

Teaching Climate Change & Business Case Studies, Classes, and Other Teaching Resources

2021



About this Document

As climate change increasingly comes to the forefront of business issues, MBA programs and faculty looking for ways to incorporate content into their classes and extracurricular programming can find many examples from their peer institutions. This document summarizes example classes, events, case studies, teaching notes, simulations, videos and reports currently in use at representative business schools in the U.S. We hope it is useful for sparking new ideas for including this subject matter in programming for MBA students.

This is not a comprehensive inventory. If you have additional resources that you would like to suggest for inclusion, please email edge@fuqua.duke.edu.

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Classes

Following are example MBA classes currently being taught on climate change at business schools (not a comprehensive list).

"Business and Climate Change"

Tuck School of Business, Dartmouth

Instructor: [Anant Sundaram](#)

"The Policy, Politics, and Economics for Solving Global Warming"

Stanford Graduate School of Business

Instructor: [Steve Westly](#)

"Climate: Policy, Finance and Infrastructure"

Stanford Law and Graduate School of Business

Instructors: [Alicia Seiger](#) & [Kate Gordon](#)

"Climate Science: Realities & Risks of a Changing Climate"

NYU Stern School of Business

Instructor: [Steve Koonin](#)

"A Financial Approach to Climate Change"

NYU Stern School of Business

Instructor: [Robert Engle](#)

"Managing Climate, Cyber, Geopolitical, and Financial Risk"

NYU Stern School of Business

Instructor: [Richard Berner](#)

"The Business of Climate Change: Investing and Managing in a Changing Environment"

Columbia Business School

Instructors: [Patrick Bolton](#); [Kent Daniel](#); [Geoffrey Heal](#)

"Climate Finance"

Columbia Business School

Instructor: [Bruce Usher](#)

"Business and Global Climate Change"

University of Colorado Denver Business School

Instructor: [John Byrd](#)

"Model UNFCCC: Climate Change Course and Simulation"

University of St. Gallen (Switzerland)

Instructor: [Rolf Wüstenhagen](#)

Extracurricular Programs

Following are several example extracurricular events hosted by business schools for MBA students and/or alumni (not a comprehensive list).

ClimateCAP: The Global MBA Summit on Climate, Capital, & Business

<https://www.climatecapsummit.org/>

Annual conference hosted in partnership between 17+ business schools with speakers from companies like JPMorgan Chase, Citi, Deloitte, Intel, Walmart, and Nike. Location rotates; open to any currently enrolled MBA student from any program.



Stanford Graduate School of Business: Climate, Business & Innovation Conference

<https://gsbclimateinnovation.com/>

Annual event begun in 2019 at Stanford Graduate School of Business; open to Stanford MBA students.

Columbia University: Climate Science & Investment Conference

<https://www8.gsb.columbia.edu/socialenterprise/initiatives/climatechange#connections>

Annual conference that brings together climate scientists and business leaders to understand how new advances in climate science can inform investments in specific sectors of the global economy.

Columbia Business School: Three Cairns Climate Fellowship for MBAs

<https://www8.gsb.columbia.edu/socialenterprise/initiatives/climatechange#fellowship>

The Three Cairns Climate Fellowship at Columbia Business School provides support to MBA and EMBA students who complete semester- or year-long projects at the intersection of climate change and business. Students may apply individually or in teams for projects that work with Columbia research faculty, or any type of organization or business in the U.S. or abroad that is addressing sustainability and climate change issues.

Harvard Business School: "Confronting Climate Change" Exhibit

<https://www.hbs.edu/environment/climate-change/Pages/confronting-climate-change-exhibit.aspx>

Two week exhibit on display at Harvard Business School in Oct.-Nov. 2019. Open to the students, faculty, and the public. Display supplemented by guided tours.

Harvard Business School: Alumni Events on Business & Climate Change

<https://www.hbs.edu/environment/for-alumni/Pages/alumni-events.aspx>

Regional HBS alumni events on topics such as: "Confronting Climate Change: Opportunities and Risks for Midwest Agribusiness" (Chicago, 2019), "Confronting Climate Change: Boston-Based Ideas that Can Change the World" (Boston, 2019), and "An Investor's Guide to Climate Change: Disruption and Opportunity" (New York, 2018).



