

# BUSINESS & ENVIRONMENT ANNUAL REPORT 2019

HARVARD | BUSINESS | SCHOOL

Initiatives

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To our friends and colleagues:

The HBS Business & Environment Initiative (BEI) is a hub for environmentally focused research, education, and discourse. We work to leverage HBS's unique platform in order to catalyze the vital role business can play in addressing climate change and other environmental challenges.

We are delighted to share this record of accomplishment with you.

## The BEI Team

**Mike Toffel**

Faculty Chair

**Jennifer Nash**

Director

**Lynn Schenk**

Associate Director

**Elise Clarkson**

Coordinator

**INITIATIVES** focus on societal challenges that are too complex for any one discipline or industry to solve alone.

# THE SNAPSHOT

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This report provides a snapshot of activities in 2019. With support from faculty, administrative departments, alumni, and students, we have made significant strides in many areas:

**WE TOOK STEPS TO INSPIRE LEADERSHIP IN ADDRESSING CLIMATE CHANGE** by creating public events, a new podcast, and a new exhibit on the role of business in confronting climate change.



Convened hundreds of alumni in **Boston, Chicago, and Los Angeles** to discuss the role of business leaders in the age of climate change.



In partnership with the Robert W. Wilson Trust and four environmental non-profit organizations, we **launched an executive education program** for future environmental leaders in the non-profit sector.



Faculty authored **25 scholarly articles and papers** on topics such as financial risks from climate change, business opportunities associated with generating carbon-free electricity, and new developments in food and agriculture that have the potential to reduce greenhouse gases.



Faculty wrote **21 teaching cases** and **11 teaching notes** and other supplemental teaching materials on business and environment topics. More than **300,000 cases** on business and environment topics were sold for use in classrooms around the world.



Over **450 MBA students** enrolled in environment-related elective courses addressing food and agriculture, sustainable cities, and reimagining capitalism.



BEI served as a gateway for MBA students seeking to access the school's business and environment resources and collaborated to host or co-host over **30 program events**.

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# BUSINESS & ENVIRONMENT HIGHLIGHTS

## OBJECTIVE 1

ENGAGE AND PROMOTE A FACULTY COMMUNITY ON BUSINESS AND ENVIRONMENT TOPICS

## OBJECTIVE 2

EDUCATE STUDENTS TO TRANSFORM ORGANIZATIONS TO BECOME ENVIRONMENTALLY SUSTAINABLE

## OBJECTIVE 3

DISSEMINATE INSIGHTS FROM RESEARCH AND FOSTER ALUMNI ENGAGEMENT ON CRITICAL ENVIRONMENTAL TOPICS

# HIGHLIGHTS

## 1 ENGAGE AND PROMOTE A FACULTY COMMUNITY ON BUSINESS AND ENVIRONMENT TOPICS

### New Impact Weighted Accounts Project (IWAP)

Professor George Serafeim launched the Impact Weighted Accounts Project to drive the creation of financial accounts that reflect a company's financial, social, and environmental performance. The project is collaborating with the many organizations that are advancing standards, impact metrics, and impact valuation estimates to create a series of research papers and convenings. In 2019, the project issued a white paper outlining the conceptual framework for forthcoming work. Impacted-weighted accounts will allow investors and managers to decide how to invest their resources based on the impact of a company on society and the environment, as well as its monetized private performance.

### Faculty Lunch Discussion Series



#### ***Massachusetts Leadership in Energy Storage and Procurement of Offshore Wind and Associated Policy Challenges***

Judith Judson (MBA 2000), Commissioner, Massachusetts Department of Energy Resources



#### ***New Research on the Role of the Corporation***

Colin Mayer, Peter Moores Professor of Management Studies, Said School of Business, with comments from Professor Rebecca Henderson and Professor Malcolm Salter



#### ***Research on Trade-offs Between Time and Money: Lessons for Environmental Behavior***

Professor Ashley Whillans



#### ***Climate Policy: The Road Ahead***

William Eacho (MBA 1979), Co-Founder, Partnership for Responsible Growth



#### ***Recent Research on Carbon Pricing***

Joseph Aldy, Professor of Practice, Harvard Kennedy School



#### ***Investing for Environmental Impact***

Professor Shawn Cole and Professor Vikram Gandhi

# HIGHLIGHTS

## 2 EDUCATE STUDENTS TO TRANSFORM ORGANIZATIONS TO BECOME ENVIRONMENTALLY SUSTAINABLE

### MBA Required Curriculum

Environmental opportunities and challenges are embedded in nine out of 10 Required Curriculum courses to give MBA students a better understanding of the importance of the natural environment in their roles as managers and be equipped to make business decisions involving sustainability issues. In 2019, 18 class sessions in the Required Curriculum featured discussions of cases with significant environmental considerations, on topics ranging from carbon credits to regenerative agriculture.

