature-rises-by-2-5c/ (explaining the impact climate change could have on the financial sector).

[39] *See* Jennifer Hijazi, *Mounting Climate Cases Expand Big Oil's Legal Battlefield*, E&E News (Sept. 16, 2020), https://www.eenews.net/stories/1063713839 (noting government officials' willingness to file climate misinformation lawsuits under consumer protection and anti-fraud statutes); *see, e.g.*, State v. Chevron Corp., C.A. No. PC-2018-4716 (R.I. Sup. Ct. 2020) (alleging, *inter alia*, that the "production, promotion, and marketing of fossil fuel products" has increased GHGs and is responsible for the climate-related injuries that Rhode Island is experiencing).

[40] *See* Karen Savage, *Why a Tidal Wave of Climate Lawsuits Looms Over the Fossil Fuel Industry*, Climate Docket (Sept. 23, 2020), https://www.desmogblog.com/2020/09/28/wave-climate-lawsuits-exxon-api-fossil-fuels 23, 2020) (discussing the litigation that has arisen throughout the fossil fuel industry).

[41] *See* TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 450 ((Jun1976) (defining the omission of information as material if "there is a substantial likelihood that the disclosure . . . would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available."); *cf.* Peter Feltman, International Accounting Body Preparing Climate Change Standards, CQ Roll Call (2020) (advising industries to account for climate change in their companies' financial statements).

[42] *See Nina Chestney, Climate-related financial disclosure becoming more mainstream: G20 task force*, Reuters (Sep. 26, 2018), https://www.reuters.com/article/us-climatechange-financial-disclosure/climate-related-financial-disclosure-becoming-more-mainstream-g20-task-force-idUSKCN1M61OM (reporting that in a survey of 1,700 companies, most were revealing information about the financial impact of climate-related risks).

[43] *See* discussion *infra* notes 70–76 and accompanying text (discussing SEC disclosure requirements).

[44] *See* Deloitte Global, *supra* note 13, at 3–5.

[45] *See* Sara Bernow et al., *More than values: The value-based sustainability reporting that investors want*, McKinsey & Co. at 3 (Aug. 7, 2019), https://www.mckinsey.com/business-functions/sustainability/our-insights/more-than-values-the-value-based-sustainability-reporting-that-investors-want (explaining how investors are questioning current sustainability reporting practices).

[46] *Id.*

[47] *See* Deloitte Global, *supra* note 13, at 4. .(quoting Goldman Sachs leadership, "[I]f you ignore sustainability [as a company], you're going to be worth less.").

[48] *Id.* at 2.

[49] *See People v. Exxon Mobil Corp.*, 65 Misc. 3d 1233(A), 3-4 (N.Y. Sup. Ct. Dec. 10, 2019) .

[50] *Id.* at 28 (contemplating whether ExxonMobil's anticipated revenues, which included an estimated price of carbon—proxy costs—misled investors into thinking the corporation was more secure than it actually was).

[51] *Id.* at 9–10.

[52] *Id.* at 3–4.

[53] *Id.* at 6–8.

[54] *Id.* at 82.

[55] *Id.* at 53 ('sufficiently specific' to 'guarantee some fact or outcome') (quoting City of Pontiac Policemen's & Firearm's Ret. Sys v. UBS AG, 752 F.3d 173, 195 (2d Cir. 2014)).

[56] *See c.f.*, Perry Wallace, *Climate Change, Fiduciary Duty, and Corporate Disclosure: Are Things Heating up in the Boardroom*, 26 Va. Env't L. J. 293, 294–296 (2008) (relating climate change developments to discussion of corporate duties to disclose); *see generally* #ExxonKnew, https://exxonknew.org/ (last visited Aug. 1, 2020).

[57] Carlson, *supra* note 10.

[58] *See* Wallace, 57 at 308 (explaining how the period after Enron leading to heightened Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) requirements proves fruitful in applying securities law to climate change litigation); 15 U.S.C. §§ 78b78a78b78a. (2018).

[59] *See* Wallace, *supra* note 57, at 308–309.

[60] 15 U.S.C. §§ 78m (2018).

[61] 17 C.F.R. § 240.10b-5. *See Id.* §§ 77q, 77w.

[62] *See* 15 U.S.C. § 78j(b); Dura Pharmaceuticals, Inc. v. Broudo, 544 U.S. 336 1627, 1631–32 (2005) (stating that "a person who 'fraudulently' makes a 'misrepresentation' [is liable] 'for. . .. loss caused' to one who justifiably relies upon that misrepresentation.")

[63] 15 U.S.C. § 78u-2(b)(3).

[64] *See* Savage, *supra* note 30. *See generally* U.S. Dep't of Just., Crim. Div. & U.S. Sec. & Exch. Comm'n, Enf't Div., FCPA: A Resource Guide to the U.S. Foreign Corrupt Practices Act 4 (2020) (discussing Department of Justice's (DOJ's) and SEC's shared enforcement authority) [hereinafter FCPA].

[65] Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 728–29 (1975) (describing legislative history of the private cause of action).

[66] *The Prospects for Rule X-10B-5: An Emerging Remedy for Defrauded Investors*, Yale L. J. 1128, 1130–31 (1950) (noting broadness of the rule as a source of private civil remedies).

[67] FCPA, *supra* note 65 (giving overview of securities laws).

[68] Arnold S. Jacobs, *§ 8:2. In general*, *in* 5B Disclosure & Remedies Under the Sec. Laws (2020).

[69] *See id.* § 9:6 (rejecting limitations of jurisdictional scope based on whether a security is traded).

[70] 15 U.S.C. § 77g (tasking SEC with promulgating regulations to require each issuer of an asset-backed security to disclose information regarding the assets backing that security); U.S. Sec. & Exch. Comm'n, *What We Do*, https://www.sec.gov/Article/whatwedo.html (Oct. 15, 2020).

[71] *See* Commission Guidance Regarding Disclosure Related to Climate Change, 17 C.F.R. pts. 211, 231, & 241 (2019) (coverage for green buildings, renewable energy, carbon risk management). [hereinafter Commission Guidance].

