

BALANCING PROFIT AND PURPOSE: THE STRATEGIC INTEGRATION OF THE SUSTAINABLE DEVELOPMENT GOALS FOR CORPORATE SUCCESS

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Introduction

Introduced by the United Nations (UN) in 2015 under the 2030 Agenda, the Sustainable Development Goals (SDGs) constitute a comprehensive framework consisting of 17 goals and 169 targets designed to facilitate transformative changes globally by 2030. The SDGs delineate a clear and actionable path towards a more equitable and sustainable world by addressing crucial issues such as climate change, hunger, access to healthcare, and education. This framework serves as a roadmap for government bodies, the private sector, civil society, citizens and informal groups, and international and supranational entities, providing a structured prosperity agenda for humanity (Accounting for Sustainability (A4S), 2022, p.1).

In the rapidly evolving landscape of global business, the imperative to align corporate strategies with these 17 broader societal goals, the SDGs, has become increasingly pronounced (Montiel et al., 2021). The SDGs stand as a testament to the commitment of the global community to addressing pressing environmental, social, and economic challenges. As businesses navigate this complex landscape of sustainable development, there is a growing recognition that integrating sustainable practices into corporate strategies not only contributes to societal and environmental well-being but also yields significant advantages for the companies themselves (Hristov et al., 2022, p. 75-97).

This study aims to explore the business case for embracing the SDGs, shedding light on the business advantages that companies can get by aligning their operations with the global sustainability objectives of the UN (Montiel et al., 2021). Focusing on four types of business cases — cost reduction, raising prices,



increasing market share, and new business model — (*Reimagining Capitalism by Rebecca Henderson, 2020*), this study aims to explore the business case for embracing the SDGs by delving into the operationalization of the SDGs with examples (Van Tulder et al., 2021).

With this objective, it is expected that companies reading or consulting this study can explore new ideas on how to develop new business strategies around the SDGs while contributing to a more prosperous society. Companies can use this study to get inspired on new business cases for action or map current activities and increase the alignment between making a profit and creating a positive impact in the world. This study is composed of four main sections. Section 1, named, *The Four Opportunities for Businesses by Aligning with the SDGs*, will delve into each of the outlined business cases, namely, *Cost Reduction, Raising Prices, Increasing Market Share, and New Business Model*, as they have been carefully analyzed to delineate the scope of this study. Section 2 dives into practical examples of companies that, by aligning with a specific SDG, have identified a distinct business case. This section follows a structural order: first, a general description of each of the 17 SDGs is presented, with some data and statistics from the *Sustainable Development Goals Report 2023: Special Edition* (United Nations Department of Economic and Social Affairs, 2023). This is followed by an exploration of a comprehensive set of business actions toward the integration of the specific SDG in the corporate strategy that can potentially reveal a business case. Finally, two real-world examples of corporations that have embraced Sustainability through the SDGs while embracing one of the four business cases are presented. Section 3 dips into the several conclusions of this paper.

Index of the Business Cases Identified in this Study

| Sustainable Development Goal | Company/ies | Title | Business Case |
|---|--------------------|---|---|
|  <p>1 NO POVERTY</p> | Dialog | Empowering Rural Communities Through a Transformative Value-Added Service | Increase Market Share New Business model |
| | Vodafone | M-Pesa Revolution in Financial Inclusion | Increase Market Share New Business Model |
|  <p>2 ZERO HUNGER</p> | Diageo | Fostering Supplier Development for Mutual Gains | Cost Reduction Increase Market Share |
| | Mars | Sustainable Rice Farming in Pakistan | Cost Reduction |
|  <p>3 GOOD HEALTH AND WELL-BEING</p> | MicroEnsure | Expanding its Frontiers to Low-income Geographies | Increase Market Share New Business Model |
| | Levis | Program Worker Well-Being | Cost Reduction |
|  <p>4 QUALITY EDUCATION</p> | Gap | Empowering the Workforce of Tomorrow | Cost Reduction |
| | Bechtel | Comprehensive and Meaningful Apprenticeship Initiatives | Cost Reduction |
|  <p>5 GENDER EQUALITY</p> | Nalt Enterprise | Empowering Women with a Kindergarten | Cost Reduction |
| | Mastercard | Empowering Women in Agriculture | Increase Market Share New Business Model |
|  <p>6 CLEAN WATER AND SANITATION</p> | Procter and Gamble | Revolutionizing Clean Water Access for Underserved Communities | New Business Model |
| | Coca-cola | Water Stewardship: Promoting Efficiency, Sustainability, and Community Engagement | Cost Reduction |

| | | | |
|---|---------------------------|--|---|
| 7 AFFORDABLE AND CLEAN ENERGY  | Pepsi Co | A Green Fleet | Cost Reduction |
| | CTT and EDP | Solar Neighborhoods | Cost Reduction Increase Market Share |
| 8 DECENT WORK AND ECONOMIC GROWTH  | Tony's Chocolonely | A Journey to 100% Slave-Free Chocolate | New business model Raise prices |
| | Pirelli | Leading the Way in Sustainable Occupational Health and Safety | Cost Reduction |
| 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE  | Galp | Investing in Bio compounds and Green Hydrogen | Cost Reduction New Business Model |
| | The Navigator Company | Pioneering Green Aviation Fuel Venture | Cost Reduction New Business Model |
| 10 REDUCED INEQUALITIES  | Fidelidade | A Tech-Driven Approach to Enhancing Senior Lives | New Business Model |
| | Lego | Building Inclusion with Braille Education | New Business Model Increase Market Share |
| 11 SUSTAINABLE CITIES AND COMMUNITIES  | Sonae Sierra | A Tech Hub Leading the Way in Sustainable Building Practices | Cost reduction |
| | Pestana Hotel Group | Driving Sustainable Tourism and Preserving the Historic Legacy | New business model Raise prices |
| 12 RESPONSIBLE CONSUMPTION AND PRODUCTION  | Belcinto | Crafting Sustainability and Fashioning Innovation | Cost Reduction New Business Model Increase Market Share |
| | Jerónimo Martins | An Innovative Approach to Food Waste Reduction | Cost Reduction Increase Market Share |
| 13 CLIMATE ACTION  | IBK Seguros and MDS Group | Climate-Proofing Insurance | Cost reduction Increase Market Share New Business Model |
| | Olam | The First Climate-Smart Cocoa | Increase Market Share |
| | Interface | Networks, A Sustainable Solution to Marine Waste | Cost Reduction New Business Model |
| | Cermaq | Laser Technology for Sustainable Aquaculture | Cost Reduction |



| | | | |
|---|--|---|--------------------------------------|
| <p>14 LIFE BELOW WATER</p>  | | | |
| <p>15 LIFE ON LAND</p>  | Corticeira Amorim | Forest Preservation Initiatives Towards a Greener Future | Cost Reduction |
| | Herbal Essences and Royal Botanic Gardens, Kew | Innovating in New Products while Protecting Biodiversity | Cost Reduction |
| <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>  | Nestlé | Contribution to Post-War Reconstruction Through Dairy Development | Increase Market Share |
| | Holcim | Fostering Peace by Securing Safety | Cost Reduction |
| <p>17 PARTNERSHIPS FOR THE GOALS</p>  | NOS and Luz Saúde | Creating Connections with the First 5G Hospital Project in Lisbon | Cost Reduction New Business Model |
| | Vale and Espírito Santo State | Building a Symbiotic Climate Resilience | Cost Reduction |



1. TRACING THE LANDSCAPE OF SDGs BUSINESS

CASE

As humanity reaches the half checkpoint towards 2030, it is important to have a mid-term review of the performance of the 17 goals in mind. The Global Sustainable Development Report from 2023 indicates that only 12% of the targets of the SDGs are on track and describes the 2030 Agenda progress as a stagnation in the face of multiple crises (United Nations, 2023). Indeed, the last few years have been marked by several events that have prevented this Agenda from progressing, such as a global pandemic, international conflicts, and a tangible climate crisis.

The 2030 Agenda is a shared responsibility in which businesses are relevant actors. Companies are, on the one hand, a large former and current contributor to climate change, a high consumer of natural resources for the development of their products and services. Businesses tremendously influence social inequalities, for example, through their wage and price policies (United Nations, 2023). On the other hand, it is their power dynamics that precisely make companies an essential stakeholder in achieving the 2030 Agenda. Companies can have a positive role in contributing to a more sustainable planet once they decide to mobilize their resources, promote innovation and new technology solutions, and become co-responsible for sustainable development, job creation, and economic growth.

Moreover, sustainable pursuit at the core of the company strategy can be positive not only for the planet and people but can also reveal a true business case that results in profit (Van Tulder et al., 2021). In particular, the Sustainable Development Goals hold the potential for substantial economic benefits for companies that



commit to implementing innovative solutions and driving transformative change through sustainability objectives. As highlighted in the report by the Business and Sustainable Development Commission, *Valuing the SDG prize* (AlphaBeta et al., 2017), the achievement of the SDGs has the capacity to generate 380 million employment opportunities and unlock 12 trillion US dollars in business prospects by the year 2030 in only four industries analyzed. Moreover, an examination of corporations conducted by the public research organization, the Conference Board (Thomas Singer, 2015), revealed that revenues derived from sustainable products experienced growth at a rate six times higher than the overall revenues of these companies. Additionally, corporations observed a notable trend, with brands that strategically incorporated sustainability into their absolute purpose and product offers exhibiting a growth rate 30% faster (*Report Shows a Third of Consumers Prefer Sustainable Brands*, 2017) than the remaining segments of their business. Therefore, we can conclude that companies strategically positioning sustainability and the SDGs at the epicenter of their strategic and operational frameworks stand to realize enhanced operational efficiencies, capitalize on emergent market opportunities, and fortify their resilience in the face of evolving challenges (Accounting for Sustainability (A4S), 2022).