### MBA Elective Courses

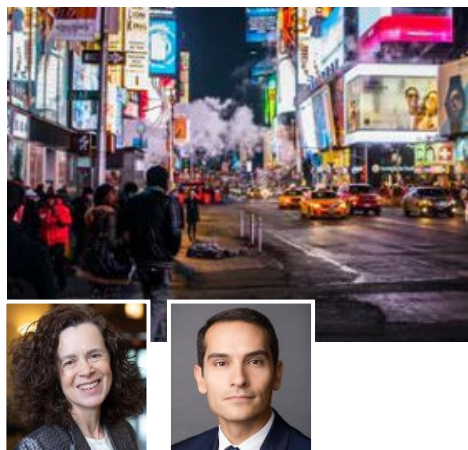
BEI-affiliated faculty offered three environmentally focused electives courses that enrolled 467 students:



#### ***Food and Agribusiness***

Forest Reinhardt

A survey of the global food and agribusiness system and management issues associated with changing consumer preferences, technological advances, public policy shifts, food safety, and risk management.



#### ***Reimagining Capitalism: Business and Big Problems***

Rebecca Henderson & George Serafeim

Explores the idea that problems such as environmental degradation and accelerating inequality can be effectively addressed by high performing private firms.

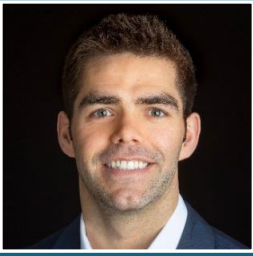


#### ***Sustainable Cities and Infrastructure***

John Macomber

Provides students with tools to address rapid urbanization, increasing pressure on the environment and on basic resources, and the growing difficulty governments face in managing the confluence of these trends.





“As someone committed to addressing climate change through business, I’m grateful for the opportunity I’ve had to further my business education at HBS and help build a community of like-minded students as co-president of the Energy & Environment Club. While the US and the world are woefully behind in addressing climate change, I am heartened by the seriousness and urgency with which so many of my friends and classmates see the issue, and I look forward to working with them in our long careers ahead.”

**TREVOR HILL**

MBA 2020



“As chair of programming for the Sustainability Club, I have focused on hosting sustainability-related ‘continuing conversations’ for the RC student body. These events are typically lunch and learn sessions with professors and students to discuss environmental and sustainability related topics such as supply chain sustainability, impact investing at the personal and corporate level, managing climate risk, and other topics.”

**LAUREN BUCHANAN**

MBA 2021

## Educating Students Around the World

In 2019, more than 300,000 copies of cases with significant environmental content were sold for use in classrooms around the world with top sales in Australia, Europe, India, and the United States. The three top-selling cases (noted below) address strategic opportunities associated with environmental innovation:



### **Tesla Motors**

Eric Van den Steen

Analyzes competitive advantage in the context of drastic technology change required to reduce carbon emissions from the automotive sector.



### **Patagonia**

Forest Reinhardt, Ramon Casadesus-Masanell & Hyun Jin Kim

Introduces students to a unique type of business model that prioritizes environmental protection, so that they may understand and assess its sustainability and evaluate innovative ways to compete.



### **Unilever’s New Global Strategy: Competing Through Sustainability**

Christopher Bartlett

Calls on students to analyze the appropriateness of Unilever’s radically different transformational global corporate strategy and consider the requirements for effective organization transformational change.



### **New Online Course: Sustainable Business Strategy**

Rebecca Henderson developed this HBS Online course to provide participants with the knowledge and tools to become purpose-driven business leaders. This course explores several business models that companies can use to drive change and explains why purpose-driven businesses are particularly well positioned to tackle the world's biggest problems, including climate change, income inequality, and social injustice.



### **New Executive Education Course: Strategic Management for Environmental Leaders**

BEI Faculty Chair Mike Toffel developed and led the new Executive Education custom course, HBS-Robert R. Wilson Program on Strategic Management for Environmental Leaders, with support by the Robert R. Wilson Charitable Trust. The course is designed to prepare emerging leaders of environmental non-profit organizations to become more effective global problem solvers, equipped with the management, partnership, and financial skills to tackle challenges such as climate change. Seventy-one high-potential leaders of environmental non-governmental organizations (ENGOs) participated in the course, and plans are underway to increase enrollment in its next deployment.

#### ***Major ENGO Partners:***

- Environmental Defense Fund
- The Nature Conservancy
- World Resources Institute
- Wildlife Conservation Society



### **New Exhibit: Confronting Climate Change: From Business as Usual to Business as Vital**

BEI launched this new exhibit in Spangler Lounge in partnership with HBS Operations. The exhibit encourages visitors to consider the current and future impacts of climate change and the role of business in mitigating their risks and identifying ensuing opportunities, especially in the energy, agriculture, transportation, buildings, and industrial materials sectors. The exhibit includes spotlights describing the work of 50 alumni, faculty, and students who are innovating to confront this challenge. It also examines the current policy context and the role that business has played in shaping it—and can play going forward. Beyond Spangler Lounge, the exhibit has been on display at Harvard i-lab and Harvard College Eliot House.



## Providing Students with a Business & Environment Roadmap

In 2019, more than one-third of admitted students indicated interest in business and environment in their applications. BEI partnered with HBS Admissions to introduce these students to the School's business and environment offerings. Upon arrival on campus, BEI welcomed them at the School's Business & Environment Kickoff, where they met BEI faculty affiliates; leaders of School's environmental clubs; Student Sustainability Associates; sector leads from the Career and Professional Development office; and Sustainability Operations and Initiatives staff.

