From Preparedness to Action

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Indiana University Environmental Resilience Institute

October 23, 2018

Grand Challenge
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1

2

Terre Haute, Indiana 2015

South Bend, Indiana 2018

3

Corn! Indiana State Department of Agriculture 2012

4

Mile a Minute Weed

Milkweed and Monarchs

5

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Armadillos slink their way into Indiana

@ap Published 4:13 p.m. ET June 7, 2014 | Updated 7:24 p.m. ET June 7, 2014

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(Photo: Silvia Izquierdo/AP)

EVANSVILLE, Ind. — Wildlife experts who once scoffed at reports that armadillos had added Indiana to their range say periodic sightings of the armored mammals common in the South are continuing in the state as some of the critters apparently roam ever-farther northward.

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Prepared for Environmental Change Grand Challenge

The overarching goal of the Prepared for Environmental Change Grand Challenges initiative is to foster Indiana's resilience as our world confronts environmental change, by providing accurate information that will enable policies to minimize adverse impact while creating opportunity.

GRAND CHALLENGES PROGRAM

Environmental Resilience Institute

Defining Resilience

Being resilient means we will be able to deal with change in ways that equitably protect the health, welfare and economic vitality of our human and ecological communities.

Being resilient is not about running away from our way of life or waiting for the worst to happen, but growing toward stronger, cleaner, healthier, safer and more vibrant communities.

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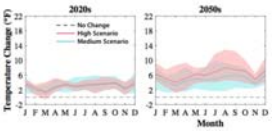
Environmental Resilience Institute

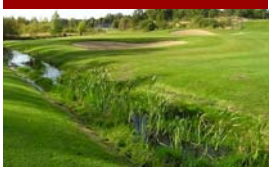
Established to host interdisciplinary researchers in environmental change across IU to provide:

Accurate Predictions



Indiana Climate Change Impacts Assessment

Feasible Solutions



Effective Communication

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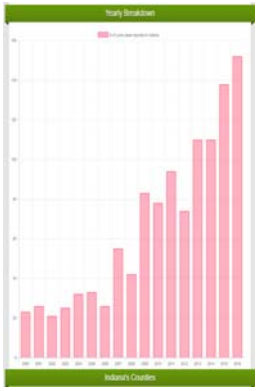
Project Vector Shield

IU bug-borne disease monitoring project finds deer ticks on the rise in Indiana

FOR IMMEDIATE RELEASE | May 24, 2018

BLOOMINGTON, Ind. -- A new environmental monitoring project at Indiana University has found increased numbers of the ticks that carry Lyme disease in Southern Indiana.



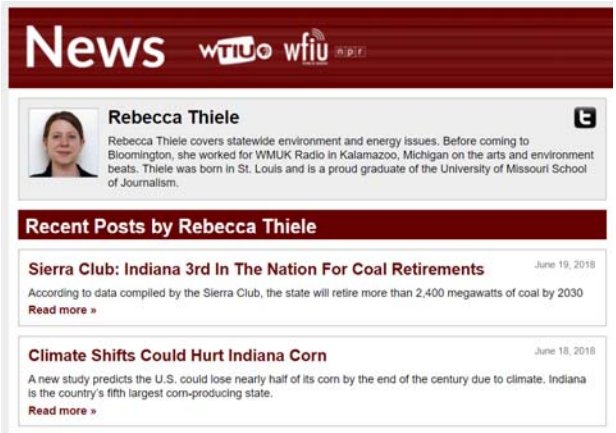
Source: tickcheck.com

Greening the Pleasant Run Waterway

IU scientists are working with the local community to pioneer a new model for water re-use in Pleasant Run Creek.

The goal is to provide resiliency in fresh water supply and quality, reduced flooding risk, enhanced carbon sequestration, an improved wildlife corridor, and economic and neighborhood revitalization.

Effective Communication



News WTIU wfiu n.p.r.

Rebecca Thiele

Rebecca Thiele covers statewide environment and energy issues. Before coming to Bloomington, she worked for WMUK Radio in Kalamazoo, Michigan on the arts and environment beats. Thiele was born in St. Louis and is a proud graduate of the University of Missouri School of Journalism.

Recent Posts by Rebecca Thiele

Sierra Club: Indiana 3rd In The Nation For Coal Retirements June 19, 2018

According to data compiled by the Sierra Club, the state will retire more than 2,400 megawatts of coal by 2030

Read more »

Climate Shifts Could Hurt Indiana Corn June 18, 2018

A new study predicts the U.S. could lose nearly half of its corn by the end of the century due to climate. Indiana is the country's fifth largest corn-producing state.

Read more »

https://indianapublicmedia.org/news/author/rthiele/

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INDIANA ENVIRONMENTAL REPORTER

Your planet. Your state.
Your backyard.

We're dedicated to unearthing stories about the environment in Indiana and in your backyard. Sign up now for weekly updates.

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Tools for Indiana Communities and Businesses

- Environmental Resilience Institute Toolkit (ERIT)
- Hoosier Resilience Index
- Prepared for Environmental Change Webinar Series
- Sustainability Externship Program
- 2019 City Resilience Cohort
- General assistance for cities

Environmental Resilience Institute Toolkit

- Geographically tailored information
- Search for resources on topics that interest you
- Stories direct from cities and towns
- Information, tools and resources that focus on Indiana, the Midwest, and on small and mid-size communities

https://eri.iu.edu/ERIT
https://grandchallenges.iu.edu/index.html

ERIT Case Studies

Gary, Indiana Installs Green Infrastructure to Revitalize Blighted Areas, Manage Stormwater

Indianapolis, Indiana Converts Streetlamps to LED

South Bend, Indiana Uses Smart Sewer Technology to Monitor and Manage Increased Water Levels

Tools for Indiana Communities

Hoosier Resilience Index

What are the specific environmental threats to Hoosier communities?

- Hotter summers
- More flooding
- Changes in precipitation patterns

How resilient are we? Where should we focus?

