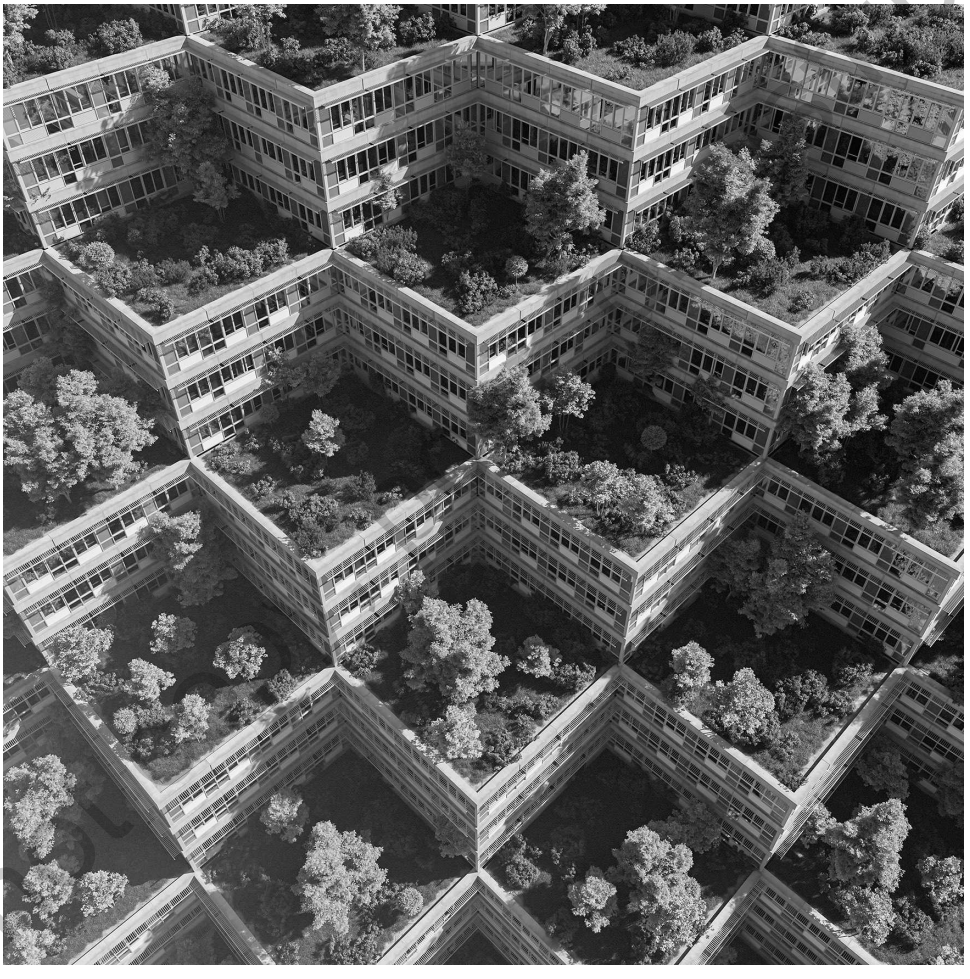
2 INTRODUCTION TO SUSTAINABILITY MANAGEMENT: PRACTICE



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LEARNING OBJECTIVES

After reading this chapter, you should be able to do the following:

2.1 Identify and analyze sustainability challenges in the Anthropocene, and their implications for sustainability management in organizations.

2.2 Identify and evaluate trends and opportunities for global sustainability in the Anthropocene, and their implications for sustainability management in organizations.

The Power of "What if?"

You are a decent human being. You have knowledge and skills that are appreciated by others, your friends and loved ones value your company, and you are a responsible, law-abiding citizen. Your heart goes to those in need, and you wish to help wherever you can, to see less suffering in the world. But you are just one person. You are not a multinational company, you are not even a powerful local group. Just an individual. What can you possibly do to make the world a better, more inhabitable place?

Good news! There is something you can do: Use the powers of scenario thinking,[1] and act on it. In everyday life, it comes down to asking "what if?" questions and trying to answer them. For example, you have finished drinking an early morning take-out coffee on the way to work, you are rushing down the street, and there are no garbage bins around. It would be so much easier to just drop the empty polystyrene cup in a gutter.

And *what if* you do? If no one sees you, there would be nothing to be embarrassed about, right? And you remember the most common reasons why it seems OK:

- What difference would it make? The street cleaners will pick it up within 24 hours . . .
- Just the other day, I saw my friend Peter do the same, and it didn't kill anyone . . .
- Look here, I am only dropping a cup, it's not like I am polluting the whole atmosphere—and it's not my fault that there are enough garbage bins around . . .
- I am all for protecting nature—but how would I know where to start? Surely, if I refrain from dropping this piece of plastic in the street it's not exactly like I have started an environmental movement, is it?

OK, stop! Let's work a little bit on asking "what if?" questions. Imagine you are asked by someone to press a button that is connected through a wire to someone else's finger. You know that, if you press that button, an imperceptible electric impulse will reach that person's body. They may not even feel it. Will you press that button? And *what if* you do? What harm can you cause and be made responsible for? But *what if* there are thousands of buttons connected with wires to the same person, and thousands of people pressing those buttons at the same time?[2]

Beyond a certain level, the effect is predictable and serious: The person can die from electrocution. If you are one of those people who pressed one of those buttons, can you say your action did not make any difference? Can you say it is all right because the others did it too? And can you say you could only be made responsible for the tiny little impulse from your wire?

Most global ecological problems look like this. So—if you ever find yourself tempted to throw that polystyrene cup in the gutter, ask yourself this powerful "what if?" question: what would happen if everyone else acted or behaved in the same way, at the same time? And imagine the answer. Most likely, it will look like a giant landfill. Would you enjoy living like this?