## Supporting Student Leadership

In 2019, a group of first-year students launched the School's Sustainability Club. The goal of the club is to prepare HBS students to serve as stewards of the environment and pursue business-led climate solutions. BEI has co-sponsored some of the Club's activities—for example, when students in the Technology and Operations Management required course were taught the case "Sustainability at IKEA Group," the Sustainability Club invited them to continue a discussion about sustainable sourcing at a lunch sponsored by BEI. BEI also sponsored fireside chats about sustainability leadership with Auden Schendler, VP of Sustainability of Aspen Skiing Company, and Thomas McQuillan, VP of Corporate Strategy at Baldor Specialty Foods.



"As a co-founder of the Sustainability Club at HBS, I have thoroughly enjoyed fostering a community of students that are eager to understand and address the complexities of global climate challenges."

**ROXANNE TULLY**

MBA 2021



"When nearly 50 million Americans face hunger, it is unacceptable that 40% of food in the U.S. is wasted. As member of the Food, Agriculture and Water club and in collaboration with BEI, I was able to bring Thomas McQuillan of Baldor Foods to HBS, a highlight of my EC year, who challenged us to question our assumptions about food and take action."

**CHRISTINA BELSITO**

MBA 2019

## Promoting Sustainability Career Opportunities

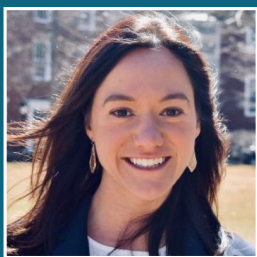
BEI's alumni mentorship program has grown from 36 alumni-student matches in 2016 to 138 in 2019. Over the course of a year, mentors and mentees share perspectives on business trends and career opportunities, sometimes fostering long-term connections. To further strengthen alumni connections for students seeking careers in renewable energy, BEI hosted alumni-student receptions as part of student career treks in Boston, New York, San Francisco, and London, as well as on-campus meetings with senior managers at Breakthrough Energy Ventures, Commonwealth Fusion Systems, Ameresco, and National Grid. BEI co-sponsored the School's first Food & Agriculture conference, which highlighted the latest innovations and opportunities for change in agribusiness.



"I helped organize our first HBS Food & Agriculture conference—we sold out, attracting over 100 attendees from the New England area on a Sunday!"

**NATALIE FERGUSON**

MBA 2021



"As VP of Career Treks for the Energy and Environment Club, I was able to connect students with companies investing in transformation across the energy value chain because of the deep and broad networks of HBS alumni. During our London Trek, we met with investors pursuing renewables-only strategies, with energy majors pivoting their traditional businesses in favor of clean energy generation and startups enabling energy access in emerging markets."

**ANGELA HOBART**

MBA 2019

## HIGHLIGHTS

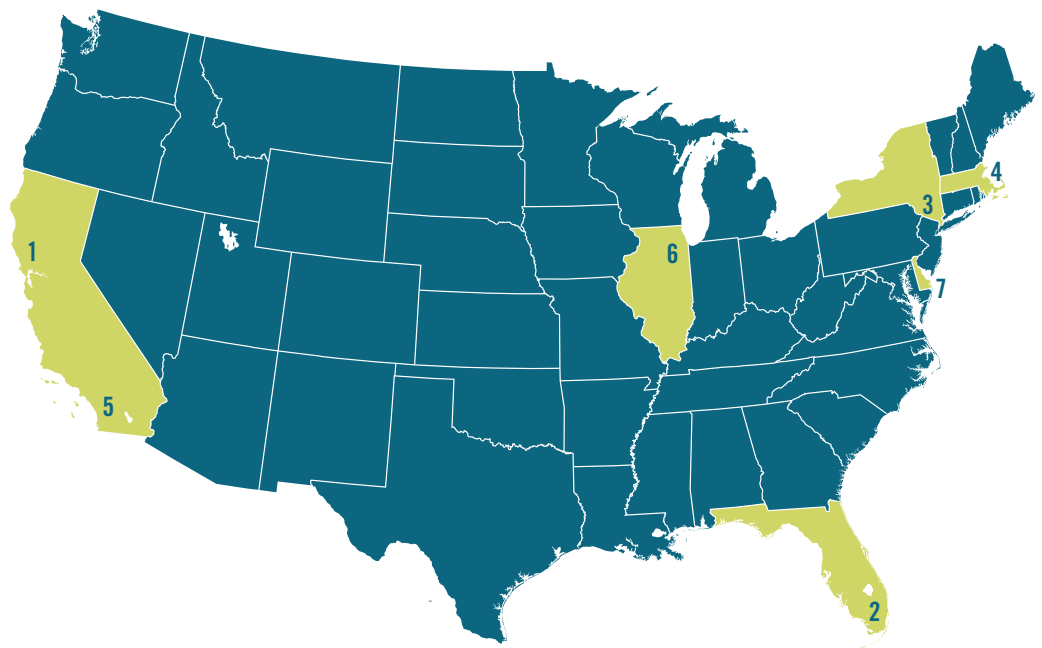
### 3 DISSEMINATE INSIGHTS FROM RESEARCH AND FOSTER ALUMNI ENGAGEMENT ON CRITICAL ENVIRONMENTAL TOPICS