Despite this notable business case of the SDGs, corporate data assessments indicate that companies are not yet involving the business case of sustainability in their strategies and priorities. During the 2020s, defined by the UN as the Decade of Action, a mere 21% of Chief Executive Officers (CEOs) acknowledged active involvement in advancing the SDGs, notwithstanding a consensus among 70% of these leaders affirming the necessity and desirability of such alignment (*5 Ways Multinationals Can Have a Greater Impact on the SDGs*, 2021). The 2023 SDG



Stocktake report (United Nations Global Compact & Accenture, 2023) supports these claims by stating that 95% of organizations understand how their business impacts the SDGs, and 79% have identified a business case for advancing at least one SDG. Despite these numbers, business leaders have only 48% confidence in the positive contribution that the private sector can have toward the SDGs. Therefore, although CEOs recognize the importance of sustainability as a business case, they do not act upon it. In addition, there has been a reverse tendency on ESG (Environmental, Social, and Governance) topics; 6% of CEOs have opted to discontinue transactions in the preceding year due to ESG-related apprehensions (United Nations Global Compact & Accenture, 2023, p.17). This disconnection between the desirability to engage with sustainability and tangible engagement underscores the need for efforts to engage companies in fulfilling this gap in corporate commitment to the SDGs.

2. FOUR BUSINESS CASES FOR THE SDGs

In the quest for sustainable development, companies play a pivotal role as drivers of innovation, economic growth, and social progress. The adoption of sustainable practices not only fulfills corporate social responsibility but also presents significant opportunities for enhancing business viability and competitiveness. This business advantage can be achieved through four business cases for action, which enterprises can capitalize on by aligning their strategies with the SDGs, thereby advancing global sustainability objectives and their own bottom lines.

A business case through sustainability is an identifiable sustainable environmental and/or social practice that provides companies with a case (scenario or circumstance) that translates into the economic and financial success of that business (Carroll & Shabana, 2010; Dyllick & Hockerts, 2002).

The four business actions selected in this written piece are 1) reducing costs, 2) increasing prices, 3) increasing market share, and 4) creating a new business model. These business cases were sourced through the work *Reimagining Capitalism in a World on Fire* (2020) by Rebecca Henderson, Professor at Harvard Business School. Nevertheless, while Professor Rebecca presents five business cases, which include the remaining 5) mitigating risks, taking into account the research and teaching experience of our team and our practical experience with companies, we keep these four business cases as the core of our analysis.

2.1 COST REDUCTION



Cost reduction is a business case for sustainability, when companies are able to reduce the economic costs in the production of their products and services by incorporating sustainable practices in their operations and supply chains.

According to a survey conducted by McKinsey, "cost-cutting" emerges as one of the top three reasons businesses engage in sustainability initiatives (*Sustainability's Strategic Worth I McKinsey*, 2014). Therefore, reducing costs can be one of the most important reasons for implementing the SDGs. Companies can achieve cost reduction as a business case for sustainability in different ways.

The first and most immediate possibility is the adoption of sustainable consumption and production (Montiel et al., 2021). Companies can, for example, achieve cost reduction by shifting to renewable alternatives and implementing efficient mechanisms in their energy and water usage (Hussain et al., 2017).

Companies can also reduce costs by mitigating risks. By identifying and addressing risks associated with resource shortages and climate-related hazards, and evaluating resource management strategies in the context of local communities of their supply chains, businesses can cut present-to-future operational and regulatory costs (Kolk & Pinkse, 2008).

A more indirect way in which companies can reduce costs in advancing a sustainable strategy is through retaining talent in their organizations. High turnover rates can incur substantial expenses in recruitment, hiring, and training (Rodríguez-Sánchez et al., 2020). By retaining skilled and experienced employees, organizations can avoid recurring costs with human resource management, ensure

continuity in projects, and prevent disruptions, leading to smoother operations and cost savings in the long run. Investing in work-life balance, caring for the mental and physical health of workers, or providing them with training opportunities, academic or professional, have all been identified as valuable strategies for talent retention and, ultimately, cost reduction (Schlechter et al., 2015).

2.2 RAISE PRICES



Raise prices is a business case for sustainability when a company has the ability to increase the price of a product or service because it is (more) sustainable than a previous product it has or a product from its competitors.

Companies embracing Sustainability often discover opportunities to command premium prices for their products and services because they are more sustainable, and consumers are more willing to pay a premium for that. This premium price is not always possible to obtain, given that consumers, in general, prefer to purchase at the lowest price possible. However, a perceptible transformation is underway in consumer attitudes. According to the global study, *Havas Meaningful Brands 2015* (Hart, 1995), brands that are perceived as meaningful by consumers have the potential to pay up to seven times more than brands perceived as less meaningful. For every 10% increase in perceived meaningfulness, a brand can anticipate a 6% enhancement in purchase/repurchase intent and a 10.4% increase in price premiums (Havas, 2015). A Shopify survey published in November 2023 confirms this pattern, revealing that 40% of holiday shoppers were inclined to spend more



on eco-friendly items, while 43% exhibited a heightened propensity to patronize brands embracing sustainability practices (Shopify, 2022).

There are, therefore, different ways in which companies can observe the possibility of increasing their prices by integrating sustainability into their operations. In the first place, companies can offer premium products and services utilizing sustainability as a reason to raise prices (Bain & Company, 2023, p. 11). These premium options can range from a variety of sectors and areas. In the health sector, companies can develop concierge healthcare services that provide convenience, accessibility, and personalized offers; in the food segment, businesses can create premium products, such as meal kits or nutritional supplements, that cater to health-conscious consumers; concerning marine and land sustainability, businesses can offer certified products by reputable institutions like the Marine Stewardship Council, the Forest Stewardship Council or the Programme of Endorsement for Forest Certification schemes; concerning the energy sector, companies can develop green energy tariffs or carbon-neutral electricity.

In the second place, companies can develop value-added service options that attribute sustainability credits to their products and services, which have not only social and environmental value but justify higher prices from the customer perspective. These value-added services can be developed in various domains of sustainability, such as sustainable production and consumption, with product take-back programs, recycling services, or carbon offset; and in the water domain, developing products such as water quality testing, water treatment consulting, or water management solutions to businesses; in the healthcare sector, by creating products or services with enhanced features such as organic ingredients, eco-friendly packaging, or advanced technology that appeal to health-conscious

consumers; in the education domain, with the creation of career counseling, mentorship programs, or networking opportunities alongside educational offerings.

2.3 INCREASE MARKET SHARE



Increase market share is a business case for sustainability when a company reaches a new segment of consumers as a consequence of its sustainable practices. It happens when, for the same segment of product, consumers prefer a sustainable product to a non-sustainable one at the same price.

The quest for market share is a challenge for businesses in a competitive landscape. Sustainability provides a structured framework that enables businesses to consolidate their prospects for growth and prosperity. Such strategic foresight is anticipated to confer competitive advantages through several avenues, including the expansion of market share (Hart, 1995). The report, *Consumers care about sustainability—and back it up with their wallets*, from McKinsey and NielsenIQ validates that both large and small brands leveraging experienced a share of market growth, indicating that sustainability can serve as a universal driver for expansion irrespective of company size or brand penetration (McKinsey & Company, 2023).

Developing sustainable products and services is, in itself, a way of tapping into what can be considered the green market. This sustainability approach aligns with evolving consumer preferences and positions businesses to capitalize on the expanding demand for sustainable products and services (Cheng & Shiu, 2012). This means that, when competing with products and services that are not

sustainable, provided by other companies, businesses that offer customers green products have an already pre-disposition to conquer a new market share. Nevertheless, companies can go beyond just tapping into the green market. Businesses can also increase their market share by exploring uncharted geographies and consumers. By understanding and addressing the unique socio-cultural, economic, and environmental needs of different population segments within these geographies, companies can tailor their products and services accordingly, enhancing their relevance and appeal (University of Cambridge Institute & for Sustainability Leadership, 2020, p.5). By analyzing the market and investment gaps in forgotten geographies such as, for example, populations with limited access to healthcare services, learners in remote areas with limited access to traditional educational resources, regions facing water scarcity, or populations of low-income consumers, business can create and foster the development accessible, affordable, or convenient products and services to tackle these neglected issues, while increasing their market reach.

2.4 NEW BUSINESS MODEL



A *new business model* is a business case for sustainability when a company adopts a unique approach or strategy to create and deliver customer value. This model typically encompasses different forms of how a company generates revenue,



interacts with customers, leverages resources, and creates competitive advantages in the marketplace. It often can involve new products, new methods for product or service development, production, distribution, marketing, pricing, and customer relationship management.

Sustainability serves as a fundamental premise guiding innovation for new business models (United Nations Development Programme (UNDP), 2023, p.21). As visible in the stretched definition of a new business model, this concept allows different possibilities for obtaining it.

A prominent example of the creation of new business models is the shift that some fossil fuel companies have or are making toward the production and development of renewable and green energy, since they operate in the same industry but with a different product. This specific new business model involves shifting a company's operations toward emerging and promising markets, utilizing the know-how acquired in the energy sector but aligning it with innovation and sustainability.

Businesses can also leverage their experience in other markets and geographies to develop products and services they know but lack in those markets. For example, if a company is inserted in a low-income market in the technology sector, providing telecommunication services, it can use the expertise of the low-income market and simultaneously of the technology area to create a new technological service toward financial inclusion through the mobile facilitation of microfinance. Here the new business model was obtained through the development of a new product.

Companies can also adopt alternative sustainable production mechanisms. For example, a company that usually uses wood to create its furniture products starts a partnership with a local cork producer to utilize their unusable materials for the construction of its furniture. This company is creating a new product and, therefore,



a new business model as it is changing the established producing process. A last example is an educational institution that decided to offer remote education and reach more students. The integration of a technological component that substantially alters the common platform of in-class lessons leads not only to the creation of a new product, but it ultimately creates a new business model.