- Infrastructure
- Planning
- Public education
- Policies

Prepared for Environmental Change Webinar Series

September 20, 12-1PM:	Environmental Changes Expected in Indiana (Recording available on website)
October 9, 12-1PM:	Planning for More Frequent River Flooding (Recording available on website)
November 13, 12-1PM:	Identifying Your Communities Vulnerabilities to Environmental Change

Eri.iu.edu/prepare/webinars.html

ISDP Sustainability Externship Program

- Expand your capacity with a student extern, who could join your team for 10 weeks in summer 2019 to work on a sustainability project.

Externs have helped:
--Cummins
--Keramida
--US Green Building Council
--and many more….

Applications Due
December 14, 2018

Learn More
Visit https://sustain.iu.edu/research/ISDP/index.html

INDIANA UNIVERSITY

We can be resilient!

INDIANA UNIVERSITY

Indiana Businesses and Sustainability

Cummins Goes Electric

Meadowlake Wind Farm

Aardvark Paper Drinking Straws

Battery Innovation Center, Newberry IN

Questions?

Thank you.

eri.iu.edu

Hoosier Resilience Hotline: 833-ERI-ATIU (374-2848)

eri@iu.edu

jgmccabe@iu.edu

317-902-3610

Climate Change and Indiana

Implications for Hoosiers and the Current Legal Landscape

Presented to the Indiana Chamber of Commerce
2018 Environmental Conference
Donald M. Snemis
Freedom S.N. Smith
October 23, 2018

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Climate Change Science

- Many scientists claim that anthropogenic (man-made) climate change has or will cause:
  - Sea level rise
  - Warmer water temperatures
  - More intense weather events such as flood, drought, tornados and hurricanes

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Climate Change Science (cont.)

- Others question the science, believe the effects are overstated, doubt that climate change is related to human activity, or point out that the United States' contribution to climate change is minimal compared to countries like China and India.

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Climate Change Science (cont.)

- Regardless of the debate, climate change theory is having a significant impact upon industry, and good risk management requires industry to understand and anticipate the current and future impacts of climate change.

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Climate Change Litigation

Increasingly, politicians and climate change activists are using the courts to achieve political goals

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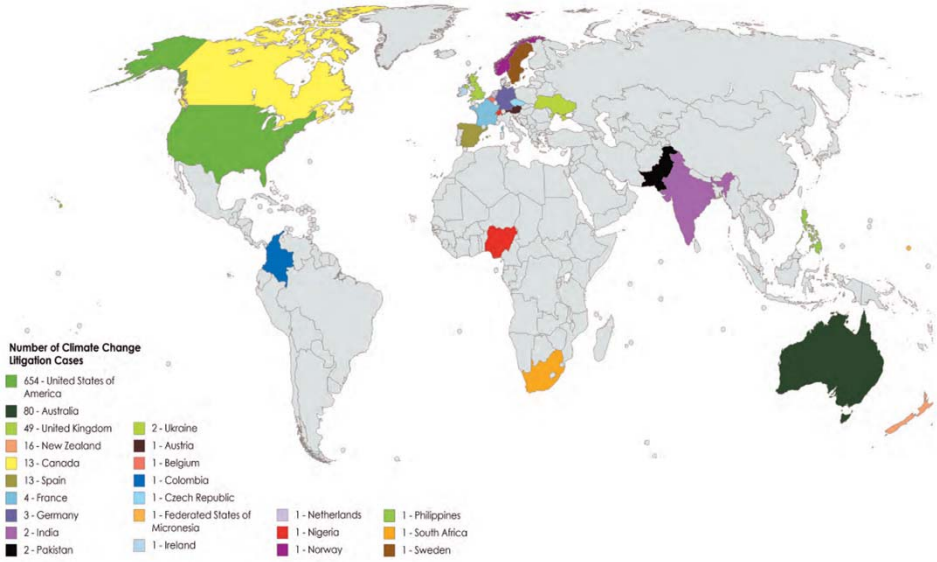

United Nations Environment Programme (UN Environment), The Status of Climate Change Litigation, May 2017.

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Trends in Climate Change Litigation

Climate Change Litigation: The Five Trends		
	1	Holding governments to their legislative and policy commitments
	2	Linking the impacts of resource extraction to climate change and resilience
	3	Establishing that particular emissions are the proximate cause of particular adverse climate change impacts
	4	Establishing liability for failures (or efforts) to adapt to climate change
	5	Applying the public trust doctrine to climate change.

United Nations Environment Programme (UN Environment), The Status of Climate Change Litigation, May 2017.

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Lawsuits Against EPA

States, local governments, and environmental groups have filed numerous lawsuits against the EPA seeking to require regulations pertaining to climate change

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Lawsuits Against EPA

Massachusetts v. EPA (U.S. 2007)

– §202(a) of the Clean Air Act authorizes EPA to regulate greenhouse gas emissions from new motor vehicles <u>if</u> it determines that such emissions contribute to climate change.

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Lawsuits Against EPA (cont.)

- *Utility Air Regulatory Group v. EPA* (U.S. 2014)
  – EPA determined that its GHG emissions standards for motor vehicles subjected stationary sources to the Prevention of Significant Deterioration (PSD) program and Title V permitting requirements due to their potential to emit GHGs.

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Lawsuits Against EPA (cont.)

- *Utility Air Regulatory Group (cont.)*
  - Holding: EPA had no authority to require PSD and Title V permitting for stationary sources based solely on GHG emissions
  - Holding: EPA could treat GHGs as a pollutant for purposes of sources that need permits based on conventional pollutants anyway

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Lawsuits Against EPA (cont.)

- *Conservation Law Foundation v. EPA* (D. Mass. 2013)
  - Environmental groups sued EPA under the CWA for approving Massachusetts' Total Maximum Daily Loads (TMDLs) establishing how much pollution a body of water could receive without negative consequences
  - Claims were based in part on EPA's failure to consider climate change
  - Held: the groups lacked standing because they failed to show any link between the TMDLs and climate change-related injuries or pollution levels

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NEPA

- NEPA requires all agencies of the federal government to assess the environmental impact of all major federal actions that significantly affect the quality of the human environment
- Environmental groups are bringing lawsuits asserting violations of NEPA for failure to consider climate change

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NEPA (cont.)