The "what would happen if . . .?" question is very useful to ask especially when you are not quite sure whether something you want to do is a good or bad thing to do for the environment. You are still wondering: *Should I do this or not?* How would I know the right answer for global sustainability? Well, this is how: If the global effect of that action, engaged in by millions of people, is likely to have a negative impact on nature (think of polluting landfills with plastics), then you know the answer is *you shouldn't do it*. And if it is likely to have a positive effect (think of planting a tree or using solar panels instead of fossil fuel), then *you should do it*.

With this question in mind, go through your regular activities—your daily, weekly or monthly routines. Make a list of what you should

(a) stop doing
(b) do differently
(c) start doing anew

And begin a sustainability-meaningful chapter in your life. If you keep at it, the list will grow. You will realize there are so many things you can actually do for a more sustainable home, workplace, economy, community, and planet. Then your ideas and actions will inspire others. You can persuade your friends, organize local networks, and then grow them further.

There is no time to lose. Start today.

CHALLENGES TO GLOBAL SUSTAINABILITY

LEARNING OBJECTIVE

2.1 Identify and analyze sustainability challenges in the Anthropocene, and their implications for sustainability management in organizations.

The Anthropocene, the geological era we are living in, raises a number of global natural challenges such as the climate crisis, water scarcity, pandemics (such as COVID-19), loss of biodiversity, and pollution of land, air and water, among others. All of these, especially occurring

together, can render life on Earth (and, within it, human society) unsustainable. The main causes of unsustainability have been identified by scientists to be human driven, mainly via economic production and consumption, and to proliferate and aggregate from micro/individual to macro/global level. New findings have been made known to the public for over six decades, and policymakers have made significant efforts, across the globe, to coordinate much-needed reforms in human economic practices. However, the pace of these reforms is proving slower than anticipated, as old human and social challenges—such as poverty, inequality, injustice, exclusion, and power abuse—resurface with renewed vigor and in new forms. In this context, organizations managing for sustainability need to respond to both natural and human-social challenges, using systems thinking and stakeholder networks to catalyze their own resources and societal energies in order to develop viable systemic solutions.

Global Natural Challenges and Human-Driven Causes of Global Unsustainability: Anthropogenic Climate Change

To safeguard a sustainable operating space for humanity, we need to better understand the impacts and consequences of human activity on the Earth's biosphere. Due to remarkable advances in contemporary science, global natural pressures on human life and habitats have become easier to observe and explain. These findings also reveal the deeper causes of disruptive changes experienced by humankind in recent times. **Anthropogenic climate change**, for example, has been experienced in the last few decades through a series of phenomena that drive and influence each other. Some examples of such phenomena are the following:

- higher temperatures in the atmosphere, in oceans and on land (global warming)
- extreme weather events such as severe storms and floods
- melting glaciers and rising ocean and sea levels
- increased drought
- rapid loss of plant and animal species
- global epidemics and other widespread threats to plant, animal, and human health[3]

We say that the climate change we are experiencing today is anthropogenic because, unlike previous climate change cycles in Earth's geological history, this one is triggered by human activity. According to most climate data and analysis, the single most important cause of climate change today is global warming due to a very fast increase in GHG emissions over the last two centuries or so. The main GHGs are carbon dioxide, methane, ozone, nitrous oxide, and chlorofluorocarbons.[4] When these gases become too widespread and abundant in the Earth's atmosphere, they act as a ceiling that traps sun heat within instead of releasing some of it back into space—much the same as a greenhouse shelters plants from cold weather. The first two GHGs (carbon dioxide and methane) are by far the most common and can be traced back to almost any human activity—from breathing to raising cattle and burning wood and fossil fuels (such as coal, oil, and natural gas). Despite efforts to diversify energy sources, most industrial activity worldwide is still heavily reliant on fossil fuels—that

is, on burning materials extracted from ancient geological deposits of remains from living organisms. While these sediments and deposits have taken millions of years to form under the Earth's crust, they are being consumed by industrial processes in a flash, by comparison. Predictably, these resources are not unlimited. They will be used up one day (as they are **nonrenewable**) and can bring global industrial activity to a halt unless they are replaced by alternative forms of energy that are **renewable**—that is, they can form closed cycles to renew themselves (e.g., solar energy capture, wind, tides, or waterfalls). In addition to this problem, however, there is the looming challenge of global warming caused by excessive carbon release in the atmosphere. Warmer global temperatures, in turn, melt the poles' ice caps, increase ocean water levels, reduce rain, scorch the earth—all effects that in turn harm and damage the habitats of many living forms, including humans.

Climate science enables us to understand why many of the ways in which we humans extract materials and energy to produce goods and services that satisfy our needs and wants are not sustainable or unsustainable from an ecological perspective. If we contrast human economic activities with the four principles of sustainability outlined in Figure 1.7 (Chapter 1), we can identify two main sources of global unsustainability:

- First, we consume more than we replace or regenerate.
- Second, we waste or discard more than we use and more than natural ecosystems can absorb without major disruptions.

The first accounts for overexploitation and degradation of natural resources, and the second for pollution of land, air, and water.

Unlike natural ecological systems, which maintain their balance/stability and support life due to their capacity to form repeating cycles of substance-energy transformations (see, e.g., weather cycles and tropical rainforests), most technological processes currently employed by humans are linear. They use up natural reserves (such as minerals or forests) without replenishing them, and they dump too much that cannot be assimilated by natural systems fast enough (including **nonbiodegradable** materials such as most products made with glass, plastics, metal alloys, chemical pesticides, and synthetic fibers). Efforts to imitate natural in economic processes have led to the design and development of **circular economy models (CEM),** which are discussed in more detail in the sections that follow.