Poverty Alleviation

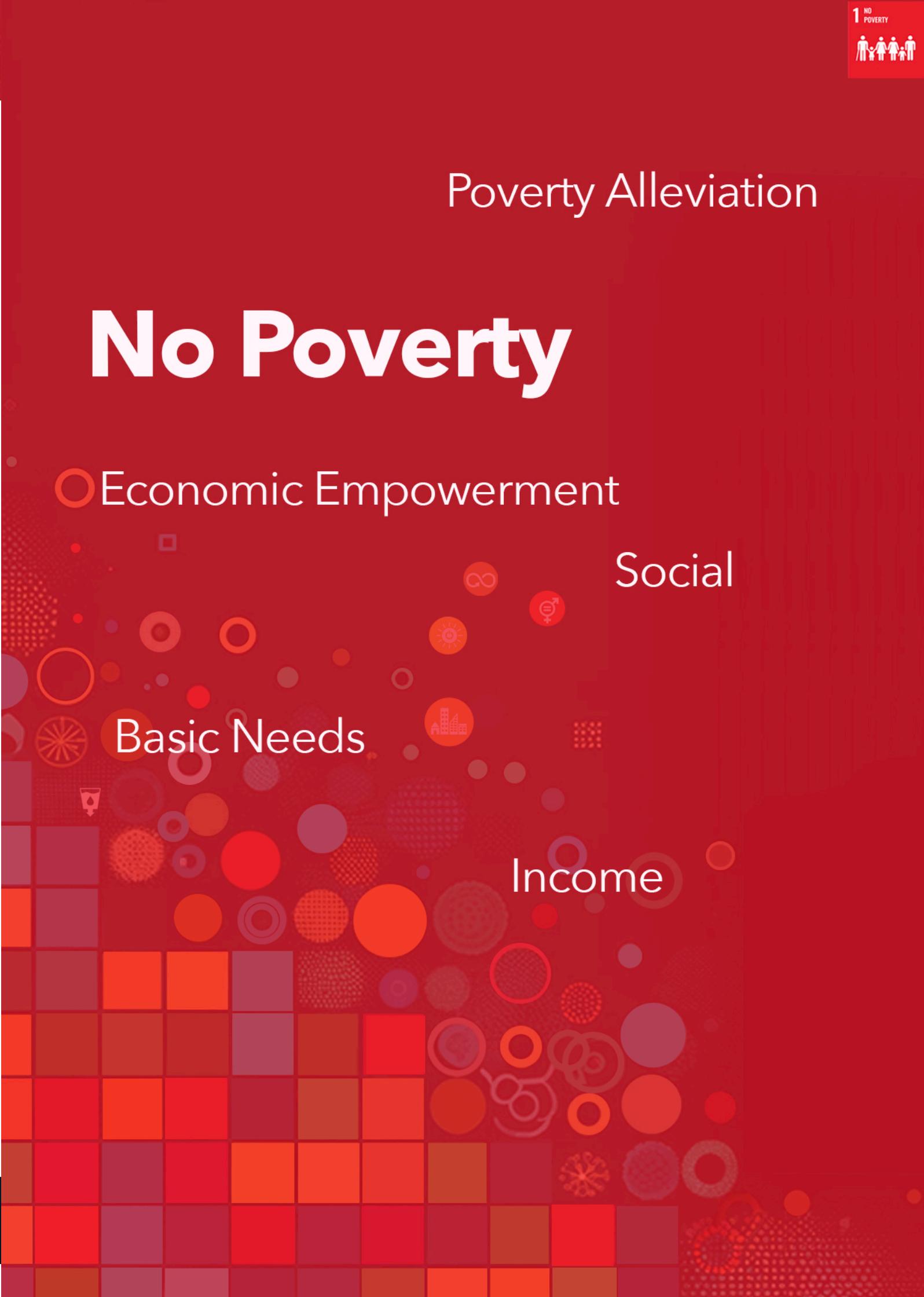
No Poverty

○ Economic Empowerment

Social

Basic Needs

Income



1 NO POVERTY

TARGETS OF SDG 1

| | | | |
|--|--|--|---|
| <p>TARGET 1-1</p>  <p>ERADICATE EXTREME POVERTY</p> | <p>TARGET 1-2</p>  <p>REDUCE POVERTY BY AT LEAST 50%</p> | <p>TARGET 1-3</p>  <p>IMPLEMENT SOCIAL PROTECTION SYSTEMS</p> | <p>TARGET 1-4</p>  <p>EQUAL RIGHTS TO OWNERSHIP, BASIC SERVICES, TECHNOLOGY AND ECONOMIC RESOURCES</p> |
| <p>TARGET 1-5</p>  <p>BUILD RESILIENCE TO ENVIRONMENTAL, ECONOMIC AND SOCIAL DISASTERS</p> | <p>TARGET 1-B</p>  <p>CREATE PRO-POOR AND GENDER-SENSITIVE POLICY FRAMEWORKS</p> | <p>TARGET 1-A</p>  <p>MOBILIZE RESOURCES TO IMPLEMENT POLICIES TO END POVERTY</p> | |

SUSTAINABLE DEVELOPMENT GOAL 1- NO POVERTY

Sustainable Development Goal 1 (SDG 1) is dedicated to the cessation of poverty in its various manifestations. The phenomenon of extreme poverty is defined as a “person subsisting on an income of less than \$2.15 per day at the 2017 purchasing power parity” (World Bank Group, 2015). Extreme poverty has witnessed a notable reduction over recent decades. Regrettably, the positive trajectory in poverty alleviation was disrupted by the COVID-19 pandemic. By the year 2020, the number of individuals grappling with extreme poverty had risen to 724 million, surpassing the projections by 90 million (United Nations Department of Economic and Social Affairs, 2023, p.12). This unfortunate escalation not only precluded the anticipated trajectory but also represented a regression of approximately three years of advancements in poverty mitigation efforts.

Proportion of the world's population living below \$2.15/day, 2015-2019 realized and 2020-2030 forecast and projected (percentage)

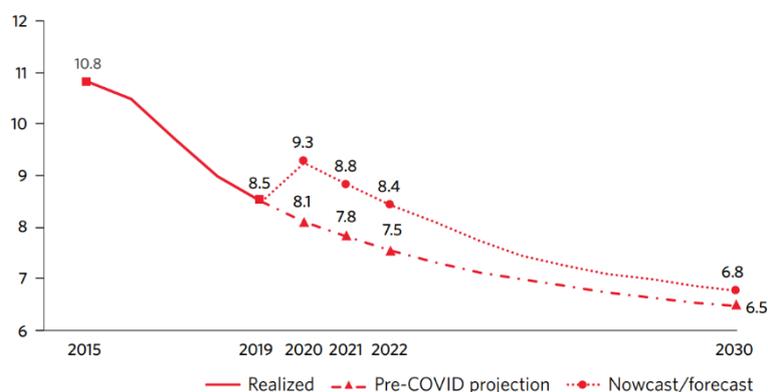


Fig 1. Portion of the World's Population Living Below 2,1\$/day **Source:** The Sustainable Development Goals Report Special edition, 2023. p.12.

1 NO POVERTY

Should prevailing trends persist, a projected 575 million individuals will remain in extreme poverty by the year 2030 (United Nations Department of Economic and Social Affairs, 2023, p.12). Additionally, there is a risk that merely one-third of nations will have achieved a fifty percent reduction in their respective national poverty levels by the 2030 target year, in comparison with 2015.

THE BUSINESS CASE FOR THE SDG 1- NO POVERTY

Business strategies oriented toward the realization of SDG 1 have the capacity to facilitate developmental objectives and enhance business outcomes concurrently.

Companies can **create value-added products or services that directly address the needs of low-income consumers**, such as affordable housing solutions, basic healthcare services, or nutritious food options, and price them competitively or utilize tiered pricing strategies that **offer flexible pricing options**, allowing consumers from different income levels to access products or services based on their ability to pay. Businesses can even **establish fair trade or ethical certification for products sourced from impoverished regions**, enabling premium pricing while ensuring equitable compensation for producers.

In addition, businesses can **target economically disadvantaged and underserved markets** with customized products or services designed to meet their specific needs (United Nations Global Compact, 2017, p.8). These strategies have the potential to stimulate innovation, giving rise to novel products and services while ensuring improved accessibility that aligns

1 NO POVERTY

effectively with the requirements of individuals. Moreover, enterprises can **integrate inclusive business models** that encompass low-income communities into value chains, such as suppliers, distributors, and customers, creating shared value for both the company and the community. Businesses can also **leverage innovation, technology, and digital platforms to reach marginalized populations** more efficiently and cost-effectively, enabling scalable solutions that address poverty at a broader scale. Notably, pro-low-income business strategies extend the reach of companies to a market encompassing an **estimated 4 billion individuals who are presently excluded from mainstream commercial activities** (United Nations Global Compact & OXFAM, 2015, p.21).

PRACTICAL EXAMPLES OF THE SDG 1- NO POVERTY BUSINESS CASE

Dialog: Empowering Rural Communities Through a Transformative Value-Added Service (GSMA, 2017)



Dialog is the largest telecommunications operator in Sri Lanka, offering media services encompassing 2G–4G connectivity, fixed and mobile broadband, and television packages. In 2015, Dialog created the Govi Mithuru, a value-added service (VAS), with the objective of engaging the rural demographic, where approximately 80% of the population relies on agriculture for sustenance and livelihood.

A **portion of this rural populace (7%), resides below the poverty line**, defined by a daily income of USD 2.50 (The World Bank, 2012). In addition, the scarcity

1 NO POVERTY

of water resources subsequently impacts crop production. The resultant decrease in rice output precipitated a surge in consumer prices, reaching a peak of USD 0.57/kg in 2016. This escalation has detrimental consequences on the food security of impoverished populations of Sri Lanka (World Health Organization, 2019).

Govi Mithuru delivers tailored and timely guidance to farmers encompassing various facets of agricultural activities, including land preparation, cultivation practices, crop protection strategies, harvest procedures, and advancements in family nutrition. This guidance is facilitated through a Voice mechanism or Govi app, ensuring accessibility and personalized support for agricultural practitioners.

