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2017 Resilient Cities Summit Report: Finance and Implementation Strategies

National League of Cities, Urban Land Institute, U.S. Green Building Council

Introduction

In summer 2017, a group of mayors, senior city officials, and nationally recognized resilience experts from the public and private sectors gathered in Stowe, Vermont, for the Resilient Cities Summit, hosted by the National League of Cities (NLC), the Urban Land Institute (ULI), and the U.S. Green Building Council (USGBC). The group of 60 participants from across the United States explored how cities can be more prepared for climate risk and achieve a more resilient future.

While the impacts of climate change that cities face back home vary from sea-level rise and heat islands to droughts and flooding, it was striking how much city leaders found they had in common in the challenges to strengthen community resilience. Key themes that defined the conversation included the following:

- Local leaders must be willing to reimagine their city.
- A resilient city requires innovative funding sources.
- Building resilience entails enhancing equity.
- Collaboration is key.

Key Themes

Local Leaders Must Be Able to Reimagine Their City

At its core, a resilient city is one that is thriving and evolving rather than simply surviving. Resilient cities are adaptive, competitive, and equitable, and this requires local leaders to position their city to respond to changes. Resilient city leaders should have an outlook for infrastructure and land use that incorporates the next 20, 30, or even 50 years as opposed to a time frame that extends only through

What is Resilience?

According to the American Planning Association (APA), the American Institute of Architects (AIA), the Urban Land Institute (ULI), and a number of other organizations that focus on the built environment, the definition of resilience is “the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.”

As severe weather events become more frequent and intense due to climate change, disruptions and stressors become a common concern among city officials and residents alike. Addressing these issues requires projects, programs, and infrastructure investments that offer multiple economic, environmental, and social co-benefits. The ability of a city to “bounce back” ultimately benefits everyone, providing evidence that bringing this concept to fruition is key to solving problems now and preventing hardship in the future.

the duration of their term. This often requires cities to do something they have never done before, whether it is changing how they finance redevelopment projects or how they use data to inform decision making.

The status quo might be comfortable, and governments are rightfully risk-averse, but elected leaders also have a responsibility to reach for the future. In today’s world, contexts are constantly in

flux, whether they are based on economic, social, climatic, or other factors. The city that thinks about tomorrow's risks and vulnerabilities and acts on that future in a collaborative, equitable fashion will ultimately be more resilient.

Interdisciplinary thinking and an embrace of innovation and technology are critical for enhancing urban resilience. Local leaders, including elected officials, should identify opportunities to encourage outside-the-box thinking that will strengthen their city and reduce its vulnerabilities.

In 2014, the U.S. Department of Housing and Urban Development (HUD), in collaboration with the Rockefeller Foundation, launched one example of such a program: the National Disaster Resilience Competition (NDRC). The NDRC was an ambitious national competition that awarded almost \$1 billion for disaster recovery and long-term resilience projects. Harriet Tregoning, previous principal deputy assistant secretary for HUD's Office of Community Planning and Development and a keynote speaker at the 2017 Resilient Cities Summit, described the NDRC as an opportunity to "learn together about how to encourage a broader range of benefits from every federal dollar that gets expended." All states and local governments with presidentially declared major disasters within the previous three years were eligible to participate in the competition.

The competition sought to encourage participants to establish opportunities for investments in resilience that would bring their local communities additional social, environmental, and economic benefits, and which would be delivered through partnerships. The opportunity to obtain significant funding for these proposals served as a catalyst to ignite this thinking and spur projects across the United States. Finalists developed proposals including stormwater and water quality projects, low-income housing renovation and relocation, energy resilience, watershed restoration, and other resilient infrastructure activities. Ultimately, the NDRC awarded funding to 13 states and communities.

Shelby County, Tennessee, whose county seat is Memphis, was one funding recipient, receiving over \$60 million. The county had experienced three events resulting in three presidentially declared disasters and the designation as a most affected and distressed area by HUD in May 2014. With the NDRC's award money, Shelby County is modeling drainage basins to influence the development of future green space and wetlands to reduce flooding

Renewable Natural Resources Foundation

The Renewable Natural Resources Foundation (RNRF) is a nonprofit, public policy research organization. Its mission is to advance the application of science, engineering and design in decision-making, promote interdisciplinary collaboration, and educate policymakers and the public on managing and conserving renewable natural resources. Member organizations are:

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in areas with the most vulnerable populations. Other plans for Shelby County include master planning, wetland restoration, and new housing development, among other initiatives that would not be possible without the NDRC. For more information, visit resilientshelby.com.

A Resilient City Requires Innovative Funding Sources

Cities must be able to find the funds necessary to implement the solutions critical to their resilience challenges. Participants pointed out that federal funding for community development and infrastructure has declined for decades, so cities need to build off of available programs, work with the private sector, get creative, and leverage every dollar, including allocations in existing capital improvement plans.

In addition, resilience should not be thought of as competing with other budget priorities. Cities already have comprehensive plans, zoning codes, capital improvement plans, and more. Refreshing these documents and strategies to reflect a consistent vision, mitigate risks, and be more forward-looking is crucial.

A central idea is to approach reinvestment from a perspective that seeks maximal co-benefits in order to solve multiple problems at once. One participant asked whether cities are asking their engineers and planners to think big enough. For instance, a needed flood barrier could be designed to also serve as a park that adds community space and boosts real estate value while, in parallel, offering drainage solutions for the surrounding neighborhoods.

Elected officials and city staff should also be aware of the growing market for green funding, such as the growing green bond market.

In addition to exploring emerging financial tools and forms of financing, summit participants discussed how to better engage with the private sector and envision resilient urban outcomes. For example, the [Global Real Estate Sustainability Benchmark](#) (GRESB) Resilience Module helps real estate, infrastructure companies, and funds better understand resilience risks and make informed investment and management decisions, considering resilience risks and capacity to manage those risks.

Stormwater management regulations in Washington, D.C.—which require new real estate projects to incorporate green infrastructure or use market-based solutions to mitigate off-site impacts—offer examples of how the public and private sectors can jointly contribute to the implementation of resilient infrastructure. More

Building Resilience Through Voluntary Standards

Voluntary standards offer another approach that can guide, measure, and validate resilience actions at multiple scales. Many U.S. cities—such as summit participants Tempe, Arizona, and Syracuse, New York—have long referenced the Leadership in Energy and Environmental Design (LEED) certification as a means for ensuring that the city's sustainability goals are being met in public and private construction. Newer versions of LEED raise the bar for sustainability expectations, and go farther to promote, reward, and sometimes require resilient building strategies such as energy efficiency, on-site water reuse, and building design for passive survivability (or buildings that facilitate sheltering in place even in the presence of infrastructure failures).

The city of Hoboken, New Jersey, participated in the 2016 Resilient Cities Summit in order to further explore best practices for boosting resilience in the wake of Hurricane Sandy. At the summit, city officials learned about voluntary standards that could keep their projects on track and help communicate their leadership in resilient infrastructure once complete. As a result, the city is now pursuing Performance Excellence in Electricity Renewal (PEER) certification (a LEED-like program for resilient power systems) for its downtown microgrid and Sustainable SITES Initiative (SITES) certification (a LEED-like system for sustainable landscapes) for its new “resilience park” that consists of active seawalls, berms, and levees that are designed to function as a public park. Learn more about voluntary resilience standards at mc-group.com.

examples of private sector involvement and leadership in stormwater management, including policies and real estate projects, are available in ULI's recent report, [Harvesting the Value of Water](#).

Building Resilience Entails Enhancing Equity

Equity is another key to building urban resilience. Throughout the world, low-income, elderly, and minority communities are more severely affected by extreme weather events, environmental degradation, economic insecurity, and climate change than other communities. Low-income communities are often located in parts of cities that are most vulnerable to extreme weather, and households can lack resources to bounce back from devastating events. Residents also often lack resources to be sufficiently prepared for an extreme event or to evacuate when necessary.

Cycles of inaction must be broken. Climate change resilience without inclusiveness results in the abandonment of a city's most vulnerable residents. When planning for climate risks such as extreme heat, successful programs engage the potentially affected communities for stability.

Cities must ensure that investments in resilience are transparent and that benefits accrue to all members of the community. Gathering reliable data is an important aspect in this regard. For example, in New York City, data and GIS mapping are used to inform city staff about which areas are most at risk to the urban heat island effect by showing which neighborhoods suffer from the highest incidence of heat-related deaths. This information is used to inform tree planting and cool roof initiatives.

Green Bonds

Green bonds are an emerging form of project financing that designates proceeds for a broad range of categories, including renewable energy, energy efficiency, low-carbon transport, sustainable water, and waste and pollution. At the 2017 Resilient Cities Summit, Tim Olson, director of municipal trading at Wells Fargo, explained that green bonds differ from conventional bonds because they specifically provide financing for projects with environmental and public health benefits.

Resilience bonds, modeled after [catastrophe bonds](#) or "cat bonds," also are currently being developed. Resilience bonds would seek to monetize reduced or avoided losses, linking municipal insurance coverage with investments in resilient infrastructure anticipated to reduce losses after peak events.

Green bonds are becoming increasingly common, especially in the U.S. municipal bond market, and the market is expected to continue to grow as investor demand increases. The first green bond was issued in the United States in 2013; since then, \$269 billion in green bonds has been issued, with most of these funds used for water, transportation, and energy projects.

Participants in the market also have varying motivations. For municipal issuers, the market operates somewhat apart from traditional municipal bonds, and high demand can help the bond sell faster. In some cases, cities with lower bond ratings have seen reduced interest rates as well. For investors, green bonds can be a way to ensure that funds are being directed to projects that meet higher standards for social or environmental responsibility. The additional reporting requirements associated with green bonds can also provide more information and due diligence that have the effect of reducing risk.

New resources such as the recently issued [Green Bond Guidelines for the Real Estate Sector](#)—which will help real estate projects such as green buildings attract and invest capital by slashing energy and environmental impacts—can help this market expand.

Summit participants also highlighted the importance of directly engaging community constituents, including vulnerable and low-income communities, in the planning process. Though often unintended, an open call for participation may not yield a balanced set of community interests. Rather than engagement by proxy, groups that are expected to be significantly at risk should be especially sought out and directly engaged. Cities that hold many different styles of meetings and prioritize the early involvement of residents are better equipped during decision-making processes, which therefore lays the groundwork for implementation.

Lastly, engagement requires action and follow-through to maintain trust, especially in communities that are already overburdened by economic and social forces. Soliciting input and establishing a shared vision for the future is one thing—but in cities throughout the country, these communities have seen plans, promises, and administrations come and go. Implementation of inclusive and comprehensive plans is of paramount importance.

Collaboration is Key

While mayors and other city officials play a critical role in leading their communities to a more resilient future, they cannot accomplish these goals alone. City staff should work across departments to ensure that staff

Curbing Effects of Extreme Heat in NYC

Extreme heat is perhaps the deadliest risk of climate change, with tremendous public health implications and the potential for increased incidence of dehydration, heat stroke, heat exhaustion, and death. Vulnerable populations, including the elderly, children, and low-income households unable to afford air conditioning, are the most at risk of extreme heat.

In New York City, the [Cool Neighborhoods NYC](#) initiative, presented at the 2017 Resilient Cities Summit by the deputy director of the New York City Mayor's Office of Recovery and Resiliency, Kizzy Charles-Guzmán, is designed to protect against the worst effects of extreme heat due to climate change, with a focus on serving those most at risk. Heat reduction efforts include planting trees, painting roofs with reflective paint, and outreach to underserved communities throughout New York City. Key to the program's work is ensuring that all New Yorkers benefit from investments in urban heat island mitigation.

