Rotman

Teaching Sustainability in Business Schools

2024 MMPA Conference

Here's where it changes.

Agenda

1. The Ethical Context
2. Valuing Nature
3. Call to Action

1. The Ethical Context

Incorporating environmental and social considerations in investment decision-making

Rotman

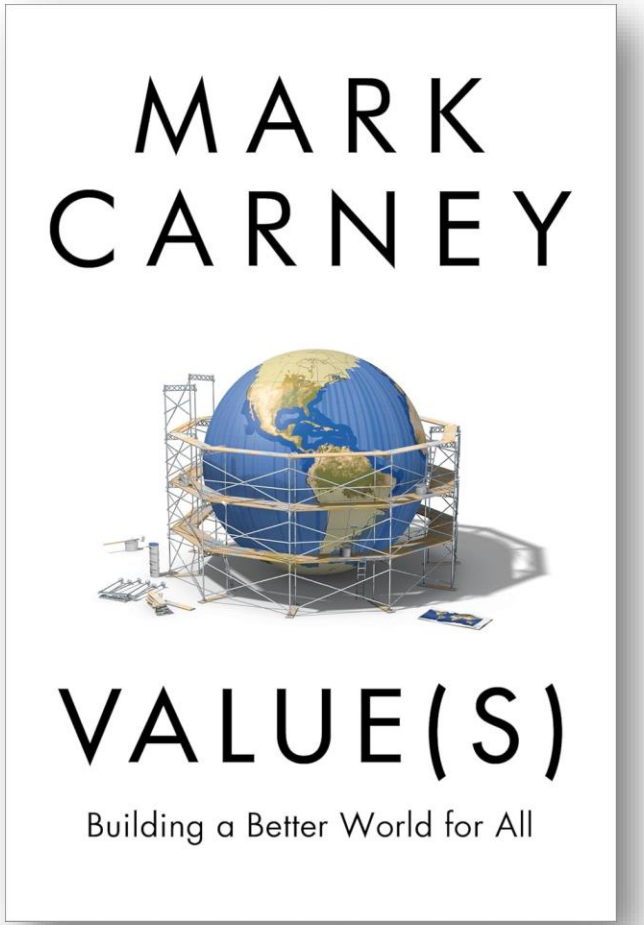
The values in value investing

“I will have nothing to do with your schemes, Squeers. You have behaved to me as no man has a right to behave to another….You have used my money most dishonestly and wickedly. If I were to have anything to do with you, it would be with a view to reclaiming my lost money, and seeing that you did not invest it in the same manner that you did before.”

Charles Dickens *Nicholas Nickleby* 1838 – 1839

"To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society.”

Larry Fink, CEO, BlackRock *2018 annual letter to CEOs*



Sustainable Development: United Nations Brundtland Commission

Source of image:
International Institute for Sustainable Development

- World Commission on Environment and Development (WCED)
  - Established in 1983
  - Published “Our Common Future”, the UN Report of the World Commission on Environment and Development, in 1987
  - Became known as the Brundtland Report after WCED’s Chair, Gro Harlem Brundtland, former prime minister of Norway
- Sustainability was defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”
- Definition underpinned the integration of environmental and social considerations into economic planning and investment decisions

Achieving the Goals of Sustainable Development: Rio Earth Summit

- United Nations Conference on Environment and Development (Rio Earth Summit)
  - Rio Declaration
    - New way of producing and consuming, living and working, and making decisions
  - Agenda 21
    - Mobilizing financial resources for sustainable development, paving the way for new financial instruments and policies that address environmental concerns

Group photo of world leaders meeting at the 'Earth Summit' in Rio de Janeiro, Brazil, 13 June 1992. UN Photo/Michos Tzovaras