UNC & Duke: Joint Networking Event – “Looking Ahead: The Business & Investment Implications of Climate Change”

<https://centers.fuqua.duke.edu/edge/2019/11/22/climate-change-business-event/>

Joint business school event held in Nov. 2019. Open to MBA students and alumni from Duke's Fuqua School of Business and UNC's Kenan-Flagler Business School. Panel discussion and reception.



Case Studies

Arranged by publication date, most recent first.

Climate Change: Paris, and the Road Ahead

<https://www.hbs.edu/faculty/Pages/item.aspx?num=54344>

Revised 2019, Vincent Pons, Amram Migdal, and Mike Lynch, Harvard Business School

This case studies efforts by the international community to address climate change. It teaches the basics of climate change and what makes it particularly difficult to solve, addresses the problems of missing markets and free riding, and identifies the main determinants of preferences on climate change. *Teaching Note also available.*

Indigo Agriculture: Harnessing Nature

<https://www.hbs.edu/faculty/Pages/item.aspx?num=57256>

Revised 2019, Marco Iansiti, Michael W. Toffel, and James Barnett, Harvard Business School

Indigo Agriculture used a digital-enabled R&D process to launch its initial product, microbial coatings for agricultural seeds, which increase crop yields while reducing the need for fertilizers. Indigo Agriculture is now considering launching an initiative to incentivize farmers to engage in regenerative agricultural practices by setting up a carbon market.

Video Supplement: How Well is Indigo Positioned with Respect to Climate Change?

<https://www.hbs.edu/faculty/Pages/item.aspx?num=56113>

2019, Michael W. Toffel, Harvard Business School

Fossil Fuel Divestment

<https://www.hbs.edu/faculty/Pages/item.aspx?num=56528>

Revised 2019, Michael W. Toffel and Sarah Gulick, Harvard Business School

The President of Harvard University is facing growing pressure from students, alumni, and other climate change activists urging the university to divest its multi-billion dollar endowment from fossil fuel companies. The case summarizes the arguments for and against Harvard divesting, examining past examples of Harvard's investment decisions and the financial implications of divestment.

Interface: Creating a Climate Fit for Life with Carpet Tiles.

<https://www.rsm.nl/cdc/case-catalogue/detail/77821-interface-creating-a-climate-fit-for-life-with-carpet-tiles/>

2019, M. Van Koert, D. Sherwood & S.P. Kennedy, Rotterdam School of Management.

This case looks at the challenges of Interface – a global carpet tile company – in pursuing its new climate change strategy. Since 1994, Interface had become a leader in sustainability and had initiated

and implemented wide-ranging innovations in its products, activities and programs to reduce the company's environmental impact. In 2016, Interface started to define and develop its new mission and strategy, Climate Take Back. The new climate change strategy required innovative leadership, management and operations while exploring an unprecedented business challenge.

Suncor and the Future of Oil Sands

<https://www.hbs.edu/faculty/Pages/item.aspx?num=50672>

Revised 2019, Richard H.K. Vietor, Harvard Business School

Suncor, Canada's largest producer of "oil sands," faces a host of issues involving prices, costs, and the environment. The Government of Canada recently put an explicit limit on carbon emissions from oil sands and a price on carbon. Suncor, which produces more than 400,000 barrels per day of bitumen and synthetic oil must reduce its emissions at the same time that crude oil prices have been dropping.

Innovating a New Business Model for Electric Utilities: Consolidated Edison's Brooklyn & Queens Demand Management Project

<https://www.stern.nyu.edu/sites/default/files/assets/documents/NYU%20Con%20Edison%20Case%20Study%20FINAL.pdf>

2019, Angus Chan, Gregory Gangelhoff, Amy Klopfenstein, and Chet Van Wert, New York University Stern School of Business

The Cultural Challenges of Meeting Climate Change Goals: Montreal Weighs an Emissions Ban on Iconic Wood-Fire Bagel Shops

<https://wdi-publishing.com/product/cultural-challenges-meeting-climate-change-goals-montreal-weighs-emissions-ban-iconic-wood-fire-bagel-shops/>

2018, Andrew Hoffman, WDI Publishing, William Davidson Institute, University of Michigan