- *WildEarth Guardians v. BLM* (10th Cir. 2017)
  - BLM and US Forest Service approved coal leases in Wyoming's Powder River Basin
  - Environmental group sued because the Environmental Impact Statement (EIS) insufficiently considered the impact of CO_2 emissions on climate change
  - Held: the EIS was insufficient and BLM must revise it, but the leases stand

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Endangered Species Act

- The ESA provides that no federal agency can take an action to jeopardize a listed species, and no one can "take" member of a listed species
- Many climate change scientists believe that climate change will have an impact on animal and plant habitat and life cycles
- Environmental groups are basing ESA lawsuits on the effects of climate change

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Endangered Species Act (cont.)

- *Turtle Island Restoration Network v. US DOC* (9th Cir. 2017)
  - Turtle Island challenged a decision of the National Marine Fisheries Service (NMFS) to allow a Hawaiian fishery to increase its fishing efforts because it would result in the unintentional deaths of sea turtles
  - Partially based on NMFS' failure to consider the impacts of global climate change
  - Held: NMFS reasonably concluded that existing climate change data is too indeterminate

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RCRA/CWA Citizens Suits

Environmental groups are using the citizens suits provisions of RCRA and the CWA to challenge compliance based on inadequate preparation for climate changes

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RCRA/CWA Citizens Suits (cont.)

- *Conservation Law Foundation v. ExxonMobil* (D. Mass. 2017)
  - CLF alleged that Exxon's terminal and WWTP are not properly designed to address climate change-related events such as storms, storm surge, flooding, sea level rise, increasing ocean temperatures and hurricanes
  - CLF also alleged that Exxon's Stormwater Pollution Prevention Plan (SWPPP), Spill Prevention, Control and Countermeasures plan (SPCC) and Facility Response Plan (FRP) were insufficient

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RCRA/CWA Citizens Suits (cont.)

- *Conservation Law Foundation* (cont.)
  - CLF cited Exxon's website, which admitted that "the risk of climate change is clear and the risk warrants action."
  - CLF also cited papers issued by Exxon scientists and admissions related to climate change made by Exxon in other lawsuits

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RCRA/CWA Citizens Suits (cont.)

- *Conservation Law Foundation* (cont.)
  - CLF's requested relief is vague, but it will likely push for major infrastructure changes and revisions to the SWPPP, SPCC, and FRP
  - Early court order indicated that CLF could support its claim with climate change events likely to occur in the near future while the permit is in effect, but not in the distant future

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Common Law Claims

States, cities and special interest groups have attempted to base claims for climate change-related injuries on federal and state common law theories like nuisance and trespass

43

Common Law Claims (cont.)

- *AEP et al. v. Connecticut* (U.S. 2011)
  - New York City, 8 states, and 3 nonprofits sued multiple electric power companies for climate change-related injuries
  - Plaintiffs cited federal and state common law claims for nuisance
  - Unanimously, the U.S. Supreme Court held that the CAA displaces federal common law claims
  - The Court left open the question of whether such claims could be brought under state law

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Common Law Claims (cont.)

- *City of New York v. BP et al.* (S.D. N.Y. 2018)
  - New York City sued multiple oil and gas companies for climate change-related damages caused by the production, marketing, distribution and sale of fossil fuels
  - Court cites American Petroleum Institute reports to show that the Defendants were aware of a scientific consensus on climate change caused by increasing CO_2 levels from fossil fuels

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Common Law Claims (cont.)

- *City of New York* (cont.)
  - Held: the Clean Air Act displaced the city's claims for nuisance and trespass
  - Held: claims for worldwide activities interfere with separation of powers and foreign policy
- "Global warming and solutions thereto must be addressed by the two other branches of government."

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Common Law Claims (cont.)

- *Oakland v. BP et al.* (N.D. Cal. 2018)
  - Nuisance lawsuit brought by Oakland against BP and the other major producers of fossil fuels
  - Removed to federal court by the defendants
  - Held: federal common law applies but the CAA did not displace the claims because they are based on the production and sale of fossil fuels, not combustion
  - Held: defendants' activities in California too limited to exercise personal jurisdiction

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Common Law Claims (cont.)

- *County of San Mateo v. Chevron et al.* (N.D. Cal. 2018)
  - Another case by a local government against gas and oil companies
  - Initially removed to federal court, but then remanded back to state court
  - Held: San Mateo can proceed under state common law theories, which were not preempted by federal environmental laws

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Common Law Claims (cont.)

- *King County, Washington v. BP et al.* (W.D. Wash. 2018)
  - King County sues major oil and gas companies on common law claims of nuisance and trespass
  - Compares this case to the lawsuits against "Big Tobacco"
  - Seeks compensatory damages and an order requiring defendants to fund "an abatement program to build infrastructure and finance programs that are urgently needed to project human safety and public and private property in King County"

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Common Law Claims (cont.)

- *King County (cont.)*
  - The complaint is tailored to try to avoid many of the bases for dismissal of similar prior complaints
    - Stays away from air emissions issues
    - Focused only on the effects in Kings County
    - States that federal lands are not included
    - Denies any connection to foreign policy

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Common Law Claims (cont.)

- *King County (cont.)*
  - Indiana AG's office filed an amicus brief in support of defendants' motion to dismiss, arguing that the claims are non-justiciable and that federal common law has been displaced
  - "Federal courts should not use public nuisance and trespass theories to confound state and federal political branches' legislative and administrative processes."
  - "The list of potential defendants is limitless"

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Children's Suits

- *Juliana v. U.S.* (D. Oregon 2016)
  - 21 minors too young to vote alleged that the US is violating their Constitutional rights by failing to stop the burning of fossil fuels
  - United States' motion to dismiss (political question, justiciability, standing, lack of identifiable due process concerns, public trust doctrine defects) denied
  - In 2018, the 9th Circuit declined to interfere

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Ranchers Cattlemen Action Legal Fund v. United States Department of Agriculture (U.S. D.S.D. 2007)

- Plaintiffs challenged USDA's Rural Utility Service's regulations relaxing restrictions on import of live cattle.
- The complaint primarily focused on increased risks posed by bovine spongiform encephalopathy, but also asserted a claim under the National Environmental Policy Act, in which the plaintiffs alleged that the environmental assessment should have analyzed increased emissions of greenhouse gases from transport and importation of cattle.
- Court did not address the NEPA issues as it found for Plaintiffs on their first claim, i.e. hat the USDA failed to comply with the APA in promulgating the beef provisions of the rule.

