

CHAPTER 4

ECOSYSTEMS

When we try to pick out anything by itself, we find it hitched to everything else in the Universe.¹

—John Muir

UNTIL 2009, ONE OF THE WORLD'S LARGEST PRODUCERS OF TISSUES AND toilet paper sourced fibers from trees that were clear-cut from Canada's boreal forest. Destruction to these forests threatened the region, which is home to nearly a million aboriginal peoples, as well as the woodland caribou, lynx, grizzly bears, wolverine, and one billion migratory birds.² The boreal is also the largest storehouse of terrestrial carbon on Earth, so deforestation in this area undermines its impact in reversing up to 20 percent of global greenhouse gas emissions—more than all the cars, trucks, planes, boats, and trains in the world combined.³

Clean air, water, timber, and arable land are essential for human sustenance; without them, we'd all perish. Yet, already 780 million people lack access to clean drinking water, women spend 200 million hours a day collecting water, and 3.4 million people die annually from water-related diseases.⁴ With flooding, droughts, natural disasters caused by climate change, and increasing demands for food and potable water resulting from population growth from 7 billion today to 9 billion by 2043,⁵ the challenges will only worsen.

The growing population, coupled with the increasing consumer demand from developed and developing nations,⁶ is accelerating the stress on Earth's ecosystems. The growth in consumer demand is described in a January 2013 report by the World Economic Forum's Sustainable Consumption Initiative, prepared in collaboration with Accenture, a management consulting, technology services, and outsourcing company.⁷ According to the report, "3 billion consumers are expected to enter the middle class by 2050, the vast majority of them from developing markets. These emerging middle class consumers want a lifestyle like today's western lifestyles, one characterized by conspicuous consumption and intense resource use. With a global population already consuming resources equivalent to more than 1.5 Earths annually, we cannot continue on this path."

In "Conservation by Design: A Strategic Framework for Mission Success,"⁸ The Nature Conservancy (the Conservancy) reveals the threats of continuing

to ignore the value of nature. The Conservancy describes the shrinking opportunities for people to support themselves through sustainable environments when there are “fewer fish to catch, less available clean water, more soil erosion and a growing potential for conflict as people compete to have and control these increasingly limited resources.”

Planet Earth is on the wrong course. An expanding consumer population has demonstrated a growing appetite for goods and products, using natural resources in increasing amounts. Moreover, too many companies have exploited and managed resources irresponsibly, degrading and depleting the world’s water, forests, and soil. Unfortunately, governments, which are entrusted to protect the interests of the people, have not succeeded in addressing the challenges of the world’s ecosystems.

Yet, a better future is possible. The Conservancy shows what is possible as well as the path forward. The Conservancy envisions a world where “forests, grasslands, deserts, rivers and oceans are healthy; where the connection between natural systems and the quality of human life is valued; and where the places that sustain all life endure for future generations.”⁹ The Conservancy collaborates with businesses, other NGOs, and governments to preserve “healthy ecosystems that support people—their health, their livelihoods, their futures—and host the diversity of life on Earth.”

Market forces present the most powerful force to save our planet and all living things. In fact, many businesses are reversing their past practices of harming the environment, and some are now taking affirmative steps to achieve compelling results in advancing the Earth toward the Conservancy’s vision. Customers, employees, and investors are proving to be the necessary drivers. This chapter will show how twenty-first century companies have the resources, global reach, and self-interest to be the leading force in ameliorating the ecosystem.

THE RAPID DETERIORATION OF THE WORLD’S ECOSYSTEMS UNDER THE WATCH OF GOVERNMENTS

Earth is facing an environmental crisis that threatens lives, jobs, and global security. According to the Millennium Ecosystems Assessment Conditions and Trends Working Group,¹⁰ “over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber and fuel. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth. In addition, approximately 60 percent (15 out of 24) of the ecosystem services it examined are being degraded or used unsustainably, including fresh water, capture

fisheries, air and water purification, and the regulation of regional and local climate, natural hazards, and pests.”

Drought is already driving mass numbers of farmers from their lands to the cities, where there are insufficient jobs and infrastructure and a lack of government response, which—in countries like Syria—can ultimately lead to hunger, frustration, and civil war.¹¹

As shown in the chapter on climate change and energy, a special report by the Council on Foreign Relations,¹² brings attention to the destabilizing affects of storms, droughts, and floods. The threat arises from damage caused domestically from extreme weather, in addition to the disruption of “US interests in strategically important countries.”¹³

Governments have attempted to respond to these environmental challenges. Most often, these approaches have taken the form of global summits and compacts between nations, reflecting the fact that environmental threats know no borders. In the summer of 2012, the Rio+20 United Nations Conference on Sustainable Development,¹⁴ also known as Earth Summit 2012, provided an opportunity for 193 United Nations member states—including 57 heads of state and 31 heads of government, private sector companies, NGOs, and other groups to plan for a sustainable future. Rio+20 was the successor to the first Earth Summit of 1992 and 2002’s Climate Change Convention in Kyoto.