In 2016, Govi Mithuru became a prosperous VAS of Dialog, with 35% of the target market successfully registered for the service. The success of the service translates into **advantages for Dialog**. The adoption of a **straightforward pricing model, entailing a daily charge of LKR 1 per crop for each active user**, revealed pivotal in the triumph of service. Simultaneously, **users exhibited a 5% higher monthly Average Revenue Per User and a 3% lower churn rate** compared to non-utilizing counterparts.

The creation of Dialog, Govi Mithuru, not only exemplifies business innovation but also **aligns with SDG 1 No Poverty**, addressing specific targets 1.1, 1.4, and 1.5.

Firstly, by targeting the rural demographic, where a portion lives below the poverty line, Dialog addresses target **1.1 Eradicate Extreme Poverty**. Secondly, the provision of tailored agricultural guidance addresses target **1.4 Equal Rights to Economic Resources**, by empowering farmers with knowledge and resources, enhancing income and food security. Thirdly, through Mithuru, Dialog contributes to target **1.5 Build Resilience to Environmental Shocks** among the

1 NO POVERTY

Impoverished, helping the stabilization of prices during water scarcity. Actions that not only fulfill societal needs but also led to an **increase in market share** for Dialog and the **creation of a new business model**, demonstrating how sustainable business practices can drive economic growth.

Vodafone: M-Pesa Revolution in Financial Inclusion (End Poverty in All Its Forms Everywhere, n.d.)



Vodafone is a multinational telecommunications company headquartered in London, UK, that provides mobile and fixed-line services, broadband, and digital TV. In 2007, Vodafone, in collaboration with Safaricom, pioneered the inception of M-Pesa, the initial mobile money transfer service. M-Pesa established a service designed to facilitate the convenient receipt and repayment of loans for microfinance borrowers who incur transaction charges, with the fees varying based on the transferred amount and the registration status of the payee.

Initially launched in Kenya and subsequently expanded to Tanzania and Afghanistan, M-Pesa has impacted SDG 1 by promoting financial inclusion, fulfilling targets 1.1, 1.2, 1.3, and 1.4. A 2016 Science publication asserted that **"access to M-Pesa increased per capita consumption levels and lifted 194,000 households, 2% of Kenyan households, out of poverty."** (Suri & Jack, 2016)

The service provides a secure and accessible platform for users, particularly those without access to traditional banking services, enabling financial transactions through mobile phones. Furthermore, M-Pesa creates safety nets and facilitates remittances, offering efficient fund transfers that are vital for individuals relying on financial support from relatives or friends in different

1 NO POVERTY

locations. In addition, the innovative approach of empowering microfinance institutions through reduced operational costs associated with digital transactions enhances their ability to provide more competitively priced loan options to their clientele (**Target 1.1 Eradicate Extreme Poverty** and **Target 1.2-Promoting Economic Empowerment**). Moreover, the facilitation that M-Pesa offers on transactions and payments fosters economic participation for small businesses and entrepreneurs and addresses challenges related to geographical remoteness or lack of documentation contributing to **Target 1.3 Social Protection for Vulnerable Populations**. Additionally, the efficiency of M-Pesa in fund transfers aids in poverty reduction by creating safety nets and facilitating remittances, aligning with **Target 1.4 Equal Rights to Economic Resources**. By strategically expanding M-Pesa to multiple countries and tailoring it to meet the needs of low-income populations, Vodafone **increases its market reach** while generating a **new business model** that contributes to poverty reduction, showcasing how sustainable business practices can drive economic growth.

Food Security

Zero Hunger

○ Agricultural Sustainability

∞ Nutrition Access

Hunger Eradication

Sustainable Farming

2 ZERO HUNGER

TARGETS: SUSTAINABLE DEVELOPMENT GOAL 2 – ZERO HUNGER

| | | | |
|---|--|---|---|
| <p>TARGET 2-1</p>  <p>UNIVERSAL ACCESS TO SAFE AND NUTRITIOUS FOOD</p> | <p>TARGET 2-2</p>  <p>END ALL FORMS OF MALNUTRITION</p> | <p>TARGET 2-3</p>  <p>DOUBLE THE PRODUCTIVITY AND INCOMES OF SMALL-SCALE FOOD PRODUCERS</p> | <p>TARGET 2-4</p>  <p>SUSTAINABLE FOOD PRODUCTION AND RESILIENT AGRICULTURAL PRACTICES</p> |
| <p>TARGET 2-5</p>  <p>MAINTAIN THE GENETIC DIVERSITY IN FOOD PRODUCTION</p> | <p>TARGET 2-A</p>  <p>INVEST IN RURAL INFRASTRUCTURE, AGRICULTURAL RESEARCH, TECHNOLOGY AND GENE BANKS</p> | <p>TARGET 2-B</p>  <p>PREVENT AGRICULTURAL TRADE RESTRICTIONS, MARKET DISTORTIONS AND EXPORT SUBSIDIES</p> | <p>TARGET 2-C</p>  <p>ENSURE STABLE FOOD COMMODITY MARKETS AND TIMELY ACCESS TO INFORMATION</p> |

2 ZERO HUNGER

SUSTAINABLE DEVELOPMENT GOAL 2 – ZERO HUNGER

Sustainable Development Goal 2 (SDG 2) - Zero Hunger – endeavors to eradicate hunger, attain food security, enhance nutritional well-being, and advance sustainable agricultural practices. This multidimensional complexity encompasses three interconnected dimensions: the social dimension, ending hunger and improving nutrition; the economic dimension, achieving food security through productivity improvement and income increase; and the environmental dimension, promoting sustainable agriculture.

Food insecurity remains a pervasive challenge, coexisting with considerable levels of food loss and waste. Despite the adequacy of food production for the global populace, a paradoxical scenario persists wherein a substantial portion of the population continues to experience hunger and malnutrition.

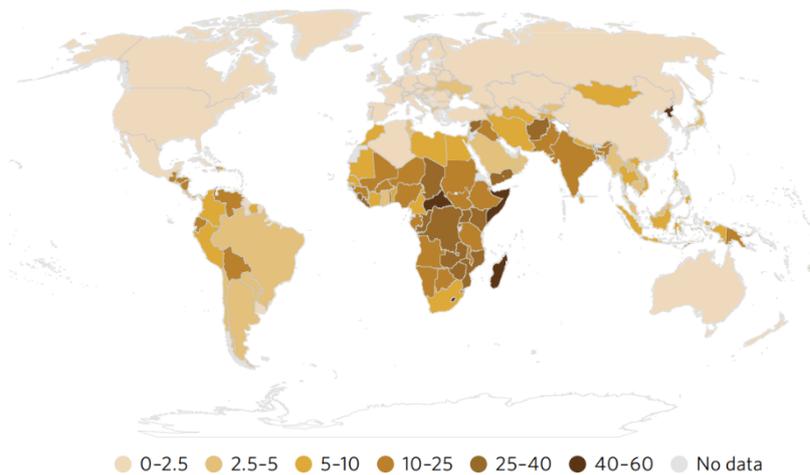


Fig. 2 Prevalence of Undernourishment **Source:** The Sustainable Development Goals Report Special edition, 2023. p.14.

According to the United Nations, 17% of the total food production of the world (1.03 billion tons) is wasted every year (United Nations Department of Economic

2 ZERO HUNGER

and Social Affairs, 2023). This wasted food could feed 1.26 billion hungry people each year (*The State of Food Security and Nutrition in the World 2022*, 2022). Moreover, 350 million people in acute hunger were added during the pandemic to 1.9 billion people already facing difficulties in accessing food (*The State of Food and Agriculture 2021*, 2021). Evidently, the crux of the issue is rooted not in the inadequacy of food supply but rather in the inherent unsustainability of the prevailing food system.

THE BUSINESS CASE FOR THE SDG 2 – ZERO HUNGER

Business strategies aligned with the pursuit of Sustainable Development Goal 2 (SDG 2)- Zero Hunger - harbor the potential to synergistically advance developmental aims while reinforcing corporate performance metrics, particularly those in the agriculture, food, chemicals, and biotechnology sectors. Through **product and process innovation**, businesses can contribute to hunger eradication globally. Key strategies include **enhancing productivity and sustainability through agricultural practices such as precision farming, organic farming, or agroecology**, which can lead to higher yields, reduced input costs, and improved soil health over the long term. In the same vein, companies can **allocate resources towards technological solutions** such as Internet of Things sensors, drones, and satellite imaging to optimize resource utilization, monitor crop vitality, and mitigate waste, thus fostering reductions in operational expenditures.

Additionally, companies can address malnutrition by **improving food distribution in areas with limited access to nutritious options and developing fortified crops** and processed foods aligned with health and environmental goals. Moreover, businesses can **facilitate market access, invest in shared**

2 ZERO HUNGER

knowledge, and provide opportunities for small-scale farmers to engage in value-added activities. This approach not only ensures a more secure food supply for local communities but also increases incomes for smallholder farmers, guaranteeing a stable supply chain (Kitinoja & AlHassan, 2012).

Terminating hunger also holds the potential of granting access to untapped markets. Notably, the most promising market opportunities coincide with regions experiencing rapid population growth, projecting a surge in food demand of up to 200% by 2050. The financial imperative is evident, as initiatives to reduce food waste are anticipated to yield over 650 billion dollars annually by 2030 (United Nations Global Compact, 2017, p. 18). Moreover, the fourteen prospects for enterprises focused on formulating business models that confront the most important challenges in the domains of food and agriculture are projected to yield an estimated cumulative value exceeding 2.3 trillion dollars by 2030 (UN Business & Sustainable Development Commission, 2017).

PRACTICAL EXAMPLES OF THE SDG 2 – ZERO HUNGER BUSINESS CASE

Diageo: Fostering Supplier Development for Mutual Gains (Nelson et al., 2015, p. 46)



Diageo is a multinational alcoholic beverage company headquartered in London, England, created in 1997 through the merger of Guinness plc and Grand Metropolitan.