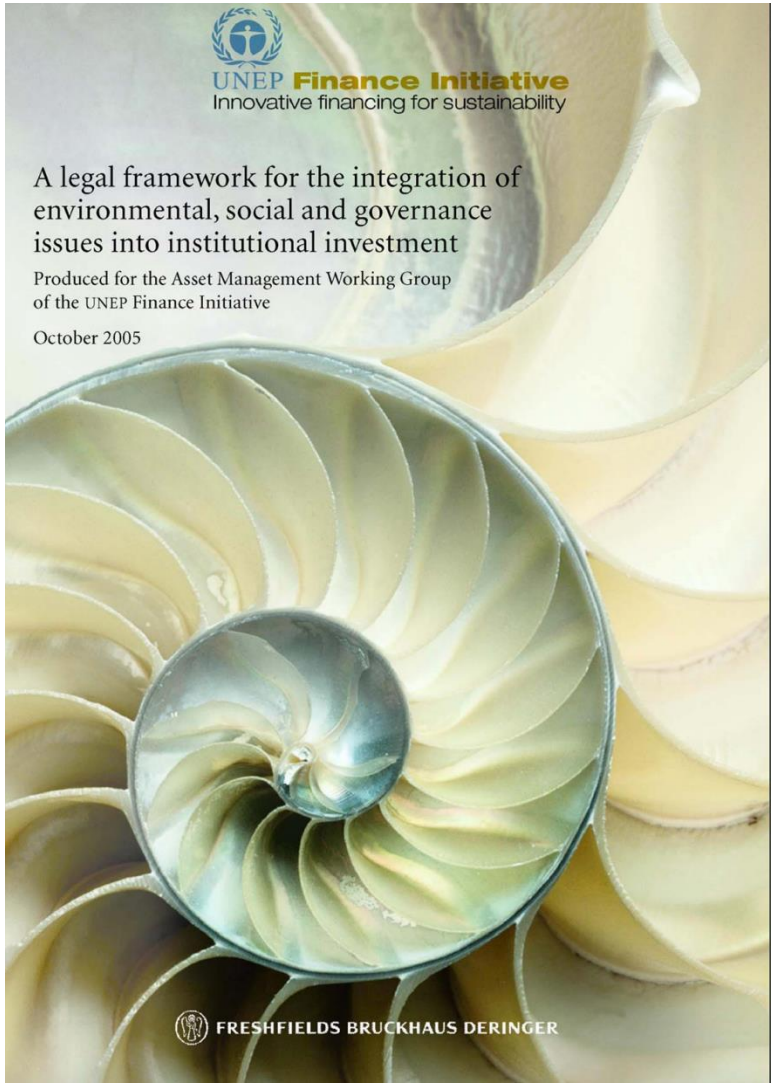
- Summit also adopted the United Nations Framework Convention on Climate Change (UNFCCC)
  - Foundation for the Kyoto Protocol and Paris Agreement

(Sidebar) 2022: COP27 World Leaders

Rotman

Integrating Sustainable Development Objectives into Investment

- UNEP FI launches as a partnership between UNEP and the global financial sector to promote sustainable finance
- Convenor of global FIs to understand the environmental, social, and governance (ESG) impacts of financial decisions
- Coined the term “ESG” (2004)
- Commissioned Freshfields Bruckhaus Deringer to develop a legal framework for the integration of ESG issues into institutional investment
- The Freshfields Report was published in 2005, arguing that fiduciary duty is not a barrier to the integration of ESG factors in investment decision-making
  - Went so far as to suggest that ESG considerations could be a part of a fiduciary’s duty when such factors may affect the financial performance of an investment over the long-term
  - Marked a pivotal moment in advancing the idea that ESG issues are financially material and relevant to long-term investment performance
- Publication was immediately followed by widespread uptake of ESG integration



Rotman

The Impact on Finance

ESG is about identifying and managing those environmental and social issues that could affect your future financial performance

Managing your business to change the world

VS

Managing your business in a changing world

Rotman

And the Backlash

ESG is an evolving mandate that is not well understood, resulting in today's "ESG wars".

"We need an energy transformation on the scale of the industrial revolution at the speed of the digital transformation. And therefore, we need a revolution in finance."

Mark Carney, UN Special Envoy for Climate Action and Finance

"To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society."

"Climate risk is investment risk"

Larry Fink, CEO and chairman, BlackRock

"The world should adopt a simple rule: if big infrastructure projects aren't green, they shouldn't be given the green light. Otherwise we will be locked into bad choices for decades to come."

Antonio Guterres, United Nations Secretary-General

"ESG marks the culmination of efforts by the ruling class to achieve through the economy what it could never achieve through the ballot box."