Rio+20 focused on building “a green economy in the context of sustainable development in poverty eradication” and creating a framework for sustainable development. The outcome of Rio+20 was a nonbinding document, “The Future We Want,”¹⁵ that also supports the development of the Sustainable Development Goals (SDGs). The SDGs, which include measurable goals for global sustainable development, are designed to follow up on the Millennium Development Goals (MDGs). The eight Millennium Development Goals (MDGs), adopted by all 193 UN member states, range from halving extreme poverty rates to halting the spread of HIV/AIDS to providing universal primary education by the target date of 2015. The MDGs form a blueprint to galvanize unprecedented efforts to meet the needs of the world’s poorest.¹⁶

While the goals are laudable and some have been achieved or are on track, some policy experts have raised environmental concerns. “Whether in Davos or almost anywhere else that leaders are discussing the world’s problems, they are missing by far the biggest issue: the rapidly deteriorating global environment and its ability to support civilization,” according to Thomas E. Lovejoy, professor of science and public policy at George Mason University and biodiversity chairman at the H. John Heinz III Center for Science, Economics and the Environment.¹⁷ Describing Rio+20 as “a failure of epic proportions,”

Kumi Naidoo, the executive director of Greenpeace International, referred to the final negotiated statement as “the longest suicide note in history.”¹⁸

In the June 7, 2012 issue of the journal *Nature*,¹⁹ leading scientists—biologists, ecologists, complex-systems theoreticians, geologists, and paleontologists from the United States, Canada, South America, and Europe—predicted that population growth, ecosystem destruction, and climate change could continue to move Earth toward an irreversible change in the biosphere, a planet-wide tipping point that would have perilous consequences. “It really will be a new world, biologically, at that point,” cautioned Anthony Barnosky, lead author of the *Nature* article, and professor of integrative biology at the University of California, Berkeley. “The data suggests (*sic*) that there will be a reduction in biodiversity and severe impacts on much of what we depend on to sustain our quality of life, including, for example, fisheries, agriculture, forest products and clean water.”

Co-author Elizabeth Hadly of Stanford University reported that she “just returned from a trip to the high Himalayas in Nepal, where I witnessed families fighting each other with machetes for wood—wood that they would burn to cook their food in one evening. In places where governments are lacking basic infrastructure, people fend for themselves, and biodiversity suffers. We desperately need global leadership for planet Earth.”

To make matters worse, due to economic challenges, government is slashing its key role of sponsoring scientific research necessary to address the environment. Stephanie Kirchgaessner wrote in the *Financial Times* that “while lawmakers have focused on belt tightening as a response to concerns about the nation’s long-term fiscal health, government investment in almost all areas of research is under threat.”²⁰

Governments face a variety of challenges in attempting to restore and protect the world’s ecosystems. First, governments represent nation-states with clearly defined borders; officials are accountable to their constituents who often focus on immediate and parochial interests. Second, governments have an array of stakeholders to manage and many issues to balance. When people are out of jobs, concerns about protecting ecosystems can seem to the voting public as conflicting with what appear to be more immediate needs. Third, government leaders are usually not in office long enough to establish and implement long-term visions and strategies, while ecosystem planning requires longer-term thinking and investments. Finally, many governments are composed of coalitions of parties with a variety of interests and constituents.

If governments have a mandate that is too short-term and parochial to protect ecosystems in a meaningful way, then perhaps corporations spanning borders, driven by market interests, can achieve the promised land.

COMPANIES ARE PIONEERING ADVANCES IN CONSERVATION

A number of companies are paving the way forward by creating solutions to conserve water, forests, and arable land. They are stepping in front of the crowd as innovators and global problem-solvers to distinguish themselves in the marketplace among customers, employees, and investors. These companies are on a trajectory to build a better world, while burnishing their brands and increasing shareholder value.

Four corporations have been chosen for discussion in this chapter because of their leadership and innovation in developing environmentally friendly solutions for the manufacture of their products and their services to customers. As these case studies demonstrate, company efforts are enabled and leveraged by powerful collaborations with NGOs/nonprofits and by healthy interaction with governmental actors.

Ecolab, with a 90-year history of helping hospitals, hotels, and food services to find new solutions that address cleanliness, health, and safety, recently merged with Nalco, a company known for helping its heavy industry clients to be more sustainable. The merged company is creating a new model and brand, integrating sustainable solutions among all of its services.

Kimberly-Clark (K-C), the company noted in the opening of this chapter for its use of wood derived from the boreal forest, is an excellent example because of their bold shift in 2009. After tussling with Greenpeace for four years over the sourcing of their fibers, K-C transformed from a position of resistance and opacity to become a leader in sustainability, transparency, and accountability through a partnership with Greenpeace and other NGOs. Additionally, K-C enhanced its advisory board to involve stakeholder expertise that is a model for its high level of engagement.