Current human production and consumption practices need to change urgently, in order to become more sustainable. Put simply, we should stop doing what is harmful for the planet and, instead, do much more of (or mostly) what is beneficial to it. This would involve a series of actions, such as the following:

- Transitioning to renewable energy
- Transitioning to more efficient production and consumption of material and energy resources
- Avoiding overexploitation and degradation of natural resources—and transitioning to regenerative production (and consumption) processes (e.g., stop cutting trees and plant more trees instead)

Human-Social Challenges to Global Sustainability

But this is easier said than done. Spearheaded by the ecological movement that emerged in the 1960s and has grown ever since, global public awareness of natural challenges to sustainability has increased and matured considerably. In response, decision-makers in all sectors (government, business, and civil society) have come together to seek collaborative solutions, and coordinated global political action has produced voluntary international agreements such as the United Nations Framework Convention on Climate Change (UNFCCC) (1992), the Kyoto Protocol (1997), and the Paris Agreement (2015), which have been signed by most countries—but not without some important drawbacks and controversies. For example, the United States (U.S.) government under the Trump Administration decided not to ratify the Paris Agreement, a decision that became effective in November 2020 but only to be revoked by the new U.S. president, Joe Biden, as soon as he took office on January 20, 2021.

The Paris Agreement has set a clear target for keeping global warming under control—that is, by maintaining world temperature increases under 1.5 degrees Celsius. To achieve this target by 2030, countries are to cut their emissions by at least 45% compared to the emission levels they recorded in 2010.[5] But over 8 years after the agreement and only 7 years left to reach the target, the UNFCCC report of 2023 found that national climate action plans are not on track to reach this target, and implementation is falling even further behind.

Many voices in global civil society (such as Greenpeace International, Earth First!, and Extinction Rebellion) have risen to decry this delay—but rigorous and extensive research is needed to understand what hinders us and our institutions in making these changes. Social science and interdisciplinary studies have found that, beside natural challenges, we are facing human and social challenges as well.

At macro level, international law and diplomacy efforts, although remarkable, have been so far unable to engender a global systems perspective in the sovereign states participating in international agreements. Short-termism and prioritization of local over global interests are still dominant. But, next to wicked problems in natural systems, there are wicked problems within human society as well. For a definition and discussion of wicked problems, see Chapter 1.

These social wicked problems can be regarded as limitations in human values. Here are some examples:

- *Persisting barriers to diversity, equity, and inclusion* (DEI)—and also to fairness, equality, human well-being, democracy, empowerment/agency, and human rights—are being perpetuated by unreformed social institutions and exacerbated under increasing pressures from natural crises and disruptions. War and conflict,[6] forced migrations,[7] and modern forms of slavery (e.g., human trafficking and forced labor)[8] are extreme examples of injustice, exclusion, and human rights abuses intensified by competition on vital resources that are becoming scarce due to the climate crisis.
- *Lack of coordination in regulating how technological innovations* are being introduced and spread in society. It has been recognized that automation and digital technologies can be a source of major improvements in social values such as inclusion, equality,

justice/fairness, and well-being. However, technologies are mere instruments. They can be used to create benefits for society, but they can also be misused and abused. Furthermore, powerful but insufficiently researched innovation can produce unintended negative impacts on humans and nature. For example, artificial intelligence (AI) is increasingly being designed and introduced to replace work, jobs, and tasks that are currently carried out by humans. Using this technology to create unemployment would be a major societal drawback, adding further pressure onto the unemployment caused by climate change[9]; instead, it should be engaged to create new and fulfilling work roles for humans in a digital world. Similarly, AI should not be used to infringe on users' privacy and autonomy rights.[10]

- *Deflecting responsibility (or problem shifting) is a recurrent pattern in nations' foreign policies*, whereby powerful states are using their influence in global political and economic order to shift their problems and concerns from their own country to other (less powerful) countries. Globalization has established patterns of production and consumption that favor affluent economies at the expense of the more vulnerable developing economies.[11] In the context of the climate change crisis, these inequities have given rise to climate injustice. For example, the need to reduce national GHG emissions has led some large corporations in the U.S. and the European Union to outsource their manufacturing operations (using outdated and highly polluting but cheaper technologies) to poorer countries in need of foreign direct investment. In this way, the carbon emissions problem has not been resolved but only shifted from one region to another.[12]
- *Lack of political will to change* may be interpreted as the societal manifestation of people's common inclination to resist change, but the climate crisis has taken this challenge to a new level. Global market-leading companies, for example, may be unwilling to move away from a business formula that has brought them success to risk losing their competitive edge if they were to adopt "greener" approaches that tend to be more investment intensive and bring about uncertain financial results. This risk-averse behavior has given rise to an assurance problem in collective action or a **social dilemma**[13,14,15]: Faced with the option to transition to a renewable energy-based production system, a country, or a company may decide to not engage in transition until other countries or companies (perceived as their competitors on the global market) have made the transition first. If all countries or companies in the world make the same decision, the overall result is a deadlock: None of them will engage in the first move and no transition is possible. Potential solutions to unlock this social dilemma will be explored later in the chapter.

In the next section, we discuss the implications of these challenges at meso level, in particular for organizations that (wish to) engage in sustainability management. Next, micro-level (individual) rationalizations and systems thinking responses are presented.

Implications for Sustainability Management in Organizations

An organization, by itself, cannot tackle and contain the complex challenges experienced by human society and by the Earth's biosphere as a whole. However, what organizations do for sustainability at meso level matters a lot to society and the planet at macro level. There are millions of organizations in the world, whose coordinated and interdependent efforts can create leverage points to boost global sustainability.