Ron DeSantis
Governor of Florida

"Together as shareholders we can (mandate Oil and Gas companies) to drill more, to frack more, to do whatever allows them to be more profitable over the long run without worrying about these toxic political agendas in the boardroom."

Vivek Ramaswamy, Founder, Strive Asset Management

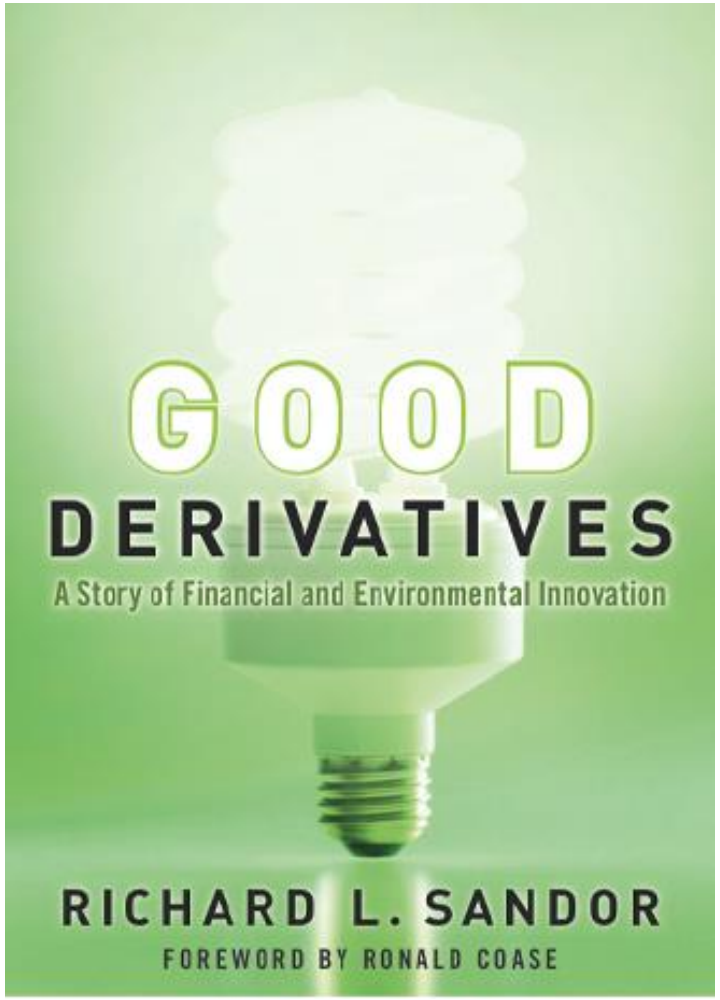
2. Valuing Nature

Quantifying externalities

Rotman

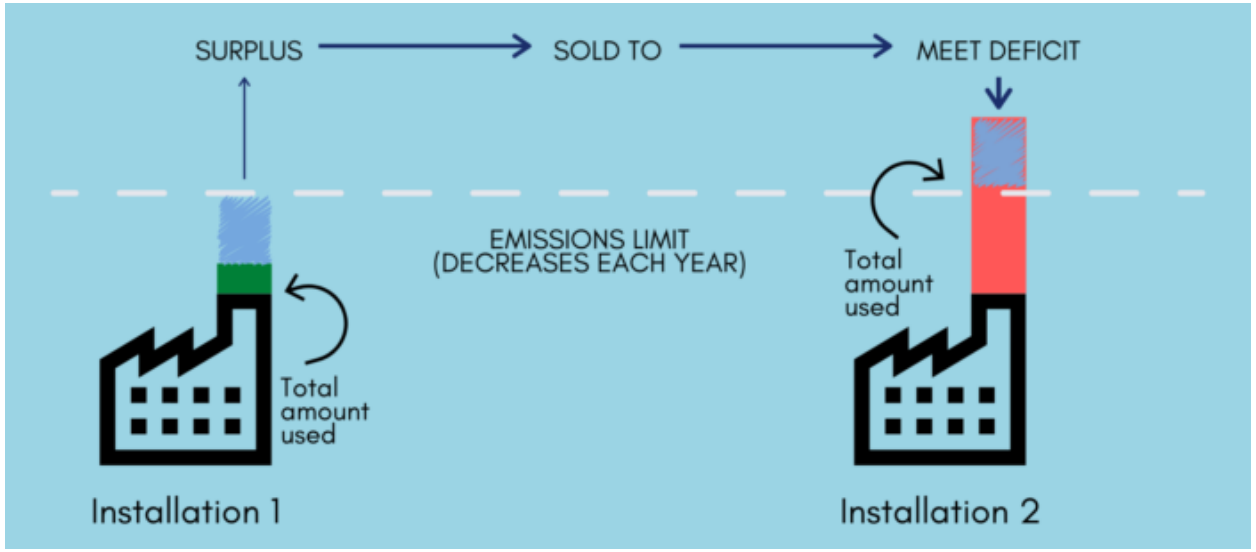
Internalizing the cost of pollution: Acid Rain Program (1990 – 2003)