The Dow Chemical Company's collaboration with The Nature Conservancy is proving effective in reducing risks and costs, enhancing the brand, and fueling growth. Not only is the work piloted through a business-NGO relationship that is transformative to Dow in valuing nature with metrics for their own corporate decision-making, but the methodologies they developed will soon be adopted by 24 additional companies.

Finally, as discussed in the chapter on climate change and energy, Unilever is at the forefront in tying sustainability and responsibility with human welfare and the environment. At Davos 2013, Unilever chairman and CEO Paul Polman declared, "We have a very bizarre situation in the world right now where 890 million people go to bed hungry, not knowing if they will wake up the next day. And yet we waste about 30 to 40 percent of the food as if it doesn't matter. Businesses understand that any system where too many people are excluded or left behind is not a system that is in equilibrium."²¹

ECOLAB'S WORK IN CONSERVATION IS GROUNDED IN THE COMPANY'S ORIGINS

With the purpose of making the world cleaner, safer, and healthier, Ecolab has four lines of business: clean water, safe food, abundant energy, and healthy environments. Following the merger of Ecolab with Nalco in December 2011, the company has 40,000 employees in 171 countries, 5,300 patents, and \$11 billion in annual sales.²² Their customers include many of the world's largest companies, such as Pepsico and Marriott, whose products and services range from food service, retail, hospitality, health care, commercial laundries, and food and beverage processing, to heavier industries such as oil, gas, and chemicals, pulp and paper, metals, mining, and mineral processing.²³

Ecolab is particularly suited to advance the vision of healthy ecosystems that support people for three reasons. First, the company's "Total Impact" approach to products and services is "designed to increase efficiency, minimize the use of natural resources, and improve safety from sourcing to manufacturing to use and through disposal."²⁴ Second, the company's values derive from its founding in 1923, when a traveling salesman imagined and established a company that would create and sell a better soap for hotel guest rooms and kitchens. Third, the company's science-based approach involves 1,300 scientists around the world who study germs that can make people sick, learn about water, and develop innovations that leverage chemistry, equipment, packaging, and dispensing. Ecolab's 22,500 field experts work with customers on-site.

So while most companies can, at best, only improve their own footprint, Ecolab has an exponential impact by leveraging its expertise to help its customers reduce their use of natural resources. For example, Ecolab reports that in 2010, the company made it possible for its customers to save more than 368 billion liters of water worldwide with Ecolab's patented systems, up to 40 percent of a typical customer's water consumption through the use of another of their innovations, and up to 50 percent of water use by restaurant customers with their patented dish machine.²⁵

Ecolab also reports making it possible for companies to save energy, sharing these examples from 2011: helping Marriott to save 17.6 million kWh of energy in 2011, helping one NV Energy station reduce coal consumption by 87,000 tons, and helping one NV Energy station to save \$3.5 million in fuel.²⁶

Ecolab's NGO partners include Water for People and the World Wildlife Fund (WWF), as described by Emilio Tenuta, vice president of Corporate Sustainability.²⁷ In the summer of 2012, Ecolab announced a two-year commitment to WWF to support the organization's Alliance for Water Stewardship (AWS) in establishing a global water standard and third-party

verification system. Ecolab provides the WWF with financial and technical support to field test the draft AWS standard. Additionally, Ecolab helps to build market awareness of the need for an international water standard to address water challenges.

AWS was formed in 2009 with a belief in collective action to “promote responsible use of freshwater that is socially and economically beneficial as well as environmentally sustainable... Socially beneficial water use recognizes basic human needs and ensures long-term benefits (including economic benefits) for local people and society at large.”²⁸

AWS includes representation by the following organizations: The Nature Conservancy, Pacific Institute, Water Stewardship Australia, World Wildlife Fund, Water Witness International, Water Environment Federation, European Water Partnership, International Water Management Institute, UN Global Compact’s CEO Water Mandate, and Carbon Disclosure Project.²⁹

Investors are a key driver for Ecolab’s forward progress. Bill Gates is one of the company’s largest shareholders.³⁰ Ecolab considers itself well-positioned in the marketplace in the face of megatrends, such as the increasing world population, an aging demographic that is also living longer, and mutating and more resistant strains of infections.³¹

Ecolab has made sustainability its business by creating solutions that address the scarcity of natural resources that confront their commercial and industrial customers. In doing so, Ecolab adds to their own bottom line and their customers’ bottom lines, while helping to preserve the world’s ecosystems.

KIMBERLY-CLARK TO GREENPEACE: “YOU MADE US A BETTER COMPANY”

From 2003 until 2009, Kimberly-Clark was an “evil empire” to Greenpeace—an independent organization that uses protest and creative communication to expose global environmental problems and to promote solutions that advance a sustainable future.³² Beginning in 2004, Greenpeace launched Kleercut, a now legendary campaign against K-C’s use of fibers derived from Canada’s boreal forest. Earlier rounds of talks between K-C and Greenpeace were unsuccessful until a breakthrough in 2009.³³

K-C is a publicly traded company listed on the New York Stock Exchange with sales of \$21.1 billion in 2012. The company is headquartered in Irving, Texas and has 58,340 full-time employees with sales in more than 175 countries.³⁴ Its products are marketed under brands such as Kleenex, Huggies, Kotex, and Depend.

