



# Sustainability

# 2

## ■ Learning Objectives

After completing this reading you should be able to:

- Describe the UN SDGs along with associated goals and targets.
- Identify the key features of sustainable development and the goals of the 2030 Agenda.
- Describe the global material sustainability issues that each SDG addresses.
- Describe the likely strategies to reach the SDGs.
- Understand SDG materiality and alignment within the private sector.
- Explain how sustainability goals and objectives are incorporated into investment guidelines and corporate risk frameworks (e.g., Sustainability Initiatives and Coalitions).
- Analyze the parameters of sustainability, social responsibility, and various environmental challenges.
- Understand the interrelationship between ESG and climate change.
- Explain the relationship and intersection among sustainability, ESG, and climate change.
- Explain various sustainability-based outcomes from company and organizational case studies.

This chapter discusses the broad topic of “sustainability,” particularly as it relates to public policies, corporate actions and financial institutions. The broad examination of sustainability in a policy, corporate, and investment context is important background before examining climate risk analysis (Chapters 3 and 6) and policy frameworks (Chapter 4) in greater detail. This chapter starts by defining sustainability, and differentiating it from the concept of ESG (environmental, social, and governance issues) and from climate risk. This chapter also discusses international goals on sustainability, notably the UN Sustainable Development Goals. The chapter takes a broad approach, touching on economic development, issues of social justice and equity (e.g., human rights), and environmental protection (e.g., biodiversity), and focusing primarily on concepts and general framing in preparation for later chapters that go into greater detail.

## Chapter Outline

- 2.1 Introduction to Sustainability
- 2.2 ESG, Sustainability, and Climate Risk
- 2.3 Sustainable Development Goals (SDGs) and Other Policies
- 2.4 Sustainability for Corporations and Financial Institutions
- 2.5 Private Sector Sustainability Frameworks

## Key Learning Points

- **Sustainability** refers to humankind meeting its economic needs without overburdening the environment or weakening societies.
- The modern concept of sustainability originated within the context of **sustainable development**, that is, country-level economic development done in a way that does not overexploit natural resources or overburden society. But sustainability is now applied to governments, corporations, and financial institutions alike, and to actions by individuals.
- Sustainability is a broad category; **ESG**, or grading firms on environmental, social, and governance performance,

often by financial counterparties, sits within sustainability. **Climate action** falls under sustainability but is not necessarily always considered ESG.

- The UN’s 2030 Agenda, particularly **the Sustainable Development Goals** at the heart of it, have become an important reference point and benchmark for both policymakers and for the private sector.
- Corporate sustainability practices have evolved from being primarily motivated by **corporate social responsibility**—that is, branding or moral considerations—to considerations of financial **materiality**.
- **Frameworks and coalitions** have been crucial in spreading sustainability practices among private sector actors.

## SUSTAINABILITY

### 2.1 Introduction to Sustainability

**Sustainability** is defined as humanity meeting its current needs without overburdening the natural environment or future generations. Most definitions of sustainability place the natural environment and its resources on co-equal footing with social and justice concerns and with economic outcomes. Environmental sustainability means maintaining ecological integrity, preserving biodiversity, and maintaining the balance of natural systems (such as the global climate), and it means that natural resources are consumed by humans at a rate less than that at which they can be replenished. Social sustainability means that a minimum standard of basic necessities and human rights is afforded to all people, who have sufficient resources to keep themselves, their families, and their communities healthy and secure. Economic sustainability means having economic systems that are accessible to everyone and that help to spread and generate prosperity globally. These three elements, then, make up “sustainability” writ large.

There have been periodic concerns about the finite nature of natural resources stretching back at least to the eighteenth and nineteenth centuries. These discussions about the value of nature and the debates (and in some cases, political movements and even revolutions) around sharing wealth and well-being more equitably for the benefit of wider society started almost as soon as the industrial

revolution (which brought unprecedented economic growth and wealth) began.

However, the concept of sustainability as applicable to today's public policy and corporate arenas traces its roots to actions in the 1970s and 1980s. In 1972, the first major United Nations meeting on environmental issues took place. That same year saw the publication of "The Limits to Growth," a report commissioned by the Club of Rome that argued that there were limits to economic growth due to resource constraints. However, neither of these significantly shaped public policy, leading to the creation of the Brundtland Commission a decade later. Unlike the Club of Rome report, the Commission's final report, released in 1987, proclaimed *sustainable development* to be compatible with economic growth and defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987). This has since become the most cited and widely accepted definition of sustainable development.

While the definition was grounded in the development discourse of allowing the world's poorer countries to gain access to better living standards, it later served as a basis for defining what sustainability means for other sorts of entities, such as corporations, financial institutions, and individuals. For example, from the 1990s, corporations widely pursued **corporate social responsibility (CSR)**, whereby companies undertake social or environmental activities for the wider benefit of society (see Section 2.4). Around the same time as companies started widely practicing, and communicating about, CSR, investors began pressing investee companies to become more sustainable through shareholder "engagement" (O'Rourke, 2003).

Today, sustainability is an important guiding principle for governments, international organizations, individuals, corporations, and financial institutions alike. Governments advocate the merits of sustainability and agree on international sustainability goals through the United Nations, such as the Sustainable Development Goals, covered in Section 2.3. Essentially every organization involved in development, such as multilateral development banks, seeks to align its work with sustainable development principles. Some consumers consider sustainability in making moral and ethical choices in regard to consumption: for instance, many

people have reduced or eliminated their use of meat and dairy products for environmental reasons.

Corporations practice sustainability through their CSR policies; through adherence to environmental, social, and governance norms (ESG); and through corporate-level commitments, which range from commitments to eliminate the use of forced labor from a firm's supply chain to the alignment of a firm's business model with Paris Agreement-compliant emissions reductions goals. Investors and financial institutions, for their part, practice sustainability through the ESG policies they have in place relating to their investing and lending activities, sustainable finance product offerings (described in more detail in Chapter 5), and various commitments to align with sustainability goals.