In 2018, the city of Montreal debated a ban on the commercial use of wood-burning ovens used by the city's famous and iconic bagel shops amid a citywide effort to substantially reduce greenhouse gas emissions. This case presents the dynamics of a situation in which environmental policy goes head-to-head with a city's culturally-important food. *Teaching Note also available.*

Innovation at the Utility: Consolidated Edison's Experience

<https://www.hbs.edu/faculty/Pages/item.aspx?num=55157>

2018, Martha Crawford, Andrew Serpa and Jon Wofsy, Harvard Business School

In 2014, regulators in New York State released a bold vision for the future of the electric utility industry to try and stay ahead of larger trends of rising customer expectations, stagnant load growth, and climate change. In response, Con Edison created a Utility of the Future Team to help guide the organizational shifts and technology investments that would be required to meet the new regulations.

JetBlue: Relevant Sustainability Leadership

<https://www.hbs.edu/faculty/Pages/item.aspx?num=53402>

Revised 2018, George Serafeim and David Freiberg, Harvard Business School

In 2017, JetBlue, the airline founded on the mission to "bring humanity back to air travel", was considering becoming one of the first companies to report its sustainability performance according to the Sustainability Accounting Standards Board (SASB) standards. Would the adoption of SASB standards help JetBlue achieve the goal of "relevant sustainability leadership?"

Architects of the Future? Tesla, Inc., Energy, Transportation, and the Climate

<https://www8.gsb.columbia.edu/caseworks/node/641/>

2017, Geoffrey Heal, Bruce Usher, Columbia CaseWorks

In 2017, the automaker, battery producer and solar company Tesla, Inc. was poised to deliver 100 thousand units of its more affordable Model 3 car. This marked a substantial shift away from manufacturing limited numbers of the high-performance, high-tech luxury electric vehicles on which the company had built its reputation as a visionary. Would Tesla succeed?

Citigroup, Inc.: Innovation in Energy Efficiency Financing

https://www.stern.nyu.edu/sites/default/files/assets/documents/Citi%20Case%20Study%2005.17_0.pdf

2107, Tom Manning and Randi Kronthal-Sacco, New York University Stern School of Business

Deforestation-free Supply Chains: Financial Impact for Brazilian Beef Production

<https://www.stern.nyu.edu/sites/default/files/assets/documents/Beef%20in%20Brazil%20Report%2009.17.pdf>

2017, Tensie Whelan, Bruno Zappa, and Nemanja Babic, New York University Stern School of Business

Cargill: The Risky Business of Integrating Climate Change and Corporate Strategy

<https://wdi-publishing.com/product/cargill-risky-business-integrating-climate-change-corporate-strategy/>

2017, Andrew Hoffman, WDI Publishing, William Davidson Institute, University of Michigan
The complex and fragmented agribusiness sector has been resistant to legislation surrounding greenhouse gas emissions and other climate change regulations. Cargill, one of the largest agribusiness companies and the largest privately held company in the U.S., has the ability to become a significant driver of the climate change conversation and set new industry standards. *Teaching Note also available.*

Climate Change and the Napa Valley Wine Industry

<https://wdi-publishing.com/product/climate-change-napa-valley-wine-industry/>

2017, Andrew Hoffman, WDI Publishing, William Davidson Institute, University of Michigan
Jon-Mark Chappellet, Director of Operations at Clos Du Val Winery in Napa Valley, is developing a 50-year plan. The effects of climate change are forcing Chappellet and other Napa Valley vineyards to adopt various adaptation strategies to protect the quality of their grapes and wines. What kind of diversification strategy will Chappellet need to implement to address climate change? *Teaching Note also available.*

The Climate Corporation

<https://www.hbs.edu/faculty/Pages/item.aspx?num=50375>

Revised 2017, David E. Bell, Forest Reinhardt and Mary Shelman, Harvard Business School
Climate Corporation is a San Francisco-based data analytics company focused on agricultural applications. It was acquired by Monsanto in 2013. The case describes Climate's technology approach, product offerings, marketing plans, and the competitive environment for "digital agriculture."

Dow: Breakthroughs to World Challenges

<https://www.hbs.edu/faculty/Pages/item.aspx?num=48331>

Revised 2017, Michael E. Porter, Mark R. Kramer and Annelena Lobb, Harvard Business School
Dow had adopted the "Breakthroughs to World Challenges" (BWC) program as part of its ten-year 2015 Sustainability Goals. BWC was an internal award recognizing products that addressed one of five world challenges: energy and climate change, sustainable water supply, decent affordable housing, personal health, and food supply. CEO Andrew Liveris confronted the question of whether to maintain, modify or terminate the BWC program.