But organizations are confronted with their own problems. Global natural challenges like climate change and pandemics affect businesses worldwide. Neither epidemics nor high levels of pollution can be contained by geographic and political borders; human life and health are under severe threat, and even following more remote events, employees may be affected both physically and psychologically; entire industries (e.g., agriculture, fishing, energy production) are severely disrupted and deprived of vital natural resources and human input; business insurance costs can skyrocket in contexts of high risk and uncertainty; and suddenly diminished supplies can create self-reinforcing scarcity loops, which in turn can lead to poverty.[16,17] Agile, flexible, and adaptable organizations have learnt from these negative impacts and have been proactive in transforming themselves to survive the new, volatile environment post–2019.

However, transitioning from business-as-usual to more sustainable business models can prove quite difficult, despite deliberate and conscious efforts by organizations to become "greener" and in more harmonious, mutually beneficial symbiosis with their environment. Research has identified three main categories of barriers to innovating business models toward reaching sustainability goals:

- *Institutional barriers* generated by the existing broader industry structures and cultures in which the organization or business is embedded:
  - Focus on maximizing **shareholder value**, which moves attention away from the sustainability needs and interests of other important stakeholders such as employees, local communities, future generations, and the natural environment
  - Uncertainty avoidance, which makes business leaders and their teams uncomfortable with taking risks and making changes they cannot entirely control, and to whose possibly negative outcomes they could be held accountable
  - Short-termism, which constrains organizations to heed the more urgent priorities and thus lose sight of the more important longer-term objectives
- *Strategic barriers* that stem from limitations in the design, development, and implementation of the organization's high-level strategies:
  - Functional approach to strategic thinking, which conditions business leaders to limit their efforts to the successful maintenance of specific functions (production, marketing-sales, supplies-procurement, etc.), simply because each function is easier to define, control, and be responsible for, thus creating a "silo effect" that fragments the organization instead of integrating its resources to find synergies for sustainability

  - Focus on exploitation of existing potential and opportunities generated by the current business model, at the expense of exploring new ways of doing business through a less tried but more innovative (and possibly more agile) business model
  - Prioritizing short-term growth, which is an expression of the short-termist institutional cultures most businesses develop in, and which attracts businesses to persist in an unsustainable direction because reaping immediate benefits of the current model is more tempting

- *Operational barriers* that flow from the strategic barriers and stifle change and innovation in everyday business operations:
  - Emphasis on functional excellence at the expense of coordinated integration of functions within a systems perspective
  - Standard innovation process and procedures followed too strictly, leaving no opportunity to think about how things could be done differently and more sustainably
  - Fixed resource planning and allocation, which prevents the organization from responding with **agility** to disruptions in its operating environment
  - Incentive system and financial performance metrics focused on the short term, which reward gains that can be obtained sooner at the expense of greater, more sustainable gains that can be obtained later[18]

We can say that institutional barriers shape strategic barriers, which in turn shape operational barriers. But behind all of these interdependent phenomena are the behaviors of individuals, which we discuss in the next section.

Micro-Level Rationalizations and Systems Thinking Responses

Organizations are run by people, and despite differences in knowledge, skills, values and attitudes and motivations, people are individuals, like you and me. Take the example of wanting to recycle your glass, plastic, and metal containers to protect the natural environment. If the recycling system is not well organized and you find yourself running out of time, how far will your commitment to protecting nature will go? We can criticize ourselves and others for self-complacency and resistance to change, but the task of contributing to global sustainability, as an individual, can be overwhelming, often because we feel so powerless and far removed from being able to create significant impact.

Here are some of the most frequent reasons why individuals choose to not change how they do things and continue with unsustainable practices:

- "My small contributions will make no difference." The average gasoline-based private car releases about 4.6 metric tons of carbon dioxide per year,[19] which may seem a lot to me but is negligible compared to the global surplus of CO_2.
- "I don't see others making the change, so why should I?" If I am in competition with other people for resources, I will find it hard to give up my present advantage for a future promise that is risky or uncertain.

- "I am only responsible for the (direct) consequences of my own actions." It feels unfair to be made responsible for something that I have not done—right?
- "How would I know what to do or change in my behavior is meaningfully linked to planetary effects?" Global unsustainability is such a complex problem, which requires so much sophisticated data and information, that I tried to work out what I should do for it I wouldn't even know where to begin.

At first sight, these reasons can appear compelling even to some of best-intentioned and strongest-willed environmentalists. But there is a common problem. These reasons stem from a limited, small-scale, individualist view of sustainability issues.

In contrast, systems thinking enables us to understand how micro-level and meso-level actions contribute to macro-level outcomes. Our individual actions do not have meaning in isolation. They do not happen in a vacuum, independently of each other, but are deeply interconnected. For example,

- Small contributions can aggregate beyond just simply adding up, and can compound into significant qualitative changes, also based on **leverage points** (i.e., points in a system where a small change can trigger significant effects or qualitative transitions).[20,21] For example, there are a number of leverage points that we, individuals, can use for change in our personal lives, to really make a difference toward a better, more sustainable world—e.g., aspire to a more harmonious relationship between ourselves and the nature that surrounds us, consume and waste less, act fairly and include others, and share your knowledge and ideas for the benefit of others.
- **Systemic leadership** requires the ability to break social dilemmas, by embracing uncertainty and taking risks to create followers and show the way to a better life and society, to act as a role model and give course to Mahatma Gandhi's advice to "be the change you wish to see in the world."
- **Systemic responsibility**[22] requires understanding how my actions (and their consequences) are intertwined with the actions of others (and their consequences). No matter how small, the consequences of my actions do affect the actions of other people—at home, at work, on the market, and in society—and these impacts may take indirect, even unpredictable forms. For example, it would be easy to say that I don't harm anyone by producing violent movies but I do have a moral responsibility if those movies are giving the audience the wrong idea that violence is harmless.
- To work out what to do in your life to make a difference to global sustainability, a good starting point is to ask yourself: What would happen if everyone on this planet (as at December, 12, 2023, ca. 8 billion people) acted or behaved in the same way, at the same time?