## 2.2 ESG, Sustainability, and Climate Risk

Discussions of sustainability can easily get bogged down in definitional confusion or overlap. Sustainability is the broadest category of all, including actions or activities undertaken in such a way as to not exhaust or exploit resources—human or natural—and to allow for economic activity to continue into the future. Sustainability can and does refer to action by governments, individuals, firms, and financial institutions (see diagram, below). Broadly, it encompasses social and environmental awareness, and it seeks to ensure that economic activity does not harm either society or the broader environment. These categories are broad in and of themselves; social sustainability can include practices ranging from respecting human rights and ensuring worker protection to fair employment practices and promoting gender equality. Environmental sustainability encompasses considerations such as addressing climate change, striving for clean air and water, protecting oceans, conserving habitats and nature, and preserving biodiversity.

The notion of **ESG**, meanwhile, with "E" referring to environment, "S" to social, and "G" to governance, began in the financial industry and its surrounding policy discussions involving financial regulation and financial-sector sustainability. The term ESG was coined in a 2005 report by the UN Global Compact, which was endorsed by a coterie of investment firms, including ABN Amro, Goldman Sachs, and Westpac. Use of the abbreviation was solidified when it was

embedded into the UN Principles for Responsible Investment, launched in 2006 (see Section 2.5).

ESG criteria are used as a set of standards by responsible investors to gauge companies—and sometimes other entities such as governments—on their environmental, social, and governance performance. Environmental criteria consider a company's relationship to climate change or to nature: Typical metrics include a company's carbon dioxide emissions, water usage, or its impact on deforestation. Social metrics examine how a company treats its employees and managers relationships with suppliers and communities. Governance deals with a company's leadership, including board composition, executive compensation, risk management, and other internal procedures.

ESG information is sometimes disclosed by companies and is often collected by data firms or by investors. Often, ESG information is condensed into specific scores or ratings (see Chapter 5). ESG scores and metrics are then used by financial firms in various ways. One important purpose is their use in screening companies for inclusion in ESG investment funds. Another use is for insight into banks', insurers', and investors' firm-level ESG policies that are integrated into their lending, underwriting, and investment practices. This can mean that certain types of clients or projects are favored over others, and that certain types of projects are restricted or even fully excluded. For example, coal-fired power plants are highly emissions-intensive and not compatible with reaching international climate goals. Consequently, many banks have stopped financing them, insurers have stopped insuring them, and investment firms have excluded coal firms from portfolios.

While non-financial corporations are more focused on sustainability than ever, the use of the term "ESG" (as opposed to CSR or sustainability) occurs for them mainly in an investor relations capacity: that is, companies communicating performance to shareholders, lenders, and other financial stakeholders using ESG metrics that have become standard in the financial industry. At the country level, investors can and do use ESG metrics for certain purposes, such as sovereign bond portfolios. To give just one example, MSCI, an ESG data provider, provides country-level ESG ratings. However, governments themselves rarely if ever use the language of "ESG" to refer to their own policy actions. They prefer the language of sustainable development or topic-specific language, such as climate policy or

social policy. Thus, the relationship of ESG to government policy is very one-sided.

Climate change-related issues, including climate risk, are sometimes thought of as a subset of ESG. While they do fall under the "E" (environmental) category, in reality climate is not exclusively an ESG issue. The impacts of climate change, both its physical impacts (e.g., sea level rise, increased incidence of extreme weather) and impacts that are related to the transition to a net-zero emissions economy, affect all stakeholders—from companies and financial institutions to governments and individuals, including those not currently acting in sustainable ways.

As for responses to climate change, governments set climate policies to reduce emissions and adapt to climate change, which is considered part of sustainable development but not of ESG per se (see Chapter 4 for more on policies). Corporations set corporate-level climate goals, but these can be motivated by bottom-up consumer pressure or government policy just as much as by ESG-related pressure from investors or lenders. The following graphic seeks to map out the overlapping spheres:

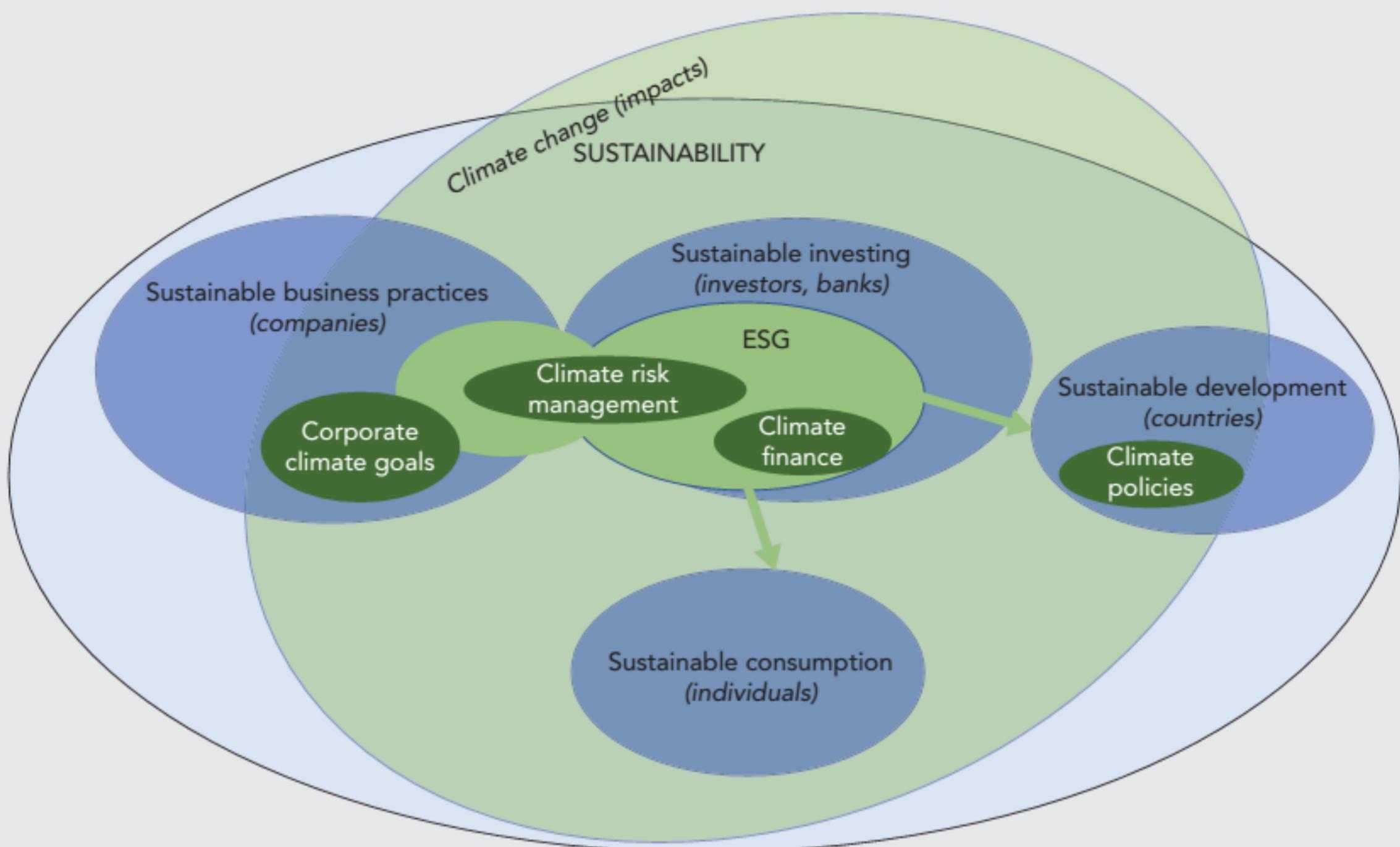
## 2.3 Sustainable Development Goals (SDGs) and Other Policies