- 1990: Clean Air Act Amendments
  - Established the SO2 emissions trading program in the US (Acid Rain Program)
  - Designed to reduce SO2 emissions from power pants to address acid rain
  - Created the concept of a cap-and-trade system for environmental pollutants
- 1995: SO2 emissions trading market officially begins with allowances for emissions allocated and traded among power companies
- 1998: The NOx Budget Program was launched to address ground-level ozone and smog in the US
- 2003: The NOx emissions trading program officially begins with trading of NOx allowances among power plants and other industrial sources



Source of image: richardsandor.com

Putting a price on carbon: Kyoto Protocol (1997)



Source of image: Investigate Europe

- Adopted on December 11, 1997 in Kyoto, Japan and becomes a milestone in global climate negotiations
- Entered into force on February 16, 2005
- First international treaty to legally bind developed countries to GHG emission reduction targets
  - 5% below 1990 levels during the 2008 – 2012 commitment period
- **Clean Development Mechanism (CDM)** key mechanism of Kyoto
  - Allowed developed countries to invest in emission reduction projects in developing countries
  - Financed renewable energy, energy efficiency improvements, afforestation and reforestation, methane capture
- Dual mandate (environment & development)

Putting a price on ecosystem services (2010)

Biodiversity:

Protects the ecosystem services on which we rely

- Economic activities e.g., harvesting (timber, fish, plants) and asset protection (flood, drought)
- Environmental activities e.g., moderating climatic, hydrological and bio-chemical cycles, as well as biological processes
- Social activities e.g., recreation, knowledge development, relaxation, and spiritual reflection

Direct and Indirect Valuation:

1. Intermediate ecosystem services
   - Used by other ecosystems
   - Contribute to the supply of final ecosystem services
2. Final ecosystem services
   - Services are used by the economy and people
   - Measured in economic units

Ecosystem Accounting (UN)
Ecosystems Flow Accounts (Government of Canada)

Putting a price on weather changes and catastrophe risk (1990s – 2000s)

- 1990s: Weather risk management gains traction as deregulation in the energy markets exposes companies to risks from weather fluctuations
- 1997: The first weather derivative was issued by Enron to hedge against mild winters
- 1999: Chicago Mercantile Exchange (CME) launches exchange-traded weather futures and options
- 2007: Market expands with tailored contracts for a wider range of industries, including insurance and agriculture
- 2010s: CME introduces more location-specific contracts and products for rainfall, snowfall, and temperature volatility
- 2020s: Weather derivatives increasingly used as a tool for managing climate risks, including droughts, floods, and hurricanes
- Catastrophe bonds develop as another tool for weather risk management