[72] 15 U.S.C. § 78m.

[73] *Id.* (providing impetus for SEC's interpretation); *see* U.S. Sec. & Exch. Comm'n, *Form 10-K*, https://www.sec.gov/fast-answers/answers-form10khtm.html (last visited July 29, 2020) (discussing disclosure requirement submitted on Form 10-K and given in an annual report providing an overview of a company's financial condition).

[74] Commission Guidance, *supra* note 72, at 21–24 (advising registrants to assess their legal disclosure obligations as climate change regulation evolves); *About Edgar*, U.S. Sec. & Exch. Comm'n, https://www.sec.gov/edgar/about (Aug. 24, 2020).

[75] *About Edgar*, U.S. Sec. & Exch. Comm'n https://www.sec.gov/edgar/about (Aug.24, 2020).

[76] Commission Guidance, *supra* note 72, at 22–24 (considering impact of federal and state legislation with respect to environmental laws; international accords such as the Kyoto Protocol; indirect consequences of regulation or business trends; and the physical impacts of climate change, such as extreme weather, sea levels, arability of farmland, and water availability and quality).

[77] Comm'r Allison Herren Lee, "Modernizing" Regulation S-K: Ignoring the Elephant in the Room, U.S. Sec. & Exch. Comm'n (Jan. 30, 2020), https://www.sec.gov/news/public-statement/lee-mda-2020-01-30#_ftn2 (stating, "[I]nvestors are overwhelmingly telling us . . . that they need consistent, reliable, and comparable disclosures of the risks and opportunities related to sustainability measures, particularly climate risk.").

[78] Karen Savage, *Learning from NY, Mass. Adjusts Fraud Case Vs. Exxon*, The Climate Docket (June 12, 2020), https://www.climatedocket.com/2020/06/12/massachusetts-fraud-exxon-new-york/ (stating, "[M]isrepresentations about climate change risks [were] highly misleading."); *see discussion* notes 88–91 and accompanying text.

[79] Karen Savage, *DC Files Latest Climate Suit Vs. Big Oil*, The Climate Docket (June 25, 2020), https://www.climatedocket.com/2020/06/25/washington-dc-climate-lawsuit/; *see also* Katie Jennings et al., *How Exxon Went from Leader to Skeptic on Climate Change Research*, L.A. Times (Oct. 23, 2015), https://graphics.latimes.com/exxon-research/ (discussing what came to be the smoking gun document in the ExxonMobil litigation—an internal ExxonMobil memo titled the "Exxon Position" that, after noting scientific consensus on the role of fossil fuels in global warming, stated that the company should emphasize uncertainty instead).

[80] Karen Savage, *Delaware: Latest State to Seek Oil Industry Liability for Climate Damages*, The Climate Docket (Sept. 10, 2020), https://www.climatedocket.com/2020/09/10/delaware-climate-liability-lawsuit-oil/; *see also* Karen Savage, *Minnesota Sues Fossil Fuel Industry for Climate Fraud*, The Climate Docket (June 24, 2020), https://www.climatedocket.com/2020/06/24/minnesota-climate-lawsuit-exxon-koch-api/.

[81] *Compare* Unif. Sec. Act of 2002 § 501 (Nat'l Conf. on Comm'rs on Unif. State Laws) (adopted by thirty-nine states), *with* 18 U.S.C. § 1350 (2002) (requiring that agent know that its certification is fraudulent), *and* 15 U.S.C. § 77k (1998) (limiting liability to statements within knowledge).

[82] *See* Anwar v. Fairfield Greenwich Ltd., 728 F. Supp. 2d 354, 369 (S.D.N.Y. 2010) (stating, "While some Martin Act violations do essentially impose strict liability and require no proof of intent, the Martin Act also allows for felony fraud offenses that require proof of 'fraudulent intent.'"); *see generally Blue Sky Laws*, U.S. Sec. & Exchange Comm'n (Oct. 14, 2014), https://www.sec.gov/fast-answers/answers-blueskyhtm.html (explaining that every state has its own set of securities laws).

[83] Karen Savage, *Learning from NY, Mass. Adjusts Fraud Case Vs. Exxon*, The Climate Docket (June 12, 2020), https://www.climatedocket.com/2020/06/12/massachusetts-fraud-exxon-new-york/.

[84] Am. Compl. at 1, 8-9, *Mass. v. Exxon Mobil Corp.*, No. 1984-CV-02222-BLS1 (Mass. Sup. Ct. June 5, 2020).

[85] *Supra* notes 57–60 (summarizing case).

[86] *See* Erik Larson, *Exxon's Climate Trial Is Over in New York. But the Legal War Is Just Beginning*, L.A. Times (Nov. 15, 2019), https://www.latimes.com/business/story/2019-11-15/exxons-climate-change-trial (noting diversity of lawsuits arising under other state laws).

[87] *See* Tim McDonnell, *In New Lawsuits Against Big Oil, Prosecutors Borrow from the Fight Against Big Tobacco*, Quartz (June 25, 2020), https://www.yahoo.com/news/lawsuits-against-big-oil-prosecutors-220147113.html ("Just as cigarette manufacturers waged a disinformation campaign about the risks of smoking . . . fossil fuel companies have knowingly misled the public about the harms of greenhouse gases."); *see also* Naomi Oreskes & Erik M. Conway, Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Climate Change 6–7 (2011) (discussing plans to undermine scientific evidence, originating in the tobacco industry, and arising later among the fossil fuel industry).

[88] *See United States v. Philip Morris (D.O.J. Lawsuit) Overview*, Pub. Health L. Ctr, https://publichealthlawcenter.org/topics/commercial-tobacco-control/commercial-tobacco-control-litigation/united-states-v-philip (discussing court's initial rejection of remedies concerning reimbursement of tobacco-related medical expenses) (last visited Oct. 1, 2020).

[89] Securities Litigation Uniform Standards Act of 1998, Pub. L. No. 105–353, § 2, 112 Stat. 3227 (1998) (finding that state securities enforcement is concurrent to federal regulation of securities "to protect investors and promote strong financial markets"); *supra* Part II: Disclosing What They Know (providing an overview of options for securities enforcement).