Sustainability is an area in which policymakers have set many goals and concrete policy. A lot of sustainability initiatives have occurred at the international level through voluntary and aspirational goals or guidelines. Despite the relative lack of strict laws, sustainability goals have become an important focal point for many stakeholders. This is most notably the case in the United Nations' Sustainable Development Goals (SDGs), launched in 2015 as part of the UN's 2030 Agenda for Sustainable Development.

### 2.3.1 Leading up to the 2030 Agenda

The UN has a strong interest in promoting sustainable development, as evidenced by the Brundtland report, and it has established multiple frameworks in this area. In 1992, at the Earth Summit in Rio de Janeiro, 178 countries adopted Agenda 21, a plan for a global partnership on sustainable development. The Earth Summit was started by the United Nations Framework Convention on Climate Change (UNFCCC), a major convening body for global climate decisions, and the Convention on Biological Diversity. These

## GRAPHIC: MAPPING OVERLAPPING DEFINITIONS



**Figure 1**

This graphic seeks to clarify the relationship between the sustainability subtypes (sustainable development, sustainable consumption, sustainable business, and sustainable investing) and ESG; climate impacts; and climate responses. Climate change's impacts are cross-cutting and do not just fall within sustainability.

Climate policy falls under sustainable development, but government policies are not typically discussed in terms of ESG, which is a moniker mainly used by the financial industry and corporations. A firm's or financial institution's climate finance and climate risk management can be seen to sit fully within ESG.

new bodies and the UNFCCC have played a crucial role in coordinating communication regarding the scientific consensus built by the Intergovernmental Panel on Climate Change (IPCC) with governments. All major global-level climate policy agreements, from the 1997 Kyoto Protocol to the 2015 Paris Agreement, have occurred under the aegis of the UNFCCC.

In 2000, the UN adopted eight Millennium Development Goals (MDG) to be achieved by 2015, including eradicating extreme poverty, achieving universal primary education, reducing child mortality, improving maternal health, and ensuring environmental sustainability. While these MDGs were helpful as benchmarks for generating discussions with governments and civil society, they ultimately fell short: Notably, the flagship goal to eradicate poverty

was not achieved. Also, the MDGs never deeply involved or engaged private-sector stakeholders such as corporations or financial institutions.

The 2030 Agenda for Sustainable Development was subsequently developed and launched in 2015. It is mainly a product of the UN, its member countries (i.e., governments), and to an extent, civil society. The Agenda, which specifically set out to "build on the Millennium Development Goals and complete what they did not achieve," centers on "people, planet, prosperity, and peace." One might have expected the Agenda, as well as the Sustainable Development Goals at its heart, to follow a similar trajectory to the MDGs, but the Agenda and the SDGs have so far proven more impactful and influential.

### 2.3.2 Sustainable Development Goals (SDGs) and the 2030 Agenda

The success of the 2030 Agenda so far is that it manages to be broad, all-encompassing, and detailed. At its heart lie 17 Sustainable Development Goals (SDGs), which cover a much broader set of policies and areas than the MDGs. They range from environmental and economic to social goals. Environmental goals include those on climate action (SDG 13) and nature-related goals to protect life on land and life in the water (SDGs 14 and 15). Social goals include those dedicated to ensuring good health (SDG 3), quality education (SDG 4), and gender equality (SDG 5), among others. Economic goals include those for good jobs (SDG 8), innovation and infrastructure (SDG 9), and responsible consumption (SDG 12) (see full list in box). The 17 goals are also subdivided into 169 targets, which provide specificity.

The broad scope of the SDGs have allowed a wide range of stakeholders to find strong agreement about at least

some of the goals—whereas the MDGs are more targeted for development in poorer countries and meant for public-sector, multilateral, and civil society stakeholders. Also, the detailed targets allow for better tracking and focus.

### 2.3.3 Implementing the Goals: Sub-Targets and Cross-Cutting Solutions

While the broad goals help bring about a wide span ambition of action, the breakdown of each large lofty goal into smaller, targeted goals and sub-targets helps in concretizing their implementation. This subsection will highlight examples from a few of the goals.