#### *Alumni Convenings: The Role of Business Leaders in the Age of Climate Change to Address Climate Change Risks and Opportunities in Different Sectors*

In collaboration with Alumni Relations and HBS alumni clubs, BEI launched this series of alumni discussions in cities across the United States to examine climate change risks and opportunities in different sectors. The goals are to foster a network of alumni interested in understanding business opportunities and risks from climate change, encourage collaborative learning among alumni and faculty, and increase the visibility of HBS leadership. In 2019, BEI convened alumni in [Boston](#) to discuss the role of business in sparking innovation (February 12), [Los Angeles](#) to discuss how large corporations are addressing climate change (March 7), and [Chicago](#) to discuss the challenges and opportunities that climate change poses for Midwest agribusiness (May 15). These convenings connected alumni to the school and each other, and enabled BEI to learn about their interests and areas of expertise.

Since 2018, BEI has launched regional alumni events across seven cities to get alumni around the table talking about climate change.

- 1 SAN FRANCISCO  
CLEAN TECH
- 2 MIAMI  
REAL ESTATE
- 3 NEW YORK  
FINANCE
- 4 BOSTON  
INNOVATION
- 5 LOS ANGELES  
ROLE OF LARGE CORPORATIONS
- 6 CHICAGO  
AGRIBUSINESS
- 7 WASHINGTON, DC  
BUSINESS & POLITICS





### **New Podcast: *Climate Rising***

BEI launched a new podcast, *Climate Rising*, to bring together business and policy leaders with HBS faculty to share insights about what businesses are doing and can do to confront climate change. Fall 2019 marked its first season and included nine episodes on challenges facing the real estate industry, working with investors to address climate change, developing the wind industry, increasing solar power, the politics of climate change, making the food of the future, making agriculture more sustainable, shaping the future of transportation, and creating resilience. Plans are underway to launch more episodes in 2020.

### **New Event Series: WBUR Cityspace**

Working with WBUR (Boston's NPR news station) and Boston University Questrom School of Business, BEI launched a series of five live events at WBUR's new CitySpace public studio; "[Stepping Up: Business in the Era of Climate Change](#)." These events featured HBS alumni Chris Dempsey (MBA 2012), director of transportation for Massachusetts; William Eacho (MBA 1979), Partnership for Responsible Growth; Ayr Muir (MBA 2004), founder and CEO of Clover Food Lab; and David Perry (MBA 1997), founder and CEO of Indigo Agriculture, as well as numerous other business experts.

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**FACULTY**  
**RESEARCH &**  
**TEACHING**



# RESEARCH, TEACHING, AND ENGAGEMENT BY TOPIC

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At HBS, faculty research, teaching, and engagement on business and the environment is broad and deep.

**WE HAVE GROUPED THIS BODY OF WORK INTO EIGHT TOPICAL AREAS:**

**ENERGY  
INNOVATION**

**ENVIRONMENT  
AND  
CONSUMERS**

**FOOD AND  
AGRICULTURE**

**FINANCE AND  
INVESTING**

- ESG Measurement and Disclosure
- Impact Investing
- Shareholder Activism

**GOVERNANCE  
AND  
REGULATION**

**REIMAGINING  
CAPITALISM**

**SUSTAINABLE  
CITIES AND  
INFRASTRUCTURE**

**SUSTAINABILITY  
STRATEGY**

The School's research, teaching, and engagement about mitigating and adapting to climate change—including how to reduce risks it poses and embrace opportunities it offers for innovation—spans many of these topics.

# ENERGY INNOVATION

The combustion of fossil fuels to generate energy is the largest source of greenhouse gas emissions and the largest contributor to climate change. Innovations are needed to generate vast amounts of carbon-free electricity and to use electricity much more efficiently. Faculty are working to address the massive market potential for renewable energy and nuclear energy as well as grid flexibility and improved demand-response technologies. Highlights from the year appear below.

## Course Material

- “Acelerex” by John Wells and Benjamin Weinstock (720-360).
- “Clean Energy for the Future” by Richard Vietor and Howaida Kamel (720-003).
- “CrossBoundary Energy” by John Macomber (219-089).
- “DeepGreen and Polymetallic Nodules” by Richard Vietor (720-016).
- “Electric Car Wars, 2018” by John Wells and Benjamin Weinstock (719-470).
- “Rechargeable Batteries, 2017: Gigafactory Wars in the Offing?” by John Wells and Benjamin Weinstock (720-371).
- “Richard Fahey and Robert Saudek—Lighting Liberia” by Rosabeth Kanter, Tessa Natanay Hamilton, and Ai-Ling Jamila Malone (teaching note, 313-032).
- “State of Charge: The Massachusetts Energy Storage Initiative” by John Wells and Benjamin Weinstock (719-448).
- “The Shale Revolution: America’s Energy Independence?” by Richard Vietor and Howaida Kamel (719-076).