In 2012, Diageo acquired Meta Abo Brewery Company, known for producing national lager brands Meta and Meta Premium. Diageo aimed to source 80% of

2 ZERO HUNGER

its agricultural inputs in Africa locally by 2020, focusing on barley and malt in Ethiopia. In Ethiopia, the second most populous country in Sub-Saharan Africa, agriculture is central to the economy, supporting a significant portion of the vulnerable population, particularly smallholder farmers. To drive transformative efforts in agriculture, the government established the Agricultural Transformation Agency (ATA).

Diageo collaboratively formalized a partnership with the ATA to explore opportunities for improving the barley value chain. **For Diageo, increasing local sourcing of barley made business sense, as purchasing in the local currency helped to keep prices stable, with the business also benefiting from greater security of supply and a stronger local economy.** The Meta Brewery smallholder farmer project had three main objectives: increase productivity and incomes of smallholder farmers, create predictable market demand for smallholder farmers, and enable 100% of agricultural raw materials in the Meta Brewery supply chain to be locally sourced, sustainably and at competitive prices (**Target 2.3 Double the Agricultural Productivity and Incomes of Small-scale food Producers, Target 2.4 Sustainable Food Production and Resilient Agricultural Practices, and target 2.b Prevent Agricultural Trade Restrictions, Market Distortions and Export Subsidies**). The approach of Meta was to tackle constraints at all stages of the barley value chain. At the core of this strategic approach was establishing direct contractual agreements between Meta and smallholder farmers, facilitated electronically (**Target 2.a Invest in Rural Technology**). This addressed multifaceted challenges faced by fragmented farmers, including issues of input access, knowledge, and infrastructure. Meta actively enhanced the agricultural proficiency and collective purchasing capabilities of farmers, offering pre-financing for all supplied inputs and contributing to sustainable cash flow management throughout the farming season. (**Target 2.c Ensure Stable Food Commodity and Timely Access to Information**).

2 ZERO HUNGER

The main impact for smallholder farmers was an increase in both yields—up to 50% on average on the same piece of land—and the amount and stability of their income. Furthermore, Meta extended the ambit of direct contracting, to encompass agreements with input and service providers. This comprehensive approach mitigated the challenges faced by these providers in efficiently and cost-effectively meeting the diverse needs of geographically dispersed smallholder farmers.

The acquisition of Meta Abo Brewery Company by Diageo and its subsequent project with the ATA in Ethiopia exemplifies a business strategy aligned with SDG 2, fulfilling targets 2.1, 2.2, 2.3, 2.a, and 2.c. This initiative led to an **increase in market share** for Diageo and resulted in the **reduction of costs** through stable pricing, greater security of supply, and a stronger local economy, showcasing the potential of sustainable business practices to drive economic growth while addressing hunger and agricultural challenges.

Mars: Sustainable Rice Farming in Pakistan (Skylar Bee & Caroline Schaeer, 2015. p.46)



Mars, Incorporated is a global food and confectionery company known for brands like Mars, Snickers, and M&M's. Founded in 1911 by Frank C. Mars in Tacoma, Washington, it operates in various sectors, including pet care, chocolate, and food.

Mars initiated a comprehensive program in Punjab, Pakistan, targeting basmati rice farmers to enhance production practices, reduce water usage, and generate co-benefits for stakeholders (**Target 2.1 Universal Access to Food and Target 2.2. Ending All Forms of Malnutrition**). The critical issue of water scarcity posed

2 ZERO HUNGER

a threat to Mars' basmati rice supply, given the high-water intensity of rice production in regions like Punjab. Constraints on water availability in Punjab could adversely affect rice yield, quality, food safety, and farmer income. Mars Foods, specifically, relies on basmati rice from this water-scarce region for a key product line.

Various risks in Punjab, such as the inappropriate use of pesticides and fertilizers and low levels of rice seed purity, impact farmers' capacity to deliver high-quality rice. Consequently, the quality of Mars' products sourced from this region is also affected. Mars implemented a program in collaboration with Rice Partners Ltd (RPL) to enhance basmati rice farming practices in Punjab, Pakistan. This initiative aimed to reduce water usage, mitigate climate change risks, and ensure a stable supply of high-quality rice.

Sustainable Rice Farming in Pakistan Mars developed a large-scale program for basmati farmers in Punjab, Pakistan, to improve rice production practices and reduce water consumption while providing significant co-benefits for stakeholders. The expected results of Mars' sustainable rice farming project in Punjab are to achieve a 30 percent reduction in water use, effectively decreasing the sensitivity of rice production to droughts and other climatological factors. The program has grown from 31 farmers in 2011 to 425 farmers in 2015, resulting in a 20 percent improvement in the farmers' net income, cash benefits, and a guaranteed route to market for the rice (Target 2.3 Double the Agricultural Productivity and Incomes of Small-scale food Producers, and Target 2.c Ensure Stable Food Commodity and Timely Access to Information). This program is expected to lead to a 50 percent or greater reduction in greenhouse gases associated with original farming practices and a 30 percent increase in farmers' net income in the future (Target 2.4 Sustainable Food Production and Resilient Agricultural Practices).

2 ZERO HUNGER

The sustainable rice farming program of Mars Incorporated in Punjab, Pakistan, illustrates the commitment of the company to Sustainable Development Goal 2 (SDG 2) - Zero Hunger, fulfilling targets 2.1, 2.2, 2.3, 2.4, and 2.c. These actions not only fulfill societal needs but also lead to the **reduction of costs** through improved efficiency and resilience in rice production, showcasing the potential of sustainable business practices to drive economic growth while addressing hunger and agricultural challenges.

Healthcare Access

Good Health and Well-being

Disease Prevention

Mental Wellness

Universal Health Coverage

Sanitation Hygiene

3 GOOD HEALTH AND WELL-BEING

TARGETS: SUSTAINABLE DEVELOPMENT GOAL 3 - GOOD HEALTH AND WELL-BEING

| | | | | | | |
|--|--|--|--|---|---|--|
| <p>TARGET 3-1</p>  <p>REDUCE MATERNAL MORTALITY</p> | <p>TARGET 3-2</p>  <p>END ALL PREVENTABLE DEATHS UNDER 5 YEARS OF AGE</p> | <p>TARGET 3-3</p>  <p>FIGHT COMMUNICABLE DISEASES</p> | <p>TARGET 3-4</p>  <p>REDUCE MORTALITY FROM NON-COMMUNICABLE DISEASES AND PROMOTE MENTAL HEALTH</p> | <p>TARGET 3-5</p>  <p>PREVENT AND TREAT SUBSTANCE ABUSE</p> | <p>TARGET 3-6</p>  <p>REDUCE ROAD INJURIES AND DEATHS</p> | |
| <p>TARGET 3-7</p>  <p>UNIVERSAL ACCESS TO SEXUAL AND REPRODUCTIVE CARE, FAMILY PLANNING AND EDUCATION</p> | <p>TARGET 3-8</p>  <p>ACHIEVE UNIVERSAL HEALTH COVERAGE</p> | <p>TARGET 3-9</p>  <p>REDUCE ILLNESSES AND DEATH FROM HAZARDOUS CHEMICALS AND POLLUTION</p> | <p>TARGET 3-A</p>  <p>IMPLEMENT THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL</p> | <p>TARGET 3-B</p>  <p>SUPPORT RESEARCH, DEVELOPMENT AND UNIVERSAL ACCESS TO AFFORDABLE VACCINES AND MEDICINES</p> | <p>TARGET 3-C</p>  <p>INCREASE HEALTH FINANCING AND SUPPORT HEALTH WORKFORCE IN DEVELOPING COUNTRIES</p> | <p>TARGET 3-D</p>  <p>IMPROVE EARLY WARNING SYSTEMS FOR GLOBAL HEALTH RISKS</p> |

3 GOOD HEALTH AND WELL-BEING

SUSTAINABLE DEVELOPMENT GOAL 3- GOOD HEALTH AND WELL-BEING

SDG 3 focuses specifically on ensuring healthy lives and promoting well-being for all at all ages. The goal includes various targets related to maternal and child health, infectious diseases, non-communicable diseases, mental health, and access to essential healthcare services.

The overarching aim is to achieve universal health coverage, reduce maternal and child mortality, prevent and treat major diseases, and ultimately to improve well-being worldwide. Additional challenges include mental health disorders, malaria, HIV, and smoking-related issues, particularly affecting well-being in developing countries where 400 million people lack access to essential health services (United Nations Department of Economic and Social Affairs, 2023. p.16).

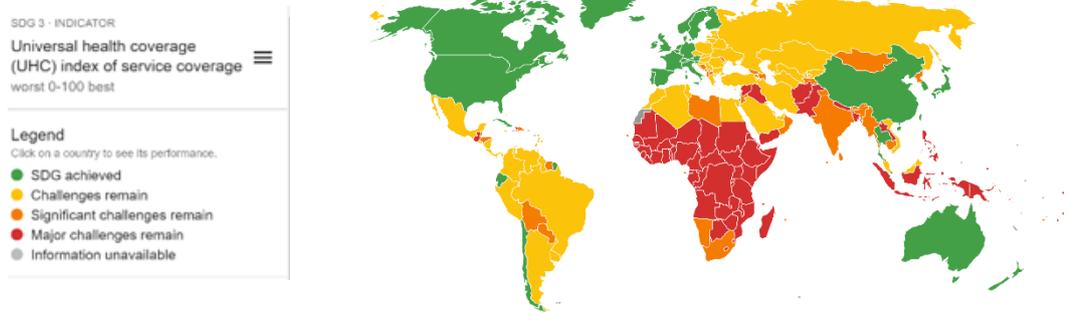


Fig. 3 Universal Health Coverage Currently (February 2024) Source: Sustainable Development Report, SDG Indicator

Universal health coverage progress has been slow since 2015, with minimal advancements in non-communicable diseases, health service capacity, and accessibility. Financial challenges persist, with over 10% of households spending on healthcare out-of-pocket, affecting around 1 billion people. Additionally, around 381 million individuals were pushed into extreme poverty due to

3 GOOD HEALTH AND WELL-BEING

healthcare expenses in 2019 (United Nations Department of Economic and Social Affairs, 2023. p. 19). The COVID-19 pandemic has worsened these issues, leading to decreased service coverage.