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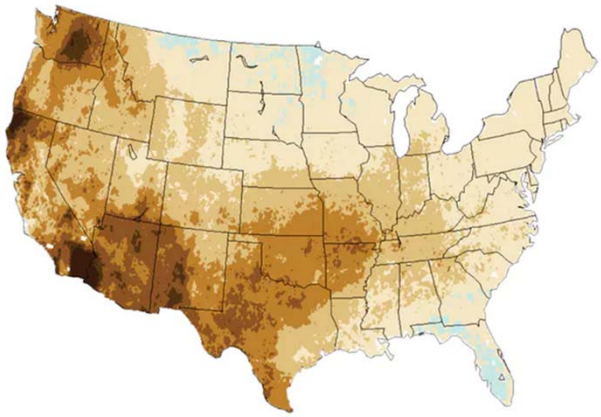

HTTP://THECONVERSATION.COM/CROP-INSURANCE-IS-GOOD-FOR-FARMERS-BUT-NOT-ALWAYS-FOR-THE-ENVIRONMENT-96841

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EPA Requirements

- The Environmental Protection Agency began requiring large emitters of greenhouse gases to report data on greenhouse gas emissions as of January 1, 2010.
  - **Mandatory Reporting of Greenhouse Gases**, Docket No. EPA-HQ-OAR-2008-0508, **74 FR 56260** (Oct. 30, 2009).
  - TITLE 40--Protection of Environment
    - CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY
    - SUBCHAPTER C--AIR PROGRAMS
    - PART 98--MANDATORY GREENHOUSE GAS REPORTING

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General Disclosure Considerations

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Securities Exchange Act of 1934

- Companies are required to disclose information that would be material to investors.
- **What is a Material?:**
  - "[A] fact is material if there is a substantial likelihood that the disclosure of the omitted fact would have been viewed by a reasonable investor as having significantly altered the "total mix" of information made available." *TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438, 450 (1976)
  - Any determination as to whether information is "material" is "inherently fact-specific." *Basic Inc. v. Levinson*, 485 U.S. 224, 236 (1988)"
  - It is changing or evolving.

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Dodd-Frank Act of 2010

2010 Act §§1502, 1503, and 1504 required the SEC to adopt rules regulating:

- Conflict minerals,
- Health and safety violations at mining-related facilities, and
- Payments to governments for the commercial development of oil, natural gas, or minerals, respectively

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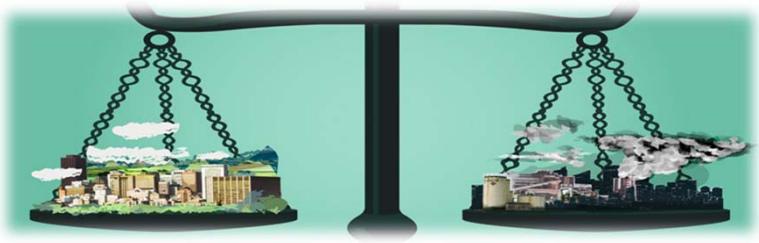
Sample SEC Disclosures



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Example 1: Excerpt of Boilerplate Disclosures from Company A

Other Items

The amount of insurance covering physical damage to our property and liability related to negative environmental effects resulting from a sudden and accidental pollution event, excluding Atlantic Named Windstorm coverage for which we are self insured, varies by asset, based on the asset's estimated replacement value or the estimated maximum loss.

Risk Factors

Climate change initiatives may result in significant operational changes and expenditures, reduced demand for our products and adversely affect our business. We recognize that climate change is a global environmental concern. Continuing political and social attention to the issue of climate change has resulted in both existing and pending international agreements and national, regional or local legislation and regulatory measures to limit greenhouse gas emissions. These agreements and measures may require significant equipment modifications, operational changes, taxes, or purchase of emission credits to reduce emission of greenhouse gases from our operations, which may result in substantial capital expenditures and compliance, operating, maintenance and remediation costs. In addition, our production is used to produce petroleum fuels, which through normal customer use may result in the emission of greenhouse gases. Regulatory initiatives to reduce the use of these fuels may reduce demand for crude oil and other hydrocarbons and have an adverse effect on our sales volumes, revenues and margins. The imposition and enforcement of stringent greenhouse gas emissions reduction targets could severely and adversely impact the oil and gas industry and significantly reduce the value of our business.

Management's Discussion and Analysis of Financial Condition and Results of Operations

We recognize that climate change is a global environmental concern. We assess, monitor and take measures to reduce our carbon footprint at existing and planned operations. We are committed to complying with all Greenhouse Gas (GHG) emissions mandates and the responsible management of GHG emissions at our facilities.

Source: Securities and Exchange Commission. | GAO-18-188

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Example 2: Excerpts of More Detailed Climate-Related Disclosures, Including Metrics, from Company B – Page 1

Risk Factors

We expect to continue to incur substantial capital expenditures and operating costs as a result of our compliance with existing and future environmental laws and regulations. Likewise, future environmental laws and regulations, such as limitations on greenhouse gas emissions, may impact or limit our current business plans and reduce demand for our products.

Our businesses are subject to numerous laws and regulations relating to the protection of the environment. These laws and regulations continue to increase in both number and complexity and affect our operations with respect to, among other things:

- The discharge of pollutants into the environment.
- Emissions into the atmosphere, such as nitrogen oxides, sulfur dioxide, mercury and greenhouse gas emissions.
- Carbon taxes.
- The handling, use, storage, transportation, disposal and cleanup of hazardous materials and hazardous and nonhazardous wastes.
- The dismantlement, abandonment and restoration of our properties and facilities at the end of their useful lives.
- Exploration and production activities in certain areas, such as offshore environments, arctic fields, oil sands reservoirs and tight oil plays.

We have incurred and will continue to incur substantial capital, operating and maintenance, and remediation expenditures as a result of these laws and regulations. To the extent these expenditures, as with all costs, are not ultimately reflected in the prices of our products and services, our business, financial condition, results of operations and cash flows in future periods could be materially adversely affected.