Emerging financial innovation

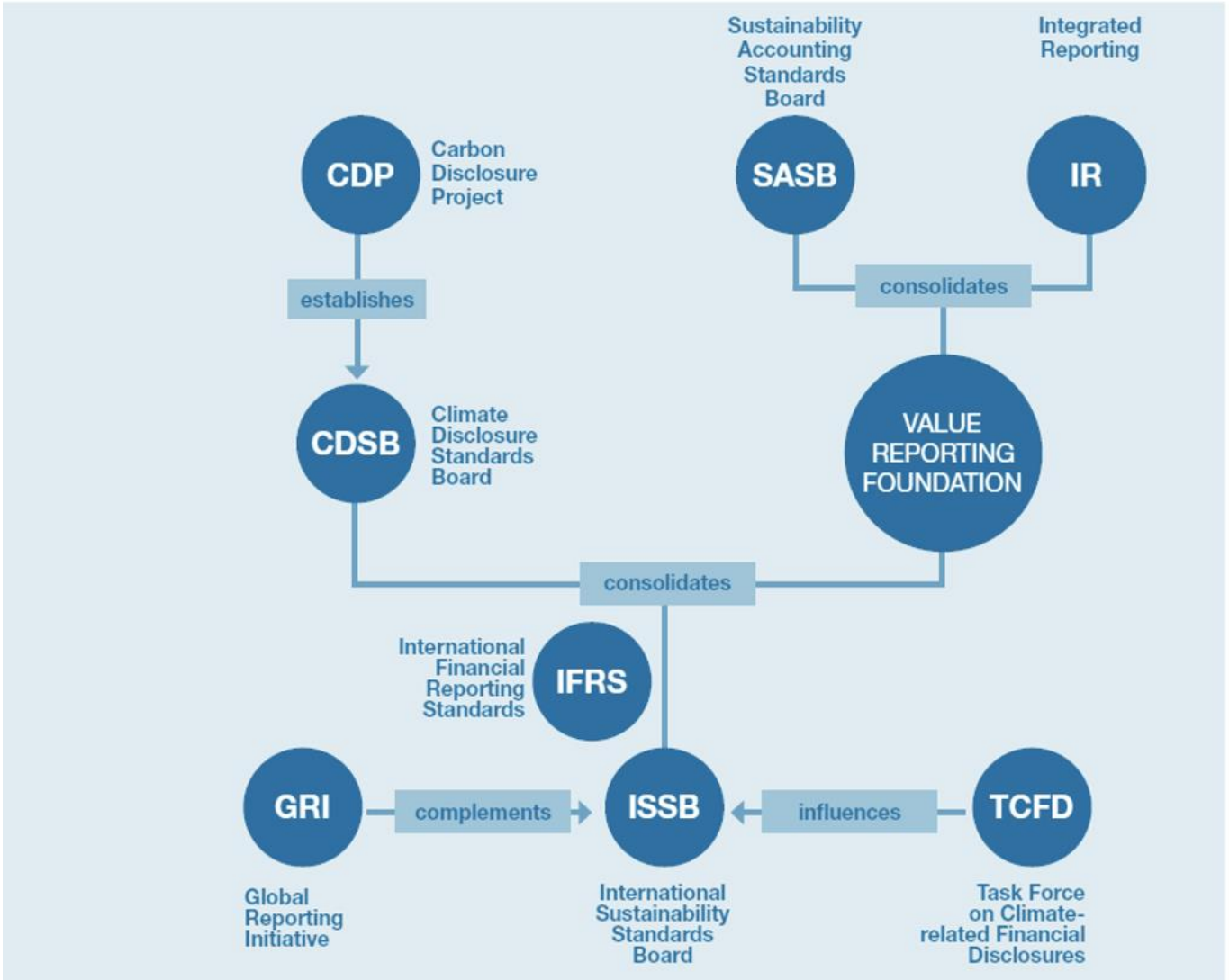
- Biodiversity bonds
  - Financing the bond through payments for ecosystem services or carbon offset purchases by users of the ecosystem services
- Debt for nature swaps
  - Restructuring or forgiving foreign debt in exchange for commitments to environmental conservation
- Private philanthropic donation to investment conversion
  - Donations are converted into impact bonds that are repaid by governments, with interest, if the projects meet pre-agreed targets
- Carbon offset futures
  - Contracts that enable project developers to pre-sell carbon credits with a locked in price to provide up-front capital for the project
- Adaptation pre-financing
  - Interest-free loan provided for adaption measures with repayment contingent upon the payout from a weather derivative

3. Call to Action

Regulatory requirements, societal expectations, technological advancement

Regulatory requirements

- **B-15:** Provide clear expectations for federally regulated financial institutions (FRFIs) in Canada on managing climate-related risks
- **C-59:** Impose stricter rules on companies making environmental claims to ensure that they are properly substantiated
- **Climate-Aligned Finance Act:** Stop banks and pension funds from financing emissions-intensive activities for which alternative options are available
- **Taxonomies:** Classify economic activities based on their environmental attributes or contribution to the transition