[90] #ExxonKnew, https://exxonknew.org/ (last visited Aug. 1, 2020) (petitioning DOJ and State Attorney Generals to investigate ExxonMobil). *But see* Public Statement, Chairman Jay Clayton, *Environmental and Climate-Related Disclosure* (Jan. 30, 2020), https://www.sec.gov/news/public-statement/clayton-mda-2020-01-30 (noting that the nature of climate-related matters renders forward-looking disclosure requirements challenging due to the complexity, jurisdiction, and uncertainty of the information required to make accurate estimates).

[91] Compl. for Declaratory and Injunctive Relief, at ¶¶ 2, 6–9, *Sierra Club v. SEC*, No. 4:19-cv-6971 (N.D. Cal. Oct. 24, 2019) (noting the importance of SEC oversight to the shareholder proposal process); *see also* Jill E. Fisch, *Making Sustainability Disclosure Sustainable*, 107 Geo. L. J. 923, 933–34 (2019) (explaining the SEC's position that sustainability disclosures are not material, and thus are not a part of financial reporting).

[92] Compl. for Declaratory and Injunctive Relief , at ¶¶ 6–9, Sierra Club v. SEC, No. 4:19-cv-6971 (N.D. Cal. Oct. 24, 2019).

[93] *Id.* at ¶¶ 1-2.

[94] *See* Elizabeth Daigneau, *Hoping for the Success They Had Against Tobacco, State AGs Unite to Fight Climate Change*, Governing (Oct. 2016), https://www.governing.com/topics/transportation-infrastructure/gov-tobacco-climate-lawsuits.html (discussing AGs United for Clean Power initiative).

[95] 17 C.F.R. § 240.14a-8 (2018).

[96] *Id.* § 240.14a-8(b).

[97] Sullivan & Cromwell LLP, 2020 Proxy Season Review: Part 1 Rule 14a-8 Shareholder Proposals 2 (2020); Eric Rosenbaum, *Activists Thought BlackRock, Vanguard Found Religion on Climate Change – Not Anymore*, CNBC (Oct. 13, 2019, 10:00 AM), https://www.cnbc.com/2019/10/13/blackrock-vanguard-found-religion-on-climate-doubts-are-growing.html.

[98] Jill E. Fisch, *Making Sustainability Disclosure Sustainable,* 107 Geo. L. J. 932, 941 (2018).

[99] *See* David J. Frame et al., *The Economic Costs of Hurricane Harvey Attributable to Climate Change*, 160 Climate Change Rsch. Inst. 272, 272 (stating that the average estimate of damages attributable to anthropogenic causes of climate change at $67 billion) (2020).

[100] *See supra* note 52 and accompanying text (taking survey of investors); Hana V. Vizcarra, *Climate-Related Disclosure & Litigation Risk in the Oil & Gas Industry: Will State Attorneys General Investigations Impede the Drive for More Expansive Disclosures?*, 43 Vt. L. Rev. 733, 740 (noting challenges of inconsistent reporting requirements and standards).

[101] 15 U.S.C. § 78u-2(b)–3 (2010).

[102] *SEC Charges Volkswagen, Former CEO with Defrauding Bond Investors During 'Clean Diesel' Emissions Fraud*, U.S. Sec. & Exchange Comm'n, SEC Charges Volkswagen (Mar. 14, 2019), https://www.sec.gov/news/press-release/2019-34 (alleging that Volkswagen made misrepresentations concerning its vehicle quality, environmental compliance, and financial standing).

[103] Press Release, U.S. Dep't Justice, Volkswagen AG Agrees to Plead Guilty and Pay $4.3 Billion in Criminal and Civil Penalties (Jan. 11, 2017), https://www.justice.gov/opa/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-six.

[104] *Volkswagen Clean Air Act Civil Settlement* Env't. Prot. Agency, https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement#mitigation (last visited Aug. 1, 2020).

[105] In re Volkswagen "Clean Diesel" Mktg., Sales Practices, & Prod. Liab. Litig., No. 7347, 2020 WL 4905093, at *7 (N.D. Cal. Aug. 2020) (denying motion to dismiss SEC's request for injunctive relief).

[106] Sarbanes-Oxley Act of 2002, § 404 (codified in 15 U.S.C.A. § 7272 and requiring internal controls for financial reporting).

[107] U.S. Commodity Futures Trading Comm'n, supra note 17, at 32; *see also* Fact Sheet, The Climate Risk Disclosure Act of 2019, Sen. Elizabeth Warren, https://www.warren.senate.gov/imo/media/doc/The%20Climate%20Risk%20Disclosure%20Act%20of%202019%20-%20One%20Pager.pdf (last visited Oct. 2, 2020) (arguing that the market undervalues climate risks).

[108] U.S. Commodity Futures Trading Comm'n, supra note 17. at 52.

[109] *Id.* at 61.

[110] *Id.* at 60.

[111] Alison Benjamin, *Stern: Climate Change a 'Market Failure*,' The Guardian (Nov. 29, 2007, 04:52 EST), https://www.theguardian.com/environment/2007/nov/29/climatechange.carbonemissions#:~:text=%22The%20problem%20of%20climate%20change,failure%20the%20world%20has%20seen.