## Courses

- Forest Reinhardt chaired a two-day discussion for Advanced Leadership Initiative fellows about the science, policy, and business implications of climate change.
- Joseph Lassiter, John Macomber, and Forest Reinhardt taught in Harvard Kennedy School’s “Executive Workshop Climate Change and Energy: Policymaking for the Long Term.”

## Practitioner-Oriented Materials

- “Increasing Solar Power” *Climate Rising* podcast episode.
- “Developing the Wind Industry” *Climate Rising* podcast episode.

## Presentations

- “Harvard Environmental Economics Program—ENEL Foundation Workshop” presentation by Joseph Lassiter.
- “Solar Geoengineering” presentations by Joseph Lassiter at the HBS Spring and Fall Alumni Reunions.

# ENVIRONMENT AND CONSUMERS

Consumer demand for environmentally preferable products is growing, as is consumer awareness of the environmental performance of the firms they do business with. Businesses seeking to meet the environmental expectations of their customers require sophisticated understanding of what motivates and sustains consumer environmental preferences. The following list includes examples of work in this area in 2019.

## Course Material

- “Hindustan Unilever's 'Pureit' Water Purifier: Abridged” by V. Kasturi Rangan and Mona Sinha (520-001).

## Scholarly Research

- “Harnessing Behavioral Science to Understand and Address Human Impact on the Environment” by H. Dykstra, S. O’Flaherty, J. Roberts, and A.V. Whillans, *Behavioral Science & Policy*, invited submission, HBS Working Paper.
- “How Transparency into Internal and External Responsibility Initiatives Influences Consumer Choice: Evidence from the Field and Lab” by Ryan Buell and Basak Kalkanci, HBS Working Paper 19-115.
- “What We Can Learn from Five Naturalistic Field Experiments that Failed to Shift Commuter Behavior” by Ariella Kristal and Ashley Whillans, *Nature Human Behavior*, forthcoming; pre-published online.
- “Why It’s So Hard to Change People’s Commuting Behavior” by Ariella Kristal and Ashley Whillans, *Harvard Business Review*.

## Practitioner-Oriented Materials

- “Getting Around: Shaping the Future of Transportation” *Climate Rising* podcast episode.
- “Making Eco Easy” by Jennifer Gillespie, *HBS Alumni Bulletin*.

## Presentations

- “Bringing Behavioral Science to Transportation Demand Management” by Ashley Whillans at the Association for Commuting & Transportation Annual Conference.
- “Using Behavioral Insights to Nudge Greener, Happier and Healthier Commutes” by Ashley Whillans, S. O’Flaherty, A. Kristal, and H. Dykstra at the Behavioral Insights into Business for Social Good Conference.
- “Using Behavioral Insights to Nudge Greener, Happier and Healthier Commutes” by Ashley Whillans at the Rare.org College Campus Sustainability Challenge.
- “Using Behavioral Science to Promote Sustainable Transportation in US Cities” by Ashley Whillans at Rare.org.

# FOOD AND AGRICULTURE

Food and agriculture is the second largest sector contributing to climate change after electricity generation, and is particularly vulnerable to climate-change impacts. The agriculture sector faces uncertainty and opportunity as much of the world's population faces food insecurity, climate change is requiring shifts in agricultural practices, and sources of fresh water are becoming scarce. At the same time, consumer demand for organic and sustainably sourced food is growing. This changing landscape is creating opportunities for companies that can recognize emerging trends, innovate, and evolve strategies quickly. The following list includes select notable accomplishments of the year.

## Course Material

- “C16 Biosciences: Lab-Grown Palm Oil” by Jeffrey Bussgang and Olivia Hull (820-008).
- “Indigo Agriculture: Harnessing Nature” by Marco Iansiti, Michael Toffel, and James Barnett (620-024).
- “Jain Irrigation Systems Limited: Continuing a Legacy” by Forest Reinhardt, Gunnar Trumbull, and Mahima Rao-Kachroo (719-044).
- “New Hope Liuhe: Building an Integrated Agri-Food Business” by Forest Reinhardt, Shu Lin, Natalie Kindred, and Nancy Hua Dai (720-009).

## Courses

- “Food and Agribusiness” MBA course taught by Forest Reinhardt.
- “Agribusiness Seminar” Executive Education course taught by David Bell.

## Practitioner-Oriented Materials

- “A Hard Sell: Bringing Cultured Beef to Market” interview of Jose Alvarez, *Cold Call* podcast episode.
- “Making the Food of the Future” *Climate Rising* podcast episode.
- “Growing Our Food: Making Agriculture More Sustainable” *Climate Rising* podcast episode.

# FINANCE AND INVESTING

Many businesses are investing in practices that protect natural systems while delivering business value. But despite widespread interest in sustainable business models, many barriers remain. Faculty are working to understand the conditions under which new tools—such as impact investing and environmental, social, and governance metrics—can lead to change on a wide scale. Select accomplishments from the year appear below, categorized by (1) environmental, social, and governance (ESG) measurement and reporting; (2) impact investing; and (3) shareholder activism.

## PART 1: ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) MEASUREMENT AND REPORTING

### Book

- “The Consequences of Mandatory Corporate Sustainability Reporting” by Ioannis Ioannou and George Serafeim, *The Oxford Handbook of Corporate Social Responsibility: Psychological and Organizational Perspectives* (chapter).