Although our business operations are designed and operated to accommodate expected climatic conditions, to the extent there are significant changes in the Earth's climate, such as more severe or frequent weather conditions in the markets we serve or the areas where our assets reside, we could incur increased expenses, our operations could be materially impacted, and demand for our products could fall. Demand for our products may also be adversely affected by conservation plans and efforts undertaken in response to global climate change, including plans developed in connection with the recent Paris climate conference in December 2015. Many governments also provide, or may in the future provide, tax advantages and other subsidies to support the use and development of alternative energy technologies.

Source: Securities and Exchange Commission. | GAO-18-188

Management's Discussion and Analysis of Financial Condition and Results of Operations

Climate Change

There has been a broad range of proposed or promulgated state, national and international laws focusing on greenhouse gas (GHG) reduction. These proposed or promulgated laws apply or could apply in countries where we have interests or may have interests in the future. Laws in this field continue to evolve, and while it is not possible to accurately estimate either a timetable for implementation or our future compliance costs relating to implementation, such laws, if enacted, could have a material impact on our results of operations and financial condition. Examples of legislation or precursors for possible regulation that do or could affect our operations include:

- European Emissions Trading Scheme (ETS), the program through which many of the European Union (EU) member states are implementing the Kyoto Protocol. Our cost of compliance with the EU ETS in 2015 was approximately $0.4 million (net share pre-tax).
- In Canada during 2015, the Alberta government amended the regulations of the Climate Change and Emissions Act. The regulations now require any existing facility with emissions equal to or greater than 100,000 metric tonnes of carbon dioxide or equivalent per year to reduce its net emissions intensity from its baseline. The reduction is increasing from the current 12 percent in 2015, to 15 percent in 2016 and to 20 percent in 2017. We also incur a carbon tax for emissions from fossil fuel combustion in our British Columbia operations. The total cost of compliance with these regulations in 2015 was approximately $4.7 million.
- The U.S. Supreme Court decision in Massachusetts v. EPA, 549 U.S. 497, 127 S.Ct. 1438 (2007), confirming that the EPA has the authority to regulate carbon dioxide as an "air pollutant" under the Federal Clean Air Act.
- The U.S. EPA's announcement on March 29, 2010 (published as "Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs," 75 Fed. Reg. 17004 (April 2, 2010)), and the EPA's and U.S. Department of Transportation's joint promulgation of a Final Rule on April 1, 2010, that triggers regulation of GHGs under the Clean Air Act, may trigger more climate based claims for damages, and may result in longer agency review time for development projects.
- The U.S. EPA's announcement on January 14, 2015, outlining a series of steps it plans to take to address methane and smog-forming volatile organic compound emissions from the oil and gas industry. The current U.S. administration has established a goal of reducing the 2012 levels in methane emissions from the oil and gas industry by 40 to 45 percent by 2025.
- Carbon taxes in certain jurisdictions. Our cost of compliance with Norwegian carbon tax legislation in 2015 was approximately $31 million (net share pre-tax).
- The agreement reached in Paris in December 2015 at the 21st Conference of the Parties to the United Nations Framework on Climate Change, setting out a new process for achieving global emission reductions.

Source: Securities and Exchange Commission. | GAO-18-188

In the United States, some additional form of regulation may be forthcoming in the future at the federal and state levels with respect to GHG emissions. Such regulation could take any of several forms that may result in the creation of additional costs in the form of taxes, the restriction of output, investments of capital to maintain compliance with laws and regulations, or required acquisition or trading of emission allowances. We are working to continuously improve operational and energy efficiency through resource and energy conservation throughout our operations.

Compliance with changes in laws and regulations that create a GHG emission trading scheme or GHG reduction policies could significantly increase our costs, reduce demand for fossil energy derived products, impact the cost and availability of capital and increase our exposure to litigation. Such laws and regulations could also increase demand for less carbon intensive energy sources, including natural gas. The ultimate impact on our financial performance, either positive or negative, will depend on a number of factors, including but not limited to:

- Whether and to what extent legislation or regulation is enacted.
- The timing of the introduction of such legislation or regulation.
- The nature of the legislation (such as a cap and trade system or a tax on emissions) or regulation.
- The price placed on GHG emissions (either by the market or through a tax).
- The GHG reductions required.
- The price and availability of offsets.
- The amount and allocation of allowances.
- Technological and scientific developments leading to new products or services.
- Any potential significant physical effects of climate change (such as increased severe weather events, changes in sea levels and changes in temperature).
- Whether, and the extent to which, increased compliance costs are ultimately reflected in the prices of our products and services.

The company has responded by putting in place a corporate Climate Change Action Plan, together with individual business unit climate change management plans in order to undertake actions in four major areas:

- Equipping the company for a low emission world, for example by integrating GHG forecasting and reporting into company procedures; utilizing GHG pricing in planning economics; developing systems to handle GHG market transactions.
- Reducing GHG emissions—In 2014, the company reduced or avoided GHG emissions by approximately 900,000 metric tonnes by carrying out a range of programs across a number of business units.
- Evaluating business opportunities such as the creation of offsets and allowances; carbon capture and storage; the use of low carbon energy and the development of low carbon technologies.
- Engaging externally—The company is a sponsor of MIT's Joint Program on the Science and Policy of Global Change; constructively engages in the development of climate change legislation and regulation; and discloses our progress and performance through the Carbon Disclosure Project and the Dow Jones Sustainability Index.

The company uses an estimated market cost of GHG emissions in the range of $8 to $35 per tonne depending on the timing and country or region to evaluate future opportunities.

Source: Securities and Exchange Commission. | GAO-18-188

SEC Climate Change Disclosure Guidance

Source: GAO. | www.gao.gov

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SEC 2010 Climate Change Guidance

- The SEC issued the *Commission Guidance Regarding Disclosure Related to Climate Change* in 2010
  - https://www.sec.gov/rules/interp/2010/33-9106.pdf
- Addressed existing disclosure requirements under **Regulation S-K** (17 C.F.R. §229) and **Regulation S-X** (17 C.F.R. §210)

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SEC 2010 Guidance Requirements

- Companies should inform investors about the risks they face from climate change, including lawsuits, business problems, regulatory supervision, or international treaties.
  - the impacts of legislation and regulation related to climate change;
  - the impacts of international accords related to climate change;
  - the indirect consequences of regulation or business trends related to climate change; and
  - the physical impacts of climate change.
    - severe weather, rising sea levels, **loss of farmland**, and the declining availability and quality of water
    - **SEC Release No. 33-9106**, at pp. 22–27.