Urgent actions are needed to accelerate the expansion of essential services and alleviate financial burdens in the access to care for physical and mental health, crucial for ensuring global health and well-being for present and future generations.

THE BUSINESS CASE FOR THE SDG 3- GOOD HEALTH AND WELL-BEING

Business strategies aimed at achieving Sustainable Development Goal 3 (SDG 3) have the potential to facilitate developmental goals and improve business outcomes simultaneously.

Within their operational purview, businesses can **implement adequate health and safety standards** in workplaces. The International Labour Organization reveals that over 2.3 million fatalities are annually attributed to occupational accidents or work-related diseases, alongside 317 million on-the-job accidents, that lead to increases in costs.

In addition, companies can **implement initiatives for the well-being of the mental and physical health of workers, which has proven to be a business case**. An American study indicates an average annual expenditure exceeding \$15,000 per employee grappling with mental health challenges. These employees exhibit an escalated utilization of healthcare services. Moreover, absenteeism, manifested often by mental health challenges in the workplace, is associated with a substantial cost averaging \$4,783 per employee annually, while **turnover costs amount to an average of \$5,733 per employee per year** (*Mental Health Employer Cost Calculator - National Safety Council, n.d.*). Furthermore, a

3 GOOD HEALTH AND WELL-BEING

European analysis demonstrated that **investment in occupational safety and health yields favorable returns**. Both the profitability index and the benefit-cost ratio underscore the advantageous outcomes derived from these endeavors (European Commission, 2011. p. 52).

Moreover, businesses can **develop** premium healthcare products or services that offer enhanced features such as **personalized medicine, advanced diagnostics, or cutting-edge treatments** and **offer value-added services** such as **telemedicine consultations, remote monitoring, or concierge healthcare services**, allowing them to command higher prices from consumers seeking superior healthcare options (European Commission, 2011. p. 52).

Finally, businesses can benefit by **accessing unserved markets or regions associated with rising healthcare costs or targeting new demographics that are marginalized** (United Nations Global Compact, 2017. p. 27). The annual expenditure on healthcare currently stands at \$7 trillion and is on a trajectory of continual increase alongside population expansion (Keehan et al., 2023).

PRACTICAL EXAMPLES OF THE SDG 3- GOOD HEALTH AND WELL-BEING BUSINESS CASE

MicroEnsure: Expanding its frontiers to low-income geographies (USAID, 2016)



MicroEnsure is a global insurance provider specializing in microinsurance products for low-income individuals and families in developing countries. Insurer MicroEnsure has strategically implemented an innovative approach inspired by the popular game Angry Birds to extend affordable insurance

3 GOOD HEALTH AND WELL-BEING

coverage to previously inaccessible demographics. Recognizing the potential within low-income groups in Asia and Africa, the company identified an opportunity to offer health, life, and disability insurance to this segment, constituting a substantial \$40 billion market for insurance companies (International Finance Corporation (IFC), 2016). However, due to their exposure to significant risks and limited financial capacity to afford substantial premiums, these groups often find themselves marginalized in the insurance landscape. Notably, in Africa, less than three percent of the population currently possesses health insurance (USAID, 2016).

MicroEnsure has addressed this gap by collaborating with local telecommunications companies and major insurance providers to devise a model akin to the mechanics of the game Angry Birds: free but with paid-for add-ons. This model operates on a complimentary basic insurance platform coupled with purchasable supplementary features. The provision of free basic insurance is contingent upon the enhancement of consumer loyalty to local telecommunications companies. Subsequently, consumers are afforded the option to procure more comprehensive coverage once they comprehend the intrinsic value of insurance (Target 3.8 Achieve Universal Health Coverage and Target 3. C Increase Health Financing and Workforce in Developing Countries).

In essence, MicroEnsure has created a new business model, AngryBirds, while increasing its market reach by devising innovative strategies to render affordable insurance accessible to demographics previously beyond reach, demonstrating how innovative strategies can drive economic growth while promoting health and well-being for underserved populations.

Levi's: Program Worker Well-Being (Her Project, 2020)



3 GOOD HEALTH AND WELL-BEING

Levi Strauss & Co., commonly known as Levi's, is a global apparel company renowned for its denim jeans. Founded in 1853 in San Francisco, California, it is one of the largest and most recognizable clothing brands in the world. Since 2011, LS&Co. has made improving worker well-being a strategic priority in its engagement with its suppliers, who collectively employ over half a million workers, and established a requirement that its key vendors integrate worker well-being (WWB) programs focused on financial empowerment, health and family well-being, and equality and acceptance, into their manufacturing operations.

Within the *Well-Being program*, a notable enhancement in **worker engagement** was observed in **75% of the participating factories**. In addition to benefiting workers in areas such as health and financial literacy, this **program generates a 4 to 1 return** on investment for vendors through reduced worker turnover, absenteeism, and tardiness. Additionally, improvements in **employee satisfaction were recorded in 50% of the establishments** (International Finance Corporation, 2023. p. 1), underscoring the multifaceted positive impact of the WWB program on both employees and organizational outcomes (Meiers, 2012).

The commitment of Levi Strauss & Co. to improving worker well-being exemplifies its contribution to SDG 3 - Good Health and Well-being, and particularly its **Target 3.4 Promote Mental Health**. By prioritizing worker well-being within its supply chain since 2011, Levi's impacts these targets by fostering a workforce characterized by enhanced physical and mental health, increased job satisfaction, and improved work-life balance. This leads to tangible economic benefits, mainly **cost reduction** attributed to reduced workplace injuries, health-related absences, and higher productivity, showcasing how investments in worker well-being can lead to reduced costs while promoting health and well-being.

Access to Education



Quality Education

○ Lifelong Learning

○ Literacy Rates

○ Educational Equality

○ Skills Development

4 QUALITY EDUCATION

TARGETS: SUSTAINABLE DEVELOPMENT GOAL 4 – QUALITY EDUCATION

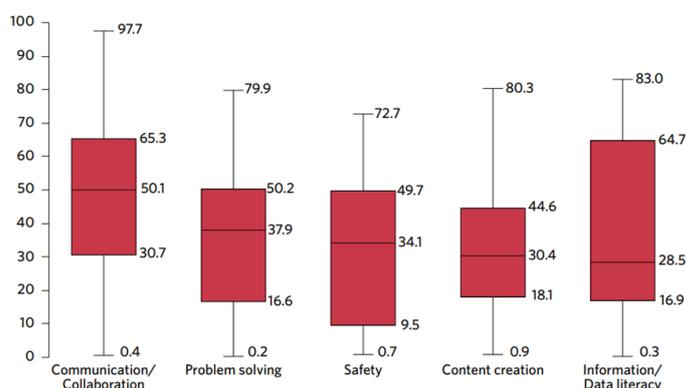
| | | | | |
|--|--|---|---|---|
| <p>TARGET 4-1</p>  <p>FREE PRIMARY AND SECONDARY EDUCATION</p> | <p>TARGET 4-2</p>  <p>EQUAL ACCESS TO QUALITY PRE-PRIMARY EDUCATION</p> | <p>TARGET 4-3</p>  <p>EQUAL ACCESS TO AFFORDABLE TECHNICAL, VOCATIONAL AND HIGHER EDUCATION</p> | <p>TARGET 4-4</p>  <p>INCREASE THE NUMBER OF PEOPLE WITH RELEVANT SKILLS FOR FINANCIAL SUCCESS</p> | <p>TARGET 4-5</p>  <p>ELIMINATE ALL DISCRIMINATION IN EDUCATION</p> |
| <p>TARGET 4-6</p>  <p>UNIVERSAL LITERACY AND NUMERACY</p> | <p>TARGET 4-7</p>  <p>EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP</p> | <p>TARGET 4-A</p>  <p>BUILD AND UPGRADE INCLUSIVE AND SAFE SCHOOLS</p> | <p>TARGET 4-B</p>  <p>EXPAND HIGHER EDUCATION SCHOLARSHIPS FOR DEVELOPING COUNTRIES</p> | <p>TARGET 4-C</p>  <p>INCREASE THE SUPPLY OF QUALIFIED TEACHERS IN DEVELOPING COUNTRIES</p> |

4 QUALITY EDUCATION

Sustainable Development Goal 4 – QUALITY EDUCATION

SDG 4 seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Attaining inclusive, equitable, and high-quality education demands significant endeavors. COVID-19 has had severe repercussions on the educational landscape, resulting in learning setbacks in the majority of countries. Without supplementary interventions, merely one in six nations is anticipated to attain the universal secondary school completion target by 2030. An estimated 84 million children and young individuals will remain deprived of educational access, and approximately 300 million students will lack fundamental numeracy and literacy skills (United Nations Department of Economic and Social Affairs, 2023. p. 20). Insufficient ICT skills pose a significant hurdle to achieving universal connectivity. Communication/collaboration skills are most prevalent, followed by problem-solving, safety, and content creation. Information/data literacy varies widely between countries. Among the 74 nations that provided data on at least three skill areas, only five reported averages exceeding 75% in three skill areas (United Nations Department of Economic and Social Affairs, 2023. p. 21).

Proportion of youth and adults with ICT skills, by type of skill, 2019-2021



Note: The bars indicate the 25th, median and 75th percentile of all country values. The bottom and top lines indicate the minimum and maximum values (excluding outliers).

Fig 4. Proportion of Youth and Adults with UCT Skills Source: The Sustainable Development Goals Report Special edition, 2023, p. 21.

4 QUALITY EDUCATION

The realization of Goal 4 requires a transformation of education financing into a foremost investment priority. Furthermore, imperative measures encompass making education universally free and compulsory, enhancing school infrastructures, embracing digital transformation, and upskilling adults for the job market.

The Business Case for the SDG 4- Quality Education

Business strategies, crafted in alignment with the objectives of Sustainable Development Goal 4, exhibit the potential to foster developmental goals and enhance business outcomes simultaneously.