This story has a good result, for K-C and for the world. Today, only a few short years after the standoff with Greenpeace, K-C’s chairman and CEO,

Tom Falk, stated that “our business success entails providing people with the essentials for a better life while conserving the natural resources on which we all depend.” Falk’s letter in the company’s 2011 Sustainability Report proudly announces that K-C “became the first US branded consumer tissue maker to offer tissue products certified by the Forest Stewardship Council (FSC) to North American consumers, while Kimberly-Clark Professional expanded its FSC certification to more than 95 percent of its tissue and towel lines in North America.”³⁵ The company expanded FSC certification on tissue products in additional countries as well as attaining other achievements and creating initiatives in water conservation and replenishment.

Richard Brooks, who planned and launched Greenpeace Canada’s Boreal Forest Campaign beginning in 2003, and who has coordinated and directed Greenpeace Canada’s forest campaign since 2006, attests to K-C’s transformation to a sustainability leader. “Kimberly Clark has gone from sourcing very little sustainable pulp to majority. That’s revolutionary for a company of this size to make such a major change,” said Brooks.³⁶ “They’re producing millions of tons of tissue. This is unique.”

Scott Paul was director of the US Greenpeace campaign in 2005, when the group decided to combine forces with the Canada campaign against K-C. Paul explained how a company is targeted.³⁷ Greenpeace works their way backwards, starting with a forest whose valuable ecosystem is under threat by forestry companies that are logging. It then researches the chain of custody to the branded companies that are buying from the destructive operators. Upon discovering that K-C was sourcing fibers from trees that were clear-cut from Canada’s boreal forest, Greenpeace appealed to K-C to stop buying pulp from the logging company in Canada.

Paul elaborated that every negotiation is based on three central tenets: “First, (there is) an examination of fiber that is purchased. Greenpeace supports the Forest Stewardship Council (FSC) and encourages companies to purchase FSC-certified fibers. Second, companies must examine their supply chain and establish policies for which areas they will not source from. These are the so-called “threatened” or “endangered” forest regions or areas with particularly important biodiversity, habitat, or carbon value, or regions with important spiritual or cultural value. Here, we talk about mapping, land use planning, and stakeholder relations. Third, the company is expected to examine how it can reduce its fiber needs overall through greater efficiencies, recycling, or the use of alternative fibers like bamboo. Every corporate negotiation regarding forests is different, but they all come down to those three issues.”³⁸

The first phase of Greenpeace’s campaign against K-C lasted from 2004–2007. This period was followed by a highly structured series of two-day

meetings spanning several weeks with attorneys and policy experts from both sides. The third such meeting broke down and ended so badly that Paul said that Greenpeace “doubled-down” on the campaign for the next two years.³⁹

In 2009, K-C chairman and CEO Tom Falk designated Drew Barfoot, a highly experienced and trusted executive, to negotiate one-on-one with Scott Paul as the exclusive point-of-contact for all intensive discussions. After Barfoot’s retirement mid-year, the negotiations with Scott Paul were completed by Suhas Apte, another highly experienced and trusted executive of the company. The negotiations resulted in a notable press conference in Washington, D.C. announcing K-C’s new commitments to sustainable forestry. From the time of that agreement forward, K-C embarked on the commitment to using 100 percent credibly certified fiber with strong preference to FSC certified fiber.

“That transformation was pretty significant from who that company was to who they became,” said Paul. “Now Greenpeace and K-C get together every four to five months to review the goals to see where they are. One thing I admired about K-C: If K-C writes it down, they are really, really serious.”

Paul recalled K-C executive Robert Abernathy slapping him on the back at one meeting and saying to him, “Greenpeace made K-C a better company . . . you can quote me on that.”⁴⁰

Paul also recalled giving a speech to employees several months after the agreement was finalized. He received a standing ovation. “I’ve heard that this is good for recruitment, retention, and morale,” he added.

Suhas Apte followed Barfoot in leading the company’s sustainability effort. He served as vice president of Global Sustainability from September 2009 until he retired in August 2012. Apte continues to serve today on the company’s Sustainability Advisory Board which advises the company’s global strategic leadership team and sustainability staff.⁴¹

Brooks, with Greenpeace Canada, elaborated on the very significant employee aspect of the campaign. “Throughout the five years, we were communicating with staff in factories via email, keeping them apprised of the campaign. People want to work at a company that they feel proud about,” Brooks explained.⁴² As a result, many employees were making individual financial contributions to Greenpeace, which depends almost entirely on private donations. Additionally, between 2004–2009 when there were no official conversations between K-C and Greenpeace, employees would encourage Greenpeace, revealing that they were seeing movement in the company’s position internally.