### Course Material

- “Should a Pension Fund Try to Change the World? Inside GPIF’s Embrace of ESG” by Rebecca Henderson, George Serafeim, Josh Lerner, and Naoko Jinjo (319-067).

### Scholarly Research

- “Four Things No One Will Tell You About ESG Data” by Sakis Kotsantonis and George Serafeim, *Journal of Applied Corporate Finance* 31, no. 2 50–58.
- “Impact-Weighted Financial Accounts: The Missing Piece for an Impact Economy” by George Serafeim, T. Robert Zochowski, and Jen Downing, *Harvard Business School Impact-Weighted Accounts Project*.
- “Market Reaction to Mandatory Nonfinancial Disclosure” by Jody Grewal, Edward Riedl, and George Serafeim, *Management Science* 65, no. 7: 3061–3084.
- “Pathways to Materiality: How Sustainability Issues Become Financially Material to Corporations and Their Investors” by Jean Rogers and George Serafeim, HBS Working Paper 20-056.
- “Where ESG Fails” by Michael Porter, George Serafeim, and Mark Kramer, *Institutional Investor*.

### Practitioner-Oriented Materials

- “3 Ways Investors Can Pressure Companies to Take Sustainability Seriously” by Mindy Lubber and George Serafeim, *Barrons*.
- “ESG Notebook: 6 Practical Approaches to Increasing Corporate Sustainability” feature on Rebecca Henderson by Nigel Wilson, *Forbes*.
- “ESG Returns Eventually Will Win Over Critics” by George Serafeim, *Barrons*.



- “Green Accounting: Financial Statements May Get New Life as Environmental-Sustainability Tool” by Margot Habiby, *Karma*.
- “Harvard Case Studies Show ESG Can Also Generate Alpha” feature on Vikram Gandhi, *Bloomberg*.
- “How to Ensure ESG Investing Isn’t Whitewash” feature on Vikram Gandhi by Debbie Carlson, *US News*.
- “Merging the Worlds of Finance, Investing, and Environmental Impact” by Martin Aares.
- “Pathways to Materiality: How Sustainability Issues Become Financially Material to Corporations and Their Investors” by Jean Rogers and George Serafeim, *Working Knowledge*.
- “PG&E’s Bankruptcy Shows Blindspots in Green Investing” feature on George Serafeim by Rob Curran, *Wall Street Journal*.
- “Shaping Leaders Who Understand Business and the Environment” feature on George Serafeim by April White.
- “Should a Pension Fund Try to Change the World?” interview of Rebecca Henderson and George Serafeim, *Cold Call* podcast episode.
- “US Business Schools Realise ESG is No Fad But Part of Long-term Trend” feature on Vikram Gandhi by Gillian Tett, *Financial Times*.
- “Working with Companies and Investors to Address Climate Change” *Climate Rising* podcast episode.

## **PART 2: IMPACT INVESTING**

### **Course Material**

- “Eric Rice, Patrick Kent, Quyen Tran, Wendy Cromwell; Wellington Global Impact” by Shawn Cole and Lynn Schenk (multimedia supplement, 220-704).
- “Financial Inclusion at Omidyar Network” by Vikram Gandhi and James Barnett (teaching plan, 320-018).
- “Goldman Sachs: Making an Imprint in Impact Investing” by Vikram Gandhi and Aldo Sesia (teaching plan, 219-007).
- “Omidyar Network’s Impact Investment Framework” by Vikram Gandhi (multimedia supplement, 320-701).
- “Omidyar Network’s Investment Decisions: MicroEnsure and Lenddo” by Vikram Gandhi (multimedia supplement, 320-702).
- “The Rise Fund: TPG Bets Big on Impact” by Vikram Gandhi, Caitlin Reimers Brumme, and Sarah Mehta (teaching note, 319-003).
- “THE VELUX FOUNDATIONS: Selecting Impact Funds” by Vikram Gandhi and Nathaniel Schwalb (teaching plan, 819-113).

- “The Sustainability Accounting Standards Board (Abridged)” by Julie Battilana and Michael Norris (419-058).
- “Thierry Deau, Founder and CEO, Meridiam” by Shawn Cole and Lynn Schenk (multimedia supplement, 220-703).

### **Practitioner-Oriented Materials**

- “At Harvard B-School, Lessons for Impact Investors” feature on Vikram Gandhi by Beth Pinsker, *Reuters*.
- “Here Are the Three Trends Driving Impact Investing” feature on Vikram Gandhi, *CNBC*.

## **PART 3: SHAREHOLDER ACTIVISM**

### **Course Material**

- “Fossil Fuel Divestment” by Michael Toffel and Sarah Gulick (620-026).

### **Scholarly Research**

- “Decarbonization Factors” by Alex Cheema-Fox, Bridget LaPerla, George Serafeim, David Turkington, and Hui (Stacie) Wang, HBS Working Paper 20-037.
- “Shareholder Activism and Firms' Voluntary Disclosure of Climate Change Risks” by Caroline Flammer, Michael Toffel, and Kala Viswanathan, HBS Working Paper 20-049.