ExxonMobil: Business as Usual? (A)

<https://www.hbs.edu/faculty/Pages/item.aspx?num=52275>

2017, George Serafeim, Shiva Rajgopal and David Freiberg, Harvard Business School
Climate change was becoming an important societal and business issue as more governments were introducing climate change related regulations and investors became increasingly worried about stranded assets within oil and gas firms. In September 2016, the U.S. Securities and Exchange Commission (SEC) launched an investigation into ExxonMobil's accounting treatment of its oil and gas reserves. How should ExxonMobil invest going forward? How should reserves be valued given regulatory and market forces moving to tackle climate change?

ExxonMobil: Business as Usual? (B)

<https://www.hbs.edu/faculty/Pages/item.aspx?num=52276>

2017, George Serafeim, Shiva Rajgopal and David Freiberg, Harvard Business School
The case presents ExxonMobil's response to growing pressure to disclose how climate change will impact their business. Supplements the (A) case.

Nuclear Energy: An Answer to Climate Change?

<https://www.hbs.edu/faculty/Pages/item.aspx?num=50712>

Revised 2017, Michael W. Toffel, Glen W. S. Dowell, James Weber, Harvard Business School
Environmental activist groups have traditionally opposed nuclear energy. However, growing environmental problems associated with climate change requires major changes to reduce the carbon intensity of electricity generation. Should environmental groups reverse course and support the construction of new nuclear plants to reduce greenhouse gas emissions that are causing global climate change? *Teaching Note also available.*

Woolf Farming and the California Water Crisis

<https://www.hbs.edu/faculty/Pages/item.aspx?num=50328>

Revised 2016, Forest Reinhardt, David Bell, Natalie Kindred, Mary Shelman and Laura Winig, Harvard Business School

This case highlights the tough choices, competing interests, and decision-making mechanisms involved in California's management of its severe drought, entering its fifth year in 2015. Stuart Woolf, CEO of Woolf Farming, a grower and processor of almonds, tomatoes, and other crops in California's Central Valley, must decide how to respond to the changing operating environment.

Solar Geoengineering

<https://www.hbs.edu/faculty/Pages/item.aspx?num=48631>

Revised 2016, Joseph B. Lassiter III and Stephanie Puzio, Harvard Business School
Science knew, beyond doubt, that volcanoes cooled the planet by forcing sulfates high into the stratosphere. This cooling effect had been recorded in history over and over again. The question that Keith and many other climate scientists wanted to answer was: could humanity learn how to design, deploy, and manage similar cooling effects to manage the threats from climate change?

China Shenhua Energy Company

<https://www.hbs.edu/faculty/Pages/item.aspx?num=48610>

Revised 2016, Forest L. Reinhardt, G. A. Donovan and Keith Chi-ho Wong, Harvard Business School
A leading Chinese energy firm, active in coal mining and electric power generation, analyzes coal-to-liquids technology in light of energy security and environmental concerns.

Carbon Engineering

<https://www.hbs.edu/faculty/Pages/item.aspx?num=45759>

Revised 2016, Joseph B. Lassiter III and Sid Misra, Harvard Business School

Working Paper, Apr. 2021. Compiled by the Center for Energy, Development, and the Global Environment (EDGE), The Fuqua School of Business, Duke University, Durham, NC. To suggest additions or updates, email edge@fuqua.duke.edu.

Available at: <https://centers.fuqua.duke.edu/edge/reports/>

Dr. David Keith, President of Carbon Engineering, a company based in Calgary, Alberta, is commercializing a technology to capture CO₂ from the atmosphere. The company plans to market the captured CO₂ to produce low carbon transportation fuels in markets such as California where regulation, derived from a state law designed to manage climate change, restricts the maximum carbon intensity of transportation fuel.

Stanford Dumps Coal

<https://www8.gsb.columbia.edu/caseworks/node/539/>

2015, Andrew Ang, Bruce Usher, Columbia CaseWorks

In May 2014 Stanford University announced that it would no longer directly invest in coal mining companies. This case summarizes the objectives of the Fossil Free movement—both at Stanford and at other universities— that gave rise to this decision, and asks students to consider how this decision might impact the earnings of Stanford's endowment as well as the broader implications such decisions might have on climate change issues.