The Cool Neighborhoods NYC initiative includes numerous strategic partnerships and outreach to public, private, nonprofit, affordable housing, and social service partners. The goal of this outreach is to increase general awareness of the risks of extreme heat, as well as services and opportunities for relief from extreme heat. Outreach components of the program, seeking to engage communities at risk, have included the following:

- Launching Be a Buddy NYC: A two-year, collaborative model to promote community cohesion, Be a Buddy NYC will work with community-based organizations to develop and test strategies for protecting against the health impacts of extreme heat.
- Partnering with home health aides: New York City will work with three home-care agencies to promote heat- and climate-based health information and will work to engage home health aides as key leaders in building climate resilience.
- Partnering with news reporters: The city will host a workshop and conduct outreach to health and medical reporters and meteorologists to improve the way that New Yorkers receive crucial information about heat and the protective actions to combat heat-related illness.

members at all levels are collaborating, using a common vocabulary, and building awareness of what resilience is and how it affects everything from public works to economic development. Working across agencies also allows city staff to better understand city needs and establish opportunities for co-benefits relevant to resilient infrastructure.

The private sector also has a key role to play. Banks, utilities, insurers, business leaders, and community groups should both increase leverage of and access to funding and be part of the planning process for building resilience. Understanding the private sector perspective is critical for cities to create a favorable business environment for private sector contributions toward and partnership in investment in resilient infrastructure. Moreover, building a business case for investing in resilience will enable cities to more effectively work with the private sector. For example, introducing incentives such as density bonuses or permit expediting for resilient design practices can help improve the business case for resilience for the real estate sector.

Regional collaboration is key as well, given that climate vulnerabilities do not adhere to municipal boundaries. A notable example of a regional approach to building resilience discussed during the summit is the Southeast Florida Regional Climate Change Compact, which coordinates mitigation and adaptation strategies across political boundaries. Since its initiation in 2009, the compact has grown to include federal, state, regional, municipal, academic, and private sector partners to foster a coordinated climate resilience effort, guided by a [Regional Climate Action Plan](#) (RCAP). The RCAP identifies vulnerabilities, prioritizes actions, and shares best practices for a clear path toward resilience in the region. Summit participants also discussed opportunities for forming other types of regional collaboratives tackling common issues such as sea-level rise.

Private Sector Leadership: Over-the-Rhine

Summit participants from the private sector underscored that there is untapped opportunity to partner with business to achieve resilience goals. Nearly every country has signed the Paris climate accord, but climate challenges cannot be solved by governments alone. Many American businesses are up to the challenge and are eager to act if the priorities can clearly be set in requests for proposals and if they are invited to the table to explore how business can help.

Private and nonprofit partners can also work together to revitalize a city and provide new pathways to long-term funding. Tom Murphy, keynote speaker of the event and former mayor of Pittsburgh, shared an example from Cincinnati, Ohio: “The business community came forward and built a nonprofit for the redevelopment of the city.”

The nonprofit Cincinnati Center City Development Corporation (3CDC) has led a dramatic transformation in Over-the-Rhine, a downtown-adjacent neighborhood previously plagued by crime. The organization’s four strategic goals include “to create great civic spaces; create high-density, mixed-use development; preserve historic structures and streetscapes; and build diverse, mixed-income neighborhoods supported by local businesses.”

To accomplish these goals, the business community raised \$50 million and created 3CDC to respond to deteriorating conditions in this neighborhood. In turn, 3CDC brought together the city’s major employers and public officials to leverage the \$50 million into more than \$1 billion in the last seven years through an array of creative financing techniques and partnerships. Next, 3CDC used this investment to buy and rescue 131 historic buildings and constructed 48 new buildings, while maintaining subsidized housing, rehabilitating parks, and developing vacant lots. Today, the neighborhood is a vibrant area, with Fountain Square as its centerpiece offering frequent family-friendly and free programming. This transformation is an inspiring example of the impact that public/private partnerships led by the private sector can have in cities.

Conclusion

Although no public official runs for office on a platform of “community resilience,” the underlying issues of public safety, infrastructure maintenance, land use, economic opportunity, and reducing vulnerability are central to any administration. To enhance resilience, local leaders must see the relationships between these issues and identify opportunities to achieve multiple benefits with their capital investments, forge partnerships, and have a clear, positive vision about what kind of community they want these investments to create.

This report is adapted from 2017 Resilient Cities Summit: Finance and Implementation Strategies. The full report of the summit, along with a list of the summit's participants, can be accessed here: https://americas.uli.org/wp-content/uploads/sites/125/ULI-Documents/ResilientCities_2017Final.pdf

The False Promise of Certification: Fisheries Case Study

Changing Markets Foundation

1. Introduction

Faced with the gravity of today's environmental and social problems, consumers are increasingly seeking out sustainable products that minimize negative impacts on people and the planet. In 2015, a survey of 30,000 consumers in 60 countries found that 66% of consumers are willing to pay more for products or services from companies committed to positive social and environmental impact (Nielsen, 2015). In the U.K. alone, the market for ethical products grew to more than £81.3 billion in 2017, with demand for sustainable fish growing by nearly 37% in 2016 (Ethical Consumer, 2017). Studies also show that many shoppers rely on labels and certifications as a quick and easy way to identify more responsibly made products without having to become supply chain experts (e.g. Nielsen, 2014).

As sustainability goes mainstream, more and more companies are keen to show off their credentials by adopting different types of certification, labels and ethical commitments. The number of different schemes and voluntary initiatives has grown exponentially in recent years. The Ecolabel Index, the largest global directory of ecolabels, currently lists over 460 labels in 25 different sectors (Ecolabel Index, 2018). Most of these have emerged in the past two decades. But are they any good? This report shows that, rather than being an accelerator for positive change, this "flood" of certification creates confusion for consumers and the industry and is standing in the way of genuinely sustainable consumption.

We investigated voluntary initiatives in three sectors where growing consumption and unsustainable sourcing have caused serious environmental problems: palm oil, fisheries and textiles. This excerpt features the fisheries case study.

Industrial fishing has devastated the planet's oceans; nearly 90% of global fish stocks are either fully fished

or overfished (FAO, 2016a). It is also a hugely wasteful industry. Nearly 10 million tonnes of good fish are thrown back into the ocean every year, while damaging fishing methods have wreaked havoc on ecosystems: gill nets commonly kill dolphins, porpoises and whales, longline fishing is a particular problem for birds and discarded fishing gear continues to kill sea life for many decades in what is called "ghost fishing." The fishing industry is also rife with violations of human and workers' rights.

In the absence of effective national and international legislation to tackle these problems, and with increasingly globalized supply chains, voluntary schemes are seen as a convenient way to fill the gap. In this report, we analyze the context in which such voluntary initiatives emerge, what their role is and how they set out to address some of the challenges identified. We investigate an array of voluntary initiatives that provide a company, product or service with a sustainability endorsement, ranging from product labels to industry-wide initiatives aiming to improve the environmental performance of a sector as a whole. We review key schemes in the industry, evaluating how they work, their achievements and their failures. Our focus is mostly environmental issues, although in some cases we also look at reports on human rights violations.

This report comes at a time when many of these schemes are under pressure to reform from NGOs and scientists – and, in some cases, even progressive companies. But despite the fact that the tide is turning, there is still a massive push for certification – and not always for the right reasons. This report demonstrates that many of these schemes are being used as a cover, which makes it more difficult for NGOs and academics to question the sustainability of some products and companies.

2. The Problem

Industrial fishing has been identified as one of the world's most pressing environmental issues; it causes systemic ecological collapse across the world's oceans and waterways (Monbiot, 2017). While environmental changes are affecting ocean temperatures, nutrient availability and currents, industrial fishing is simultaneously and drastically reducing global fish stocks. Damage also results from industrial pollution, coastal development for urbanization and aquaculture. Despite the introduction of a range of national and international actions aiming to preserving marine resources, most current large-scale fishing practices remain destructive.

The pressure on the oceans is fueled by growing demand for fish, as a result of larger populations and rising incomes in China, Mexico, South Korea and other countries. About 87% of the fish produced globally is consumed by people as food (FAO, 2016a, p.6). Global human consumption of seafood has doubled from 1980 to the present; wild-capture fisheries produced 93.4 million tonnes in 2014, and aquaculture production rose to 73.8 million tonnes (FAO, 2016a, pp.4–5). If China has its way, the pressure will grow; as the world's largest consumer, producer and exporter of seafood, China has proposed new goals to increase seafood consumption by 50% over the next six years (MoA of China, 2014).

Based on current trends, total demand is projected to grow to 186 million tonnes by 2030, with aquaculture providing close to two-thirds of that, according to collaborative research by the World Bank, the Food and Agriculture Organization of the UN (FAO) and the International Food Policy Research Institute (World Bank, 2013, p.xv). By 2030, China is expected to account for 38% of global fish consumption and Asia overall for 70% (World Bank, 2013, p.46).

While human population growth is expected to have the greatest effect on availability of fish per capita, climate change and bad fishing practices are projected to reduce fish availability and harm other marine species (Merino et al., 2012, Bell et al., 2013).

Destructive fishing practices are responsible for much of the fish species depletion and degradation of ocean habitats. Wild-capture fisheries reduce the abundance, spawning potential and maturation of species; they modify the age, size structure, sex ratio and genetics of not only their target species but also other species in the ecosystem (Garcia et al., 2003, p.10). In addition to bad fishing practices, damage to ocean health is caused by pollution from fish-processing plants, use of ozone-depleting refrigerants, dumping at sea of plastic debris that can entangle marine animals or be swallowed by turtles and loss of fishing gear (Garcia et al., 2003, p.10).

The state of the world's fish stocks continues to deteriorate; in its latest report, using 2014 data, the FAO (2016a, p.6) stated that 58% of fish stocks are fully exploited. This means they are producing or close to producing their maximum sustainable limits, with little or no potential for catch increases. A further one-third of fish stocks are close to being overfished. In other words, nearly 90% of global fish stocks are either fully fished or overfished (FAO, 2016a, pp.5–6).

In the Mediterranean and the Black Sea, catches have dropped by one-third since 2007 (FAO, 2016a, p.16). Illegal, unregulated and unreported fishing accounts for up to 26 million tonnes of fish per year, or more than 15% of the world's total annual capture fisheries output (FAO, 2016a, p.iii). In West Africa alone, about 37% of all fish caught are caught illegally (EJF, 2017). In an article entitled "Trawling for Trouble," The Economist (2016) exposed the growing pattern of illegal fishing infractions among Chinese fishers, who have also been detained for illegal fishing in Japan; the Philippines; Taiwan; Vietnam; Russia, North Korea and Sri Lanka.

Aside from catching too many fish, industrial fishing results in bycatch (fish and other marine organisms that are caught incidentally) and discards fish and other marine life that are caught and thrown overboard. Not all bycatch is discarded and some discards are not bycatch; for example, sometimes fishers will discard low-value

fish to take on board more valuable fish. Tropical shrimp trawl fisheries have the highest discard rate; they throw away up to 90% of the catch, and account for over 27% of total estimated discards (Kelleher, 2005). The scale of the problem is difficult to measure, as fishing fleets often do not report what they do not land. Different types of fishing practices result in different species being killed as bycatch: gill nets commonly kill dolphins, porpoises and whales; longline fishing is a particular problem for birds, which dive on the baited hooks, are pulled underwater and drowned; and bottom trawling devastates corals and sponges growing on the seabed (Garcia, 2003; Greenpeace, 2016a, Greenpeace, 2016b).