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2016 SEC Concept Release

- **April 2016:** SEC issued a "Concept Release" ("2016 Release") soliciting public input on modernizing the disclosure requirements in Regulation S-K. *U.S. SEC, Business and Financial Disclosure Required by Regulation S-K, 81 Fed. Reg. 23915; Release No. 33-10064; 34-77599; File No. S7-06-16 (Apr. 13, 2016).*
  - At Section IV(F) of the 2016 Release, "Disclosure of Information Relating to Public Policy and Sustainability Matters," the SEC identified and solicited public comment on ESG eight topics relevant to a future rulemaking.
  - Specifically, the SEC is exploring "which, if any, ***sustainability and public policy disclosures*** are important to an understanding of a registrant's business and financial condition and whether there are other considerations that make these disclosures important to investment voting and investment decisions.

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SEC 2018 GAO Study

- In 2018 the Governmental Accountability Office (GAO) was asked to review
  1. Steps SEC has taken to clarify to companies their disclosure requirements for climate-related risks,
  2. Steps SEC has taken to examine changes companies may have made to their climate-related disclosures since the release of its 2010 Guidance, and
  3. Constraints SEC faces when reviewing climate-related disclosures and stakeholders' views of those disclosures.

https://www.gao.gov/products/GAO-18-188

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SEC GAO Study Findings

- The SEC faces constraints in reviewing climate-related and other disclosures because it primarily relies on information that companies provide.
  - Companies report similar climate-related disclosures in different sections of the filings and in different ways.
- Additional disclosure requirements, or increased scrutiny of climate-related information, could have mission and resource implications for SEC's Division of Corporation Finance.
- Industry associations consider the current climate-related disclosure requirements adequate.
  - Some investor groups/asset management firms disagree
  - Investors have not agreed on the priority of climate-related disclosures.

https://www.gao.gov/products/GAO-18-188

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Disclosure Investigations and Lawsuits

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State AG Investigations of Exxon

- In 2015, the New York AG subpoenaed Exxon and its auditors (PWC) for documents pertaining to Exxon's historical knowledge of climate change
- In 2016, the Massachusetts AG did the same
- The AGs were purportedly investigating whether Exxon misled investors

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State AG Investigations of Exxon (cont.)

- NY AG Schneiderman attended a 2016 AGs United for Clean Power conference and said that its purpose was to *"com[e] up with creative ways to enforce laws being flouted by the fossil fuel industry and their allies … ."*
- Also at the conference, Exxon was compared to Big Tobacco

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State AG Investigations of Exxon (cont.)

- ***Exxon v. Attorney General*** **(Mass. 2017)**
  - Exxon challenged the Massachusetts AG's information request and moved to disqualify her due to bias
  - The AG's investigation was based in part on alleged violations of consumer protection and securities laws
  - Massachusetts courts denied Exxon's petition and affirmed the AG's right to investigate
  - Exxon filed a petition for cert. to the US SC

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State AG Investigations of Exxon (cont.)

- ***Exxon v. Schneiderman*** **(S.D. N.Y. 2018)**
  - Exxon sued the New York and Massachusetts AGs to stop the investigations on Constitutional grounds
  - Started in Texas, but transferred to NY
  - Exxon's complaint dismissed
  - On appeal to the 2nd Circuit

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SEC Investigation of Exxon (2016 – 2018)

- Starting in 2016, SEC investigated ExxonMobil's climate change disclosures
  - The SEC asked Exxon Mobil and its accounting firm PricewaterhouseCoopers LLP for documents relating to its practice of not writing down assets amid fluctuating oil prices, as well as the company's calculation of future compliance costs related to climate change regulations.
  - The SEC's investigation also explored how the company was accounting for future costs to come into compliance with federal GHG regulations.

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SEC Investigation of Exxon (cont.)

- The company turned over 4.2 million pages of documents to the SEC
- The probe related in part to ExxonMobil's calculation of future compliance costs related to climate change/GHG regulations
- SEC ended the probe without charges in August 2018

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In dismissing the New York lawsuit on 7/19/2018, Federal judge John Keenan stated:

"Climate change is a fact of life, **as is not contested by Defendants** . But the serious problems caused thereby are not for the judiciary to ameliorate. **Global warming and solutions thereto must be addressed by the two other branches** of government."

https://www.sdnyblog.com/files/2018/07/18-Civ.-00182-Order.pdf.

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Shareholder and Public Actions

- Globally, investors and shareholders have raised concerns about the lack of forward-looking assessments of climate related issues.
- They are seeking to tackle this issue in many ways, from lawsuits to finding other ways to force disclosures.

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Ramirez v. Exxon Mobil Corp.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

PEDRO RAMIREZ, JR., Individually and on Behalf of All Others Similarly Situated,	§	Case No. 3:16-cv-3111
	§	CLASS ACTION
Plaintiff,	§	
	§	COMPLAINT FOR VIOLATIONS OF THE FEDERAL SECURITIES LAWS
vs.	§	
EXXON MOBIL CORPORATION, REX W. TILLERSON, ANDREW P. SWIGER and JEFFREY J. WOODBURY,	§	
Defendants.	§	
	§	DEMAND FOR JURY TRIAL

11/07/2016: Exxon Investor Filed Securities Class Action for Failure to Disclose Climate Risks.

8/14/2018: Motion to dismiss denied

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Global CEOs call for greater disclosure of climate risks and opportunities

Image: REUTERS/Andrew Winni

21 Apr 2017

Emily Farnworth
Head of Climate Change, World

inside climate news

A Pulitzer Prize-winning, non-profit, non-partisan news organization dedicated to covering climate change, energy and the environment.