Endnotes: Swallowing the Rule: Why FERC's "Immediate Need Exemption" Frustrates Competitive and Climate-Smart Electricity Sector Transmission Planning under Order No. 1000 *continued from page 10*

1 Order Instituting Section 206 Proceedings, 169 FERC ¶ 61,054 (2019).
2 *See* 16 U.S.C. § 824d(a) (2012).
3 *Id.* § 824(b)(1).
4 *Id.* § 824(d)(a)-(b).
5 *See* Devin Hartman, *Federal Power Act and Organized Electricity Markets*, R. St. Elec. 101 Series No.1 (2016), https://www.rstreet.org/wp-content/uploads/2018/04/electricity1-1.pdf.
6 *See* David B. Spence, *Can Law Manage Competitive Energy Markets*, 93 Cornell L. Rev. 756, 770–71 (2008).
7 *See, e.g.*, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 841, 162 FERC ¶ 61,127 (2018); *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 134 FERC ¶ 61,187 (2011); *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services By Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 75 FERC ¶ 61,080 (1996).
8 *See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 136 FERC ¶ 61,051 (2011).
9 *See id.* at 70–71, 78–84.
10 *See id.*
11 *See id.*
12 *See id.*
13 *Id.* at 225–26.
14 *See* Order Instituting Section 206 Proceedings, 169 FERC ¶ 61,054, at PP 3, 5 (2019).
15 *Id.*
16 *See ISO New England*, 143 FERC ¶ 61,150 at 238 (2013); *see also PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214 at 249 (2013); *Sw. Power Pool, Inc.*, 144 FERC ¶ 61,059 at 197 (2013).
17 *ISO New England*, 143 FERC ¶ 61,150 at P 238.
18 *See* Johannes Pfeifenberger et al., *Cost Savings Offered by Competition in Electric Transmission: Experience to Date and the Potential for Additional Customer Value*, 3–4 Brattle Grp. (Apr. 2019).
19 *Id.* at 26, 28.
20 *See id.* at 5.
21 *See id.* at 12–13.
22 *See id.* at 39–40.
23 *See id.*
24 *ISO New England*, 143 FERC ¶ 61,150 at 236; *PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214 at 248; *Sw. Power Pool, Inc.*, 144 FERC ¶ 61,059 at 195–196.
25 *See PJM Interconnection, L.L.C.*, 156 FERC ¶ 61,030 at 22–24 (2016).
26 Comments of the New England State Agencies, Docket No. EL 19-90-000 at 7 (Dec. 27, 2019) (No. EL19-90-000).
27 *See id.*
28 *See id.*
29 Submission of Short-Term Reliability Projects Informational Filing, No. ER13-366-000 at 3 (Jan. 24, 2019).
30 Order Instituting Section 206 Proceedings, 169 FERC ¶ 61,054 at 10 (2019) .
31 *Id.* at 9.
32 *See* ISO New Eng., Inc., 2019 Regional System Plan 100 (2019), (characterizing transmission projects in-service in ISO-NE as helping "maintain system reliability" and supporting a "robust, competitive wholesale power market by reliably moving power"); Sw. Power Pool, Inc., Balance: 2018 Annual Report 14 (2018). https://www.spp.org/documents/59858/2018%20annual%20report%2020190416%20spp-org.pdf (noting SPP's "robust and reliable processes and decade-long investment in grid modernization"); PJM Interconnection, L.L.C., Leading Through the Transition: 2018 PJM Annual Report 4 (2018) ("Overall, markets continue to work well to deliver reliability at the least cost.").
33 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. 49,842, 49,876–77 (Aug. 11, 2011) (to be codified at 18 C.F.R. pt. 35).
34 *Id.* at 49,876.
35 *See generally State Renewable Portfolio Standards and Goals*, Nat'l Conf. State Legislatures (Apr. 17, 2020), https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx.
36 *See* 2019 Regional System Plan, *supra* note 32, at 145–46.
37 *Comparison of Renewable Portfolio Standards (RPS) Programs in PJM States*, PJM Interconnection L.L.C., https://www.pjm-eis.com/~/media/pjm-eis/documents/rps-comparison.ashx.
38 *See State Renewable Portfolio Standards and Goals*, *supra* note 35.
39 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. at 49,880.
40 *See generally* Garrett Fitzgerald et al., Rocky Mountain Inst., *The Economics of Battery Energy Storage* 5 (2015).
41 *See* Rich Glick & Matthew Christiansen, *FERC and Climate Change*, 40 Energy L.J. 1, 37 (2019).
42 Alexander E. MacDonald et al., *Future Cost-competitive Electricity Systems and Their Impact on US CO_2 Emissions*, 6 Nature Climate Change 526, 526 (2016).
43 Glick & Christiansen, *supra* note 41 at 35.

Endnotes: Accounting for Climate Change in United States' Regional Ocean Planning: Comparing the Obama and Trump National Ocean Policies to a Climate-Forward Approach *continued from page 17*

9 *Id.*
10 *Id.*; Hana V. Vizcarra & Laura Bloomer, *Analysis of the Regulation and Deregulation of U.S. Ocean and Fisheries Policies*, Harvard Law School Environmental & Energy Law Program 1, 11 (2019), http://eelp.law.harvard.edu/wp-content/uploads/Oceans-paper-COMPLETE-WEB-VERSION.pdf.
11 *See* Vizcarra & Bloomer, *supra* note 10, at 11.
12 U.N. Env't Programme and World Meteorological Org., Intergovernmental Panel on Climate Change (IPCC), *Climate Change - The IPCC Scientific Assessment*, (1990), https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_I_full_report.pdf.
13 U.N. Env't Programme and World Meteorological Org., Intergovernmental Panel on Climate Change (IPCC), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers*, (2019), https://www.ipcc.ch/srocc/chapter/summary-for-policymakers/.
14 *Id.* at 5, 9, 13, 16, 20, 22, 27.
15 Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Env't. L. Rev. 305, 318–19 (2012).
16 *IPCC Special Report* (2019) at 16.
17 *Id. IPCC Special Report* at 15.
18 Craig, *supra* note 15, at 310.
19 *IPCC Special Report* (2019) at 27.
20 Craig, *supra* note 15, at 307.
21 *Id.* at 310–11.
22 *Id.* at 310.
23 *Id.*
24 *Id.* at 307.
25 Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Env't. L. Rev 305, 310 (2012).
26 *See* Elena Gissi, Simonetta Fraschetti, and Fiorenza Micheli, *Incorporating Change in Marine Spatial Planning: A Review*, 92 Env't Sci. Pol'y 191, 192 (2019) (giving examples of MSP initiatives).
27 Craig, *supra* note 15, at 333; U.S. Comm'n on Ocean Policy, Review of the U.S. Ocean and Coastal Law: The Evolution of Ocean Governance over Three Decades App. 6 to An Ocean Blueprint for the 21st Century at 6 (2004); *See* John Duff, *The Voice of Local Authorities in Coastal and Marine Spatial Planning in the Northeast: Insights From the Regional Ocean Planning Process*, 8 Sea Grant L. & Pol'y J. 6, 6 (2017) (describing the

relationship between varying levels of government jurisdiction in the MSP of U.S. coastal waters).