New research has shown that industrial fishing fleets dump nearly 10 million tonnes of good fish back into the ocean every year. Almost 10% of the world's total catch in the last decade was discarded due to poor fishing practices and inadequate management – equivalent to throwing back enough fish to fill 4,500 Olympic sized swimming pools, every year (Zeller et al., 2017).

The consequences of bycatch are often far-reaching, as species become functionally extinct in many areas. For example, leatherback turtles are major predators of jellyfish, capable of consuming more than 600 jellyfish in a single day (Heaslip et al., 2012). When turtles are gone, jellyfish populations boom in some areas, making the waters dangerous for swimmers and thus harming tourism – a vital source of revenue for some countries. Green sea turtles and manatees are herbivores, which graze in seagrass beds and keep the grass at a healthy level; without them, many seagrass ecosystems have suffered large die-offs, unable to sustain a wide range of marine life.

The growing aquaculture sector exacerbates the pressure on overfished stocks because of its appetite for forage fish. About two-thirds of farmed fish production requires feed (FAO, 2014). Although there are herbivorous species of fish that consume feed from crops, other species – such as salmon, cod and trout – are carnivorous and have to be fed fish or animal protein. Using forage fish and low-value fish to feed the aquaculture industry raises concern of overfishing, disruption to aquatic food webs, food insecurity and a potential net loss of seafood available for human consumption (Cao et al., 2015).

2.2. Certification Schemes

NGOs have been the front-runners in developing labelling schemes in the fisheries sector. Of the more than 50 voluntary seafood standards currently in operation (Potts et al., 2016), the Marine Stewardship Council (MSC) is the most prominent market-based seafood certification scheme globally; the only scheme that certifies a similar volume of wild-catch fish is Friend of the Sea (FOS).

Wild catch provides only half of the fish consumed globally (FAO, 2016a). In the future, aquaculture and its certification will play an even more crucial role in the supply of certified seafood. The challenges of the two supply chains are so different that they require mostly separate standards and certification schemes. The focus of this case study is on wild capture.

Even though FOS and MSC certify nearly equal portions of production, FOS has grown five times as fast as MSC over the last few years and, by 2015, the total production volumes of the two initiatives converged at just over 9 million metric tonnes. Other schemes cover fairly insignificant volumes by comparison (Potts et al., 2016).

The amount of certified seafood has multiplied many times over in recent years. In 2015, 14% of global seafood production was certified by any of the larger schemes (MSC; FOS; ASC; GlobalG.A.P., ChinaG.A.P. and GAA BAP) – up from only 0.5% nearly a decade earlier. Certified-sustainable wild catch accounts for 20% of global wild-catch supply and has been growing ten times faster than conventional seafood production (Potts et al., 2016). The problem is that “sustainable catch” labels often don't mean as much as consumers think they do.

2.2.1. Marine Stewardship Council (MSC)

The MSC was established through a collaboration between WWF and Unilever. It has developed two sets of standards:

- The MSC Fisheries Standard: Assesses fisheries activities up to the point at which the fish are landed.
- The MSC Chain of Custody Standard: Ensures the fish can be traced from point of landing to sale and allows the use of the blue MSC label on packaging at fish counters and on restaurant menus.

The MSC Fisheries Standard is designed to assess if a wild-capture freshwater or marine fishery is well-managed and sustainable. The certification can relate to a whole fishery or a small part of it – even down to an individual fishing vessel. To ensure only seafood originating from MSC-certified fisheries carry the MSC label, all companies in the supply chain must be certified according to the MSC Chain of Custody Standard. MSC's annual budget from 2016–2017 was over £24 million; while a proportion of its income comes from foundation grants, most of it comes from the licensing fees it charges businesses for the right to use its label (MSC, 2017a). Indeed, these licensing fees have become an increasingly large share of the MSC budget; logo licensing currently constitutes 76% of its annual income – up from 7% in 2006 (Christian et al., 2013; MSC, 2017a). MSC has also received millions of dollars in grant money from the Walton Family Foundation, which Wal-Mart's founder created and his descendants govern; the Foundation has become one of the MSC's largest donors (Zwerdling and Williams, 2013).

2.2.2. Friend of the Sea (FOS)

FOS was founded by the Earth Island Institute, which has been managing the Dolphin-Safe project for the elimination of dolphin bycatch in tuna fishing. FOS now is one of the most diversified seafood labelling initiatives, certifying both aquaculture and wild-catch fisheries. Like MSC, FOS also certifies particular fisheries – but, because of lower certification costs, FOS wild-catch certification has certified many species destined for fish meal or fish feed. Of FOS-certified companies, 22% are in the fish oil and fishfeed markets (Potts et al., 2016). FOS has also grown a supply base in the Global South; more than half of certified products originate from artisanal fisheries and aquaculture producers in developing countries (FOS, 2016; Potts et al., 2016).

Nearly one-quarter of the global catch of tuna is certified as sustainable through FOS, making it the largest certifier of tuna in the world (FOS, 2016). Tuna companies are required to be Dolphin-Safe-approved to gain FOS certification. The FOS Chain of Custody Standard is designed to ensure that certified seafood can be traced back to a sustainable and well-managed source. DNA tests are carried out on a sample basis on certified products to monitor traceability (FOS, 2016). FOS is entirely funded by royalties from the use of the “Friend of the Sea” logo and sporadic sponsorships strictly related to single marketing events (FOS, n.d.). Its revenues are a small fraction of that of MSC, which has 25 times its annual income (FOS, 2016; MSC, 2017a).

2.2.3. Main Criticisms of FOS and MSC Certification Procedures

Both the MSC and FOS certification standards cover prohibiting destructive fishing standards, managing bycatch, environmental risk and impact assessment and managing stock regulation. Neither addresses GHG emissions or protecting high-value conservation areas (Potts et al., 2016).

Both schemes depend on auditors from accredited third-party certification bodies (also called Conformity Assessment Bodies), which monitor the fishery operations. Producers pay a fee to these third-party certification bodies to be assessed against the standards and, if certified, to use the sustainability label. Crucially, these third-party certification bodies are selected, appointed and paid for by the fishery or the business.

Auditors often fail to identify and mitigate unsustainable practices, and the regulatory regimes of all certifying schemes are ill-equipped to screen the operations they oversee. One analysis (Christian et al., 2013) found that MSC allows third-party certifiers too much leeway in deciding whether a fishery operation has met the mark. A random sample of about twenty FOS assessment reports showed that reporting was poor and inconsistent, using simplified checklists with minimal information to back up the assessment (Greenpeace, 2009). Recent anecdotal evidence suggests that MSC auditing might take place without the auditors inspecting the vessels or gear or meeting the fishermen (Kochen, 2017).

Both MSC and FOS provide access to independent dispute-resolution processes. In theory, these procedures should enable NGOs and others to object to certifications for possibly problematic fishing operations, but these procedures are deeply faulty. For FOS, no information could be found about how many objections have been raised so far, by which organizations and whether any succeeded in halting certification. Objections to pending MSC certifications are cumbersome to file and appear to have a very low chance of success (Christian et al., 2013; Brown et al., 2016).

MSC charges around 8,000 USD to launch a formal objection, whereas FOS charges for the costs of establishing and maintaining a panel, which also run to thousands of dollars (Potts et al., 2016). NGOs and other groups have filed and paid for dozens of formal objections to MSC fisheries certifications, yet so far only two objections have resulted in the fisheries not being certified. By tonnage, more than one-third of MSC-certified seafood has received formal objections. Among the most common concerns were lack of data on stock population and size, high levels of bycatch, harm caused by dredging and trawling and damage to vulnerable marine ecosystems and seabird populations (Christian et al., 2013).

Conflicts of interest are inherent to the process: Third-party certifiers are paid by the very companies they certify, resulting in lenient certifications as numerous certification bodies compete to win business. This may not be such a large problem if MSC provided effective oversight. However, MSC has a clear interest in increasing its logo-licensing revenue, in conflict with its role as an independent and impartial standard-setting body; not certifying a fishery or withdrawing an existing certification means less revenue for MSC. According to an internal WWF report in 2016, “MSC actively interjected itself into ongoing certification processes” in favor of approving certifications, instead of enforcing its own standards (WWF, 2016).

The schemes place too much emphasis on increasing the number of fisheries participating and the volume of seafood caught, rather than on the quality of participation or outcomes. Most participating companies’ public documents lack meaningful quantitative data by which to assess performance or progress.

2.3. Have Seafood Certification Schemes Made a Difference?

Despite the problems outlined above, certification schemes can and do have some positive impacts. Their existence has made industry and government regulators more proactive about sustainability concerns, and can be seen as a catalyst for increased data transparency and improved analysis of fisheries (MSC, 2017c). They appear to have resulted in reduced bycatch in some fisheries, and, at times, better practices in terms of fishing gear and areas being fished (MSC, 2017b). Certification also plays an important role in ensuring that labelled fish has not been caught illegally (MSC, 2017b).

Although the FOS Annual Report (FOS, 2016) says its certification has contributed to the health of the world’s oceans, it does not provide data or cite studies to show how the scheme has achieved this impact. In contrast, using independent stock-assessment data in nine regions of the world, MSC found that certified stocks showed higher biomass in nearly all regions after certification (MSC, 2017b). Some experts who express reservations about certification nonetheless say certified seafood is a reasonable choice, because those fisheries are more likely to reflect healthy, moderately exploited stocks (Froese and Proelss, 2012).

However, these apparent improvements in some sectors of the fishing industry do not outweigh disturbing lapses in fishery certification.

For example, consumers should be able to assume that seafood with sustainable-catch labels is free of significant bycatch and that endangered, threatened or protected species have not been harmed. But the MSC standard allows certifiers to award generous scores to fisheries with high levels of bycatch, because the criteria focus only on “avoiding serious or irreversible harm.” In contrast, FOS sets an upper limit of 8% of the total catch in weight for discards and requires strong bycatch mitigation and monitoring – but does not deem it “essential” for bycatch to be free of vulnerable or higher-risk species on the International Union for Conservation of Nature’s (IUCN) red list of endangered species. For example, even though shark finning is not acceptable according to the MSC standard, in practice it is tolerated (Ziegler et al., 2017). The loopholes in the standards offer certification bodies plenty of room for diverse interpretations (White, 2017).

Overfishing has been raised as a key concern in several official objections to MSC certification. In the Pacific hake fishery, managers ignored scientific advice about rebuilding depleted stock; instead of taking precautionary measures (and despite Canadian scientists’ disapproval), in 2008 hake catch limits were set at their highest levels ever. The following year’s stock assessment indicated the hake stock was at an unacceptably high risk of being overfished – yet the fishery was still certified (Christian et al., 2013).

Certification schemes should also disqualify fisheries that are destructive because of their fishing methods or gear. The MSC Standards define destructive fishing practices as only those using poisons or explosives. However, bottom trawling and dredges are also highly destructive (Kaiser et al., 2006); there are alternatives to bottom trawling, and continued reliance on these destructive methods fails the MSC’s own criteria (MSC, 2014). A recent study of MSC-certified fisheries in Canada showed certifications were most frequently awarded to fisheries employing bottom-trawling methods (Arnold and Roebuck, 2017).

During the first assessment of the Alaska pollock fisheries, four separate U.S. District Court decisions found the fisheries were operating in violation of the federal Endangered Species Act and National Environmental Policy Act. Even so, after an official objection from NGOs, the MSC objections panel upheld the certification. Its justification defied reason: the MSC standard required “respect for the law,” and non-compliance with the law did not mean “not respecting” the law (Christian et al., 2013). Due to its troubled history of deadly interactions with seabirds, the MSC-certified New Zealand hoki fishery has also been found to violate that country’s fisheries act, which requires addressing and avoiding adverse effects on the aquatic environment (Highleyman et al., 2004).