Furthermore, by engaging employees in the conversation, Brooks reported that there were two positive outcomes in 2009 when the company finally agreed to change its policy to source sustainable pulp. First, he said, morale

jumped. Employees saw their employer as a leader. Second, employees ran with the change. They felt empowered by the company's decision, and this helped K-C to make the transformation.

The legacy of the new directions of 2009 remains strong at K-C today. Sustainability has a central role in the company's strategic, financial, and operational plans.⁴³ In his letter at the opening of K-C's 2011 Sustainability Report, Apte described the company's Sustainability 2015 strategy and five-year goals under three pillars: People, Planet, Products. "In addition to our Sustainability 2015 goals, we have identified four focus areas in which we believe we can take an industry-leading role," Apte wrote. "These areas include forest conservation, access to water and sanitation in communities, responsible solutions for postconsumer waste, and providing access to essentials for a better life through our global social giving programs developed in partnership with our brands' health and hygiene products."⁴⁴

Moreover, K-C has not just shifted its sustainability goals; the company is now transparent and accountable in reporting those goals, indicating exactly where they succeed and fall short. Additionally, K-C further enhanced its Sustainability Advisory Board (SAB) in order to take full advantage of its access to expertise on trends and best practices on sustainability. The SAB is composed of thought leaders and experts with a variety of perspectives worldwide, including finance, design, governance, and sustainability.⁴⁵

The Greenpeace campaign demonstrates the importance of brand and reputation as drivers of K-C's sustainability strategy. Additionally, as the company expanded its sustainability strategy, it recognized greater values to the sustainability elements of risk-mitigation, energy efficiency savings, and business opportunities through innovation, particularly in emerging markets. When asked about the competitive advantages from the company's sustainability efforts, chairman and CEO Tom Falk cited "tens of millions of dollars in savings."⁴⁶ He also noted customer advantages "where we're selling products to our B2B customers as well as our consumer customers." Falk also spoke of gaining a recruiting advantage.

On the investor side, Falk commented in "We Learned How to Listen Better," published in the *MIT Sloan Management Review*, that "I'm starting to get questions from investors. On a recent investor relations trip, I spoke with one of our large longtime shareholders, and for whatever reason that day, all we talked about was sustainability."⁴⁷

The K-C story illustrates many lessons: it's never too late for companies to adopt sustainability strategies, regardless of past opposition and even conflict; sustainability adds to the bottom line, in spite of previously held assumptions; and NGOs/nonprofits can become mutually beneficial partners, which will ultimately improve the world.

DOW AND THE NATURE CONSERVANCY BREAK NEW GROUND IN VALUING NATURE

Andrew Liveris began to transform The Dow Chemical Company when he became the CEO in 2004. With the acquisition of Rohm and Haas, a specialty chemical company in 2009, Dow was positioned to provide a more comprehensive mix of products to its customers in value-added chemicals, plastics, and materials. With chemistry enabling more than 96 percent of manufactured products, Dow sought to create new technologies and solutions for world challenges, focusing in particular on “alternative energy, water purification, crop productivity, building efficiency, and many more solutions that improved lives while protecting the planet.”⁴⁸

Under Liveris’ leadership, Dow shifted to become a more transparent and accountable company with a strategy oriented around sustainability. Aligned with these interests, Dow partnered with The Nature Conservancy (the Conservancy), a global NGO, to develop a tool to enable their own company as well as others to measure the impact of their actions on nature and surrounding communities. The tool was designed to provide the data for companies to make decisions to better mitigate risk, improve their bottom lines, benefit communities, and help preserve the ecosystem.⁴⁹

In early 2011, Dow and the Conservancy began their collaboration to create a methodology to measure the value of nature to a company and a community in order to inform business decision-making and purposeful conservation outcomes. The first pilot project at Dow’s Texas operations focused on valuing ecosystems services such as air quality, water supply, and coastal hazard protection. The approach included defining business decisions, projecting future scenarios, running biophysical models, assessing economic values, and evaluating options and trade-offs.⁵⁰

“When our conservationists and Dow’s engineers had their first conversations, we were speaking in different languages,” recalled Mark Tercek, president and CEO of The Nature Conservancy. “But today, we are all on the same page, talking about incorporating the value of nature into business goals, decisions, and strategies.”⁵¹