### **Practitioner-Oriented Materials**

- “In Wake of Protests, Harvard Business School Faculty at Odds Over Divestment” feature on Rebecca Henderson and George Serafeim by Ellen Burstein, *The Harvard Crimson*.

# GOVERNANCE AND REGULATION

Businesses cannot drive societal-level change toward sustainability by working on their own. Industry collectives, public-private partnerships, and government regulatory agencies all play important roles in fostering change. Faculty are working to identify the most effective governance mechanisms, including industry self-regulation, government policy, and hybrid approaches. Examples from the past year are noted below.

## Course Material

- “Climate Change: Paris, and the Road Ahead” by Vincent Pons (teaching note, 719-050).
- “Hapag-Lloyd AG: Complying with IMO 2020” by Benjamin Esty, Mette Fuglsang Hjortshoej, and Emer Moloney (220-003 and supplement 220-713).
- “Advanced Leadership Pathways: Torsten Thiele and the Global Ocean Trust” by Rosabeth Kanter, Sibel Yalman, and Ai-Ling Jamila Malone (teaching note, 316-039).

## Scholarly Research

- “Voluntary, Self-Regulatory, and Mandatory Disclosure of Oil and Gas Company Payments to Foreign Governments” by Paul Healy and George Serafeim, *Accounting Horizons*, forthcoming.
- “Assessing the Impact of CEO Activism” by Aaron Chatterji and Michael Toffel, *Organization & Environment* 32, no. 2): 159–185.

## Practitioner-Oriented Materials

- “Business and the Politics of Climate Change” *Climate Rising* podcast episode.
- “On Climate Change, Florida Needs Less Political Bickering and More Math” feature on JohnMacomber by Graham Brink, *Tampa Bay Times*.
- “Solving for Climate Change’s Impact on Urban Water: Flooding, Sea Rise, and Drought?” feature on John Macomber by Michael Hoban, *Urbanland*.

# REIMAGINING CAPITALISM

Reimagining capitalism asserts that for companies to deliver value over the long-term, their leaders have a responsibility to society as well as to shareholders. Through teaching, research, and engagement, faculty are exploring when and how companies pursue opportunities to act as change agents within the larger system, addressing public goods challenges like environmental degradation and income inequality.

## Award

- “ODX” Director of the Year Award to Rebecca Henderson.

## Courses

- “Reimagining Capitalism: Business and Big Problems” MBA course taught by Rebecca Henderson and George Serafeim.
- “Sustainable Business Strategy” HBS Online course taught by Rebecca Henderson.

## Scholarly Research

- “Corporate Purpose and Financial Performance” by Claudine Gartenberg, Andrea Prat, and George Serafeim, *Organization Science*.

## Practitioner-Oriented Materials

- “6 Women that are Changing the Way We Think About Innovation” feature on Rebecca Henderson by Brian Sherry, *Stern Strategy Group*.
- “A Lesson from ‘Re-imagining Capitalism’: No Objective Reality” feature on Rebecca Henderson by Jeff Turner, *LinkedIn*.
- “Alumni Changing the World” by James Reinhart.
- “Business in an Age of Sustainability” HBS Alumni Story.
- “Capitalism in Crisis: U.S. Billionaires Worry About the Survival of the System that Made Them Rich” feature on Rebecca Henderson by Greg Jaffe, *Washington Post*.
- “Harvard Business Professor Rebecca Henderson Discusses New Class Aimed at Reimagining Capitalism” feature on Rebecca Henderson.
- “HBS Professor Explores the Impact Purpose Can Have on Your Organization” feature on Rebecca Henderson by Matt Gavin, *Harvard Business Review*.
- “Rebecca Henderson: Reimagining Capitalism” interview of Rebecca Henderson, *Work and Life with Stew Friedman* podcast episode 112 .
- “Reimagining Capitalism” feature of Rebecca Henderson, *The Aspen Institute*.

- “Reimagining Capitalism in a World on Fire” feature on Rebecca Henderson by Allison Webster, HBS Alumni Story.
- “Reimagining Our Capitalist Markets” George Serafeim, HBS Newsroom.
- “Torched Planet: The Business Case to Reinvent Almost Everything” by Rebecca Henderson, *Working Knowledge*.
- “Why is For-Profit Environmental Sustainability so Difficult?” feature on Geoffrey Jones by Dina Gerdeman, *Working Knowledge*.

## **Presentations**

- “Anthroposophical Capitalism: Esoteric Beliefs and the Creation of Modern Business Enterprises” presentation by Geoffrey Jones at the Business History Conference.
- “Book Project Conference at the Harvard Safra Center” conference with Rebecca Henderson.
- “CASBS Project in SF: Reimagining Capitalism” conference and panel with Rebecca Henderson.
- “Columbia Conference: Reimagining Capitalism” conference with Rebecca Henderson.
- “HEC Seminar in Paris: Reimagining Capitalism” conference with Rebecca Henderson.
- “Leadership Now Project Annual Member Meeting: Business & Politics” conference with Rebecca Henderson.
- “Liberating Our Futures Annual Symposium in Cincinnati: Reimagining Capitalism” conference with Rebecca Henderson.
- “Mastering Growth: Re-Inventing Capitalism” conference with Rebecca Henderson at the HBX Program.
- “Princeton Seminar: Reimagining Capitalism” conference with Rebecca Henderson.
- “Ricky Locke Conference: Purpose and Productivity” conference with Rebecca Henderson.
- “Spark Capgemini CXO Forum—Pebble Beach CA: Innovation in a changing world” conference and panel with Rebecca Henderson.
- “Stanford GSB Strategy and the Business Environment Conference” conference with Rebecca Henderson.
- “Sustainability Research at the Strategy Supply Chain Interface” presentation by Michael Toffel at the Academy of Management Annual Meeting.