Exxon Shareholders Approve Climate Resolution: 62% Vote for Disclosure

The landmark investor vote defied Exxon's management. It requires the oil giant to begin reporting climate-related risks to its business.

BY MARIANNE LAVELLE Follow @mlavelles

MAY 31, 2017

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https://corporate.exxonmobil.com/en/current-issues/climate-policy/climate-perspectives/our-position

Our position on climate change

We have the same concerns as people everywhere – and that is how to provide the world with the energy it needs while reducing greenhouse gas emissions.

The risk of climate change is clear and the risk warrants action. Increasing carbon emissions in the atmosphere are having a warming effect. There is a broad scientific and policy consensus that action must be taken to further quantify and assess the risks.

ExxonMobil is taking action by reducing greenhouse gas emissions in its operations, helping consumers reduce their emissions, supporting research that leads to technology breakthroughs and participating in constructive dialogue on policy options.

Addressing climate change, providing economic opportunity and lifting billions out of poverty are complex and interrelated issues requiring complex solutions. There is a consensus that comprehensive strategies are needed to respond to these risks.

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What's Next?

- Counsel for ConocoPhillips Co. said in a July 10, 2018 memo to its corporate clients that:
  - Public companies should scrutinize their statements and public disclosures related to the effect "climate change may have on their operations."
  - State attorneys general use "allegedly inadequate disclosures" as a basis to begin investigations.

http://src.bna.com/Aru

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What's Next? (cont.)

- Counsel for ConocoPhillips Co. said in a July 10, 2018 memo to its corporate clients that:
  - "Although the litigation brought so far has centered on the oil and gas industry, the underlying legal theories could extend to many other industries."
    - "Public nuisance" claims "could be leveled against any company whose operations or products allegedly contribute to global warming . . . ."
  - "The business community as a whole needs to view this development as a potential threat and take appropriate steps to combat it."

http://src.bna.com/Aru

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Environmental / Sustainability Reporting

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Environmental, Social, and Governance ("ESG") (aka, sustainability) Reporting

Issues frequently bundled under the ESG umbrella are:

- **Environmental:** performance, compliance history, and liability exposure, (e.g., infractions, releases, safety incidents), the use of renewable and/or non-renewable energy, greenhouse gas emissions and/or intensity (aka, carbon footprint ***or issues related to climate change***), and ***water use***;
- **Social:** employee-related matters, such as gender equality and diversity, implementation of international labor standards, ***supply chain management***, human rights, and engagement with local communities; and
- **Governance:** anticorruption and bribery issues, political contributions, and the composition and roles of boards of directors.

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ESG Reports

- Most companies voluntarily publish ESG reports
  - In 2015, 81% of U.S. corporations on the S&P 500 Index reported on sustainability, up from merely 20% in 2011. Louis D. Coppola, Flash Report: Eighty One Percent (81%) of the S&P 500 Index Companies Published Corporate Sustainability Reports in 2015, GOVERNANCE & ACCOUNTABILITY INSTITUTE, March 15, 2016, available here.
- The Global Reporting Initiative (GRI) is the most widely used voluntary reporting framework, far exceeding the use of national standards and other guidelines.
  - Of the largest 250 companies, 82% use GRI.

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ESG Reports

- Foreign governments increasingly regulate ESG disclosures
  - France was the first country to require that investors and banks disclose how they are managing climate change, in addition to all companies on the stock exchange.
  - The EU passed a law effective in 2017 that requires its biggest companies to include sustainability factors as part of their annual financial report. These "public interest companies" must:
    - Report on environmental, social and employee-related, human rights, anti-corruption and bribery matters
    - Describe their business model, outcomes and risks of their policies regarding these topics, as well as their diversity policy for management and supervisors.

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New York City Sues Five Largest Fossil Fuel Companies for Climate Change Damages.

- The City alleged that the defendants “produced, marketed, and sold massive quantities of fossil fuels” despite knowing for many years that the use of fossil fuels caused emissions of greenhouse gas emissions that would accumulate and remain in the atmosphere for centuries, causing “grave harm.”

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1. This lawsuit is based upon the fundamental principle that a corporation that makes a product causing severe harm when used exactly as intended should shoulder the costs of abating that harm. Defendants here produced, marketed, and sold massive quantities of fossil fuels—primarily oil and natural gas—despite knowing that the combustion and use of fossil fuels emit greenhouse gases ("GHG pollution" or "GHGs"), primarily carbon dioxide ("CO2"). Defendants have also known for decades that GHG pollution accumulates and remains in the atmosphere for up to hundreds of years, where it traps heat, a process commonly referred to as "climate change" or "global warming," and that this process would cause grave harm. Defendants continue to this day to produce, market, and sell massive amounts of fossil fuels and plan to continue doing so for decades into the future; their past and ongoing conduct causes and continually exacerbates global warming and all of its impacts, including hotter temperatures, longer and more severe heat waves, extreme precipitation events including heavy downpours, rising sea levels, and other severe and irreversible harms.

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21. Each Defendant has controlled and continues to control all relevant decisions regarding fossil fuel production, fossil fuel reserves, fossil fuel promotion, and climate policy for their respective corporate families—indeed, these are some of the primary functions that Defendants have performed for their subsidiaries. This control is illustrated by the activities and statements by Defendants described herein. These include advertisements and statements by each Defendant promoting its company-wide production of fossil fuels, and by Defendants' public statements acknowledging their control of company-wide production levels, reserves, and climate policy. For example, Defendants—and not their subsidiaries—annually submit reports to the Carbon Disclosure Project addressing their group-wide climate change policies and actions.[6] Each Defendant, through its employees and/or agents, also controls the process by which its fossil fuels, including raw crude oil and natural gas, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers by and through its subsidiaries.

[6] *See, e.g.*, BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Chevron Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; Exxon Mobil Corporation Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1; Royal Dutch Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 2; *available at* https://www.cdp.net/en/companies.

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98. On December 11, 2017, Exxon filed a notice with the U.S. Securities & Exchange Commission that it "has decided to further enhance the Company's disclosures" consistent with a 2017 shareholder proposal requesting that Exxon more fully disclose the impacts of climate change policies on its business, and stated that it "will seek to issue" disclosures on "energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future" in the "near future."[86] Shareholders have been calling on Exxon to make further detailed disclosures on how climate change will impact its business for years. Exxon's brief announcement—which says nothing about reducing oil and gas production—will do nothing to avert climate change impacts that already are occurring, and that will inevitably grow more severe based upon Exxon and other Defendants' past and continuing conduct and future business plans.