By the time the 2012 Progress Report was issued by Dow and the Conservancy, the first pilot project had been completed in Dow’s Texas operations in Freeport, and the second project had been initiated in Santa Vitoria, Brazil. Moreover, Dow and the Conservancy had begun creating the Biodiversity and Ecosystem Services Trends and Conditions Assessment Tool (BESTCAT) for use by additional companies.⁵² In fact, by June 2012, 24 major companies representing \$500 million in combined revenue announced commitments to incorporate ecosystems and biodiversity into

business strategy.⁵³ The companies included Alcoa, the Clorox Company, Coca-Cola, Dell, Dow Chemical, Duke Energy, Ecolab, Enterprise Rent-A-Car, FEMSA, General Motors, Hanesbrands, Kimberly-Clark, Lockheed Martin, Marriott International, Nike, Patagonia, TD Bank, Unilever, The Walt Disney Company, Xerox, Weyerhaeuser, and others. With regard to businesses collaborating with NGOs, Tercek commented that “environmentalists should take full advantage of the opportunity that partnerships with forward-thinking companies provide.”⁵⁴

The 24 companies also launched a report called “The New Business Imperative: Valuing Natural Capital,”⁵⁵ published by the Corporate EcoForum,⁵⁶ a membership organization for large companies that demonstrate a serious commitment to environment as a business strategy issue. The Corporate EcoForum report describes the business imperative to safeguard the natural goods and services on which the global economy depends: “Clean water and air, affordable raw materials and commodities, fertile soil to grow crops, abundant fish stocks, buffers to floods, droughts, fires and extreme weather, barriers to the spread of disease, and biological information to propel scientific and medical breakthroughs.” The report notes that “each year nature provides \$72 trillion of ‘free’ goods and services essential to a well-functioning global economy.”

“The New Business Imperative: Valuing Natural Capital”⁵⁷ also explains the four benefits of “prioritizing ecosystems within business strategy: (1) cutting costs, (2) reducing risks, (3) enhancing brand and reputation, and (4) growing revenues.”

The article continues with recommendations as to how companies can capture these opportunities: “(1) Assess your company’s impacts and dependencies on ecosystems, (2) put a price on nature’s value, (3) optimize resource use to minimize environmental degradation, (4) invest strategically in conservation and restoration, (5) engage your value chain to bring solutions to scale, (6) innovate in materials, processes and products, (7) build natural instead of man-made infrastructure, (8) leverage new natural capital markets and investment tools, and (9) join forces.”⁵⁸

“For its part, Dow has embedded sustainability and transparency within the company’s culture,” explained Neil Hawkins, vice president of Global Environment, Health & Safety (EHS) and Sustainability at Dow. The sustainability team for which he is responsible convenes to ensure that environmental, health, and safety standards and expectations of management are being implemented in every business unit. Additionally, Hawkins has product sustainability leaders in every business unit, supporting them in life-cycle analysis work in value chain and EHS implementation. “If you’re a chemicals and materials company, you want risks managed well,” Hawkins said.⁵⁹

Hawkins is responsible to the Environmental, Health, Safety and Technology Committee of the Board of Directors. Additionally, he works with the Sustainability External Advisory Committee (SEAC), first launched in 1992. The SEAC is composed of leaders from around the world who have expertise in corporate social responsibility and the environment. The role of the SEAC is to provide advice, not oversight, and not to endorse; SEAC offers guidance to Dow executives about where they are not doing as well as they can, and lets them know where the opportunities are.

Dow's collaboration with the Conservancy is not only a value for the company but for many others who are also valuing nature for the benefit of their businesses and a better world.

UNILEVER: LIVING THE GOOD LIFE

No chapter on ecosystems is complete without a discussion of Unilever and its innovation and leadership in sustainability. Chapter two, which addresses climate change and energy, provides a more comprehensive description of Unilever and their sustainability strategy. The company's Sustainable Living Plan, launched in November 2010, commits to three outcomes by 2020: "To help more than one billion people take action to improve their health and well-being; to halve the environmental footprint of the making and use of our products; and, to source 100 percent of our agricultural raw materials sustainably."⁶⁰

Unilever makes the business case for integrating sustainability into its brands by recognizing that sustainability appeals to consumers and retailers, fuels innovation, helps develop new markets in developing countries, saves money for the company and its customers, and inspires employees and prospective employees.⁶¹

Unilever's strategy for protecting ecosystems includes goals for reducing the use of water in manufacturing and agriculture, as well as in the habits of consumers of the company's personal care products. The company claims significant progress in reducing the use of water in manufacturing and agriculture, yet consumers' use of water appears to be a more elusive goal. The company seeks to cut consumers' water use in half by 2020.⁶² To this end, they work on "The Five Levers for Change" to inspire sustainable living: Make it understood, make it easy, make it desirable, make it rewarding, make it a habit. Unilever uses this approach to encourage customers to change their behavior and reduce their use of water.⁶³

Half of Unilever's raw materials derive from forests and farms, so sustainable sourcing is important to the company. Unilever commits to source 100 percent of its agricultural raw materials sustainably by 2020 and records being on track to that goal. Similarly, Unilever, in partnership with

governments, industry, and NGOs, has set a goal to increase recycling and recovery rates by 5 percent by 2015 and by 15 percent by 2020 in its largest market countries. To do so, Unilever will make it easier for customers to recycle packaging by using materials best aligned with treatment facilities in the various countries.⁶⁴