Tough Decisions at Marks and Spencer

<https://www.hbs.edu/faculty/Pages/item.aspx?num=41428>

Revised 2015, Robert G. Eccles, [George Serafeim](#) and Kyle Ambrester, Harvard Business School

In 2007, the iconic British retailer Marks and Spencer, with great fanfare, announced its "Plan A" initiative. Based on the five essential pillars of climate change, waste, sustainable materials, fair partnership, and health, the plan sought to transform the company's practices. Key aspects of Plan A included more sustainable sourcing and influencing the business practices of the company's supply chain; communication to employees, customers and investors; and employee engagement.

C12 Energy

<https://www.hbs.edu/faculty/Pages/item.aspx?num=44283>

Revised 2014, Joseph B. Lassiter III and James McQuade, Harvard Business School

C12 aimed to build not only a company, but an entire industry around carbon capture and sequestration (CCS).

Keystone XL Pipeline

<https://www.hbs.edu/faculty/Pages/item.aspx?num=43345>

Revised 2014, Richard H. K. Vietor, Harvard Business School

On January 18, 2012, President Obama rejected TransCanada's application for a "national interest" determination to approve construction of the Keystone XL Pipeline. Now the head of Keystone had to figure out what had gone wrong, and decide what to do next in order to get the project approved.

Keystone XL Pipeline Sequel

<https://www.hbs.edu/faculty/Pages/item.aspx?num=50664>

2016, Richard H.K. Vietor, Harvard Business School

Low-Carbon, Indigenous Innovation in China

<https://www.hbs.edu/faculty/Pages/item.aspx?num=42734>

Revised 2014, Richard H.K. Vietor, Harvard Business School

The Chinese government has been powering ahead with industrial policies to promote low-carbon energy technologies—wind, solar, electric batteries and vehicles, nuclear power, and carbon capture and sequestration. Explicit governmental policies and subsidies discriminate against foreign products and foreign companies invested in China. The net effects of these initiatives leave low-carbon energy industries in the United States in the dust.

Travelers Insurance: Focusing on Climate Change and Natural Catastrophe Risk

<https://wdi-publishing.com/product/travelers-insurance-focusing-on-climate-change-and-natural-catastrophe-risk/>

2013, Andrew Hoffman, WDI Publishing, William Davidson Institute, University of Michigan
The dilemma Evan Blue faces stems from a report by sustainability advocacy group Ceres that calls on companies to take climate change into consideration in their risk models and develop response strategies. The fictional vice president of Traveler's Insurance is tasked with briefing the company's board on the matter. He must decide if there is a business case to be made for taking action in response to climate change risk. *Teaching Note also available.*

AEP: Carbon Capture and Storage

<https://www.hbs.edu/faculty/Pages/item.aspx?num=39541>

Revised 2013, Richard H.K. Vietor, Harvard Business School
By Oct. 2010, American Electric Power, the largest coal-fired electric utility in the U.S., had been operating a carbon capture and sequestration pilot plant for one year. As part of its larger carbon reduction strategy, AEP was launching construction of a \$680 million demonstration plant. Mike Morris, AEP's chairman, was frustrated that Congress had not passed a cap-and-trade bill, and was worried how he would recover AEP's share of this huge investment. *Teaching Note also available.*

Monsanto

<https://www.hbs.edu/faculty/Pages/item.aspx?num=43215>

2012, Ray A. Goldberg, Harvard Business School
Monsanto CEO Hugh Grant must guide his global agribusiness technology company into an uncertain future where food security, food safety, sustainability, and climate change will all impact the global food system.

The Political Economy of Carbon Trading

<https://www.hbs.edu/faculty/Pages/item.aspx?num=38396>

Revised 2011, Forest L. Reinhardt, J. Gunnar Trumbull, Mikell Hyman, Patia McGrath and Nazli Zeynep Uludere, Harvard Business School
Global climate change is an increasingly prominent political and business problem. Design of market-based systems to reduce carbon emissions has proven difficult. The case summarizes the science and economics of climate change and encourages readers to contemplate the strategic and risk management problems that it presents to government officials and to business leaders in developed countries and in the developing world.