2.4. Losing Faith

Because of the problems outlined above, fishery certification schemes face a new challenge: NGOs, scientists, other sustainable seafood listings and even governments have been losing faith in, and raising objections to, various aspects of fisheries certification – and especially the MSC.

Countless critical analysis, peer-reviewed articles, reports and newspaper articles have been written regarding concerns about the MSC. The same cannot be said about FOS, which has seemingly attracted much less attention. In fairness, that could be largely due to MSC’s transparency and active interaction with stakeholders. FOS is a much less transparent certification scheme; without available information on assessments and objections, it is very hard to assess or criticize it (Ziegler, 2017).

As a result, the MSC has been the target of far more public criticism. The overarching concern is that the MSC standard is too weak; so, while some very good fisheries have been certified, so have some especially poor ones (Dorey, 2017).

For example, two sectors of the Canadian Northwest Atlantic swordfish fishery, one using longlines and the other harpoons, carry the same MSC certification but have very different levels of bycatch. While the harpoon fishery is targeted and has virtually no bycatch, the longline fishery has extremely high bycatch, which contains shark and turtle species listed on the IUCN red list as near-threatened, vulnerable, endangered or critically endangered. The differences between these fisheries are not highlighted at the certification level; ultimately, both fisheries carry exactly the same MSC ecolabel certification, even though harpoon fishermen originally sought the certification to communicate their superior sustainability to consumers (Christian et al., 2013).

In 2010, a widely publicized article written by prominent marine biologists (Jacquet et al., 2010) openly criticized the MSC, explaining: “as the MSC increasingly risks its credibility, the planet risks losing more wild fish and healthy marine ecosystems.” Another painful blow came from WWF – the very NGO that set up the MSC 20 years ago. At the end of 2016, the media made public a WWF report that was highly critical of the MSC. The report – which documents the struggle WWF had when trying to ensure MSC’s standards and process were properly applied to the Indian Ocean tuna fisheries assessments – highlights a range of MSC failures. It states the MSC certification scheme has “troubling systematic flaws,” including ineffective conditions and the fact that failing to fulfil them did not lead to decertification. The report also accused the MSC of receiving “very large sums” from the fishing industry (WWF, 2016).

Most recently, in January 2018, 66 organizations issued a letter condemning the MSC for awarding an increasing number of certifications to fisheries that catch thousands of vulnerable and endangered animals and cause irreversible harm to vulnerable ocean habitats (Make Stewardship Count, 2018b). At the time the letter was issued, Dr. Iris Ziegler from Sharkproject emphasized: “without swift changes to its standards and processes, the MSC runs the risk of being identified as contributing to the problem of unsustainable fishing and misleading consumers, rather than being a solution and a truly sustainable choice” (Make Stewardship Count, 2018a).

In summary, there are fundamental problems with the current certification systems for wild-capture fisheries.¹ These include financial conflicts of interest and prospective financial gains for both standard-setting bodies and third-party auditors, which manifest in lenient interpretations of the standards. Other major issues contributing to weak and ineffective schemes include a lack of mechanisms to review auditors’ certification decisions; biased objection procedures; conditions attached to certification that neither lead to continuous improvement nor

Key Problems with the MSC and FOS Schemes

1. Conflict of interests
 - Certification auditors are paid by the fisheries they are assessing;
 - Standard-setting bodies have financial interest in certifying increasing numbers of fisheries.
2. Lack of monitoring and enforcement of standards
 - Auditors fail to identify and address unsustainable practices by fisheries;
 - Evidence of poor-quality and inconsistent assessments;
 - Lack of continuous improvement of fisheries’ practices once certified.
3. Inadequate, expensive and inaccessible procedures for objecting to certifications
 - Stakeholder input often dismissed;
 - No objection process for annual audits.
4. No independent evaluation of the schemes’ impact on sustainability
 - Most participating companies’ public documents lack meaningful quantitative data on which to assess performance or progress.
 - Annual “Global Impact Report” assessment by MSC is not written by the independent evaluators but by the MSC staff.
5. Failure to address causes of overfishing and ecosystem destruction
 - Lack of ecosystem-based approach to fisheries assessment, i.e. schemes look at target species in isolation and do not take into account impacts on the whole ecosystem.

need to be fulfilled during the certification period; failure to assess the cumulative impacts on all species caught by the fishery; and, crucially, that third-party certifiers are selected and paid for by the fisheries under assessment. Critics also state the MSC system has compromised its standards to keep up with booming demand from Wal-Mart and other chains (Potts et al., 2016).

2.5. The Way Forward for Fisheries Certification

There is no silver bullet to shift global fisheries towards a more sustainable path, but a number of significant changes are required to reform current seafood certification schemes. Certification schemes must revise their standards and application processes to ensure only fisheries managed in an ecologically and socially responsible way are rewarded with certification. They also need to ensure the certification process is rigorous. The plea for radical reform has been made by a wide spectrum of stakeholders; yet, these fundamental and systematic problems remain unaddressed.

FOS does not have a high level of acceptance among NGOs or the scientific community. Due to its lack of transparency and stakeholder involvement, it is currently very far from being a credible seafood certification scheme that could drive change for the oceans. The MSC, on the other hand, could still be given a last chance, despite years of fruitless efforts from so many NGOs.

First and foremost, the MSC should rid itself of the “conflict of interest” criticism by splitting the organization into two separate entities: the independent standard-setting and oversight function could sit with the MSC Standards team, whereas a separate commercial arm could promote and increase logo and certification uptake. Reform should: ensure the impartiality of certification bodies; simplify the standard so it is accessible to small-scale fisheries; ban destructive fishing techniques; exclude illegal fishing, assess the full ecological impacts of the entire fishery and introduce incentives to continuously improve – including cumulative assessment and introducing targeted measures to drastically reduce bycatch and discards.

Besides certification, many alternative tools could radically drive change towards healthy ocean ecosystems. Of the estimated 30 million fishers globally, 90% are small-scale (FAO, 2016); sustainability efforts must be targeted in a way that benefits them. Government payments to the fishing sector are key drivers of the unsustainable exploitation of the world’s depleted fish populations. Large-scale fisheries receive about four times more subsidies than their small-scale counterparts; up to 60% of these subsidies promoting overfishing, according to a recent study by the University of British Columbia (Schuhbauer et al., 2017). If fisheries are to become sustainable, subsidies need to be significantly reduced and shifted to supporting small-scale fisheries that focus on sustainability and ecosystem restoration. In addition, standards for sustainability certification could be adapted to encourage the participation of small-scale, community-based fisheries. Investors should rigorously check the companies they invest in, move away from those that are operating irresponsibly and shift financial and technical investment towards sustainable, small-scale fisheries.

Fishermens’ cooperatives are another grassroots alternative to voluntary certification schemes. For example, Thorupstrand Kystfiskerlaug fishermen in Denmark take short fishing trips with low-environmental-impact, energy-efficient gear; they use smaller, traditional coastal vessels that are dragged on to the beach. They have chosen not to carry the MSC brand, instead developing their own brand in a strategic partnership with Coop: a large, consumer-controlled Danish retail chain (Hadjimichael and Hegland, 2016).

The most important first step that a company can take towards responsible behavior is to formulate and adopt a responsible seafood policy. Such a policy does not entail avoiding poorly managed fisheries and confining

¹ Many NGOs producing seafood guides assess the MSC’s certified fisheries against their own standards, rather than simply accepting the MSC fishery as a sustainable or “green” option. MSC fisheries often do not make the “green” rating and are occasionally given a red rating. The Monterey Bay Aquarium (2013) assessed the MSC Standard against its own Seafood Watch standard; it found that the MSC Standard could allow fishery certification equivalent to a yellow Seafood Watch recommendation.

procurement to “sustainable fisheries”; rather, it involves a commitment to continuous improvement and transparency, with ambitious targets in the future. Such policies must also include sufficient traceability within the supply chain to ensure illegally caught fish cannot be sold, adopting sanctions against suppliers convicted of dealing in illegal fish and rewarding fisheries that are performing well.

In addition to these measures, there needs to be improved government regulation of sustainable seafood that supports an ecosystem-based approach, as well as greater enforcement of regulations and better monitoring and data collection on fish stocks. At an international level, agreements on creating marine reserves could be extremely effective in promoting the health of ocean ecosystems, as they can help rebuild depleted stocks and act as sanctuaries for biodiversity. Ultimately, robust government fisheries and aquaculture policies are needed to ensure a sustainable seafood industry for generations to come (Arnold and Roebuck, 2017).

The best chance of improvement is through a combination of grassroots initiatives, strong national regulations and international efforts to create marine reserves; shifting subsidies away from destructive fishing practices; channeling funds for better stock assessments; and capacity building among small-scale fishermen. At the same time – and equally important – fish consumption needs to be drastically scaled back in high-income countries; in the context of continually rising demand for fish, there should be a strict limit even on truly sustainable seafood.

This excerpt is adapted from Changing Markets Foundation's report “The False Promise of Certification.” The full report can be accessed here: [http://changingmarkets.org/wp-content/uploads/2018/06/](http://changingmarkets.org/wp-content/uploads/2018/06/THE_FALSE_PROMISE_OF_CERTIFICATION_FINAL_WEB.pdf)
[THE_FALSE_PROMISE_OF_CERTIFICATION_FINAL_WEB.pdf](http://changingmarkets.org/wp-content/uploads/2018/06/THE_FALSE_PROMISE_OF_CERTIFICATION_FINAL_WEB.pdf)