# SUSTAINABLE CITIES AND INFRASTRUCTURE

The world is currently undergoing the largest wave of urban growth in human history. More than half of the global population is now concentrated in urban areas, a proportion that is expected to increase to nearly 70% by 2050. Cities provide opportunities to innovate to address development needs and to reduce greenhouse gases. Below are examples of faculty work in this critical area.

## Course Material

- “Banorte and the Capital Call Facility: Infrastructure Finance in Mexico” by John Macomber, Carla Larangeira, and Fernanda Miguel (219-049).

## Courses

- “Sustainable Cities and Resilient Infrastructure” MBA course taught by John Macomber.
- “Global Infrastructure Program” Executive Education course taught by John Macomber, York University, Toronto.
- “Real Estate Management Program” Executive Education course taught by John Macomber (Chair).
- “YPO Real Estate Industry Network Program” Executive Education course taught by John Macomber (Chair).

## Scholarly Research

- “Climate Change is Going to Transform Where and How We Build” by John Macomber, *Harvard Business Review*.

## Practitioner-Oriented Materials

- “Climate Change Challenges Facing the Real Estate Industry” *Climate Rising* podcast episode.
- “Creating Resilience: How Businesses Can Cope with the Costs of a Warming Planet” *Climate Rising* podcast episode.
- “Harvard Business School Faculty and Climate Experts Talk Water and the Future of the City in Panel Discussion” feature on John Macomber by Ellen Burstein, *The Harvard Crimson*.

## Presentations

- “Investing in Resilience” presentation by John Macomber to HBS Alumni in Nigeria and Ivory Coast; HBS Alumni in Mexico City; at HBS Reunions; at Harvard Kennedy School Energy Program; and to the Nature Conservancy and Florida Department of Environmental Protection.
- “Irrigation in Latin America: Value Creation and Value Capture” keynote presentation by John Macomber at the Zofnass Program for Sustainable Infrastructure.

- “Sea Level Rise and Investing in Resilience” presentation by John Macomber at HLS and the Nature Conservancy South Florida Sea Rise Workshop.
- “The Next Steps in Climate Change” presentation by John Macomber at the CG/LA Global Infrastructure Forum.
- “The Future of Cities: Water” presentation and moderation by John Macomber at WorldWide Week at Harvard.
- “Water Shortage in Mexico City” keynote presentation by John Macomber at the David Rockefeller Center for Latin American Studies 25<sup>th</sup>.

# SUSTAINABILITY STRATEGY

Over the past several decades a growing number of firms have incorporated a range of sustainability practices. For some firms, sustainability has been a differentiation strategy, while for others it has become a strategic necessity to ensure survival. Research, teaching, and engagement at HBS has explored the conditions under which sustainability strategy can lead to superior performance.

## Book

- “Luxury and Environmental Responsibility” by Anat Keinan, Sandrine Crener, and Dafna Goor, *Research Handbook on Luxury Branding* (chapter).

## Course Material

- “Capitalism, Entrepreneurship and Responsibility” by Geoffrey Jones, 1/3 (319-081).
- “Rio Tinto: Decommoditizing Aluminum” by David Fubini and Jonathon McCarthy (419-044).

## Scholarly Research

- “CEO Materialism and Corporate Social Responsibility” by Robert Davidson, Aiyasha Dey, and Abbie Smith, *Accounting Review* 94, no. 1): 101–126.
- “Corporate Sustainability: A Strategy?” by Ioannis Ioannou and George Serafeim, HBS Working Paper 19-065.
- “The Dual-Purpose Playbook” by Julie Battilana, Anne-Claire Pache, Metin Sengul, and Marissa Kimsey, *Harvard Business Review*.
- “Intelligent Design of Inclusive Growth Strategies” by Robert Kaplan, George Serafeim, and Eduardo Tugendhat, HBS Working Paper 20-050.
- “Understanding and Overcoming Roadblocks to Environmental Sustainability. Past Roads and Future Prospects” by Ann-Kristin Bergquist, Shawn Cole, John Ehrenfeld, Andrew King, and Auden Schendler, HBS Working Paper 19-067.
- “Yes, Sustainability Can Be a Strategy” by Ioannis Ioannou and George Serafeim, *Harvard Business Review*.

## Practitioner-Oriented Materials

- “Even for Non-Believers, These Are the Next Steps on Climate Change” by John Macomber, *Working Knowledge*.
- “Green Businesses Are Incredibly Difficult to Make Profitable. Try It Anyway” by Geoffrey Jones, *Working Knowledge*.

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