To engage with each of these examples and connect them to your personal experiences, revisit The Power of "What If?" at the beginning of this chapter.

OPPORTUNITIES FOR GLOBAL SUSTAINABILITY

LEARNING OBJECTIVE

2.2 Identify and evaluate trends and opportunities for global sustainability in the Anthropocene, and their implications for sustainability management in organizations.

In The Power of "What If?" we have explored what individuals (and groups) can do for global sustainability, starting from your personal example. Organizations engaged in sustainability management can take scenario and systems thinking to a whole new level, and have been doing so through a range of strategic actions. We now know more about how sustainability achievements can be measured and accounted for (see Environmental-Social-Governance Frameworks); how to make production and consumption of goods and services more sustainable (circular economy); how to coordinate and collaborate across organizations, industries, and sectors to leverage on shared resources (multisectoral partnerships); and how to reach global agreement on what goals should be pursued (see the Sustainable Development Goals setting the business agenda for global sustainability). As discussed further in this section, these trends have opened up remarkable opportunities for organizations to engage in a more successful course toward nurturing a healthier society and planet.

Environmental-Social-Governance (ESG) Frameworks

Efforts to make businesses more ethical (G = governance), socially responsible (S = social), and environmentally sustainable (E = environmental) have been on an upward trend since the modern industrial revolution in Europe (mid-19th century). For the last two decades, however, these efforts have become global and have resulted in creating reporting frameworks that allow all types of organizations to collect, analyze, and evaluate data about their ESG performance, be transparent to their stakeholders and the public about this performance, and monitor progress over longer periods of time.

According to the Corporate Governance Institute UK, "[u]ltimately it is all about investing in ethical business practices."[23] Pressures on organizations to change and adopt ESG have come both from individual stakeholders (the micro level) as well as international organizations such as the United Nations (the macro level). In 1999, the United Nations created a Global Compact (UNGC) which is an international agreement between the world's largest corporations whose aim is to promote good business practices and lead by example in 10 key areas. Accordingly, the 10 principles of the UNGC require businesses to protect human rights (Principle 1) and avoid complicity in human rights abuses (Principle 2); to eliminate oppressive, exploitive, unfair and discriminatory employment practices (Principles 3–6); to take responsibility and innovate for environmental protection (Principles (7–9); and to fight against corruption practices such as extortion and bribery (Principle 10).[24] Today the UNGC is by far the most comprehensive

corporate responsibility and sustainability business initiative in the world, with over 13,000 member organizations in over 87% of the total number of countries on the planet.

In 2004, the UNGC published a report titled "Who Cares Wins: Connecting Financial Markets to a Changing World." As stated upfront, it contained "recommendations by the financial industry to better integrate environmental, social and governance issues in analysis, asset management and securities brokerage."[25] The report introduced the ESG concept for the first time, and made a business case for corporate social responsibility and sustainability—arguing that engaging in ethical, fair and environmentally friendly business practices pays off financially in the long run. While **ESG frameworks** have been evolving ever since, the concept has been widely adopted by the corporate world and is now the preferred way for companies to benchmark their social, environmental, and ethical performance. As regulatory bodies are increasingly requiring companies to report on their ESG performance alongside their financial performance, ESG frameworks have now become the blueprints used by businesses to integrate their regulatory compliance and voluntary sustainability management efforts—not only within the organization but across their supply chains as well, from local to global level (see Chapters 7 and 8 for a discussion of main ESG frameworks and implications for sustainability management in organizations).

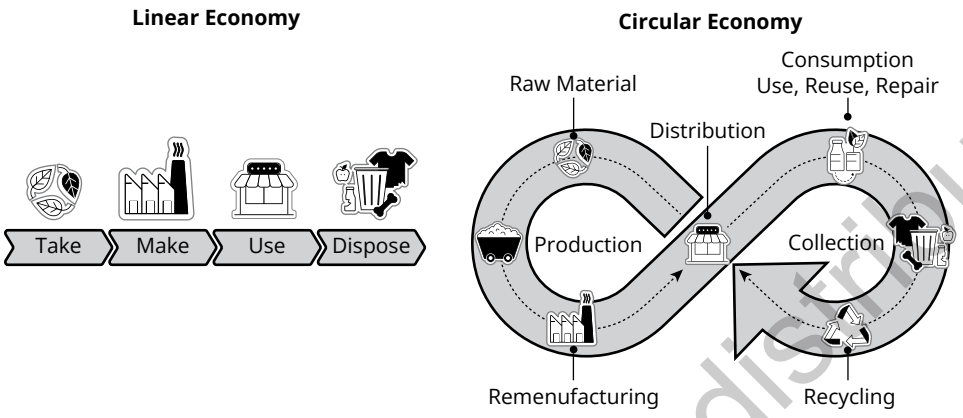
But there is no single unitary ESG framework being used. Due to the wide diversity of industries and business models, the selection of relevant ESG indicators can vary greatly. According to an Ernst & Young estimate in 2023, there are over 600 ESG standards and frameworks worldwide.[26] Despite this diversity, there is a common trend in motivating and justifying corporate engagement in ESG by using financial performance arguments (in other words, the business case for ESG). The business case argues that ESG monitoring and reporting improves information about the company's resources and capabilities, its strategic planning, its capacity to innovate and deliver better value for its stakeholders—and thus its ability to attract more business and increase its profitability.[27] One important growing area is also interest in ethical and socially responsible investing. Public ESG reporting has made it easier for investors to identify opportunities for viable investing in organizations with strong long-term ESG performance. While the sustainable finance sector has grown considerably in recent years, there are still challenges ahead, in particular the "limited transparency and comparability of climate transition and ESG methodologies and metrics."[28] For a discussion of **ESG investing**, see Chapters 8 and 9.