Companies can also **facilitate and implement measures that foster access to vocational training and lifelong learning for employees**. As per findings outlined in the LinkedIn 2023 Workplace Learning Report, among the top five considerations influencing the job-seeking endeavors of employees, the prospect of **acquiring and developing new skills emerges as a prominent factor** (LinkedIn Learning, 2024). Statistics confirm that learning and development programs exert a favorable influence on employee retention. Allocating resources towards such initiatives can prove to be a successful strategy for enhancing staff retention rates. By affording employees opportunities to advance their skills and careers, organizations can foster greater satisfaction, engagement, and loyalty among their workforces. Consequently, the **investment in professional growth contributes to heightened retention levels and a more efficient staff cohort** (Mishra, 2023). Moreover, businesses can contribute to SDG 4 by implementing programs that provide access to

4 QUALITY EDUCATION

higher education and free equitable and inclusive primary and secondary education for the children in their workforce.

In addition, businesses can **develop premium educational products or services** such as **personalized tutoring, specialized certifications, or executive education programs** that offer superior quality and value and partner with reputable educational institutions or industry experts to co-create educational content or curricula that align with industry needs and standards. These measures intertwine with the objectives of SDG 8.

Lastly, innovation in **research, development, and deployment of products and services with educational outcomes** can enhance the educational development of customers while reaching new markets (United Nations Global Compact & wbcasd, 2016. p. 1).

Practical Examples of the SDG 4 – Quality Education Business Case

Gap: Empowering the Workforce of Tomorrow (Gap Inc., n.d.)



Founded in 1969 in California, Gap Inc. is a global retail company known for its clothing and accessories brands, including Gap, Old Navy, Banana Republic, and Athleta. The job training and internship program from Gap Inc., *This Way Ahead*, provides low-income teens and young adults with the skills, training, and experience to succeed at work. Since launching the program in 2007, more than 2,000 teens and young adults have received job training through *This Way Ahead*. The program is run in close partnership with youth-serving community partners in over 50 cities across the US, Canada, the UK, and Japan. Participants

4 QUALITY EDUCATION

are recruited through non-profit partners and attend workshops led by store volunteers on topics such as decision-making, goal-setting, presentations, and conflict resolution.

Graduates of the program can then apply for paid internships in Gap Inc. stores, where they can apply their skills right away. **Gap Inc. stores have hired many of the interns who have completed the program, and this group has stayed on the job twice as long as their peers and scored 10 percent higher on employee engagement surveys.** One hundred percent of *This Way Ahead* graduates have reported gains in maturity, conflict resolution, and leadership. At the same time, volunteers who have mentored participants have enhanced their own skills and become more motivated to advance their own careers.

The Way Ahead program from Gap Inc. is a clear contribution to SDG 4 - Quality Education, particularly targets 4.3 and 4.4. Graduates of the program demonstrate increased maturity, conflict resolution abilities, and leadership skills, fulfilling **target 4.3 Equal Access to Affordable Technical and Vocational Education.** Furthermore, interns hired from the program gained valuable working and social skills addressing the target **4.4 Increase in the Number of People with relevant skills for Financial Success** and exhibited higher levels of employee engagement and retention. These actions not only enhance the employability and personal growth of program participants but also lead to **reduced costs** for Gap Inc. through improved talent retention and employee satisfaction (and productivity), showcasing the positive impact of investing in education and skill-building initiatives.

4 QUALITY EDUCATION

Bechtel: Comprehensive and Meaningful Apprenticeship Initiatives (Tam Nguyen, 2017)



Bechtel Corporation is a global engineering, construction, and project management company. Founded in 1898 in California, Bechtel secured mega-scale Engineering, Procurement, and Construction contracts for the three liquefied natural gas projects in Australia.

In these projects, Bechtel applied a proactive approach to human capital development manifested through training programs, featuring a distinctive apprenticeship initiative. This program, spanning five distinct trades (electrical fitter mechanics, instrumentation and control, boiler making, sheet metal, mechanical fitting, and carpentry formwork), played a pivotal role in cultivating a skilled workforce. Training facilities on each project conferred heightened flexibility in integrating on-the-job experiential learning with classroom-based instruction. Individual mentors and full-time site-based trainers enabled apprentices to fulfill their modules, attain trade certificates, and commence professional trajectories on these projects and beyond. **(Target 4.3 Equal Access to Affordable Technical, Vocational and Higher Education)** A notable commitment within this scope was the pledge to furnish 400 apprenticeship opportunities across the Projects. **Noteworthy outcomes of this initiative include the employment of 436 apprentices during the construction phase, and 107 existing employees seeking to upskill into a trade.** The apprentice completion rate of 94% significantly outpaces the national average, attributable to the efficacy of site training teams, and personalized training regimens. **(Target 4.4 Increase the Number of People With Relevant Skills for Financial Success).**

4 QUALITY EDUCATION

By implementing comprehensive training programs and apprenticeship initiatives Bechtel demonstrates its contribution to SDG 4 - Quality Education, specifically targets 4.3 and 4.4. These initiatives promote inclusive and equitable quality education while leading to cost reduction through talent retention and increased productivity, as skilled workers are retained for the duration of the projects and beyond, contributing to the long-term success and sustainability of the operations of Bechtel.

Women's Rights

Gender Equality

5 GENDER EQUALITY



○ Gender Parity

Equal Opportunities

Empowerment

Ending Discrimination

5 GENDER EQUALITY

TARGETS: SUSTAINABLE DEVELOPMENT GOAL 5 – GENDER EQUALITY

| | | |
|---|---|--|
| <p>TARGET 5-1</p>  <p>END DISCRIMINATION AGAINST WOMEN AND GIRLS</p> | <p>TARGET 5-2</p>  <p>END ALL VIOLENCE AGAINST AND EXPLOITATION OF WOMEN AND GIRLS</p> | <p>TARGET 5-3</p>  <p>ELIMINATE FORCED MARRIAGES AND GENITAL MUTILATION</p> |
| <p>TARGET 5-4</p>  <p>VALUE UNPAID CARE AND PROMOTE SHARED DOMESTIC RESPONSIBILITIES</p> | <p>TARGET 5-5</p>  <p>ENSURE FULL PARTICIPATION IN LEADERSHIP AND DECISION-MAKING</p> | <p>TARGET 5-6</p>  <p>UNIVERSAL ACCESS TO REPRODUCTIVE HEALTH AND RIGHTS</p> |
| <p>TARGET 5-A</p>  <p>EQUAL RIGHTS TO ECONOMIC RESOURCES, PROPERTY OWNERSHIP AND FINANCIAL SERVICES</p> | <p>TARGET 5-B</p>  <p>PROMOTE EMPOWERMENT OF WOMEN THROUGH TECHNOLOGY</p> | <p>TARGET 5-C</p>  <p>ADOPT AND STRENGTHEN POLICIES AND ENFORCEABLE LEGISLATION FOR GENDER EQUALITY</p> |

5 GENDER EQUALITY

Sustainable Development Goal 5 – Gender Equality

The pursuit of Goal 5, pertaining to Gender Equality and the empowerment of women

and girls, holds a prominent position on the 2030 Agenda. Challenges include a significant proportion of countries globally having legal deficiencies regarding gender equality: 55% lack laws prohibiting discrimination against women, 60% lack laws defining rape based on consent, 45% do not mandate equal pay for equal work, and over a third fail to meet International Labour Organization standards for maternity leave. Additionally, nearly a quarter of nations do not grant equal marital and divorce rights (United Nations Department of Economic and Social Affairs, 2023. p. 23).

Women, Business and the Law Index, 2022

The index measures how laws and regulations affect women's economic opportunity on a scale from 0 to 100, where 100 means equal legal rights for men and women. It is the average score of eight categories: mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets and pension.

Our World
in Data

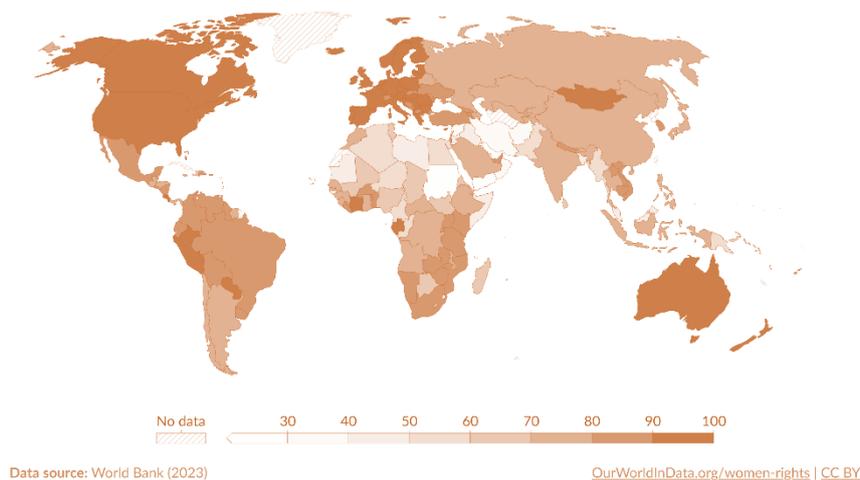


Fig 5. Women, Business and the Law Index Source: World Bank, 2023.

5 GENDER EQUALITY

Comprehensive research under the Women, Business, and the Law Index underscores the global impact of legal barriers on employment and learning opportunities for over 2.7 billion women (World Bank Group, 2018). Despite advancements, recent studies highlight that female labor force participation rates persistently lag behind those of men, with no advanced or middle-income economy successfully narrowing the gender gap below 7 percentage points (J. D. Ostry et al., 2018).

The Business Case for the SDG 5 – Gender Equality Business Case

The private sector assumes a pivotal role in advancing gender equality, simultaneously, businesses advancing SDG 5 strategically have a number of business opportunities.