[86] Exxon, Regulation FD Disclosure to the United States Securities and Exchange Commission, *available at* https://www.sec.gov/Archives/edgar/data/34088/000003408817000057/r8k121117.htm.

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"There is work being done to incorporate climate risk as a reasonable consideration in pricing and reserves as an industry-standard best practice," *says Lindene Patton, an attorney and independent consultant who worked for Zurich Insurance for 17 years before leaving in 2014 as chief climate product officer.* **"But it's not there yet."**

http://ww2.cfo.com/risk-management/2016/03/hot-topic-climate-change-insurance/

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Allianz, one of the world's largest insurers, **says it sold the retail business of U.S. insurer Fireman's Fund Insurance Co. in 2015 in part because climate change is increasing the risk of losses to coastal homes** in California and Florida.

https://www.wsj.com/graphics/climate-change-forcing-insurance-industry-recalculate/?mod=article_inline

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Munich RE

"We don't discuss the question anymore of, 'Is there climate change,'" says Torsten Jeworrek, chief executive for reinsurance at Munich Re, the world's largest seller of reinsurance—insurance for insurers. "**For us, it's a question now for our own underwriting."**

https://www.wsj.com/graphics/climate-change-forcing-insurance-industry-recalculate/?mod=article_inline

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INSURANCE JOURNAL

View this article online: https://www.insurancejournal.com/news/international/2018/08/06/497132.htm

Munich Re to Stop Investing in Coal-Related Business, Insuring New Coal-Fired Plants

Munich Re, the world's biggest reinsurer, will stop investing in bonds and shares of companies that generate more than 30 percent of their sales with coal-related business, its chief executive said, caving to pressure from investors.

"In the individual risk business, where we can see the risks exactly, we will in future in principle no longer insure new coal-fired power plants or mines in industrial countries," Joachim Wenning added in a commentary to be published in German daily Frankfurter Allgemeine Zeitung on Monday [Aug. 6].

Policymakers are pushing companies to do more to help meet a target, agreed in Paris in 2015, to limit global warming to below 2 degrees Celsius. Investors are increasingly using their financial muscle to reward those at the forefront of that transition.

Swiss Re, world number two by share value, said in July it would not reinsure any company for which thermal coal represents more than 30 percent of its business, following French peer Scor.

Despite being a vocal supporter of the Paris deal, Munich Re had said as recently as last month that it did not plan to copy Swiss Re in limiting its underwriting of coal companies. (Reporting by Maria Sheahan Editing by Alexandra Hudson)

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"It takes a lot of premium, a lot of margin, to account for this increased uncertainty, and I'm not sure we're doing a good job of reflecting this and charging appropriately for it," said Marc Grandisson, chief executive of insurer Arch Capital Group Ltd., at an industry conference Thursday. **"We need to incorporate a greater range of possible outcomes into our pricing."**

https://www.wsj.com/graphics/climate-change-forcing-insurance-industry-recalculate/?mod=article_inline

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Insurance Industry Response

- Climatewise is an industry coalition of 27 of the world's largest insurers
- Meant to address the climate-risk protection gap.

Principle 1
Lead in risk analysis

Principle 2
Inform public policy making

Principle 3
Support climate awareness amongst our customers

Principle 4
Incorporate climate change into our investment strategies

Principle 5
Reduce the environmental impact of our business

Principle 6
Report and be accountable

https://www.smithhanley.com/2018/03/29/insurance-industry-response-climate-change/

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Potential Claims and Coverage Issues: Types of Claims

- *What does all this mean for claims, underwriting, and insurance regulation?*
  - Property / Business Interruption
  - CGL
  - Directors and Officers Coverage (D&O)
  - Errors & Omissions Coverage (E&O)
  - Bonds
  - New Products, *Evolving concerns*
    - Renewable energy
    - Green building / replacement
    - Supply chain risk

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Potential Coverage Issues

- Pollution exclusion
- Occurrence
- Multiple perils - Wind / flood / anti-concurrent causation

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AES Corp. v. Steadfast Ins. Co.
(Virginia 2008 -2012)

- Background:
  - In 2008 AES Corporation was sued in the Native Village of Kivalina v. ExxonMobil Corp., one of the first climate change nuisance cases brought in federal court.
  - After being sued, AES asked its insurer, Steadfast Insurance Company, to defend. Steadfast denied coverage because:
    - (1) the Kivalina complaint did not allege "property damage" caused by an "occurrence" under its policies;
    - (2) the alleged injuries arose before Steadfast's coverage incepted; and
    - (3) the GHG emissions alleged in Kivalina were "pollutants" excluded from coverage by virtue of the policies' pollution exclusion.
  - Steadfast filed and won a DJ action against AES in Virginia (where AES is headquartered).

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AES v. Steadfast – Virginia S.Ct. (4/2012)

- Coverage may exist where an intentional act results in unforeseen harm, but not where resulting harm is alleged to be the "natural or probable consequence" of the insured's act.
  - Court found that plaintiffs alleged both that **(i)** AES intentionally released carbon dioxide into the atmosphere as part of its energy-producing activities, and **(ii)** there is a "clear scientific consensus that the natural and probable consequence of such emissions is global warming and damages such as Kivalina suffered."
  - Accordingly, the court reiterated that whether or not AES's intentional act constitutes negligence, the natural or probable consequence of that intentional act is not an accident under Virginia law.

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Climate Change Could Swamp Your Muni-Bond Portfolio

California localities warn of disaster when suing oil companies. So how come they don't tell investors?

By Jay Newman

Feb. 2, 2018 6:20 p.m. ET

Climate Lawsuits Backfire

01/16/2018 12:33 pm ET

1,652 views | Jan 22, 2018, 12:11pm

Global Warming and Bond Offerings

Richard Epstein Contributor

The Libertarian

How public nuisance law suits have trapped city governments in a web of their own making

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Thank You

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