Integrating Environmental Goals and Firm Strategy: China Mobile and Climate Change

<https://wdi-publishing.com/product/integrating-environmental-goals-and-firm-strategy-china-mobile-and-climate-change/>

2010, Jacob Park, Rick Bunch, WDI Publishing, William Davidson Institute, University of Michigan
In September 2009, Chinese President Hu declared that China would reduce the amount of carbon dioxide it emits and work to develop a green economy. At the same time, the Chairman of the largest telecom company in China (China Mobile) was awaiting the release of his company's third CSR report, as well as the conclusion of the Green Action Plan, a comprehensive environmental strategy. This case examines whether the firm's environmental strategy could support the firm's business strategy.

Global Climate Change and BP

<https://www.hbs.edu/faculty/Pages/item.aspx?num=34984>

Revised 2009, Forest L. Reinhardt and Mikell Hyman, Harvard Business School
Following the sudden resignation of Sir John Browne, Tony Hayward, BP CEO, must decide how global climate change management will figure into BP's corporate strategy.

International Carbon Finance and EcoSecurities

<https://www.hbs.edu/faculty/Pages/item.aspx?num=36062>

Revised 2008, Andre F. Perold, Forest L. Reinhardt, and Mikell Hyman, Harvard Business School. In late 2007, EcoSecurities had to decide whether to undertake a new Clean Development Mechanism project in China. As demand for UN-issued carbon credits rose, the UN approval process had become increasingly burdensome. The Ventilation Air Methane Project was an opportunity to break into a new sector with large potential, and the economics and risks of the project needed to be assessed.

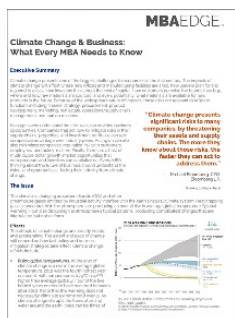
UBS and Climate Change--Warming Up to Global Action?

<https://www.hbs.edu/faculty/Pages/item.aspx?num=34097>

Revised 2007, Felix Oberholzer-Gee, Forest L. Reinhardt, Elizabeth Raabe, Harvard Business School Marco Suter, Executive Vice-Chairman, UBS Board of Directors, studied the chart on his desk. It showed the public commitment of major financial institutions to help mitigate global warming. Evidently, UBS lagged behind its competitors. The graph suggested the company adopt a more progressive policy on climate change. *Teaching Note also available.*

Background Notes / Briefings

Arranged by publication date, most recent first.



Briefing: Climate Change & Business: What Every MBA Needs to Know

<https://centers.fuqua.duke.edu/edge/wp-content/uploads/sites/11/2019/10/MBA-EDGE-Climate-Change-and-Business.pdf>

2019, Center for Energy, Development, and the Global Environment (EDGE), Fuqua School of Business, Duke University.

Briefing paper aimed at introducing MBA students and alumni to the key business implications of climate change. Free to download and distribute.

Background Note: Climate Change as an Organizational Challenge

<https://wdi-publishing.com/product/note-climate-change-organizational-challenge/>

2019, Andrew Hoffman, WDI Publishing, William Davidson Institute, University of Michigan. Developing a corporate climate change strategy is more than just a technological and economic challenge. More importantly, it is an organizational and cultural challenge.

Report Series: Path to 2060 Series: Decarbonizing Key Industry Sectors

2019, Business Innovation and Climate Change Initiative at the Batten Institute, University of Virginia

- Batten Report: [Path to 2060: Decarbonizing the Agriculture Industry](#)
- Batten Report: [Path to 2060: Decarbonizing the Industrial Sector](#)
- Batten Report: [Path to 2060: Decarbonizing the Electric Utility Industry](#)
- Batten Report: [Path to 2060: Decarbonizing the Automobile Industry](#)

Free to download.

Background Note: Climate Change in 2018: Implications for Business

<https://www.hbs.edu/faculty/Pages/item.aspx?num=51755>

Revised 2018, Rebecca M. Henderson, Sophus A. Reinert, Polina Dekhtyar and Amram Migdal, Harvard Business School
This note provides general information about climate change and its implications for business.