Literature Cited

- Arnold, S. and Roebuck, K., 2017. What's behind the label? Assessing the impact of MSC and ASC certifications in Canada. [Online] Available at: <http://www.seachoice.org/wp-content/uploads/2017/09/Seachoice-ASCMS-Report-Online.pdf> [Accessed 27 March 2018].
- Bell, J.D. et al., 2013. Mixed responses of tropical Pacific fisheries and aquaculture to climate change. *Nature Climate Change*, 3(2013): 591–599.
- Brown, S., Agnew D.J., Martin, W., 2016. On the road to fisheries certification: The value of the Objections Procedure in achieving the MSC sustainability standard. *Fisheries Research*.
- Cao, L., Naylor, R., Henriksson, P., Leadbitter, D., Metian, M., Troell, M. and Zhang, W., 2015. China's aquaculture and the world's wild fisheries. *Science*, 347: 133–135. [Online] Available at: <http://www.sciencemag.org/content/347/6218/133.full> [Accessed 13 April 2018].
- Christian, C. et al., 2013. A review of formal objections to Marine Stewardship Council fisheries certifications. *Biological Conservation*, 161.
- Dorey, C., 2017. Personal communication with former Science Adviser and Campaigner at Greenpeace Australia, October.
- Ecolabel Index, 2018. Ecolabel index. [Online] Available at: <http://www.ecolabelindex.com> [Accessed 2 April 2018].
- Environmental Justice Foundation, 2017. EJF and Hen Mpoano launch project to address illegal and unsustainable practices in Ghana's fisheries. [Online] Available at: <https://ejfoundation.org/news-media/2017/illegal-unsustainable-fishing-ghana-hen-mpoano-ejf> [Accessed 23 March 2018].
- Ethical Consumer, 2017. Ethical Consumer: Markets report. [Online] Available at: <http://www.ethicalconsumer.org/portals/0/downloads/ec%20markets%20report%202017.pdf> [Accessed 13 April 2018].
- FAO, 2016a. The state of world fisheries and aquaculture (SOFIA). [Online] Available at: <http://www.fao.org/publications/sofia/2016/en/> [Accessed 13 April 2018].
- FAO, 2016a. The state of world fisheries and aquaculture (SOFIA). [Online] Available at: <http://www.fao.org/publications/sofia/2016/en/> [Accessed 13 April 2018].
- Food and Agriculture Organization of the United Nations (FAO), 2014. The state of food insecurity in the world 2014. [Online] Available at: www.fao.org/publications/sofi/en/ [Accessed 13 April 2018]
- FOS, n.d. Frequently asked questions. [Online] Available at: <http://www.friendofthesea.org/faq.asp> [Accessed 27 March 2018].
- Friend of the Sea (FOS), 2016. Friend of the Sea annual report 2016. [Online] Available at: www.friendofthesea.org/public/page/fos-foe_annual_report_2016_web.pdf [Accessed 13 April 2018].
- Froese, R. and Proelss, A., 2012. Evaluation and legal assessment of certified seafood. *Marine Policy*, 36(6): 1284–1289. [Online] Available at: <https://doi.org/10.1016/j.marpol.2012.03.017> [Accessed 13 April 2018].
- Garcia, S.M., Zerbi, A., Aliaume, C., Do Chi, T. and Lasserre, G., 2003. The ecosystem approach to fisheries: Issues, terminology, principles, institutional foundations, implementation and outlook. *FAO Fisheries Technical Paper*, 443. Rome: FAO.
- [Online] Available at: <http://www.fao.org/docrep/006/y4773e/y4773e00.htm#Contents> [Accessed 13 April 2018].
- Greenpeace, 2009. Assessment of the Friend of the Sea fisheries and aquaculture certification programme: Greenpeace briefing. [Online] Available at: <https://www.greenpeace.org/archive-international/Global/international/planet-2/report/2009/6/friend-of-the-sea.pdf> [Accessed 27 March 2018].
- Greenpeace, 2016a. Detox collaboration – two tales: Of greater and lesser ambition. [Online] Available at: https://static.greenpeace.org/international/Global/international/code/2016/Catwalk2016/pdf/Collaboration_Prato_ZDHC_2016.pdf [Accessed 15 March 2018].
- Greenpeace, 2016b. Detox campaign. [Online] Available at: <https://www.greenpeace.org/archive-international/en/campaigns/detox/fashion/about/> [Accessed 12 April 2018].
- Hadjimichael M. and Hegland T.J., 2016. Really sustainable? Inherent risks of eco-labelling in fisheries. *Fisheries Research*, 174(2016). [Online] Available at: DOI:10.1016/j.fishres.2015.09.012 [Accessed 13 April 2018].
- Heaslip, S.G., et al., 2012. Jellyfish support high energy intake of leatherback sea turtles (*Dermochelys coriacea*): video evidence from animal-borne cameras. *PloS one*, 7(3): e33259.
- Highlyman, S. et al., 2004. Wildhavens, turnstone consulting and ecos corporation, 'An independent assessment of the Marine Stewardship Council'. Prepared for Homeland Foundation, Oak Foundation, and The Pew Charitable Trusts. January
- Jacquet J.L. et al., 2010. Seafood stewardship in crisis. *Nature*, 467: 28–29. [Online] Available at: https://jenniferjacquet.files.wordpress.com/2010/05/jacquetetal2010_nature1.pdf [Accessed 13 April 2018].
- Kaiser, M.J. et al., 2006. Global analysis of response and recovery of benthic biota to fishing. *Marine Ecology Progress Series*, 311: 1–14
- Kelleher, K., 2005. Discards in the world's marine fisheries: An update. *FAO Fisheries Technical Paper*, 470. [Online] Available at: <http://www.fao.org/3/a-y5936e.pdf> [Accessed 23 March 2018].
- Kochen, M., 2017. Personal communication with Director Program and Science at MDPI, Indonesia. November.
- Make Stewardship Count, 2018a. Organizations call on Marine Stewardship Council (MSC) to improve standards. [Press release]. 24 January. [Online] Available at: http://www.make-stewardship-count.org/wp-content/uploads/2018/02/24-Jan-18-MSC-Press-release_English.pdf [Accessed 27 March 2018].
- Make Stewardship Count, 2018b. Calling on MSC to stand up for its vision. [Letter]. 19 January. [Online] Available at: http://www.make-stewardship-count.org/wp-content/uploads/2018/02/Open-Letter-to-MSC_FINAL_January-2018.pdf [Accessed 27 March 2018]
- Marine Stewardship Council, 2014. MSC fisheries certification requirements, version 2.0. Marine Stewardship Council. [Online] Available at: <https://www.msc.org/documents/scheme-documents/fisheries-certification-scheme-documents/fisheries-certification-requirements-version-2.0> [Accessed 19 April 2018]

- Marine Stewardship Council, 2017a. The MSC at 20: Wild. certified. sustainable. Annual report 2016-17. [Online] Available at: <https://www.msc.org/documents/msc-brochures/annual-report-archive/annual-report-2016-17-english> [Accessed 27 March 2018].
- Marine Stewardship Council, 2017b. MSC global impacts report 2017. [Online] Available at: <https://www.msc.org/documents/environmental-benefits/global-impacts/msc-global-impacts-report-2017> [Accessed 19 April 2018].
- Marine Stewardship Council, 2017c. A summary of the Marine Stewardship Council's strategic plan, 2017–20. [Online] Available at: <https://www.msc.org/documents/institutional/strategic-plan/msc-strategic-plan-summary-2017-2020> [Accessed 19 April 2018].
- McGrath, M., 2016. McDonald's fish: Row over sustainability 'cover-up'. BBC News, 19 May. [Online]. Available at: <http://www.bbc.co.uk/news/science-environment-36316246> [Accessed 28 March 2018].
- Merino, G. et al., 2012. Can marine fisheries and aquaculture meet fish demand from a growing human population in a changing climate? *Global Environmental Change*, 22(4): 795–806.
- MoA of China, 2014. Ministry of agriculture of China, China food and nutrition development guideline 2014–2016. Beijing: Ministry of Agriculture of China.
- Monbiot, G., 2017. Insectageddon: Farming is more catastrophic than climate breakdown. *The Guardian*, 20 October. [Online] Available at: <https://www.theguardian.com/commentisfree/2017/oct/20/insectageddon-farming-catastrophe-climate-breakdown-insect-populations> [Accessed 23 March 2018].
- Monterey Bay Aquarium, 2013. Marine Stewardship Council: Benchmarking equivalency draft results assessed against the Seafood Watch fisheries criteria. Monterey Bay, CA: Monterey Bay Aquarium.
- Nielsen, 2014. Global consumers are willing to put their money where their heart is when it comes to goods and services from companies committed to social responsibility. [Press release]. 17 June. [Online] Available at: <http://www.nielsen.com/us/en/press-room/2014/global-consumers-arewilling-to-put-their-money-where-their-heartis.html> [Accessed 13 April 2018].
- Nielsen, 2015. The sustainability imperative: New insights on consumer expectations. [Online] Available at: <http://www.nielsen.com/content/dam/nielsen/global/co/docs/Reports/2015/global-sustainability-report.pdf> [Accessed 13 April 2018].
- Potts, J. et al., 2016. The state of sustainability initiatives: Standards and the blue economy. Winnipeg: IISD/IIED/FAST. [Online] Available at: <https://www.iisd.org/sites/default/files/publications/ssi-blue-economy-2016.pdf> [Accessed 13 April].
- Schuhbauer, A. et al., 2017. How subsidies affect the economic viability of small-scale fisheries. *Marine Policy*, 82: 114–121. [Online] Available at: DOI: 10.1016/j.marpol.2017.05.013 [Accessed 13 April 2018].
- The Economist, 2016. Trawling for trouble. 16 April. [Online] Available at: <https://www.economist.com/node/21697030/tw/te/pe/ed/why-do-chinese-fishermen-keep-getting-arrested-trawling-trouble> [Accessed 23 March 2018].
- White, C., 2018. PNA skipjack tuna fishery earns MSC recertification over objections. *Seafood Source*, 6 March. [Online] Available at: <https://www.seafoodsource.com/news/environment-sustainability/pna-skipjack-tuna-fishery-earns-msc-recertification-over-objections> [Accessed 28 March 2018].
- World Bank, 2013. Fish to 2030: Prospects for fisheries and aquaculture. Agricultural and Environmental Services discussion paper 03. Washington DC: World Bank. [Online] Available at: <http://documents.worldbank.org/curated/en/458631468152376668/Fish-to-2030-prospects-for-fisheries-and-aquaculture> [Accessed 13 April 2018].
- WWF (World Wide Fund for Nature), 2016. WWF retrospective on Indian Ocean tuna harvest control rules. [Online] Available at: <https://wp.maydayblog.com/wp-content/uploads/2016/11/WWF-Retrospective-Indian-Ocean-Tuna-HCRs-FINAL.2-1-1.pdf> [Accessed 27 March 2018].
- Zeller, D. et al., 2017. Global marine fisheries discards: A synthesis of reconstructed data. *Fish and Fisheries*. [Online] DOI: 10.1111/faf.12233 [Accessed 13 April 2018].
- Ziegler, I., 2017. Personal communication, International Cooperations at Sharkproject Germany, December 2017.
- Zwerdling, D. and Williams, M., 2013. Is sustainable-labeled seafood really sustainable? *All Things Considered*, 11 February. [Radio programme]. [Online] Available at: <https://www.npr.org/2013/02/11/171376509/is-sustainable-labeled-seafood-really-sustainable> [Accessed 13 April 2018].

Coastal States' Reactions to Trump Administration's Offshore Drilling Proposal

RNRF Staff Report - Attiya Sayyed and Amber Todoroff

Introduction

On January 4, 2018, U.S. Department of the Interior (DOI) Secretary Ryan Zinke announced a proposal for a five-year plan that would open all coastal waters of the U.S. to oil and gas development.¹ The Bureau of Ocean Energy Management (BOEM), the agency within the DOI responsible for the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources, would administer the plan.² The National Outer Continental Shelf Oil and Gas Leasing Program (hereafter referred to as the proposal) for 2019-2024 proposes “to make over 90 percent of the total OCS acreage and more than 98 percent of undiscovered, technically recoverable oil and gas resources in federal offshore areas available to consider for future exploration and development.”³

The proposal comes after President Trump signed an executive order requesting a review of former President Obama's five-year offshore drilling ban. The ban, imposed by Obama near the end of his term, blocked offshore drilling on about 94 percent of the OCS. The proposal would increase drilling sites off the coasts of Alaska and in the Gulf of Mexico while reinstating leasing sites in Pacific and Atlantic waters. The DOI intends to hold “19 lease sales off the coast of Alaska and 12 in the Gulf of Mexico. Seven areas offered for new drilling would be in Pacific waters off California, where drilling has been off limits since a 1969 oil spill near Santa Barbara.”⁴

The Trump Administration has additionally signaled a willingness to ease safety and environmental regulations adopted after the British Petroleum Deepwater Horizon spill in 2010, which killed 11 people and spilled 5 million barrels of oil into the Gulf of Mexico.⁵ The cost of the Deepwater Horizon explosion to BP has been nearly \$62 billion so far.⁶ The Obama-era regulations, which took effect in July 2016, aimed to reduce the taxpayer burden of cleaning up oil spills and removing old wells by requiring companies to buy “bonds, or provide other financial grantees, to prove they had the capacity to pay for the removal of wells.” It also required “additional inspections of devices called blowout preventers, the equipment that failed during the Deepwater Horizon disaster. To prevent accidents, another provision required oil and gas platforms to shut down temporarily when so-called lift boats positioned themselves for repair work.” However, drilling operators insist that this kind of regulation disincentivizes investment and operations are safe without additional government oversight.⁷

Environmental groups denounced the proposal. A Natural Resources Defense Council [report](#) suggested that 68 coastal national parks are at risk if the plans moves forward – only one part of much broader concerns for the ecological health of marine and coastal environments, human health effects, and negative consequences for livelihoods of coastal communities dependent on tourism and marine activities.