Under Goal 4, which relates to education, the more detailed targets include ensuring the free and equitable access of all children to primary and secondary education; access to early childhood care; access to technical, vocational, and higher education; and eliminating gender disparities in education, as well as a more short-term goal (set for 2020) of

## SUSTAINABLE DEVELOPMENT GOALS: FULL LIST

### SUSTAINABLE DEVELOPMENT GOALS



**Figure 2** Reprinted with permission of the United Nations Sustainable Development Goals [<https://www.un.org/sustainabledevelopment/>]. The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States.

Goal 1. End poverty in all its forms everywhere  
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture  
Goal 3. Ensure healthy lives and promote well-being for all at all ages  
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all  
Goal 5. Achieve gender equality and empower all women and girls  
Goal 6. Ensure availability and sustainable management of water and sanitation for all  
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all  
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all  
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation  
Goal 10. Reduce inequality within and among countries  
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12. Ensure sustainable consumption and production patterns  
Goal 13. Take urgent action to combat climate change and its impacts  
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development  
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss  
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels  
Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

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"substantially expanding" the number of scholarships available to developing countries. Goal 7, on affordable energy, has detailed targets on energy access, renewable energy, and energy efficiency (see box).

Even if these targets are not necessarily quantitative, their specificity nonetheless is helpful in developing targeted metrics and policies to better gauge progress.

While the original UN formulation is methodical goal by goal, many implementations of the SDGs further several goals at once. Many private sector stakeholders, in particular, have started enumerating which SDGs their activities principally align with (see Section 2.4, including Shell case study). One example of a synergistic action for tackling multiple goals is a **nature-based solution** for climate change mitigation (see below).

## EXAMPLE OF TARGETS UNDER AN SDG: GOAL 7 (AFFORDABLE ENERGY)

- 7.1** By 2030, ensure universal access to affordable, reliable and modern energy services
- 7.2** By 2030, increase substantially the share of renewable energy in the global energy mix
- 7.3** By 2030, double the global rate of improvement in energy efficiency
- 7.a** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

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## CASE STUDY: NATURE-BASED SOLUTIONS TARGETING A COMBINATION OF SDGs 13, 14, AND 15

Nature-based solutions are defined as actions to protect, manage, or restore ecosystems that also address societal and human challenges. Some nature-based solutions are well suited to providing climate change mitigation and adaptation benefits. This case study examines how actions to protect ecosystems such as forests, grasslands, mangroves, and wetlands (SDGs 14 and 15) can also address human-caused climate change (SDG 13).

Climate change is, after all, caused by excess human-generated carbon dioxide emissions, as well as emissions of other greenhouse gases. Plants absorb carbon dioxide from the air and use it in photosynthesis to produce chemical energy in the form of sugars and as building blocks for their structural tissues. The carbon is retained in plants indefinitely so long as the plants are alive, or in wood products, that is, lumber; but if the plant material burns or decomposes, the carbon dioxide is re-released into the atmosphere. In terrestrial forests, microbes and fungi can absorb and sequester carbon dioxide in the soil. Wetlands, meanwhile, can retain and absorb floodwaters, which can help limit their impact on buildings or infrastructure. Mangrove forests along tropical coasts can substantially attenuate storm surges and provide important habitats for fish and other marine wildlife (see graphic).

For nature-based climate solutions to be viable, the World Wildlife Fund argues they must

- 1) address climate change and increase ecosystem functionality;
- 2) be science-based;
- 3) be synergistic;
- 4) be designed and implemented with local stakeholders and indigenous peoples; and
- 5) be measurable and traceable.

In light of these conditions, it is easy to see why one well-known nature-based climate solution—planting trees—can fail unless done properly. From a carbon sequestration perspective, planting one species of tree in orderly, dense rows may seem optimal, but this does not produce a functional, biodiverse ecosystem, and thus fails condition 1. Many offsetting schemes involving tree-planting only ensure that saplings are planted, but they do not have mechanisms in place to ensure the trees grow and stand for decades and centuries, rather than being felled or burned; this, then, fails condition 5. Therefore, only tree-planting done in a way to ensure biodiversity and ecosystems are supported, and tree growth is ensured and monitored for the long term, would actually fulfill the criteria.