[28] Duff, *supra* note 27, at 8.

[29] U.S. Comm'n on Ocean Pol'y, An Ocean Blueprint for the 21st Century (2004) at 70.

[30] *Id.* at 71.

[31] *Id.* at 72.

[32] *See,* e.g., Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801 (2007) (exemplifying a law that governs marine fisheries management in U.S. federal waters).

[33] U.S. Comm'n on Ocean Pol'y, *supra* note 29, at 76, 80.

[34] *See id.* at 67–68.

[35] *See id.*

[36] Oceans Act of 2000 § 3(a), (f)(1) Pub. L. No. 106-256 (establishing the Commission on Ocean Policy and ordering the Commission to report its U.S ocean policy findings and recommendations).

[37] U.S. Comm'n on Ocean Pol'y, *supra* note 29 at 55.26.

[38] *Id.* at 378.

[39] *Id.* at 87, 90.

[40] *Id.* at 90.

[41] *Id.* at 98.

[42] HARVARD ENVIRONMENTAL & ENERGY LAW PROGRAM STAFF, NAT'L OCEAN Pol'y EXEC. ORDER (Sep. 20, 2018), https://eelp.law.harvard.edu/2018/09/national-ocean-policy-executive-order/ (describing the creation and subsequent revocation of the National Ocean Council, National Ocean Policy); *See* NAT'L OCEAN COUNCIL, NAT'L OCEAN Policy IMPLEMENTATION PLAN (2013) at ii, https://obamawhitehouse.archives.gov/sites/default/files/national_ocean_policy_implementation_plan.pdf.

[43] *What is an Executive Order?*, A.B.A, (Oct. 9, 2020) (2018), https://www.americanbar.org/groups/public_education/publications/teaching-legal-docs/what-is-an-executive-order-/.(describing executive orders and how they are used in the U.S).https://www.americanbar.org/groups/public_education/publications/teaching-legal-docs/what-is-an-executive-order-/.

[44] Robert B. Cash, Note, *Presidential Power: Use and Enforcement of Executive Orders*, 39 Notre Dame L. Rev. 44, 44 (1963).

[45] NAT'L OCEAN COUNCIL, *supra* note 42, at 2 (explaining the function of the National Ocean Policy).

[46] *What is an Executive Order?*, *supra* note 43.

[47] Exec. Order No. 13547, 3 C.F.R. 13547 (2010).

[48] *Id.*

[49] Christy Goldfuss & John P. Holdren, *The Nation's First Ocean Plans*, THE WHITE HOUSE BLOG (Dec. 7, 2016, 9:02 AM), https://obamawhitehouse.archives.gov/blog/2016/12/07/nations-first-ocean-plans.

[50] Healthy Oceans Coalition, *Support Ocean Planning*, https://healthyoceanscoalition.org/our-work/coalition-priorities/marine-life.

[51] Exec. Order No. 13547, 3 C.F.R. 13547 (2010).

[52] National Ocean Council, *supra* note 4, at 22; The White House Council on Environmental Quality, *Final Recommendations Of The Interagency Ocean Policy Task Force* (2010) at 58, https://obamawhitehouse.archives.gov/files/documents/OPTF_FinalRecs.pdf.

[53] White House Council on Environmental Quality, *supra* note 54, at 57-58, 63.

[54] *Id.* at 47.

[55] *See generally* Northeast Regional Planning Body, *supra* note 6; Mid-Atlantic Regional Planning Body, *supra* note 6.

[56] *See generally* Mid-Atlantic Regional Council on the Ocean, *Mid-Atlantic Ocean Data Portal,* http://portal.midatlanticocean.org/ocean-stories/every-map-tells-a-story/; Northeast Regional Ocean Council, *Northeast Ocean Data*, https://www.northeastoceandata.org/about/.

[57] Craig, *supra* note 14, at 312-313.

[58] Northeast Regional Planning Body, *supra* note 6, at 5; Mid-Atlantic Regional Planning Body, *supra* note 6, at 39.

[59] Mid-Atlantic Regional Planning Body, *supra* note 6, at 41.

[60] *Id at 41-42.*

[61] Northeast Regional Planning Body, *supra* note 6, at 5.

[62] *Id.* at 167.

[63] Duff, *supra* note 27, at 10-11.

[64] Exec. Order No. 13840, at 29432 (June 19, 2018); Fact Sheet, *President Donald J. Trump is Promoting America's Ocean Economy*, The White House (June 19, 2018) ("President Trump's Executive Order also eliminates the duplicative, Federally driven Regional Planning Bodies established by the previous Administration"), https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-promoting-americas-ocean-economy/.

[65] Exec. Order No. 13840, 29431-34 (June 19, 2018).

[66] Ocean Policy Committee, *Summary of the 2019 White House Summit on Partnerships in Ocean Science & Technology* (2019), https://www.whitehouse.gov/wp-content/uploads/2019/11/Ocean-ST-Summit-Readout-Final.pdf; Memorandum on Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska, 84 Fed. Reg. 64699, 64699-647701 (Nov. 19, 2019).

[67] David Malakoff, *Trump's New Oceans Policy Washes Away Obama's Emphasis on Conservation and Climate*, Science Magazine (June 19, 2018), https://www.sciencemag.org/news/2018/06/trump-s-new-oceans-policy-washes-away-obama-s-emphasis-conservation-and-climate.

[68] Hana V. Vizcarra & Laura Bloomer, *Analysis of the Regulation and Deregulation of U.S. Ocean and Fisheries Policies*, Harvard Law School Environmental & Energy Law Program (2019) at 11, http://eelp.law.harvard.edu/wp-content/uploads/Oceans-paper-COMPLETE-WEB-VERSION.pdf.