However, if organizations wish to achieve more meaningful change for global sustainability, they will have to go beyond the business case to find creative ways to deliver economic, social and environmental value for as many stakeholders as possible. Although some companies—such as Patagonia,[29] DHL,[30] and The North Face[31]—have achieved significant improvements by pursuing Triple Bottom Line sustainability, changing direction to create and deliver sustainable value may mean adopting practicing systems thinking within an ecological perspective, as outlined in Chapter 1.

Circular Economy

Nature teaches us that, in order to be sustainable, an economic process should not be linear but a **circular economy**. As illustrated in Figure 2.1, this means replacing the business-as-usual linear sequence Take-Make-Use-Dispose-Waste with a closed-loop, iterative sequence called a

FIGURE 2.1 ■ Linear vs Circular Economy Models



Source: iStock.com/Whale Design

circular economy model (CEM). Ideally, a CEM should follow the circle Take-Make-Use-Re-use/Repair-Collect-Recycle-Regenerate/Give Back. In practice, CEMs are difficult to achieve, and it is only recently that we have been able to better understand how regenerative/resource-replenishing economic practices should work.[32]

A good example of CEMs is provided by The North Face **circular design** process, which is structured according to four key principles:

- *"Source Better:* Use more materials that are recycled, responsibly-sourced renewable and/or regeneratively grown, to help reduce our use of finite resources.
- *Maintain Durability:* Craft products that work to resist damage and wear. The most sustainable piece of gear is the one you don't have to replace.
- *Minimize Waste:* Generate as little waste as possible during production and put textile waste and leftover materials to use.
- *Champion Cyclability:* Design products to be more easily broken down and made into new gear at the end of their usable lives."[33]

This revolutionary production and consumption strategy enables the company to better integrate the economic, social and environmental value delivered for its growing number of stakeholders.

Multisectoral Partnerships

Just as individuals can achieve very little alone, in isolation from each other, so organizations need to coordinate, collaborate and cooperate a lot more to make meaningful contributions to global sustainability. Longer term strategic partnerships between organizations in all

sectors—in particular government, business and civil society—have developed considerably in recent years, focusing on sustainability goals. A central concept driving these projects is **public value**, which refers to the value created and delivered for the collective benefit of society. Public value usually refers to the utility of **public goods,** that is, those goods that are owned and used in common by large numbers of people and/or human communities, such as air, rivers, national parks, and forests. Global sustainability challenges and priorities have taught us, the hard way, the importance of caring for all the natural ecosystems and environmental goods that are not privately owned by anyone but are essential to the survival of every one of us.

Partnerships for sustainable development have grown on the foundations of traditional public management contracts and public–private partnerships. However, unlike their traditional counterparts, partnerships for sustainable development have improved their approaches to sharing resources and risks, in ways that prevent responsibility shifting among parties. These partnerships are also more pragmatic and realistic in understanding that trying to solve all problems at once, especially in developing economies with limited resources, would be doomed to failure. Therefore, they are focusing on those business models that integrate most efficiently what each partner is best at (their core competencies) and makes them work together to deliver the greatest public value.[34]

Leading sustainability partnerships today range from companies working with suppliers and local communities to make their sourcing fairer and ecologically friendly, such as the LEON-Puro Fairtrade partnership[35] to large infrastructure projects that unite government, business and NGOs to deliver sustainable urban living and transport solutions in cities such as Athens, Copenhagen, Panama, and Buenos Aires.[36] These provide inspiring examples and role models worth following by multisector partnerships around the world.

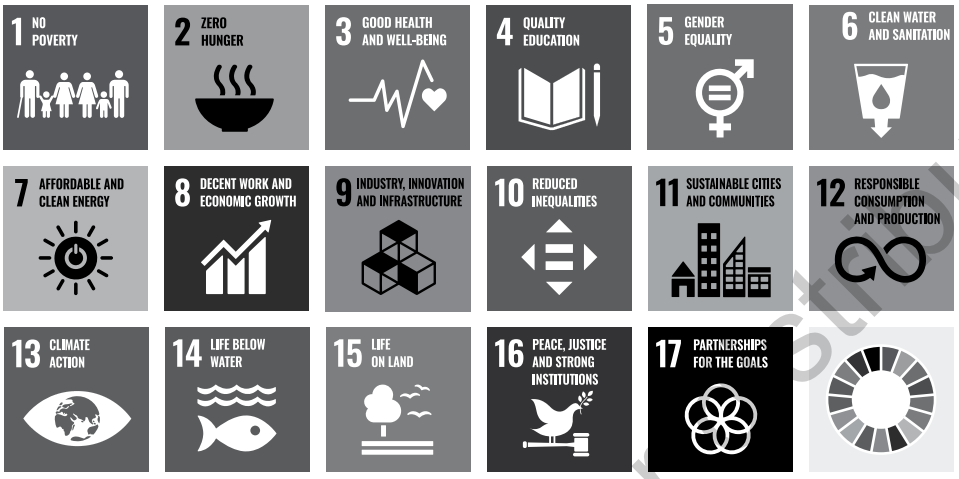
The Sustainable Development Goals (SDGs) and the Global Business Agenda for Sustainability

In pursuit of global sustainability, the closest we humans have been able to come to global coordination so far is the setting of the **Sustainable Development Goals (SDGs)**. The SDGs were proposed and adopted by the United Nations at its Sustainable Development Conference held in Rio de Janeiro on June 20–22, 2012. Adding up to a total of 17 (see Figure 2.2), the SDGs represent a "set of universal goals" aiming to "meet the urgent environmental, political and economic challenges facing our world."[37]

The SDGs have catalyzed the energies and kindled the imagination of individuals, organizations and institutions across the planet. In a record global movement, all 191 UN member states have agreed to pursue the SDGs and achieve their targets by 2030. While the path to success seems still remote and arduous, this commitment acts as a powerful directing force. In each chapter, as well as in the Case Studies of this textbook, we focus on various SDGs, depending on their relevance for the discussed topic.