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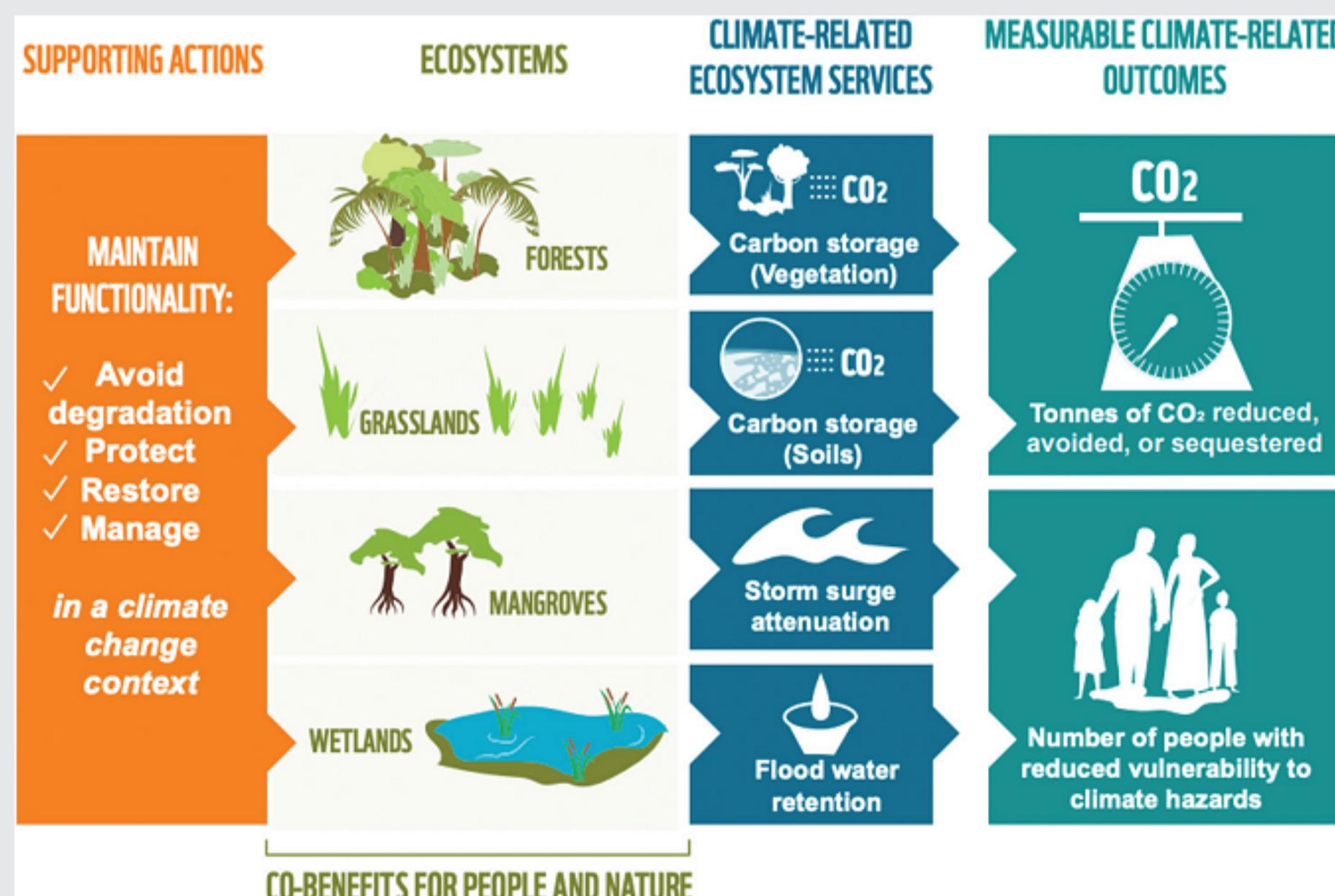


Figure 3

## 2.4 Sustainability at Corporations and Financial Institutions

Combining business with meaningful social or environmental responsibility and stewardship is not new. It has roots in the utopian socialist experiments of certain socially conscious entrepreneurs of the industrial revolution, notably Robert Owen, whose New Lanark Mills in Scotland included social welfare programs and became a hopeful example for many social reformers. Similar communities existed in many parts of the United States. John Lewis & Partners, a British department store, is famous as an employee-owned mutual organization that has served social goals and demonstrated commercial success. From its foundation in its current form in 1920, its employees, called partners, have been co-owners of the business and have had a say in how it is run.

Until recently, the likes of John Lewis have been the exception rather than the norm. Historically, the prevailing view has been that businesses practice "pure" capitalism and that achievement of social, environmental, or other non-economic outcomes were the domain of governments or other stakeholders. This line of thinking is summed up in the famous adage of Nobel Prize-winning economist Milton Friedman: "there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits" (Friedman, 1970).

In the 1980s and 1990s, however, the notion of the "triple bottom line" was developed, placing environmental and social impact "bottom lines" on co-equal status with the traditional bottom line—a company's financial performance. The concept of corporate social responsibility (CSR)—that a corporation also has a broader obligation to society—gained attention in corporate boardrooms. Although the term was coined in the 1950s, its use was regularized in the 1990s, with many large multinational corporations launching CSR initiatives. For example, Royal Dutch Shell, a large Anglo-Dutch oil & gas firm, formed its internal Social Responsibility Committee in 1997, and the firm started issuing standalone sustainability reports in 1998—one of the

first major global firms to do so. The first one was titled "Profits and Principles—does there have to be a choice?" The firm has issued annual sustainability reports ever since, with the contents evolving somewhat over the years (see Case Study).

During this period, investors started taking an interest in the sustainability of investee companies. Proponents of responsible investment point to early examples like the Philadelphia Quakers, who in the mid-eighteenth century banned investing in slave trading, and the decision by Sweden's Ansvar Aktie Fond in 1960 to leave out shares of companies with interests in apartheid South Africa, alcohol, or gambling (Chow, 2010). These are two examples of divestment—that is, an exclusion from investments. The notion of using shareholder pressure for "good" is a more recent phenomenon, tracing to the notion of corporate social responsibility in the 1990s and early 2000s, which is when it became known as "engagement" (O'Rourke, 2003).

### 2.4.1 Applying the SDGs in the Private Sector: SDG Materiality and Alignment

The SDGs have become a benchmark against which companies and investors measure outcomes. In particular, even if the SDGs themselves are concerned with non-financial outcomes for society, the environment, and the wider economy, many of the SDGs do have **material** financial effects on particular companies or industries—that is, effects that can impact the financial bottom line. In recognition of this, individual companies have started including references to SDGs in their sustainability and other reporting. Consultancies promote their knowledge on how SDGs can have material financial effects on corporations, and advise firms on how to integrate SDGs in their operations. This can occur through the development of appropriate key performance indicators (KPIs) (see box for examples). Data firms provide information on SDGs. And finally, financial institutions and investment firms measure them in their portfolios. Not every single SDG has a material on every firm, but most if not all of the goals are aligned with issues that can be material for firms in certain affected sectors (see below).

## CASE STUDY: CORPORATE SUSTAINABILITY REPORTING—ROYAL DUTCH SHELL

As one of the first large firms to issue a modern-format sustainability report, Anglo-Dutch oil & gas firm Royal Dutch Shell makes an interesting case study for understanding how corporate responsibility and sustainability have changed over two decades, and how these concerns are communicated to outside stakeholders.