Paper: Changing the Climate of Capital

https://energy.stanford.edu/sites/g/files/sbiybj9971/f/changingtheclimateofcapital_hellerseigersept2018.pdf

2018. Tom Heller and Alicia Seiger, Stanford Sustainable Finance Initiative, Stanford University

Article: The Investment Gap that Threatens the Planet

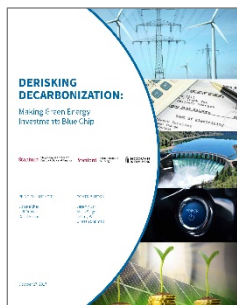
https://d2l8rne3sx3c3l.cloudfront.net/wp-content/uploads/2017/12/Winter_2018_the_investment_gap_that_threatens_the_planet.pdf?x57461

2018. Burger, Murray, Kearny and Ma, Stanford Social Innovation Review

Briefing: Innovating for Sustainability: Challenges & Opportunities

https://www.darden.virginia.edu/sites/default/files/inline-files/Innovating%20Sustainability%20issuu%20042517_0.pdf

2017, Business Innovation and Climate Change Initiative at the Batten Institute, University of Virginia



Paper: Derisking Decarbonization: Making Green Energy Investments Blue Chip

https://www-cdn.law.stanford.edu/wp-content/uploads/2017/11/stanfordcleanenergyfinanceframingdoc10-31_final.pdf

2017. Dan Reicher, Jeff Brown, David Fedor et al, Steyer-Taylor Center for Energy Policy and Finance, Precourt Institute for Energy & Hoover Institution, Stanford University.

Background Note: Climate Change: An Unfolding Story

<https://www.hbs.edu/faculty/Pages/item.aspx?num=48471>

2015, Joseph B. Lassiter III, Sid Misra and Stephanie Puzio, Harvard Business School

Background Note: Carbon Credits

<https://www.hbs.edu/faculty/Pages/item.aspx?num=43201>

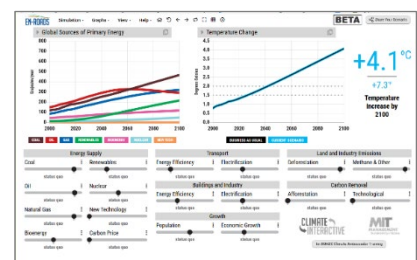
2012, Forest Reinhardt, Jost Hamschmidt and Mikell Hyman, Harvard Business School

Simulations

En-ROADS Climate Solutions Simulator

<https://www.climateinteractive.org/tools/en-roads/>

Climate simulation tool for understanding how to achieve our climate goals through changes in energy, land use, consumption, agriculture, and other policies. Developed by [Climate Interactive](#), [Ventana Systems](#), and [MIT Sloan](#)



Working Paper, Apr. 2021. Compiled by the Center for Energy, Development, and the Global Environment (EDGE), The Fuqua School of Business, Duke University, Durham, NC. To suggest additions or updates, email edge@fuqua.duke.edu.

Available at: <https://centers.fuqua.duke.edu/edge/reports/>.

CarbonSim

<https://www.edf.org/climate/carbonsim-edfs-carbon-market-simulation-tool>

Facilitated emissions trading system simulation developed by [Environmental Defense Fund](#) that highlights choices, provides a framework for decisions, and serves as a platform for experiments in the design of carbon emissions trading systems. Designed for 1-100 players.

Food Chain Reaction: A Global Food Security Game

<http://foodchainreaction.org/>

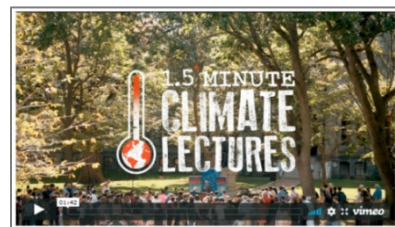
Simulation and role-playing exercise intended to improve understanding of how governments, institutions, and private sector interests might interact to address a crisis in the global food system. The scenario is set five years from today in a world where population growth, rapid urbanization, extreme weather, and political crises combine to threaten global food security. The game's players—high-level decision makers representing nations, international institutions, and the private sector—will collaborate, negotiate, make decisions, and confront tradeoffs while dealing with a chain reaction of consequences resulting from their actions.