The SDGs have practically set the business agenda for sustainability. Recent research has found that pursuit of the SDGs can be effective in guiding both corporate value creation for sustainability[39] and public value creation by national governments.[40] In particular, the business agenda is focusing on decarbonization initiatives, reducing pollution by taking responsibility for pervasive externalities, reforming consumption patterns by reducing waste, using

FIGURE 2.2 ■ The 17 Sustainable Development Goals



Source: United Nations (2023) 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[38]

innovation and investment ethically and responsibly, promoting inclusion and social justice while reducing inequalities, and educating new generations of corporate leaders to take effective action and help the global community achieve their targets in pursuit of the SDGs.

At the level of global policymaking, it has been argued that, because the 17 SDGs are deeply interconnected, it would be a mistake to prioritize some while neglecting others. For example, it would be very difficult, if not impossible, to imagine how widespread good health and well-being (SDG3) in conditions of significantly reduced inequalities (SDG10) could be achieved alongside poverty and hunger (failures toward SDG1 and SDG2); or how quality education (SDG4) could be achieved without gender equality (SDG5), and vice versa. However, it would be unwise for individuals and organizations to pursue all SDGs at once, as their resources would be spread thin and trigger limited effects.

An organization managing for sustainability can only be successful if it adopts a systems approach to

- Identify those SDGs where they can add most value, and pursue them strategically
- Integrate its processes for creating economic, social and environmental value (and related capitals) in accordance with this strategy
- Include multiple stakeholders in the value creation processes (see also Chapter 3)
- Collaborate with other organizations, also across industries and sectors, to achieve synergies and complementarities in pursuing their SDGs
- Innovate their sustainability management processes in rapid response to their changing environment

It is now widely recognized that a "sustainability mindset shift is necessary to address the complex challenges of the Anthropocene."[41] As discussed and illustrated throughout Chapter 1 and 2, systems thinking is central to this mindset shift.

SUSTAINABILITY AND YOU

Consider the 17 UN SDGs in the context of your own personal, social, community, and working life. Which SDGs are more relevant to you, in each of these contexts?

How do your behaviors contribute to the pursuit of these SDGs?

Are they

(a) converging toward the SDGs?
(b) diverging away from the SDGs?
(c) making little to no difference?

What do you think you should do differently to contribute more value to these SDGs?

Do you think it would be beneficial to pursue only some SDGs, in isolation from (or without consideration for) the others? What do you need to be careful about when trying not to pursue some SDGs at the expense of others?

SUMMARY

This chapter has focused on setting the context for understanding the importance of sustainability management in tackling global social and environmental challenges today. It has defined the concept of *sustainability*, explained the key features of a systems approach, and broadly applied this approach to sustainability management in organizations. The chapter has illustrated how systems thinking can help organizations to better understand the global challenges and the main international response trends to these challenges. Supported by this understanding, organizations can develop more effective solutions to adapt to a rapidly changing environment and to also make valuable contributions to global sustainability.

Learning Objective 2.1: Identify and analyze sustainability challenges in the Anthropocene, and their implications for sustainability management in organizations.

- The most prominent global natural challenge we experience today is climate change, with many related effects such as flooding, droughts, water scarcity, loss of biodiversity, and global pandemics such as COVID-19. Climate science has found that human economic activity, from extraction and manufacturing to agriculture and transport, is the most significant cause of global warming and related disruptions in the Earth's climate. Anthropogenic climate change is caused by unsustainable patterns of production and consumption of goods and services, which are overreliance on extraction and use of nonrenewable energy and materials and polluting the air, land and water beyond naturally resilient levels.

- At macro level, the main human-social challenges to global sustainability are short-termism; prioritizing local over global interests; barriers to equality and diversity, equity, and inclusion (DEI); lack of coordination in regulating technological innovations; deflecting responsibility (or problem shifting) in nations' foreign policies; and lack of political will to change.
- At meso level, societal barriers to sustainability values create further barriers for sustainability management in organizations, such as institutional barriers (focus on maximizing shareholder value, uncertainty avoidance, organizational short-termism), strategic barriers (functional approaches to strategic thinking, focus on exploitation at the expense of exploration, prioritizing short-term growth), and operational barriers (overemphasis on functional excellence, rigid application of standard innovation procedures, fixed resource planning and allocation, short-term focused incentive systems and financial performance metrics).
- At micro level, we individuals tend to justify our lack of action toward global sustainability based on the belief that our actions cannot make any difference; we may lose advantage if we make risky and costly changes; we are not directly responsible for unsustainable global effects; and we do not have the knowledge to choose appropriate actions for sustainability. Systems thinking enables us to challenge these beliefs and understand that global effects are compounded from small contributions like ours (also helped by leverage points along the way); some risks and costs are worth taking in order to lead and show the way toward global sustainability solutions; our responsibilities for global sustainability are intertwined with the responsibilities of others; and we can work out what we should do for sustainability by engaging in scenario thinking (asking questions such as: *What* would happen *if* every human being on the planet behaved in the same way?).