The inaugural 1997 report frames its content primarily through the lens of values, arguing there does not need to be a “choice between profits and principles.” Meanwhile, the most recent report at the time of publication, covering the year 2019 and published in spring 2020, is much more focused on firm-level commitments to specified initiatives or international goals. For example, in 2019, the firm “fully support[s]” the Paris Agreement’s well-below 2°C goal and has set firm-specific targets for itself on emissions reductions.

### **Excerpts from the 1997 First Sustainability Report: “Profits and Principles—does there have to be a Choice?”**

From the Chairman’s letter: “...Fundamental to [the changes at Shell] is our commitment to support sustainable development and to embody this in our strategic planning and the daily conduct of our businesses. [...]

That such determination exists, and is so strongly imbedded in our organisation, makes me feel particularly proud of the plans we have put in motion to reinforce the ethical underpinning of the Group as it enters its next hundred years. We believe fundamentally that there does not have to be a choice between profits and principles in a responsibly run enterprise.”

On climate change: “Human activities, especially the use of fossil fuels, may be influencing the climate, according to many scientists, including those who make up the Intergovernmental Panel on Climate Change (IPCC). [...] we share concern over the impacts of potential climate change and believe that prudent precautionary measures are called for. The reductions set out in the Kyoto Protocol provide the necessary direction to encourage such measures.”

### **2019 Sustainability Report: “Delivering Energy Responsibly”**

From the CEO Letter: “In 2019, demands for urgent action on climate change grew ever louder. [...] Shell shares this sense of urgency. We continue to take climate action on many fronts [...] But we—and society as a whole—need to do much more because change is not happening fast enough. [...]

This report shows much progress. But Shell must further step up efforts on all fronts, from climate change to ethical leadership to greater transparency. We must continue to make a real contribution to people’s lives. We can only do this by keeping our approach to sustainability at the heart of the way we do business.”

On climate change: “We fully support the Paris Agreement’s goal to keep the rise in global average temperature this century to well below two degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.”

Source: 1997 & 2019 Shell sustainability reports.

Understanding SDG alignment has also become increasingly important and relevant for financial institutions analyzing corporate performance. It is now a lens used to screen companies and analyze entire investment portfolios. As an example, MSCI, an investment data company, offers an SDG Alignment Tool that covers 8,600 companies in a way that measures a “holistic overview of [a company’s] net contribution to the UN SDGs”. In parallel, using SDG alignment allows for an easy way to

present outcomes and priorities to investors in a way that is cross-comparable between financial firms (see Nuveen case study).

### **2.4.2 Moving Toward Sustainability as a Source of Risk**

While sustainability issues were once seen as a supplementary add-on by many companies, they are now increasingly

**Table 1****LINKING THE SDGs TO MATERIAL CONCERNS FOR CORPORATIONS: KEY EXAMPLES**

<b>Goal #</b>	<b>SDG</b>	<b>Example Material Factors</b>	<b>Key Sectors</b>
1	No poverty	Fair wages in operations, supply chains	All
2	No hunger	Food supply chains; Food wastage	Agriculture Retail
3	Good health	Employee health; Provision of health services; Drug access	All Healthcare Pharmaceuticals
4	Quality education	Access to education	Education
5	Gender equality	Board representation; employment and hiring practices; Consumption	All
6	Clean water and sanitation	Avoidance of water pollution; Equitable access	Industrials Utilities
7	Affordable and clean energy	Energy pricing	Utilities
8	Decent work and growth	Employment and hiring practices	All
9	Innovation and infrastructure	Innovation funding	Venture capital
10	Reduce inequalities	Executive pay	All
11	Sustainable cities	Energy efficiency in buildings; urban infrastructure	Construction
12	Sustainable consumption and production	Supply chains; recyclability and durability of products	Industrials, Consumer Goods
13	Climate action	Emissions intensity; Climate vulnerability	Energy, Utilities All
14	Life in the oceans	Overfishing, stock depletion; Pollution	Fishing Industrials, Waste Management
15	Life on land	Deforestation, habitat destruction	Agriculture, Mining
16	Peace and justice	Exacerbating conflict	Defense
17	Partnerships	Cooperation, participation in coalitions	All

being viewed as potentially material sources of corporate risks that can directly or indirectly cause financial impacts and losses.

Reputational risk, for example, can be a material risk. If all corporations are expected to have a CSR policy, and then

some corporations either do not have one or are exposed (e.g., through investigative journalism or a non-governmental organization) to not have abided by their own policy, these companies can sustain real losses. Serious perceived breaches of sustainability can lead to reduced demand for

## CASE STUDY: USE OF THE SDGs IN AN INVESTMENT CONTEXT—NUVEEN

Nuveen, a large American asset manager, explicitly promotes "SDG alignment" in its fixed-income impact investing portfolio. Its impact investments are targeted at four thematic areas, which the firm has mapped to SDGs:

- Affordable housing → SDG 1, No poverty; SDG 11, Sustainable cities
- Renewable energy and climate change → SDG 13, Climate action; SDG 7, Affordable and clean energy
- Community and economic development → SDG 3, Good health; SDG 4, Quality education; SDG 8, Decent work and growth; SDG 9, Industry and innovation; SDG 11, Sustainable cities
- Natural resources → SDG 6, Clean water and sanitation; SDG 11, Sustainable cities; SDG 12, Responsible