[69] *Id.*

[70] *Id.*; Fact Sheet, The White House (June 19, 2018).

[71] Northeast Ocean Planning, https://neoceanplanning.org/about/ (last visited Jul. 13, 2020)

(The Ocean Planning Committee (OPC) had first been constituted in 2005 when the Governors of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut joined to form the Northeast Regional Ocean Council. After the issuance of the Obama Administration's E.O. creating the Regional Planning Bodies, the members of the OPC shifted to this new body in support of the administrations' ocean priorities. When Trump's E.O. rescinded the Obama era policy, the OPC was simply reconstituted with the same membership as existed in the RPB).

[72] Northeast Regional Ocean Council - Ocean Planning Committee, *2019-2020 Work Plan*, 1, 1-6 (2019), https://www.northeastoceancouncil.org/wp-content/uploads/2019/06/NROC_OceanPlanningCommittee_WorkPlan_2019-2020.pdf.

[73] Vizcarra & Bloomer, *supra* note 68, at 11.

[74] Hana V. Vizcarra & Laura Bloomer, *Analysis of the Regulation and Deregulation of U.S. Ocean and Fisheries Policies*, Harvard Law School Environmental & Energy Law Program (2019) at 11, http://eelp.law.harvard.edu/wp-content/uploads/Oceans-paper-COMPLETE-WEB-VERSION.pdf; Harvard University Environmental & Energy Law Program Staff, *National Ocean Policy Executive Orde*r (Sept. 20, 2018), https://eelp.law.harvard.edu/2018/09/national-ocean-policy-executive-order/.

[75] Ocean Policy Committee: Ocean Science and Technology Subcommittee, *Workplan to Identify Priority Research and Technology Needs*, (Feb. 2019), https://www.whitehouse.gov/wp-content/uploads/2017/11/20190211-OST-workplan-FINAL.pdf.

[76] *Id.*; Vizcarra & Bloomer, *supra* note 74, at 11.

[77] U.N. Env't Programme and World Meteorological Org., Intergovernmental Panel on Climate Change [IPCC], *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, 2019: (Summary for Policymakers)* 5 (Nerilie Abram et al. eds., 2019), available at: https://www.ipcc.ch/srocc/chapter/summary-for-policymakers/.

[78] U.S. Commission on Ocean Policy, Appendix 6: The Evolution of Ocean Governance Over Three Decades, *An Ocean Blueprint for the 21st Century*, Washington, D.C., (2004) at 90; Pew Oceans Comm'n, *America's Living Oceans: Charting a Course for Sea Change* (2003), http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf.

[79] *See* J.R. King, & G.A. McFarlan, *A framework for incorporating climate regime shifts into the management of marine resources*, 13 Fisheries Mgmt. & Ecology 93, 95 (2006)(stressing the need for a regional perspective on climate change); Josh Eagle, *Regional Ocean Governance: The Perils of Multiple-Use Management and the Promise of Agency Diversity*, 16 Duke Envl Law & Policy F. 143, 156-58 (2006) (discussing the relevant benefits of the Pew Commission's proposal to shift to regional ocean governance).

[80] *See* Northeast Ocean Planning, *Northeast Ocean Plan*, at 69 (2016), *available at* https://neoceanplanning.org/wp-content/uploads/2018/01/Northeast-Ocean-Plan_Full.pdf (describing the various ways in which the Portal will benefit the tribes).

[81] *See* John Duff, *The Voice of Local Authorities in Coastal and Marine Spatial Planning in the Northeast: Insights From the Regional Ocean*

Planning Process, 8 Sea Grant Law and Policy Journal, 2017, at 16 (explaining how regional ocean planning processes are much more responsive by structurally including state and local feedback in developing and revising environmental management plans).

[82] *See generally* National Ocean Council, National Ocean Policy Implementation Plan, at 21-23 (2013), *available at* https://obamawhitehouse.archives.gov/sites/default/files/national_ocean_policy_implementation_plan.pdf (laying out how federal, state, tribal, and local authorities will have their interests and data evaluated together in a streamlined process via RPBs without infringing on their discrete regulatory authority).

[83] *See* Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Envtl. L. Rev. 313 (2012) (noting that, "by its very nature, marine spatial planning imports a static quality into marine management[,]" which it further explains is intentional and beneficial).

[84] *See id.* at 344 (observing that, despite the otherwise static nature of marine spatial planning, dynamic zoning is possible and can be useful).

[85] *See id.* at 344-45 (detailing how TurtleWatch, a dynamic fisheries management tool, allows for a "moving recommended fishing zone, which appears effective in reducing loggerhead sea turtle bycatch"); *see generally* Sara M. Maxwell et al., *Dynamic ocean management: Defining and conceptualizing real-time management of the ocean*, 58 Marine Policy 434243 (2015) (giving an in-depth overview of the possible benefits of utilizing dynamic marine spatial planning).

[86] *See* Craig, *supra* note 83, at 345 (providing an overview of how far turtles migrate across the ocean over the course of a year).

[87] *See id.* (explaining how TurtleWatch uses precisely that data to protect turtles in that manner).

[88] *See* National Ocean Council, National Ocean Policy Implementation Plan, at 2 (2013), *available at* https://obamawhitehouse.archives.gov/sites/default/files/national_ocean_policy_implementation_plan.pdf. (defining the legal limits of the NOP and how it works within those limits).

[89] *See* Jennifer McCann, Sarah Schumann, Grover Fugate, Sue Kennedy, and Chip Young, The Rhode Island Ocean Special Area Management Plan: Managing Ocean Resources Through Coastal and Marine Spatial Planning. University of Rhode Island Coastal Resources Center/Rhode Island Sea Grant College Program, at 4 (2013), *available at* https://seagrant.gso.uri.edu/oceansamp/pdf/Practitioner_Guide.pdf. (acknowledging that, although the SAMP serves many purposes, the primary impetus for its creation was "determin[ing] where offshore renewable energy should be sited").

[90] *See id.* at 28 (observing that enforcement of the SAMP beyond Rhode Island's EEZ requires coordination with the federal government).