¹ <https://www.doi.gov/pressreleases/secretary-zinke-announces-plan-unleashing-americas-offshore-oil-and-gas-potential>

² *ibid.*

³ *ibid.*

⁴ <https://www.nytimes.com/2018/01/04/climate/trump-offshore-drilling.html>

⁵ <https://www.nytimes.com/2018/03/10/business/offshore-drilling-trump-administration.html>

⁶ <https://www.nrdc.org/onearth/trump-moves-expand-offshore-drilling-he-shrinks-safety-protections-what-could-go-wrong>

⁷ <https://www.nytimes.com/2018/03/10/business/offshore-drilling-trump-administration.html>

Secretary Zinke stated that the proposal would not move forward without state, community and congressional feedback. BOEM held 23 public meetings across the affected states between January and March 2018.⁸ At the meetings, participants were able to ask questions, talk with BOEM representatives, and share opinions about the proposal.

States React to the Proposal

There has been tremendous backlash against the offshore drilling proposal from governors, senators, congressmen, and the public. Secretary Zinke has received numerous letters of opposition from state officials. Several states are seeking exemption from offshore drilling: New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Washington, Oregon, and California. Alaska has asked for limits on the proposal. Maine opposes the plan but has not formally asked for an exemption. The states claim offshore drilling will have negative impacts on coastal livelihoods, maritime industries, and recreation.

Letters of Opposition

On January 9, 2018, 37 Democratic senators reacted to the proposal in a [signed letter](#) to Secretary Zinke, which stated that the proposal was a “misuse of taxpayer funds and [Interior Department] resources.” Florida almost immediately received an (unofficial) exemption to the proposal after Governor Rick Scott argued that Florida’s coasts are heavily reliant on tourism. Two days later, 22 senators from 12 states signed and sent a letter to Secretary Zinke requesting the same treatment as Florida and to be exempted from any new offshore oil or gas leases.⁹

That same week, Secretary Zinke met with seven governors who opposed the plan: South Carolina’s Henry McMaster, Rhode Island’s Gina Raimondo, California’s Jerry Brown, Washington’s Jay Inslee, Delaware’s John Carney, North Carolina’s Roy Cooper, and Oregon’s Kate Brown.¹⁰ The governors of the three Pacific Coast states issued a joint statement expressing opposition to the proposal. Similarly, governors from six northeastern and Mid-Atlantic States signed a joint [letter](#) to Secretary Zinke objecting to the plan.¹¹

Shifting U.S. Ocean Policy

On June 19, 2018, President Trump signed an [executive order](#) that revokes the 2010 ocean policy executive order issued by former President Obama. It significantly changes the direction of U.S. ocean policy.

[Obama’s executive order](#) focused on environmental stewardship, conservation, and sustainable use of natural resources of the Great Lakes and U.S. coastal waters. Trump’s executive order drops that language and instead focuses on economic and security concerns. Ocean industries such as energy production (notably offshore drilling), the military, and freight transportation are emphasized.

A new Ocean Policy Committee replaces the “overly bureaucratic” National Ocean Council and 9 Regional Planning Bodies, two of which are already operational, from the Obama order. The Ocean Policy Committee will have two branches: a Subcommittee for Science and Technology and a Subcommittee for Resource Management. Much diminished is the emphasis on data collection and sharing to help managers makes decisions. References to social justice, biological diversity, and conservation are absent in Trump’s order.

For further analysis visit: <http://www.sciencemag.org/news/2018/06/trump-s-new-oceans-policy-washes-away-obama-s-emphasis-conservation-and-climate>

⁸ <https://www.boem.gov/national-program-participate/>

⁹ <https://www.merkley.senate.gov/news/press-releases/after-interior-exempts-florida-from-controversial-offshore-drilling-plan-merkley-and-wyden-call-on-trump-administration-to-ban-drilling-off-oregon-coast-too>

¹⁰ <http://thehill.com/policy/energy-environment/368813-zinke-talks-with-more-governors-about-offshore-drilling-plan>

¹¹ <https://portal.ct.gov/Office-of-the-Governor/Press-Room/Press-Releases/2018/01-2018/Gov-Malloy-and-Coastal-Governors-Tell-Trump-Administration-No-to-Offshore-Drilling>

A bipartisan group of New England senators submitted a bill to Congress to ban offshore drilling off the New England coast. The bill, the New England Coastal Protection Act “amends the Outer Continental Shelf Lands Act to prohibit the Department of the Interior from issuing a lease for the exploration, development, or production of oil or natural gas off the coast of: (1) Maine, (2) New Hampshire, (3) Massachusetts, (4) Rhode Island, or (5) Connecticut.”¹² A House version of the New England Coastal Protection Act was signed by all New England members of the House of Representatives.¹³

Another [letter of opposition](#) signed by 227 state legislators representing 17 coastal states was sent to Secretary Zinke. It cited that the decision to grant Florida an exemption indicated that other states could also be exempt, and urged him to consider the “repercussions... to local and regional economies and ecosystems.”¹⁴

Twelve attorneys generals from coastal states also signed [a letter](#) to Secretary Zinke, highlighting the risk of oil spills to all coastal economies.¹⁵

States Introduce Bills

Additionally, states including New Jersey, New York, California, South Carolina and Rhode Island have worked to make offshore development nearly impossible by introducing bills that prohibit oil and gas infrastructure from being built on their land or crossing through their state waters. Washington State is threatening a similar bill and Maryland has introduced a bill imposing strict liability on those who cause a spill during offshore drilling or oil and gas extraction.¹⁶

In retaliation on June 7, 2018, House Republicans advanced a draft [proposal](#) to fine states that block offshore drilling. The proposal notes that states that prohibit offshore drilling on over 50 percent of the lease blocks off their coasts will incur a “fee equal to at least one-tenth the estimated government revenue that would have been generated from lease sales, royalties and other revenue streams, if oil and gas drilling had taken place. The bill would also create revenue-sharing scheme for states that do decide to drill. Under current law, only Alabama, Louisiana, Mississippi and Texas receive a share of offshore oil and gas receipts.”¹⁷

Coastal States Opposed to the Proposal

New Hampshire

Governor Chris Sununu met with Secretary Zinke to request an exception for New Hampshire.¹⁸ He said that New Hampshire’s coasts are a low target area and that he expects a “positive result” after the public comment process by BOEM is complete.

Several senators and congresswomen sent a letter to Secretary Zinke stating their strong opposition to the proposal. In it they wrote:

“This reckless proposal poses a significant risk to seacoast communities in New Hampshire and would negatively affect marine ecosystems and our environment. Furthermore, this expansion threatens the

¹² <https://www.congress.gov/bill/115th-congress/senate-bill/2298>

¹³ <https://www.ecori.org/renewable-energy/2018/2/12/ri-leaders-pledge-to-halt-offshore-drilling>

¹⁴ <https://www.ncei.net/wp-content/uploads/2018/03/OCS-Oil-and-Gas-Leasing-Program-Sign-On-Letter.pdf>

¹⁵ <http://ripr.org/post/ri-attorney-general-offshore-drilling-puts-coastal-economies-risk#stream/0>

¹⁶ http://www.pressofatlanticcity.com/business/states-fight-trump-offshore-drilling-plan-with-local-bans/article_1bc05df7-0450-5ee5-9745-84fa33fa6866.html

¹⁷ https://www.washingtonpost.com/news/energy-environment/wp/2018/06/13/house-republicans-propose-financial-penalties-for-states-that-block-offshore-drilling/?utm_term=.5f250d43dfb4

¹⁸ <http://www.unionleader.com/environment/trump-off-shore-drilling-initiative-gets-cool-response-from-nh-protesters-20180306>

vitality and economic interests of New Hampshire's commercial fishing industry that depends on access to clean and healthy oceans... As your Department begins to accept public comments in accordance with the National Environmental Policy Act, we urge you to listen to the voices of our constituents and remove the New Hampshire coastline from this misguided proposal.”¹⁹

Ocean resources in New England support 250,000 jobs; tourism and recreation represent more than 70 percent of this. Around \$17.4 billion in economic activity is generated.²⁰

Massachusetts

Governor Charlie Baker [signed a letter](#) to Secretary Zinke asking to remove Massachusetts from the proposal following pressure from state officials. The letter was also signed by all members of the state's congressional delegation. In it they stated:

“The resources and uses of the OCS are critically important to the health and well-being of Massachusetts. These federal waters off our coast contain rich natural resources and important marine ecosystems that support local, state, regional and national economies and are intrinsic to the social fabric and heritage of our coastal communities.”

Previously, in June 2017, Baker commented on offshore drilling to Secretary Zinke in a letter about marine monuments. Baker's objections were noted in the proposal.²¹

The letter continues, adding that the marine economy generated a statewide economic impact of over \$17 billion in 2015, and that commercial fishing alone supports 83,000 jobs in the state. The letter additionally noted the importance of the OCS marine habitat to endangered species and other wildlife. The state reiterated its commitment to wind energy and its potential as the state's energy future.²²

The Massachusetts Senate passed a resolution noting that the proposal “threaten[s] to jeopardize the environmental well being of the Commonwealth, and more particularly, its coastal communities and waters.”²³

Rhode Island

Governor Gina Raimondo is a vocal critic of the proposal. In response to Secretary Zinke's announcement, she stated that:

“The President is endangering the health of nearly all coastal waters in our country, including our 400 miles of coastline in Rhode Island, so that rich oil companies can get richer. The North Atlantic region is home to one of the most productive and sensitive marine ecosystems in the world, not to mention Rhode Island's tourism, recreation and fishing industries. We've taken action over the past few years to decrease our reliance on fossil fuels and invest in alternative energy sources. We are home to the nation's first offshore wind farm. We cannot take this step backwards. Now is the time for Rhode Islanders to make their voices heard and tell President Trump to protect our waters.”²⁴

¹⁹ <https://shea-porter.house.gov/sites/sheaporters.house.gov/files/2018.01.11%20-%20NH%20Delegation%20Zinke%20Drilling.pdf>

²⁰ <http://www.concordmonitor.com/Off-shore-drilling-on-display-in-New-Hampshire-16003967>

²¹ https://www.masslive.com/politics/index.ssf/2018/01/massachusetts_congressional_de_8.html

²² https://www.scribd.com/document/372653358/Massachusetts-Congressional-delegation-opposes-Trump-s-offshore-drilling-plan#from_embed

²³ <http://www.thebedfordcitizen.org/2018/02/massachusetts-senate-asks-feds-disallow-oil-gas-drilling-off-ne-coast/>

²⁴ <https://www.ri.gov/press/view/32260>

Democratic U.S. Senators Jack Reed and Sheldon Whitehouse have also spoken out against the proposal and signed the aforementioned letter asking the Trump Administration to exempt Rhode Island from any offshore oil or gas leases.²⁵

Connecticut

Governor Dannel P. Malloy opposed the offshore drilling proposal, saying:

“This is yet another disgraceful and unnecessary action from an administration that has taken us lightyears backward in the fight against climate change. It stands only to hurt Connecticut’s economy, our natural resources, and our coastal communities. We need a federal government that will stand up and protect our environment. Sadly, this president has once again put special interests before people.”²⁶

U.S. Senators Richard Blumenthal and Chris Murphy, and several of Connecticut’s U.S. Representatives wrote Interior Secretary Zinke expressing opposition to the proposed expansion of offshore oil and gas drilling, saying in part:

“Opening waters off the coast of Connecticut to drilling puts jobs, coastal communities, and our environment at risk, and is antithetical to Connecticut’s efforts to transition to a sustainable, clean energy future. The Atlantic Ocean is a precious public resource that is critical to Connecticut’s well being and should belong to every American, rather than special interests. As such, we urge you to remove the Atlantic region from the National Outer Continental Shelf Oil and Gas Leasing Program for 2019-2024.”²⁷

New York

Governor Andrew Cuomo formally requested to remove New York from the proposal as it contradicts the state’s efforts to advance clean energy. In response to the announcement, Cuomo stated:

“The federal government’s plan to open coastal waters to drilling shows an absolute disregard for science and history. Offshore drilling would make our coastal communities vulnerable to the dangers of oil spills and other drilling disasters and jeopardize the health of our robust marine economy. New York will do everything in our power to prevent environmental disasters and will continue to safeguard our offshore assets and bolster our efforts to support renewable energy development.”²⁸

Later, in May, Cuomo advanced the Save our Waters bill to “prohibit the leasing of lands, including underwater lands, for offshore drilling and exploration, and drilling infrastructure, in New York State waters.”²⁹ It would also ban the transportation of oil taken from New York waters inside the state.