consumption; SDG 14, Life in water; SDG 15, Life on land

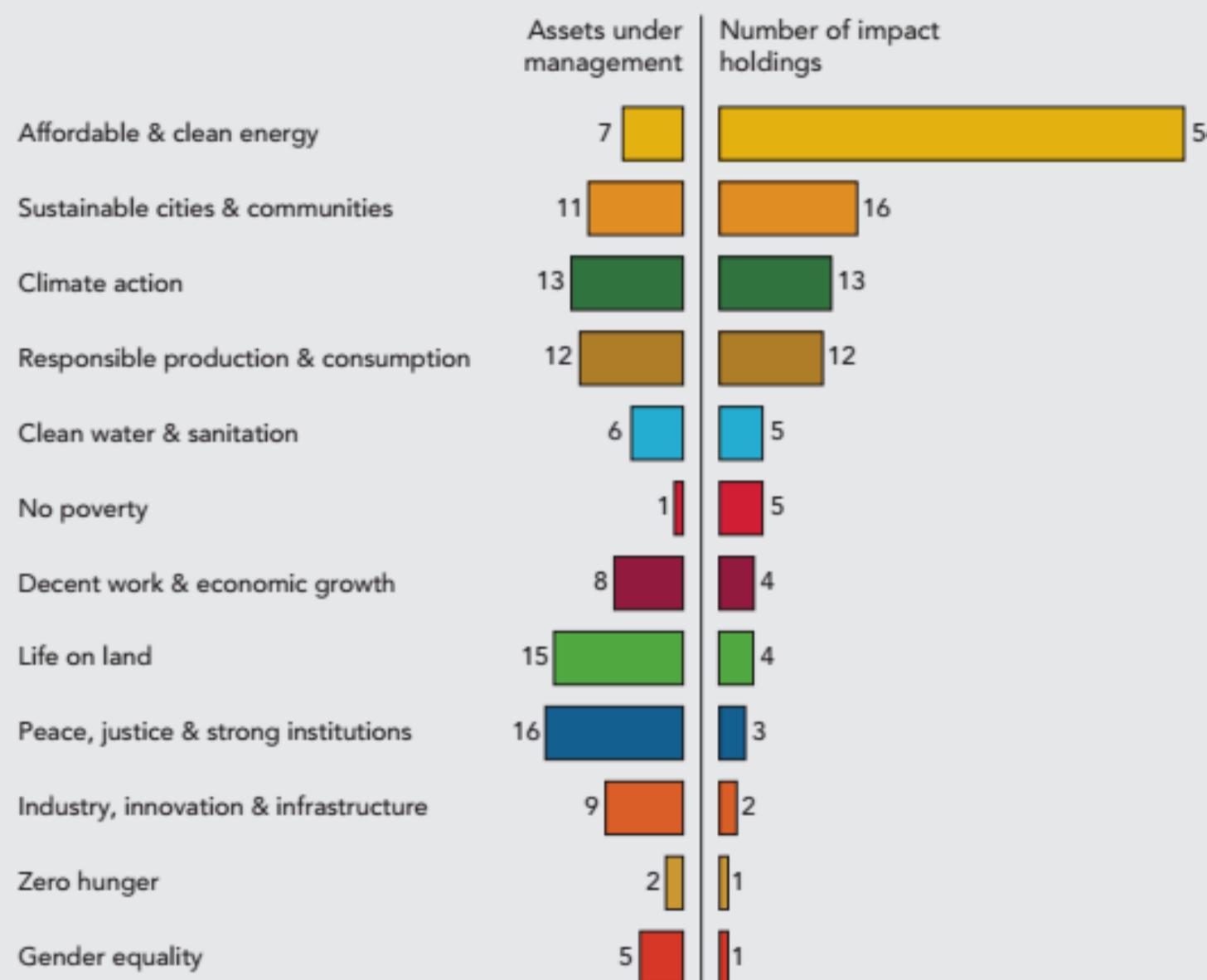
Nuveen has stated that its choice of impact investment priorities predate the SDGs, but that the SDG nonetheless provide a convenient framework for analysis:

"We were investing for impact well before the SDGs were created, but many of the areas that the SDGs have identified as being important for investors and stakeholders to consider, are closely aligned with the investment areas we have chosen."

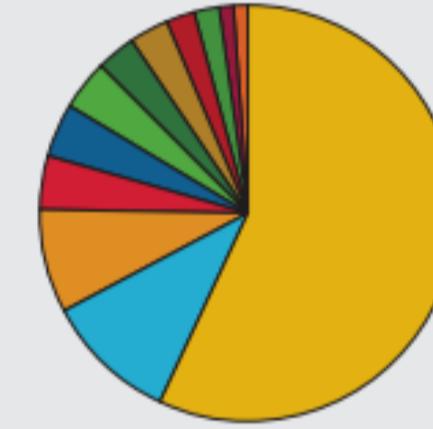
In actually measuring its portfolio exposure, the asset manager opts for two relatively simple metrics: the number of impact holdings aligned with specific SDGs (see left, below), and the assets under management by "primary" SDG alignment (right).

### Alignment with the United Nations Sustainable Development Goals (SDGs)

Number of impact holdings aligned with the SDGs as of 31 Dec 2019



Assets under management by primary SDG alignment



7	Affordable & clean energy	56%
6	Clean water & sanitation	10%
11	Sustainable cities & communities	8%
1	No poverty	4%
16	Peace, justice & strong institutions	4%
15	Life on land	4%
13	Climate action	3%
12	Responsible production & consumption	3%
4	Quality education	2%
3	Good health and well being	2%
8	Decent work & economic growth	1%
9	Industry, innovation & infrastructure	1%
2	Zero hunger	<1%
14	Life below water	<1%
5	Gender equality	<1%

Holdings are subject to change.

Impact holdings are tagged based on the types of projects financed, using an evidence-based approach to align with SDG targets.  
An individual holding could be aligned with up to three SDGs.

Adapted from Nuveen Global Insights SDG Alignment.

Figure 4

a firm's products and services, and increased scrutiny from creditors or regulators.

But there is increased recognition that sustainability issues can affect firms materially in ways beyond reputational risk. If a forestry or fishing firm overexploits resources through excessively wide-scale logging or fishing, forests or fish stocks could be severely depleted. If a mining firm does not properly maintain tailings dams (for storing liquid waste), they can burst, causing floods that inflict severe damage. For example, in January 2019, the Brumadinho dam in Brazil, owned by the mining firm Vale, collapsed. The ensuing flood killed 270 people and polluted the downstream river's ecosystem, which prompted an outcry from many of Vale's investors; the firm's share price also crashed, falling by 24% on the first trading day following the incident. These sorts of incidents can lead firms to face pressure on many fronts, such as from regulators, making it more difficult or costly to secure permission to operate in the future, or from skeptical investors putting heavier scrutiny on companies' practices. Too many such destructive incidents can even risk a business' "social license to operate."