According to Chief Sustainability Officer Gail Klintworth of Unilever, the company's business case for protecting ecosystems is multi-faceted. It includes risk mitigation with the scarcity of resources; a consumer base that is endangered due to flooding, droughts, hunger, and disease; cost management; and the opportunity for growth by finding sustainable solutions to global challenges. Unilever's sustainability mission and strategy is driven by consumers, employees, and investors.⁶⁵

Unilever explains that "there is a clear business case for Unilever to source its raw materials sustainably. By taking a long-term view we can ensure security of supply, reduce costs and protect scarce resources."⁶⁶

Protecting and restoring ecosystems is at the core of Unilever's business strategy. Its products are designed and manufactured with sustainability in mind. Unilever's success is dependent on their effectiveness in building a better world.

SPURRING GOVERNMENT INTEREST IN PRESERVING GLOBAL ECOSYSTEMS

Protecting the most exceptional ecosystems and habitats is vital to preserving most of life on Earth.⁶⁷ Consider the Amazon rainforest in Brazil, the forests and carbon-rich peatlands in Indonesia,⁶⁸ and the boreal forest in Canada. These are just a few of the natural resources owned by national governments. Yet, these governments have neglected their responsibilities.

According to Brooks at Greenpeace Canada, involving businesses in demanding changes from governments has been a highly effective approach. "Businesses care about their brands and their employees. And once they're engaged, you have partners worth billions, and you have employees. Then you can go with companies to ask governments to protect forests."

Brooks explained that "governments have to be forced to embrace the responsibility that they inherently have as owners of the forest." As to the motivation for companies to advocate for government regulation of ecosystems: "Companies want an even playing field," he said. "They also want their supply chain operating under the same rules, and as much choice as possible among legitimate fiber suppliers."

BSR (Business for Social Responsibility) is a global NGO that works with businesses to create a just and sustainable world. BSR's study of "Global

Public Sector Trends in Ecosystem Services, 2009–2012,⁶⁹ reveals five trends showing governments' growing interest in ecosystem services. Ecosystem services are defined as benefits that derive from the ecosystem and contribute to personal health, jobs, and safety. Ecosystem services include provisioning services—goods and products such as freshwater, wood, and fiber; regulating services—natural processes regulated by ecosystems, such as filtering water and control of the climate and disease; cultural services—nonmaterial services such as spiritual, cultural, and recreational programs; and supporting services—maintenance of the other services, such as nutrient cycles and crop pollination.⁷⁰

These are the five trends as described by Sissel Waage at BSR:⁷¹

1. National governments around the world are exploring expansion of GDP measures to include natural capital, which would include ecosystem services measurements.
2. Public-sector exploration of ecosystem services valuation is on the rise.
3. Governments around the world are showing interest in attracting investment in ecosystem services, such as through payments for ecosystem services (PES) and eco-compensation mechanisms.
4. Public sector-funded research on ecosystem services is proliferating.
5. Engagement between the private and public sectors on ecosystem services is limited but has grown each year.

Governments that are increasingly interested in measuring and managing environmental and social impacts of ecosystem services will need to learn about the advances made by the most innovative companies. Businesses will need to understand governments' interests. Collaboration will be required in order for the sectors to move forward together in the best interests of communities and the world. NGOs like BSR play a vital role in helping to facilitate and advance the discussion and progress.

CUSTOMERS, EMPLOYEES, AND INVESTORS DRIVING COMPANIES TO BUILD A BETTER WORLD

Biodiversity—the existence of a wide variety of ecosystems, animals, and plants—is essential to the planet's health. Biodiversity safeguards vital resources such as clean air and water, as well as providing the raw materials for food, medicines, and industries that support life. Yet overexploitation and habitat destruction imperil our Earth and damage is often irreversible.⁷² Already 85 percent of ocean fisheries are overexploited or depleted, threatening sources of food and jobs. Nearly one billion people lack access

to clean, safe drinking water, leading to poverty, disease, hunger, inequality, and instability.

“Environmental change is happening rapidly and exponentially. We are out of time . . . Ecosystem destruction is massive and accelerating. Institutional responsiveness seems lethargic to a reptilian degree,” according to Lovejoy at George Mason University.⁷³

There are a number of impediments to reversing this treacherous course. During these times of economic uncertainty, people too often mistake efforts to protect ecosystems as a threat to jobs. Moreover, while our better instincts are to safeguard the planet, the desire to consume abundantly and even to “have it all” appears to be human nature. Additionally, the vast emerging middle class in the developing world is also looking for its share of creature comforts after centuries of deprivation, if not oppression. Finally, the global nature of ecosystem challenges requires unprecedented cooperation between nation-states that often have diverging interests.

As shown in other chapters, there are cases where a leading NGO makes an example of a major brand that is causing harm. As with Greenpeace and Kimberly-Clark, the NGO can publicly challenge the company until it finally reverses course, embracing best environmental and social standards. Once the NGO sets an example within an industry, other companies will often follow the reformed company in adopting the new environmental and social practices.