Overall, New York’s ocean economy generates about \$11 billion in wages and contributes \$23 billion in GDP. An estimated 320,000 jobs could be jeopardized by the drilling proposal.³⁰

Numerous state government officials have commended Cuomo and his efforts to remove New York from the proposal while also offering their own objections.

²⁵ <http://ripr.org/post/ri-gov-raimondo-says-not-our-watch-federal-offshore-drilling-expansion#stream/0>

²⁶ <https://ctmirror.org/2018/01/04/malloy-environmentalists-blast-trump-proposal-to-open-north-atlantic-to-oil-drilling/>

²⁷ <https://www.murphy.senate.gov/newsroom/press-releases/connecticut-congressional-delegation-stands-in-opposition-to-proposed-offshore-drilling-expansion>

²⁸ <https://www.governor.ny.gov/news/governor-cuomo-advances-save-our-waters-bill-prohibit-offshore-drilling-infrastructure-new-york>

²⁹ *ibid.*

³⁰ *ibid.*

Congressman Zeldin spearheaded a bipartisan letter of New York members to Secretary Zinke underscoring their opposition to drilling off the coast of Long Island. The letter was signed by 26 representatives.³¹

The New York State Assembly also introduced an act to amend the state's environmental conservation law to prohibit the leasing of state-owned underwater coastal lands for oil and natural gas drilling and prevent leases in federal waters.³²

New Jersey

Governor Phil Murphy strongly opposes the proposal. In a letter to Secretary Zinke, Murphy stated:

"New Jersey is committed to protecting its natural resources and realizing a new clean energy future through support of smart energy policy and renewable energy sources. We will not accept outdated, dangerous approaches that promote reliance on fossil fuels and result in more environmental degradation."³³

Murphy also signed a [bipartisan bill](#) called the "Shore Tourism and Ocean Protection from Offshore Oil and Gas Act" or "STOP Offshore Oil and Gas Act" in April on the anniversary of the 2010 Deepwater Horizon oil spill.³⁴ The act bans drilling and the construction of supporting infrastructure three nautical miles off the coast. As such, the state has effectively banned pipelines or docks that could transfer the oil from federal waters.³⁵

State representatives reiterated that drilling activity could lead to oil spills that will harm marine life, the state's coastal economy, and shore residents' quality of life.

Delaware

Governor John Carney opposed the offshore drilling proposal in a statement:

"Drilling for oil and gas in the Atlantic off Delaware's coast would create the risk of a catastrophic spill or other related disasters that would not only threaten our natural resources but pose serious threats to Delaware's economy. More than 60,000 jobs are tied, directly and indirectly, to tourism and recreation along our coastline. Coast-related activities contribute almost \$7 billion to our economy. We also have an obligation to take steps to confront climate change, and this takes us in the wrong direction. Delaware is our country's lowest-lying state, and the effects of sea-level rise pose significant risks. For all of these reasons, I continue to stand with Delawareans in opposing drilling off the coast of Delaware or elsewhere in the Atlantic, and we will continue to voice our opposition."³⁶

Senator Ernie Lopez proposed a [bill to ban offshore drilling](#) for oil and natural gas in state waters and Delaware's coastal zone; "It would also prohibit permits from being issued for facilities or infrastructure connected to offshore drilling in state and federal waters." The bill has bipartisan support.

³¹ <https://zeldin.house.gov/media-center/press-releases/rep-zeldin-bipartisan-bicameral-ny-delegation-underscore-opposition>

³² [http://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A09819&term=2017&Summary=Y&Actions=Y&Committee](http://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A09819&term=2017&Summary=Y&Actions=Y&Committee=Y&Votes=Y&Memo=Y&Text=Y)
[%26nbspVotes=Y&Memo=Y&Text=Y](#)

³³ <https://www.nj.gov/governor/news/news/562018/approved/20180309c.shtml>

³⁴ <https://www.ecowatch.com/new-jersey-offshore-drilling-ban-2562603514.html>

³⁵ *ibid.*

³⁶ <https://news.delaware.gov/2018/01/04/governor-carney-releases-statement-trump-administrations-offshore-drilling-plan/>

Maryland

Governor Larry Hogan asks Maryland to be exempted from offshore drilling.³⁷ He has also instructed the state's Attorney General Brian E. Frosh to investigate whether Maryland will be affected by the Trump policy and to bring legal action if it is.³⁸

The Maryland House of Delegates passed the [Offshore Drilling Liability Act](#), a bill that calls offshore drilling "an ultrahazardous and abnormally dangerous activity." It "stipulat[es] that individuals or companies responsible for offshore spills of oil and natural gas shall be found 'strictly liable for certain damages.'"³⁹ It also makes the company liable without "showing of negligence or intentional harm."⁴⁰

Virginia

Governor Ralph Northam has stated his opposition to the proposal on numerous occasions and requested an exemption for Virginia from Secretary Zinke. In March he commented:

"We've got the military, the Navy that does a lot of training off our coast. We've got the aquaculture industry, the growing of clams [and] of oysters, which is about a \$75 million industry. They don't need a misadventure with contaminated water and finally, tourism," said Gov. Northam (D). "We need to wean ourselves off fossil fuels and move towards renewable energy and the last thing we need to do is put more oil rigs off our coast."⁴¹

The state's Members of Congress are split over the proposal. Democratic members generally oppose drilling. Two Democratic senators (Mark Warner and Tim Kaine) sent a letter to Secretary of Defense James Mattis to note concern over the drilling's impacts on the Department of Defense's extensive military activities in Hampton Roads, the home of the largest naval installation in the world at Naval Station Norfolk.⁴²

Republican members, in favor of the proposal, are eager to begin drilling. Representatives Barbara Comstock and Dave Brat have introduced bills that would make it easier to drill. Comstock's bill would also suspend "environmental reviews until 2022, although drilling would remain subject to several federal laws, including the Endangered Species Act and the Marine Mammal Protection Act."⁴³ If passed and approved, drilling would affect over 4 million people who live on Virginia's coasts and it's ocean economy, which contributes over \$8.2 billion to state GDP.^{44,45}

North Carolina

Governor Roy Cooper submitted formal comments to BOEM citing the dangers of offshore drilling to North Carolina. He wrote:

"We cannot afford to endanger our ecologically sensitive coastlines or the natural and cultural resources that are the foundation of our state's tourism industry and coastal economy. Because offshore drilling

³⁷ <http://www.baltimoresun.com/news/maryland/politics/bs-md-off-shore-drilling-20180119-story.html>

³⁸ *ibid.*

³⁹ <http://www.naturalgasintel.com/articles/113783-maryland-florida-take-action-against-trump-ocs-drilling-plan>

⁴⁰ <http://www.baltimoresun.com/news/maryland/politics/bs-md-oil-spills-liability-20180319-story.html>

⁴¹ <https://wtkr.com/2018/03/05/gov-ralph-northam-to-speak-at-offshore-drilling-forum/>

⁴² <https://www.warner.senate.gov/public/index.cfm/2018/4/warner-kaine-call-on-trump-administration-to-examine-risks-of-offshore-drilling-on-military-assets-in-hampton-roads>

⁴³ https://www.washingtonpost.com/local/virginia-politics/virginia-lawmakers-split-over-off-shore-drilling/2017/04/28/ff7504a6-2b80-11e7-be51-b3fc6ff7faee_story.html?utm_term=.4626bcf93338

⁴⁴ <https://coast.noaa.gov/data/digitalcoast/pdf/econ-report-regional-state.pdf>

⁴⁵ <https://coast.noaa.gov/states/virginia.html>

threatens North Carolina's critical coastal industries and unique coastal environment with little benefit for our state residents, it is a bad deal for North Carolina."⁴⁶

Cooper also met with Secretary Zinke in early February to request an exemption to the proposal and more recently has pledged legal action to prevent offshore drilling if the proposal moves forward. Bipartisan opposition to the proposal also comes from congressmen and state and local elected officials throughout North Carolina.

South Carolina

Governor Henry McMaster opposes the plan. McMaster outlined his position in a letter to Secretary Zinke on January 18, 2018, stating that the benefits of offshore oil and gas development do not outweigh the risk to South Carolina's natural beauty and coastal industries:

"Arguments that offshore drilling for oil and gas is needed to meet [increased energy demand] are salient—but I am certain that this is not in South Carolina's best interest. Simply put: our coastline is not an industrial working coastline as in some other states. It is just the opposite."

"Our beaches, sea islands, and marshes are among the most beautiful in the nation. Many are uninhabited and off-limits for development. This unspoiled beauty draws 28.5 million people to South Carolina each year. Our 187-mile coastline and 2,876 miles of coastal shoreline drive a \$20 billion tourism industry—one of our largest industries. Our seaside communities like Myrtle Beach, Charleston, Hilton Head, and Beaufort depend on a pristine coastline that brings visitors here from all over the globe. Such reliance means that we cannot afford to accept the risk of adverse environmental impacts attendant to offshore drilling."⁴⁷

McMaster additionally noted that every city and town council along South Carolina's coastline has voted against offshore drilling and seismic testing.