Many key sustainability risks that are financially material on reasonably short timescales are climate change-related. Therefore, climate change forms a large portion of risk-based sustainability analyses (see Chapter 3).

## 2.5 Private-Sector Sustainability Frameworks and Coalitions

In the sustainability space, a particularly important role has been played by corporate and investor groups and coalitions, which have helped develop best practices on sustainability issues. The World Business Council for Sustainable Development (WBCSD) was formed after the UN Rio Summit in 1992, and it does research on corporate social responsibility and shares best practices on sustainability among its members.

The Principles for Responsible Investment (PRI) group, launched in 2006, has played a similar role to the WBCSD for investors.

By joining PRI, investors commit to

1. incorporating ESG in investments and decisions;
2. being active owners;

3. seeking disclosure on ESG issues from investee firms;
4. promoting acceptance and implementation of the Principles;
5. collaborating to implement the principles; and
6. reporting activities and progress toward implementing the Principles.

The PRI, as a very early coalition, has helped pave the way for later issue-specific coalitions ranging from groups like the Alliance to End Plastic Waste to commodity-specific organizations like the Roundtable for Sustainable Palm Oil (RSPO) to climate groupings such as Climate Action 100+ (see further discussion on coalitions in Chapter 4).

### 2.5.1 Frameworks for Sustainability Risk

An important area where initiatives and frameworks have been influential on sustainability is in homogenizing and standardizing how sustainability-related risks are accounted for, disclosed, and reported.

The Sustainability Accounting Standards Board (SASB) was founded in 2011 to provide cross-comparable sustainability metrics. SASB is run as an independent, non-profit, standard-setting organization that aims to guide and promote the disclosure of financially material sustainability information by companies to their investors. SASB standards single out the most materially relevant issues in each of 77 industries. Overall, the framework uses five main dimensions of sustainability—social capital, human capital, governance, business model, and environment—and has identified a number of key issues that sit within these categories (see graphic). SASB has gained further prominence now that Blackrock, the world's largest asset manager, has required investee companies to disclose corporate performance in line with SASB metrics and recommendations.

Another, similar initiative is the Global Reporting Initiative (GRI), founded in 1997 in the wake of the Exxon Valdez oil spill. Initially, the GRI focused on guidelines, but since 2016, it has moved to providing global standards for sustainability reporting.

Of the material sustainability risks, climate risk is one of the most significant, and is an area where frameworks have been particularly influential. Some initiatives have focused

**Table 2**

SUSTAINABILITY INITIATIVES AND COALITIONS		
General/Corporate Initiatives		
Name	Members	Description
World Business Council for Sustainable Development (WBCSD)	Cross-sectoral	An organization of over 200 global firms, formed in the wake of the 1992 Rio Summit. Members come from a range of industries, such as consumer goods (Nestle), chemicals (Dupont), or oil & gas (BP). Firm CEOs act as council members.
Business for Social Responsibility	Cross-sectoral	A network organization that helps develop resilient business strategies and connects member companies with sustainable business experts.
UN Global Compact	Cross-sectoral	A UN pact to encourage businesses to adopt sustainable practices. It has 13,000 participants and representation from 170 countries. The framework is based around ten principles on human rights, labor, environment, and anti-corruption.
Business Roundtable	Cross-sectoral	Historically a “normal” business advocacy group in the United States, but it is included on this list for redefining the purpose of business in 2019 as promoting “an economy that serves all Americans” and serves all stakeholders.
Financial-Sector Initiatives		
Principles for Responsible Investment (PRI)	Asset managers and owners	The six Principles for Responsible Investment are a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice.
Principles for Sustainable Insurance (PSI)	Insurers	Launched in 2012, the four Principles for Sustainable Insurance are designed to guide better management of ESG issues and strengthen the insurance industry’s contribution to building a resilient, inclusive, and sustainable society.
Principles for Responsible Banking (PRB)	Global banks	The six Principles for Responsible Banking provide the framework for a sustainable banking system and help the industry to demonstrate how it makes a positive contribution to society. They embed sustainability at the strategic, portfolio, and transactional levels, and across all business areas.

on addressing how to do one important issue well, such as the Partnership for Carbon Accounting Financials on greenhouse gas reporting. Others, like the Taskforce on Climate-Related Financial Disclosures, have sought to provide

holistic recommendations for disclosing all kinds of climate risks, from physical risks caused by the physical impacts of climate change to transition risks caused by the economic shift to a net-zero economy (see Chapter 3).

## GRAPHIC: SASB DIMENSIONS AND KEY ISSUES

### Environment

- GHG Emissions
- Air Quality
- Energy Management
- Water & Wastewater Management
- Waste & Hazardous Materials Management
- Ecological Impacts

### Leadership & Governance

- Business Ethics
- Competitive Behavior
- Management of the Legal & Regulatory Environment
- Critical Incident Risk Management
- Systemic Risk Management



### Social Capital

- Human Rights & Community Relations
- Customer Privacy
- Data Security
- Access & Affordability
- Product Quality & Safety
- Customer Welfare
- Selling Practices & Product Labeling

### Human Capital

- Labor Practices
- Employee Health & Safety
- Employee Engagement, Diversity & Inclusion

### Business Model & Innovation

- Product Design & Lifecycle Management
- Business Model Resilience
- Supply Chain Management
- Materials Sourcing & Efficiency
- Physical Impacts of Climate Change

**Figure 5**

Within SASB's five main dimensions of sustainability—social capital, human capital, governance, business model, and environment—it uses 26 key issues. These range from issues such as greenhouse gas emissions and water management under "environment" to

labor practices and employee health under "human capital".

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