With today’s digital media, it takes even less effort to raise consumer awareness of a company’s practices that harm the environment.⁷⁴ As a result, there is greater demand from companies for NGOs to collaborate to help businesses to adopt more environmentally positive approaches. This is leading some NGOs to shift from the role of activist protester to collaborator—and for new NGOs to emerge as consultants and advisors—in order to help achieve the mission of a better world.

Many top company executives understand that success in addressing global challenges will only come through partnerships with NGOs. “Instead of schmoozing clients or doing deals, he [Paul Polman, chairman and CEO, Unilever] will be brainstorming with Greenpeace and Oxfam on food security, persuading other business leaders to commit to sustainability programs, and hanging out with social entrepreneurs, according to a savvy observer at Davos 2013.”⁷⁵

Consumers expect companies to be serious about sustainability, and they want action and evidence, not just words. 80 percent of Americans don’t believe companies are addressing all of their environmental impacts, and only 44 percent trust companies’ green claims. Consumer skepticism can go straight to the company’s bottom line, since the 2012 Cone Green Gap Trend

Tracker says that “as many as 77 percent would be willing to boycott if misled.”⁷⁶ When you read Cone’s conclusion that “American consumers expect companies to address the full environmental impact of a product’s lifecycle, from the impacts associated with manufacturing the product (90 percent), to using it (88 percent), to disposing of it (89 percent),” it is clear that Ecolab, Kimberly-Clark, Dow, and Unilever are on the right track in understanding the consumer market.

Globally, consumer trust in corporations has dropped as well. According to the Brand Asset Valuator, conducted by BAV Consulting, trust has declined by 50 percent since the financial crisis in Fall 2008.⁷⁷ Furthermore, BAV recommends that companies can distinguish themselves in the marketplace through socially responsible practices. Their results show that 63 percent of respondents, who are consumers in 18 countries, make it a point to buy from “companies whose values are similar to their own,” and 69 percent feel that “they and their friends can change corporate behavior by supporting companies who do the right thing.” BAV concludes that “brands from companies with a strong record of social responsibility have greater usage (+33 percent) and preference (+39 percent), as well as greater loyalty (+27 percent), among consumers worldwide representing 78 percent of global GDP.”⁷⁸

Investors, consumers, and employees are key players in a company’s increased focus on sustainability. Corporate leaders who seek to maximize long-term shareholder value recognize and promote the importance of the environment. “There’s...a strong correlation between financial performance and performance on environmental and social issues—we’ve found there’s an 11 percent higher return from companies that demonstrate high environmental and social standards,” says William Bulmer, director for the Environment, Social, and Governance Department at the International Finance Corporation (IFC), the private sector arm of the World Bank.⁷⁹ Smart investors see this connection as well.⁸⁰

Companies at the environmental forefront also have better workforces. Studies show that such companies attract and retain the best employees, while enhancing their motivation to deliver higher productivity by as much as 16 percent. “Adopting green practices is...good for your employees and it’s good for your bottom line. Employees in such green firms are more motivated, receive more training, and benefit from better interpersonal relationships. The employees at green companies are therefore more productive than employees in more conventional firms,” according to Professor Magali Delmas of UCLA and Sanja Pekovic from France’s University Paris-Dauphine, who published “Environmental Standards and Labor Productivity: Understanding the Mechanisms That Sustain Sustainability” in the *Journal of Organizational Behavior*.⁸¹ In fact, BAV reports that “70 percent of workers

in our survey (and 91 percent of millennials) said they ‘would work for less money at a company whose culture they believed in.’”⁸²

It will continue to be important to discern which companies are “green washing” as opposed to becoming more sustainable. Let’s apply the definition of sustainability from the first chapter—a sustainable company finds solutions to protect the environment and serve society while pursuing their profit motive, measures their impact, and provides the public with an annual sustainability report along with the company’s financial report. In order to assess a company’s sustainability, consider the NGOs with which the company consults to derive expertise, the level in the company where the NGOs have the relationship and the depth and quality of the engagements, the degree to which the CEO and board of directors seem engaged and aware of significant environmental and social impacts, the nature of stakeholder engagement on material issues, and the company’s transparency in reporting on its environmental and social impacts. For each of the companies described in this chapter—Ecolab, Kimberly-Clark, Dow, and Unilever, the standard of being a sustainable company seems to be met.

ACHIEVING THE VISION

The Nature Conservancy describes a better world where “forests, grasslands, deserts, rivers and oceans are healthy; where the connection between natural systems and the quality of human life is valued; and where the places that sustain all life endure for future generations.”⁸³ Some global corporations are recognizing the imperative to achieve this mission and vision in order to build thriving businesses. They are transcending barriers to ecosystem protection by working with their customers, suppliers, and across national boundaries. Only companies have the resources, global reach, and self-interest to achieve what governments cannot.