[91] *See id.* at 4, 13 (noting that the SAMP took two years to draft and receive state approval prior to its submission to the process of federal review).

[92] *See id.* at 28-29 (explaining how these laws allow Rhode Island to try to apply the SAMP outside of its boundaries through the federal government).

[93] *See* U.S. Department of the Interior, Bureau of Ocean Energy Management, Coastal Zone Management Act, *available at* https://www.boem.gov/environment/environmental-assessment/coastal-zone-management-act (last visited on Nov. 15, 2020) (explaining how the federal consistency requirement of the CZMA works).

[94] *See* National Oceanic and Atmospheric Administration, Office for Coastal Management, Federal Consistency (last visited Nov. 12, 2020), https://coast.noaa.gov/czm/consistency/ (noting that, as a result, the federal consistency provision is "a major incentive for states to join the National Coastal Zone Management Program").

[95] *See* Braxton Davis, *Judicial Interpretations of Federal Consistency under the Coastal Zone Management Act*, 29 Coastal Mgmt. 341, 347-48 4 (2001) (observing that the states are often required to exhaust administrative remedies before seeking judicial review, and that the federal government has challenged state authority in a number of such instances).

[96] *See* National Oceanic and Atmospheric Administration, Listed federal license or permit activities,15 C.F.R. § 930.53 (2020) (establishing the technical requirements for drafting, and the administrative results of providing, such lists and GLDs).

[97] *See* National Oceanic and Atmospheric Administration, Program change decision criteria, 15 C.F.R. § 923.84(d) (detailing what sort of information a state coastal analysis must provide).

[98] *See* Chad J. McGuire, *Coastal Planning, Federal Consistency, and Climate Change: A Recent Divergence of Federal and State Interests*, 27 Nat. Res. & Env't 41, 46 (2012) (discussing the general utility of the state's argument advanced in the referenced case).

[99] *See id. at 46* (laying out the particulars, and the strengths and weaknesses, of such an argument).

[100] *See, e.g.,* Mid-Atlantic Ocean Data Portal, About the Portal (2020), https://portal.midatlanticocean.org/about-us/ (explaining that the portal "consolidates available data and enables state, federal and local users to visualize and analyze ocean resources and human use information") at 2; Northeast Ocean Data Portal, About the Northeast Ocean Data Portal (2020), https://www.northeastoceandata.org/about/ (describing how its data "facilitates decision making by government agencies, businesses, non-government organizations (NGOs), academic entities, and individuals").

[101] *See, e.g.,* Northeast Ocean Planning, Northeast Ocean Plan, at 168-69 (2016), https://neoceanplanning.org/wp-content/uploads/2018/01/Northeast-Ocean-Plan_Full.pdf (noting that there are many gaps in the relevant bodies of knowledge which should or even must be filled).

[102] *See* Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Envtl. L. Rev. 342 (2012) (describing how anticipatory zoning works as an approach).

[103] *See id.* at 343-44 (providing an overview of the implementation of the FMP); NOAA Fisheries, Fishery Management Plan for Fish Resources of the Arctic Management Area, at 4, 9 (2009) [hereinafter "2009 Arctic FMP"], *available at* https://www.fisheries.noaa.gov/management-plan/fish-resources-arctic-management-plan (explaining that the Council developed and implemented the FMP based on the best available information while keeping the effects of climate change in mind).

[104] *Id.,* 2009 Arctic FMP, at 2.

[105] *See id.* at 61 (noting that commercial fishing and climate change will "interact in complex ways to affect the marine ecosystem[,]" which require further study).

[106] *See* Kim S. Alexander, Anthony Ryan, & Thomas G. Measham, *Managed retreat of coastal communities: understanding responses to projected sea level rise,* 55 J. Env't Plan. & Mgmt. 409, 410-12 (discussing the need for coastal communities to take climate change into account in their long-term planning, the ways some of them are doing so, and the costs and benefits of such planning).

[107] *See* Craig, *supra* note 102, at 344 (explaining how anticipatory zoning in regard to climate change would benefit wind farms).

[108] *See* Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Envtl. L. Rev. 328-29 (2012) (discussing the importance of "place-based approaches" to marine ecosystem management).

[109] *See* Jean-Pierre Gattuso et al., *Ocean Solutions to Address Climate Change and Its Effects on Marine Ecosystems*, 5 Frontiers in Marine Sci., 1, 2 (2018).

[110] Craig, *supra* note 108, at 310, 324, 329.

[111] Herman S. J. Cesar and Pieter J. H. van Beukering, *Economic Valuation of the Coral Reefs of Hawai'i*, 58 Pac. Sci. 2:231, 235; Craig, *supra* note 108, at 328. (*See* Robert W. Buddemeier et al., *Pew Ctr. On Glob. Climate Change to Stresses on Coral Reef Ecosystems iii* (2004).

[112] Exec. Order No. 13158, 65 C.F.R. 34909 (May 26, 2000)(calling for a national system of MPAs); *See* World Wildlife Fund, *Coral Triangle: What WWF is Doing*, https://www.worldwildlife.org/places/coral-triangle (last visited July 26, 2020); Craig, *supra* note 108, at 329.

[113] Nat'l Marine Protected Areas, Ctr., *Framework for the Nat'l of Sys. Marine Protected Areas Of the United States of America* (Mar. 2015) https://nmsmarineprotectedareas.blob.core.windows.net/marineprotectedareas-prod/media/archive/nationalsystem/framework/final-mpa-framework-0315.pdf.

[114] *Id.* at 12.

[115] *Id.* at 7, 22-23, 28.

[116] Robin Kundis Craig, *Ocean Governance for the 21st Century: Making Marine Zoning Climate Change Adaptable*, 36 Harv. Envtl. L. Rev. 329, 339-40 (2012).

[117] John Duff, *The Voice of Local Authorities in Coastal and Marine Spatial Planning in the Northeast: Insights From the Regional Ocean Planning Process*, 8 Sea Grant Law and Policy Journal, 2017, at 17.