South Carolina's Republican Senators Lindsey Graham and Tim Scott have voiced concerns on the plans, particularly regarding local engagement in offshore drilling decisions. Graham said, "I don't mind opening up drilling if states can opt out" and added that he would "follow [McMaster's] lead" on the issue. Scott said in a comment to HuffPost that he was "willing to wait until we get more buy in from our coastal folks."⁴⁸

Alaska

Governor Bill Walker, requested that Secretary Zinke limit offshore drilling in Alaska. A supporter of offshore drilling, Walker suggested that leases should only be granted on the most prospective areas off Alaska (Chukchi Sea, Beaufort Sea, and Cook Inlet), not the entire coast. In a statement, Walker said:

"Interior Secretary Ryan Zinke is a partner with Alaska in many resource development projects, but a key threat in the effort to achieve a vibrant offshore program in Alaska is creating the false impression that there is an imminent attempt to foster development along our entire coast."⁴⁹

⁴⁶ <https://governor.nc.gov/news/governor-cooper-submits-next-round-formal-comments-opposition-offshore-drilling>

⁴⁷ https://www.postandcourier.com/news/south-carolina-gov-henry-mcmaster-wants-offshore-no-drill-oil/article_b4162f12-f614-11e7-b5bc-1b205b230114.html

⁴⁸ https://www.huffingtonpost.com/entry/offshore-drilling-republicans_us_5a5686e8e4b03bc4d03dc035

⁴⁹ <https://www.reuters.com/article/us-usa-drilling-offshore/alaska-becomes-latest-state-to-request-limits-on-u-s-offshore-drilling-idUSKBN1FJ2QY>

His comments reiterate that of the congressional delegation. They sent a letter to Secretary Zinke asking to keep some sales in the proposal (Chukchi Sea, Beaufort Sea, and Cook Inlet) but to remove the 11 other proposed sales in the Bering Sea and Gulf of Alaska.⁵⁰ Chukchi and Beaufort Seas have traditionally been the sites of oil and gas exploration in the past though many leases have since expired or been abandoned.⁵¹

Washington

Governor Jay Inslee formally requested that Interior Secretary Zinke remove Washington from the proposal in a February 2018 letter. In it he stated:

“On behalf of the State of Washington, I write today to formally express my opposition to the proposed oil and gas leasing off our state’s coast, and the Pacific Coast more broadly, as part of the 2019-2024 Draft Proposed National Outer Continental Shelf Oil and Gas Leasing Program issued by your department last month. Although I oppose the totality of this proposal, which exacerbates our nation’s carbon pollution at a time when we should be developing and deploying 21st century clean energy technologies, I implore you to at least exclude the waters off Washington’s coasts to protect the thousands of American workers and multi-billion dollar industries dependent on the health of our coastal economy... [O]pening the Pacific Coast to new oil and gas drilling for the first time in decades poses grave danger to our state’s unique recreation, tourism, shipping, military and fishing industries, threatening thousands of jobs and billions of dollars in revenue generated each year.”⁵²

This is not the first time that Inslee has spoken out against offshore drilling. He sent letters to Secretary Zinke in August 2017 and again in January 2018, when the proposal was first announced.

State officials say there may not be enough oil or gas off Washington’s coasts to justify offshore development, but they will be prepared to take legal action against drilling if necessary. Tribes have also come out against the proposal – leaders have said they would “assert their treaty rights, which guarantee the ability to fish and gather shellfish and native plants, which would be jeopardized by an oil spill.”⁵³

Oregon

Oregon Governor Kate Brown opposes the offshore drilling plan and in an interview with CNN, said the proposal was “unacceptable” and the “entire West Coast is outraged.”⁵⁴

Democratic Senators Ron Wyden and Jeff Merkley also publicly denounced the plan.^{55, 56} They joined four Representatives from Oregon in a letter asking Secretary Zinke for a 60-day extension on the public comment period for the plan, saying in part:

“Considering the fact that under a best-case scenario, oil and natural gas drilling would be a detriment to our traditional, sustainable economies, and under a worst-case scenario it could create an unprecedented environmental and humanitarian crisis, we believe that our stakeholders should have an appropriate amount of time to provide comment. [...] Given the incredible number of stakeholders in this process, it is critical that each one of them is given a voice so they can speak for their future.”⁵⁷

⁵⁰ *ibid.*

⁵² https://www.governor.wa.gov/sites/default/files/Gov%20Inslee%20ltr%20to%20Zinke%20re%202018%20OCS%20Offshore%20Drilling%20Proposal%20Comments%20%28002%29.pdf?utm_medium=email&utm_source=govdelivery

⁵³ <http://www.spokesman.com/stories/2018/feb/06/washington-will-fight-offshore-drilling-inslee-say/>

⁵⁴ <https://www.msn.com/en-us/health/wellness/oregon-governor-outraged-at-offshore-drilling/vp-BBldLub>

⁵⁵ <https://www.wyden.senate.gov/news/press-releases/wyden-statement-on-trump-administrations-decision-to-allow-west-coast-drilling->

⁵⁶ <https://twitter.com/SenJeffMerkley/status/949025374796738560>

⁵⁷ <https://www.merkley.senate.gov/news/press-releases/oregon-democrats-call-for-extension-to-public-comment-period-on-off-shore-drilling->

California

Along with a joint statement issued with Oregon Governor Kate Brown and Washington Governor Jay Inslee, California Governor Jerry Brown issued a [personal statement](#) regarding Trump's offshore oil and gas plans for his state:

"Donald Trump has absolutely chosen the wrong course. He's wrong on the facts. America's economy is boosted by following the Paris Agreement. He's wrong on the science. Totally wrong. California will resist this misguided and insane course of action. Trump is AWOL but California is on the field, ready for battle."

California Senators Dianne Feinstein and Kamala D. Harris, both Democrats, have also publicly spoken out against the plan.^{58, 59} The senators, along with 22 of California's representatives, additionally wrote a letter to Secretary Zinke and BOEM Acting Director Walter Cruickshank asking for more opportunities for Californians to ask questions about the new offshore drilling plan, saying in part:

"Given the geographical nature of the proposed leasing program, it is important to provide adequate access to the public meetings for each of the impacted regions. In order to afford our constituents this opportunity, we urge the Department of the Interior and the Bureau of Ocean Energy Management to add public meetings in the Northern and Southern California Draft Proposed Program Areas."

The California Coastal Commission, which reviews the state's offshore oil and gas activity, opposed Trump's plan for new drilling. Additionally, California's land commission said in February that it will refuse permits for necessary offshore oil and gas infrastructure. Other states may follow California's lead and similarly restrict drilling infrastructure permitting to make offshore drilling impossible or prohibitively expensive.⁶⁰

California Assembly Member Monique Limón sponsored a joint resolution that stated the "Legislature strongly and unequivocally supports the current federal prohibition on new oil and gas drilling in federal waters offshore California, opposes the Trump Administration's proposal to remove safety and environmental protections related to offshore drilling operations, and opposes the Trump Administration's proposed leasing plan that would expose the state to new offshore drilling. The measure would also urge the United States Secretary of the Interior to remove California from that proposed leasing plan."⁶¹

Other State Reactions to the Proposal

Maine

Governor Paul LePage is the only coastal governor not to oppose the proposal. Maine's coasts would be newly open to drilling. He has also signaled support for offshore drilling in the past. However, Maine's congressional delegation is adamantly against drilling. The legislature of Maine adopted a joint resolution to request Secretary Zinke to exclude Maine from the offshore drilling proposal. It stated that 46,319 jobs and more than \$2.4 billion of the state's GDP depend on "clean, oil-free water and beaches and abundant fish and wildlife." In response to the pressure to request an exception for Maine, Le Page's office said the governor expects "significant regions will be excluded from the final plan."⁶³

⁵⁸ <https://www.feinstein.senate.gov/public/index.cfm/press-releases?id=3172EA0D-9980-4EEC-AD79-C62636E25696>

⁵⁹ <http://www.sacbee.com/news/local/article193056924.html>

⁶⁰ <https://www.cnn.com/2018/02/08/california-gives-coastal-states-blueprint-to-block-offshore-drilling.html>

⁶¹ http://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AJR29

⁶² <https://track.govhawk.com/public/bills/1032239>

⁶³ <https://www.pressherald.com/2018/01/11/five-states-congressional-delegations-submit-bill-to-prohibit-drilling-off-new-england/>

Announcements

American Water Resources Association

2018 Annual Conference

November 4 - 8, 2018. Baltimore, MD

<http://www.awra.org/meetings/Baltimore2018/index.html>

This conference will convene water resource professionals and students from throughout the nation and will provide attendees the opportunity to learn about and engage in multi-disciplinary water resource discussions. The program will stimulate conversations on water resource management, research and education. The 2018 conference will also include locally relevant topics such as the Chesapeake Bay, the Delaware River watershed, and eastern water law as well as globally significant issues such as coastal resilience, fire effects on watersheds, communication and outreach strategies and integrated water resources.

American Meteorological Society

10th International Conference on Urban Climate/14th Symposium on the Urban Environment

August 6 - 10, 2018. New York, NY

<https://www.ametsoc.org/ams/index.cfm/meetings-events/ams-meetings/10th-international-conference-on-urban-climate-14th-symposium-on-the-urban-environment/>

This conference comes at a time when accelerated urban development is challenged by the risks and consequences of extreme weather and climate events and global socio-economic disparity. Resiliency and reduced vulnerability to all socio economic sectors have become critical elements to achieve sustainable development. The conference theme is Sustainable and Resilient Urban Environments.

AMS 29th Conference on Severe Local Storms

October 22 - 16, 2018. Stowe, VT

<https://www.ametsoc.org/ams/index.cfm/meetings-events/ams-meetings/29th-conference-on-severe-local-storms/>

This conference will feature experts on topics related to severe local storms and associated hazards of tornadoes, large hail, damaging winds, lightning, and flash floods.

AMS 99th Annual Meeting

January 6 - 10, 2019. Phoenix, AZ

<https://annual.ametsoc.org/2019>

Join fellow scientists, educators, students, and other professionals from across the weather, water, and climate community to share, learn, and collaborate. This year's theme is "Understanding and Building Resilience to Extreme Events by Being Interdisciplinary, International, and Inclusive (III)."

Geological Society of America

Annual Meeting & Exposition

November 4 - 7, 2018. Indianapolis, IN

<http://community.geosociety.org/gsa2018/home>

This annual meeting will highlight Indiana area geology as well as the wider world of geoscience research.

American Society of Civil Engineers

2018 Convention

October 12 - 15, 2018. Denver, CO

<http://2018.asceconvention.org/>

The ASCE Convention is the Society flagship membership event. The program for the Convention will be of an integrated, cross-cultural, technical, and educational nature. The following issues will be discussed: state of the industry and profession; professional development; multi-disciplinary technical, natural and man-made disasters; strategic issues/public policy; significant projects; and history and heritage.

Society of Environmental Toxicology and Chemistry

2018 Asia-Pacific Conference

September 16 - 19, 2018. Daegu, South Korea

<http://setac-ap2018.org/>

This conference is dedicated to provide highly scientific programs as well as stimulating discussion under the main theme "Data, Science, and Management Promoting Environmental Welfare." In Daegu, experts from different fields of academia, business, and regulatory communities and large student community will take a part of the conference to provide a multidisciplinary and comprehensive overview of the latest researches with advanced solutions to environmental challenges.

North America Annual Conference

November 4 - 8, 2018. Sacramento, CA

<https://sacramento.setac.org/>

This meeting will explore the link between sustainable economic development and environmental stewardship, with particular focus on ecological and societal considerations. In this context, stewardship represents the practice of transforming sustainable thinking into action. However, we are challenged to decouple the historical connection between economic growth and ecological integrity, and the resultant societal effects. This meeting offers opportunities to feature the connections between desired ecosystem goods and services, stable flourishing societies and sustainable economies.

American Society for Landscape Architects

2018 Annual Meeting

October 19 - 22, 2018. Philadelphia, PA

<https://www.asla.org/annualmeetingandexpo.aspx>

The ASLA annual meeting will feature a diverse spectrum of industry experts providing perspectives on a wide range of subjects, from sustainable design to active living to best practices and new technologies. More than 130 education sessions, field sessions and workshops will be presented during the meeting.

American Geophysical Union

Fall Meeting

December 10 - 14, 2018. Washington, DC

<https://fallmeeting.agu.org/2018/>

The AGU 2018 Fall Meeting provides an opportunity to share science with world leaders in Washington, DC. As the largest Earth and space science gathering in the world, the Fall Meeting places participants in the center of a global community of scientists drawn from myriad fields of study whose work protects the health and welfare of people worldwide, spurs innovation, and informs decisions that are critical to the sustainability of the Earth.

Geoscience and Society Summit

March 18 - 21, 2019. Stockholm, Sweden

<https://connect.agu.org/gss/home>

The Summit aims to create a highly interactive forum for effective cooperation between scientists and users of scientific information to tackle global and local challenges around sustainability of natural resources and systems, global health, and resilience.

Renewable Natural Resources Foundation

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