Videos, Podcasts, & Interactive Materials

1.5-Minute Climate Lectures

<https://web.sas.upenn.edu/climate-1point5/>

2019, University of Pennsylvania School of Arts & Sciences
Videos in the series include: "What We Need Now to Stop Global Warming," "The Effects of Climate Change on Food and Agriculture," "Adapting our Cities for Climate Change: Revolution or Evolution?" and more.



Podcast: Climate Rising

<https://www.hbs.edu/environment/podcast/Pages/default.aspx>

Podcast from Harvard Business School Business in which policy leaders and HBS faculty discuss what businesses are doing, can do, and should do to confront climate change.

ClimateCAP Summit Videos

<https://www.climatecapsummit.org/watch>

2018, Fuqua School of Business, Duke University
Videos of keynotes, panel discussions, and short talks from 2018's ClimateCAP: The Global MBA Summit on Climate, Capital, & Business. Topics include: "Climate 101: What Every MBA Needs to Know," "Investors' Perspective: Pricing Climate Risk - Panel Discussion," "Innovating & Investment Opportunities for a Low-Carbon Future: Panel discussion" and more.

Videos: Business in the Era of Climate Change

Videos of 2019 panel discussion series organized by Harvard Business School, Boston University Questrom School of Business, and WBUR.

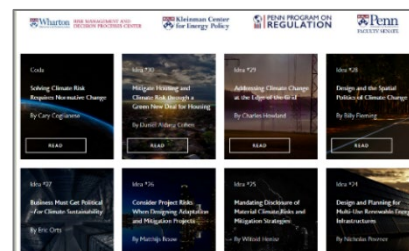
- Part 1: Open for Business?:
<https://www.wbur.org/events/445123/stepping-up-business-in-the-era-of-climate-change>
- Part 2: Food, Diet and Climate
<https://www.wbur.org/events/446257/stepping-up-food-diet-and-climate-part-2>

- Part 3: Climate Politics and Business
<https://www.wbur.org/events/446262/stepping-up-climate-politics-and-business-part-3>
- Part 4: The Road Map of the Future: Transportation
<https://www.wbur.org/events/446272/stepping-up-the-road-map-of-the-future-transportation-part-4>
- Part 5: Energy Transitions
<https://www.wbur.org/events/446278/stepping-up-energy-transitions-part-5>

Interactive Deck: Climate Risk Solutions

<https://riskcenter.wharton.upenn.edu/climate-risk-solutions/>

2019, The Wharton School, The University of Pennsylvania
Interactive deck of 30 ideas from Wharton's Risk Management & Decision Processes Center.



Reports from Industry

Some of the most useful publications from industry on the business risks of climate change. Arranged by publication date, most recent first.

[Getting physical: Scenario analysis for assessing climate-related risks](#), Blackrock, 2019.

[Demystifying Climate Scenario Analysis for Financial Stakeholders](#), Four Twenty Seven, 2019.

[Climate Risk and Real Estate Investment Decision-Making](#), Urban Land Institute (ULI) and Heitman LLC, 2019.

[Major Risk or Rosy Opportunity: Are companies ready for climate change?](#), CDP, 2019.

[Climate + Supply Chains: The Business Case for Action](#), BSR, 2018.

[Assessing Exposure to Climate Change in U.S. Munis](#), Four Twenty Seven, 2018.

[In Sight of the Clean Trillion: Update on an Expanding Landscape of Investor Opportunities](#), Ceres, 2018.

[Banking on a Low Carbon Future: Are the World's Largest Banks Stepping Up to the Risks & Opportunities of Climate Change](#), Boston Common Asset Management, 2018.

[Adapting Portfolios to Climate Change: Implications and Strategies for All Investors](#), BlackRock, 2016.

[Risks and Opportunities from the Changing Climate: Playbook for the Truly Long-Term Investor](#), Cambridge Associates, 2015.

[Investing in a Time of Climate Change: The Sequel](#), Mercer, 2015.

[Climate Change, Global Food Security, and the U.S. Food System](#), USDA, 2015.

[The Low Carbon Economy: GS SUSTAIN equity investor's guide to a low carbon world, 2015-25](#), Goldman Sachs, 2015.

[How companies can adapt to climate change](#), McKinsey & Co., 2015.

[Risky Business: The Economic Risks of Climate Change in the US](#), Risky Business Project, 2014.

[Climate Change and Tourism – Responding to Global Challenges](#), World Tourism Organization and the United Nations Environment Programme, 2008.