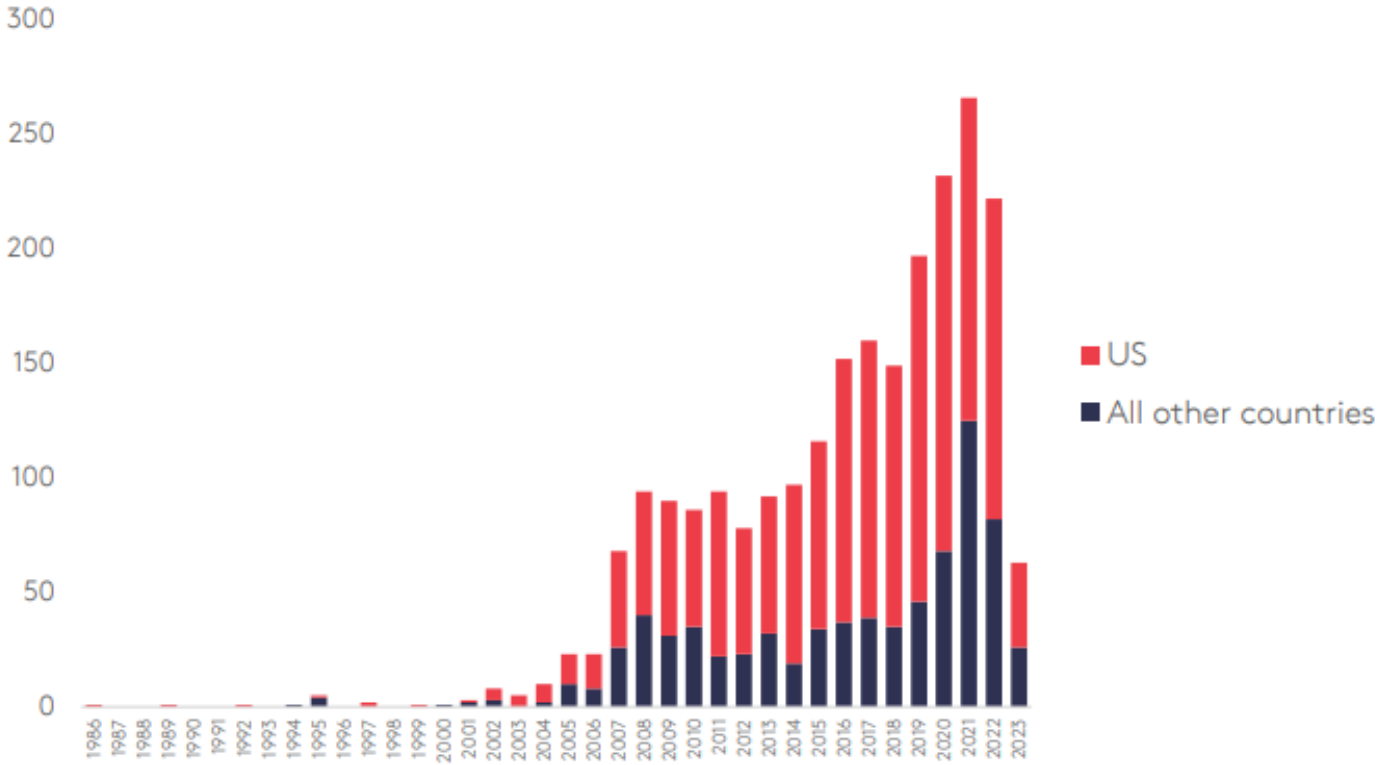
Source: PwC

Societal expectations – Civic action

Rotman

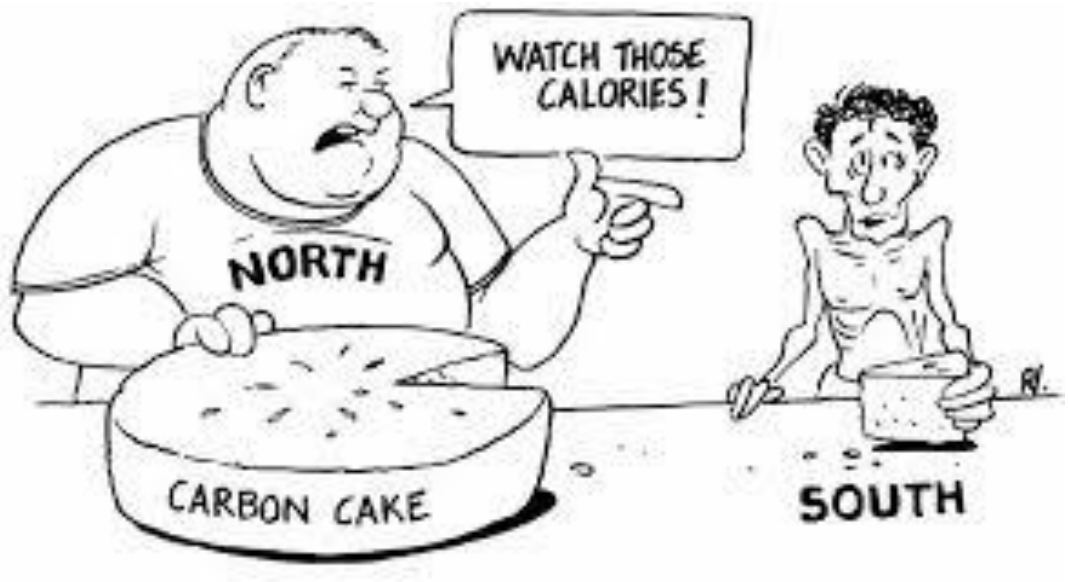
Societal expectations – Legal action

Total climate change cases over time, US and non-US (1956 to 31 May 2023)



Source: Setzer and Higham, June 2023 https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/06/Global-trends-in-climate-change-litigation_2023-snapshot.pdf

Societal expectations - Global consensus (2009 Copenhagen Accord)



Source of image: judithcurry.com (Climate Etc.)

- Recognized the need for long-term financial contributions from developed countries to support climate action in developing countries
- Annual target of $100 billion by 2020 although this target has not been met

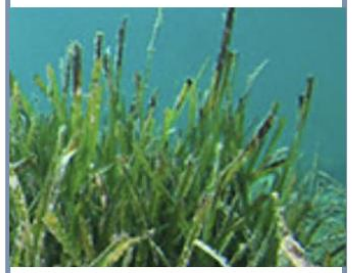
Societal expectations - Materiality

Rotman

Technological advancement

CLIMATE FINANCE

Ocean Love



Building capacity in local communities to capitalize on carbon sequestration and biodiversity credit markets in the Caribbean and African coastal communities.

- Climate Justice
- Entrepreneurship
- Women & Youth
- Education

INDUSTRIAL DECARBONIZATION

Cyan Zero

Piloting a manufacturing plant decarbonization. Encompasses facilities, manufacturing process, onsite generation, and fleet electrification.

- Net-Zero Economy
- Capacity Building
- SME Investment

Mineral Spark

Off balance sheet financing solution for a critical mineral mine site decarbonization solution through fleet and process heat electrification.

- Industrial Decarbonization
- Supply Chain Resilience

RESIDENTIAL DECARBONIZATION

Eco Urban

Transforming industrial areas into net-zero, affordable housing solutions powered by clean energy with engineered wetlands to manage storm and wastewater.

- Net-Zero Urban Design
- Home Affordability

Eco Haven

Creating a financing platform to facilitate access to affordable capital for building custom eco-friendly homes.

- Net-Zero Goals
- Sustainable Future
- Housing Crisis
- Citizen Empowerment

CARBON CREDITS

Carbon Canopy

Piloting a carbon credit generation project through Canada's new forest management (private land) protocol.

- Net-Zero Goals
- Economic Transformation
- Nature-based Solutions
- Indigenous Partnerships

Follow us on LinkedIn

Global Climate Finance Accelerator

INFO@GLOBALCLIMFIN.COM

Download the 2023 -24 Accelerating Climate Finance report or follow our regularly posted Insights.