Review Questions 2.1

- What are the global natural challenges we experience today? What role does human activity play in global unsustainability?
- What are the human-social challenges to global sustainability?
- What barriers do these challenges create for sustainability management in organizations?
- How do we, individuals, tend to justify our lack of action toward global sustainability? How can systems thinking help us to better understand what we as individuals can do for global sustainability and make a difference?

Learning Objective 2.2: Identify and evaluate trends and opportunities for global sustainability in the Anthropocene, and their implications for sustainability management in organizations.

- The main contemporary trends in pursuing global sustainability are the following:
  - Sharp increase in Environmental-Social-Governance (ESG) frameworks around the world

  - Creation and application of a growing number of circular economy models (CEM)
  - Rise of multisectoral partnerships for sustainability
  - International coordination of a business agenda for global sustainability, via the United Nations Sustainable Development Goals (UN SDGs)

- These trends provide organizations with new opportunities to engage with and work out sustainability management: how to measure and account for sustainability achievements (ESG frameworks), how to make production and consumption of goods and services more sustainable (CEM), how to coordinate and collaborate with other organizations across industries and sectors to leverage on shared resources (multisectoral partnerships), and how to align their targets with globally agreed sustainability goals (the UN SDGs).

- ESG frameworks help businesses to integrate regulatory compliance with their voluntary sustainability management activities. According to the business case, ESG monitoring and reporting improves an organization's ability to attract more business and, in the longer term, increase its profitability by improving information about the company's resources and capabilities, enhancing its strategic planning, and increasing its capacity to innovate and deliver better value for a growing range and number of stakeholders. Making organizations' sustainability performance public has also facilitated the rise of ESG investing, which prioritizes investment opportunities depending on the ESG performance (rather than just the financial performance) of companies, thus allowing for better allocation of resources across industries and sectors in order to reach global sustainability targets more effectively. Beyond the business case, organizations can look at ESG frameworks for guidance when searching for creative ways to deliver environmental, social, and economic value for as many stakeholders as possible.

- A circular economy model (CEM) is an approach to producing goods and/or services that is imitating sustainable cycles in nature. Instead of the traditional Take-Make-Use-Dispose-Waste production line used in most of our economic activities, a CEM follows a closed-loop, repetitive sequence that can be described as Take-Make-Use-Reuse/Repair-Collect-Recycle-Regenerate/Give Back-Take (again)-Make (again) . . . A CEM is based on circular design, whose main principles are *source better*, by using renewable sources and processes for input materials and energy; *maintain durability*, by producing goods and/or services that are most resistant or lasting, minimizing the number of times they would need to be changed and/or fixed; *minimize waste*, by reducing its quantity and finding new uses for the remaining waste; and *champion cyclability*, by designing products so they can be more easily integrated into new products at the end of their life cycle.

- The main purpose driving multisectoral partnerships for sustainable development is that of creating public value, that is, value for the collective benefit of society. Typical examples of public value-driven projects are large infrastructure projects (such as global transport systems) and environmental protection projects (clean air, clean waters, forest regeneration). Multisectoral partnerships for sustainable development differ

from traditional public–private partnerships in that the partners have developed better, collectively responsible ways to share resources, risks, and complementary competencies.

- The UN SDGs were adopted by the United Nations during its Conference for Sustainable Development in Rio de Janeiro (2012). These 17 universal and inter-dependent goals have been set in an international effort to overcome the global challenges we are facing today and are guiding all 191 UN member countries, which have committed to pursue the goals and reach them by 2030, to coordinate and integrate their sustainability targets as effectively as possible. The UN SDGs have practically set the new business agenda for global sustainability, which includes focusing on decarbonization initiatives, reducing pollution by taking responsibility for pervasive externalities, reforming consumption patterns by reducing waste, using innovation and investment ethically and responsibly, promoting inclusion and social justice while reducing inequalities, and educating new generations of corporate leaders to take effective action and help the global community achieve the UN SDG targets.

Review Questions 2.2

- What are the main contemporary trends in pursuing global sustainability? What opportunities do they create for sustainability management in organizations?
- What are the main advantages of ESG frameworks? What is ESG investing?
- What is a circular economy model (CEM)? What are the main principles of circular design?
- What is the main purpose driving multisectoral partnerships for sustainable development? How do they differ from traditional partnerships?
- How were the SDGs created and why are they important? What is the new business agenda for global sustainability?

DISCUSSION QUESTIONS

- Imagine you are the new CEO of a clothing manufacturing company. You have a plan for producing Fairtrade-certified clothing using a circular economy model (CEM). Using a diagram like the one illustrated in Figure 2.1, describe the key features of your CEM and explain, in broad terms, how this model will deliver economic, social, and environmental value for your company and your stakeholders (employees, suppliers, local community, the state, investors and shareholders, future generations, humankind, nature).
- Consider some of the most common ESG goals adopted by companies today, such as improving their waste management (E), reducing their overall carbon footprint (E), promoting ethical and responsible practices throughout their supply chains (S, E), and increasing gender equality (S, G). And then consider the example of a leading global courier/logistics company (such as DHL) wishing to pursue all four ESG goals.

- Identify which SDGs the company would contribute to by pursuing these ESG goals, and explain why.
- Choose one of the four ESG goals and identify which types of organizations the company would need to collaborate with to achieve these goals. Explain your choice of partner organizations, and outline what the collaboration/s should consist of.

KEY TERMS

agility
Anthropogenic climate change
circular design
circular economy
circular economy models (CEM)
climate science
ESG frameworks
ESG investing
leverage points
nonbiodegradable
nonrenewable
public goods
public value
renewable
shareholder value
social dilemma
Sustainable Development Goals (SDGs)
systemic leadership
systemic responsibility