[118] Emily A. Smith et al., *Treading Water: Tools to Help US Coastal Communities Plan for Sea Level Rise Implications*, 6 Frontiers in Marine Sci. 1, 2 (2019) (see discussion of direct impacts of climate change on local coastal communities and the need for solutions to be responsive to unique coastal communities' needs).

[119] Nat'l Ocean Council, *Ne. Ocean Plan* (2016) at 99; *Mid*-Atl. Reg'l Plan. Body, *Mid-Atl. Reg'l Ocean Action Plan* (2016) at 70.
[120] Nat'l Ocean Council, *Ne. Ocean Plan* (2016) at 11, 25, 90, 99; *Mid*-Atl. Reg'l Plan. Body, *Mid-Atl. Reg'l Ocean Action Plan* (2016) at 12, 60.
[121] Smith, *supra* note 118, at 2, Duff, *supra* note 117, at 16-17.
[122] Smith, *supra* note 118, at 2.
[123] John Duff, *The Voice of Local Authorities in Coastal and Marine Spatial Planning in the Northeast: Insights From the Regional Ocean Planning Process*, 8 Sea Grant Law and Policy Journal, 2017, at 16-17.

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[7] Protocol Relating to the Status of Refugees, art. 1(2), Jan. 31, 1967, 606 U.N.T.S. 267.
[8] See Convention on Refugees, supra note 4, art. 1(A)(2).
[9] Daniel Bodansky et al., International Climate Change Law 314–15 (2017) (stating that "internal displacement is likely to far outstrip cross-border displacement").
[10] Clarifying those requirements, see: Council Directive 2004/83/EC of Apr. 29, 2004, art. 9(2)(b), 2004 O.J. (L 304/12).
[11] McAdam, *supra* note 5, at 43.
[12] *Id.*
[13] *Id.* at 44.
[14] *Id.*
[15] *See* U.N. Framework Convention on Climate Change. Dec. 2/CP.15, Copenhagen Accord, U.N. Doc. FCCC/CP/2009/11/Add.1, at 6, para. 3 (Mar. 30, 2010) (recognizing the different capabilities of States in adapting and preventing the deleterious effects of climate change and calling on developed nations to provide for financial resources, technology and capacity-building to support and assist developing nations).
[16] Bodansky et al., *supra* note 8, at 314–15.
[17] I Gede Eka Sarjana, *Climate Change and Human Migration: Towards More Humane Interpretation of Refugee*, 2 Udayana Journal Law & Culture 220, 231–32 (2018) (arguing that because the current persecution standard is viewed in context of the actors that perpetuate the action and the "indiscriminate" nature of climate change, the standard is ill-equipped to address the concerns of climate refugees, and that the standard should be read more broadly to account for the real impacts on particularly vulnerable groups).
[18] McAdam, *supra* note 5, at 45.
[19] The Nansen Initiative, 1 Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disaster and Climate Change 14–15 (2015) (describing climate change as just one factor in the "multi-causal" analysis of human movement).
[20] Frank Biermann & Ingrid Boas, *Climate Change and Human Migration: Towards a Global Governance System to Protect Climate Refugees*, *in* 8 Hexagon Series on Human and Environmental Security and Peace, Climate Change, Human Security and Violent Conflict, Challenges for Societal Stability, 292–93 (Jürgen Scheffran et al. eds., 2012).
[21] Paul J. Smith, *Climate Change, Mass Migration and the Military Response*, 51 Orbis: A Journal of World Affairs 557, 617 (2007).
[22] Walter Kälin & Nina Schrepfer, *Protecting People Crossing Borders in the Context of Climate Change Normative Gaps and Possible Approaches*, UNHCR Legal and Protection Policy Research Series (2012) at 54.
[23] Jane McAdam, *supra* note 5, at 43.
[24] Bodansky, *supra* note 9, at 314.
[25] Memorandum from U.N. High Commissioner for Refugees to UNHCR Field Offices, (July 22,1998) (PR00/98/109).
[26] GRID Global Report on Internal Displacement 2, (IDMC Internal Displacement Monitoring Centre and the Norwegian Refugee Council) (2018).
[27] *See The Inter-Agency Standing Committee*, ISAC, (last accessed Nov. 15, 2020) https://interagencystandingcommittee.org/the-inter-agency-standing-committee.
[28] UNISDR Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters 1 (From the final report of the World Conference on Disaster Reduction (A/CONF.206/6) (2005).
[29] Third UN World Conference on Disaster Risk Reduction, *Sendai Framework for Disaster Risk Reduction 2015-2030*, UN, foreword (Mar. 18, 2020) https://www.undrr.org/implementing-sendai-framework/what-sendai-framework.
[30] Bodansky, *supra* note 9, at 320-21.
[31] G.A. Res. 48/189, at 1 (Jan 20, 1994).
[32] U.N. Framework Convention on Climate Change art. 4, (May 9, 1992).
[33] U.N. Framework Convention on Climate Change, COP 13 Decision, FCCC/CP/2007/6/Add.114 (March 2008) (establishing the Bali Road Map, including the Bali Plan of Action (Decision 1/CP.13) which urges countries to urgently mitigate and to "support urgent adaptation for the poorer countries," available at https://unfccc.int/process/conferences/the-big-picture/milestones/bali-road-map).
[34] U.N. Framework Convention on Climate Change, COP 16 Decision, FCCC/CP/2010/7/Add.1 (March 2011).
[35] U.N. Framework Convention on Climate Change, The Warsaw International Mechanism, FCCC/CP/2015/L.9 (Dec. 2015).
[36] U.N. Framework Convention on Climate Change, Paris Agreement, FCCC/CP/2015/L.9 (Dec. 2015).
[37] Bodansky, *supra* note 9, at 11.
[38] *See Submissions: INDCs as Communicated by Parties*, UN Climate Change, (last accessed Nov. 22, 2020) https://www4.unfccc.int/sites/submissions/indc/Submission%20Pages/submissions.aspx (Showing in 2016, the Brazilian Environmental Ministry initiated the studies for the National Plan on Adaptation).
[39] U.N. Environment, Global Environment Outlook GEO-6: Summary for Policymakers, at 6-16 (2019).

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