Enterprises ought to enact policies and **adopt practices that uphold the principles of gender equity**, thereby precluding any form of discrimination based on gender **within the realms of the workplace, marketplace, and broader community**. This includes actively supporting **the employment of women** and endeavoring to achieve gender balance throughout their operations, including within their supply chain and across all hierarchical levels of the organization. By doing so, businesses stand to unlock substantial economic potential (United Nations Global Compact, 2017. p. 46). Empirical research underscores the positive correlation between gender diversity and business performance. A 2015 report released by the McKinsey Global Institute delineated that **achieving gender parity in labor markets would yield**

5 GENDER EQUALITY

substantial economic dividends, amounting to an increase of US\$28 trillion in global economic output by the year 2025 (McKinsey & Company, 2015). Notably, enterprises fostering greater gender equality exhibit traits of enhanced innovation, generosity, and profitability (Hewlett et al., 2013). Companies can also offer flexible work arrangements such as remote work, part-time options, or parental leave policies to accommodate caregivers' needs, reducing absenteeism, turnover, and productivity losses associated with work-life conflicts.

Businesses can also develop products or services tailored to the needs and preferences of women and girls, and that empower them, addressing their needs and aspirations while promoting gender equality and enhancing their quality of life. Simultaneously, enterprises can do this by expanding distribution channels to reach underserved or overlooked markets where women play a significant role as consumers or decision-makers, such as emerging economies or niche industries.

Lastly, businesses can create new business models, such as exploring opportunities in the "femtech" sector by developing innovative healthcare technologies, and digital platforms that address the health needs of women or investing in gender-focused impact funds that prioritize investments in companies with strong gender equality policies, while also creating new revenue streams.

5 GENDER EQUALITY

Practical Examples of the SDG 5- Gender Equality Business Case

Nalt Enterprise: Empowering Women with a Kindergarten (International Finance Corporation, 2013. p. 86)



Nalt Enterprise is an export garment factory located in Binh Duong, Vietnam. Established in 2003, the company manufactures garments for a range of international brands, including Ann Taylor, Gap, Target, and Columbia. In 2012, Nalt Enterprise employed 650 workers, of whom 85 percent were women. The flourishing garment sector of Vietnam is a key contributor to export earnings (Niethammer, 2013). However, the global financial crisis impacted Nalt, leading to reduced orders, squeezed profit margins, and elevated staff turnover. In this context, Nalt identified a strategic advantage and offered benefits that exceeded statutory requirements (**Target 5.c Adopt and Strengthened Policies and Enforceable Legislation for Gender Equality**), making it an employer of choice, particularly for women workers.

Recognizing the crucial role women play in childcare responsibilities in the country, Nalt built a kindergarten adjacent to the factory in 2008, providing free childcare services for children of workers aged 2 to 5 years (**Target 5.4 Value Unpaid Care and Promote Share Domestic Responsibilities**). Staffed by qualified teachers, the kindergarten follows the state curriculum, offering nutritious meals, clothing, and educational materials. This initiative eases the burden on working mothers and contributes to SDG 5 **Target 5.1 End Discrimination Against Women and Girls, and Target 5.5 Ensure Full Participation in Leadership and Decision-Making**. Moreover, Nalt extended its

5 GENDER EQUALITY

commitment beyond early childhood by sponsoring the annual school fees of children up to university, thus facilitating educational opportunities and aligning with SDG 5's objective of promoting equal access to education.

By acknowledging that workers are integral to its business model and by providing favorable working conditions, Nalt successfully addressed the increasingly competitive landscape in the garment sector, where **employee retention became a critical factor**. The provision of the kindergarten is notably advantageous for migrant workers residing far from their homes, lacking access to extended family support for childcare during working hours, and facing challenges in securing spots for their children in public kindergartens due to the complexities associated with local residence permits (United Nations Development Programme, 2011. p. 82-83.).

Since the initiation of the kindergarten, the company has experienced a significant 33% reduction in average monthly employee turnover rates. Furthermore, the introduction of these services has facilitated greater acceptance of overtime among workers, as the assurance of the well-being of their children during extended working hours contributes to increased flexibility. The strategic focus on women workers with families, coupled with attractive benefits, has resulted in reduced absenteeism for child-related issues, as children can conveniently access the factory health clinic too. Overall, women workers express that the proximity and well-being of their children instill peace of mind during their working hours.

The proactive approach of Nalt in addressing women's societal barriers aligns with the principles of SDG 5, fulfilling targets 5.1, 5.4, 5.5 and 5.c., and **simultaneously leads to cost reduction through talent retention**, increases productivity, and reduces employee turnover, enhancing both social and economic value.

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Mastercard: Empowering Women in Agriculture (2KUZE | Department of Economic and Social Affairs, n.d.)



Mastercard is a global financial technology company that facilitates electronic fund transfers and transactions between merchants, banks, and cardholders worldwide. Developed by the MasterCard Labs for Financial Inclusion in Nairobi, 2KUZE serves as a digital platform fostering connectivity among smallholder farmers, agents, buyers, and banks within East Africa.

This innovative platform facilitates essential agricultural transactions for farmers by enabling them to seamlessly buy, sell, and receive payments for their produce, all through the use of feature phones. By harnessing the capabilities of mobile commerce and electronic payments, 2KUZE brings forth a range of benefits and enhanced security to participants within the agriculture supply chain. **The strategic significance of 2KUZE extends to its explicit support for women farmers, recognizing the unique challenges they face. Women farmers, often constrained by household duties that limit their ability to physically engage beyond the farm gate, encounter vulnerabilities in negotiating deals with middlemen. The digitization of the agriculture supply chain through 2KUZE serves as a transformative intervention, empowering women farmers with greater agency in their transactions and reducing their susceptibility to suboptimal deals imposed by intermediaries.**

The 2KUZE platform exemplifies the commitment of Mastercard to SDG 5 - Gender Equality, fulfilling targets 5.1, 5.5, 5.a, and 5.b. By creating a digital platform specifically tailored for smallholder farmers in East Africa, Mastercard addresses gender disparities in agricultural transactions and empowers women

5 GENDER EQUALITY

farmers (**Target 5.1 End Discrimination Against Women and Girls**). Through 2KUZE, women farmers gain greater agency in their transactions, reducing vulnerabilities and enabling them to negotiate fair deals independently, thereby promoting gender equality in economic decision-making (**Target 5.5 Ensure Participation in Leadership and Decision-Making**). The platform also fosters financial inclusion by connecting farmers with banks and buyers, enhancing their access to financial services and markets (**target 5.a Equal Rights to Economic Resources and Financial Services**). Additionally, by leveraging mobile commerce and electronic payments, Mastercard promotes safe and secure transactions, contributing to the overall well-being and economic empowerment of women in agriculture (**target 5.b Promote Empowerment of Women Through Technology**). These initiatives have increased the market share of Mastercard in the financial technology sector and led to the development of a new business model promoting financial inclusion and gender equality in agricultural economies.

Water Conservation

Clean Water and Sanitation

6 CLEAN WATER AND SANITATION



Sanitation Infrastructure

Safe Drinking Water

Hygiene Promotion

Water Quality

6 CLEAN WATER AND SANITATION

TARGETS: SDG 6 – ACCESS TO WATER AND SANITATION

| | | | |
|---|---|--|---|
| <p>TARGET 6-1</p>  <p>SAFE AND AFFORDABLE DRINKING WATER</p> | <p>TARGET 6-2</p>  <p>END OPEN DEFECTION AND PROVIDE ACCESS TO SANITATION AND HYGIENE</p> | <p>TARGET 6-3</p>  <p>IMPROVE WATER QUALITY, WASTEWATER TREATMENT AND SAFE REUSE</p> | <p>TARGET 6-4</p>  <p>INCREASE WATER-USE EFFICIENCY AND ENSURE FRESHWATER SUPPLIES</p> |
| <p>TARGET 6-5</p>  <p>IMPLEMENT INTEGRATED WATER RESOURCES MANAGEMENT</p> | <p>TARGET 6-6</p>  <p>PROTECT AND RESTORE WATER-RELATED ECOSYSTEMS</p> | <p>TARGET 6-A</p>  <p>EXPAND WATER AND SANITATION SUPPORT TO DEVELOPING COUNTRIES</p> | <p>TARGET 6-B</p>  <p>SUPPORT LOCAL ENGAGEMENT IN WATER AND SANITATION MANAGEMENT</p> |

6 CLEAN WATER AND SANITATION

Sustainable Development Goal 6 – Access to Water and Sanitation

SDG 6- Clean aims to achieve universal access to Clean Water and Sanitation by 2030. The goal comprises eight targets such as drinking water, water quality, sanitation and hygiene, water use efficiency, water management, and ecosystems. Compelling statistical data underscores the criticality of addressing and contributing to the SDG 6 objectives. Notably, 844 million individuals lack access to basic drinking water, and 2.3 billion people are deprived of basic sanitation (World Health Organization & United Nations Children’s Fund (UNICEF), 2017. p. 201). In addition, adaptation and resilience to climate change are underpinned by effective water management. Water use, storage, and distribution are responsible for 10% of global greenhouse gas emissions (*Global Water Industry Net Zero Commitments Top 72 Million People Served* | Water UK, n.d.).

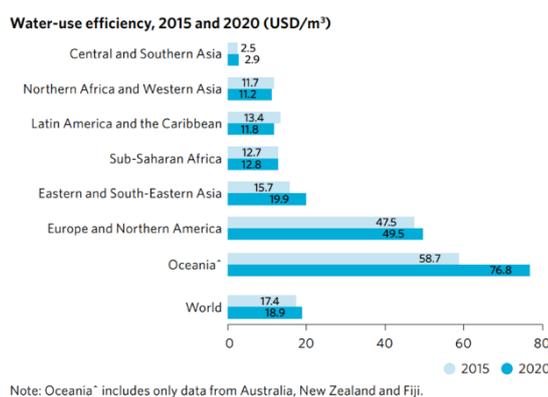


Fig 6. Water-use Efficiency **Source:** The Sustainable Development Goals Report Special edition, 2023. p. 25

6 CLEAN WATER AND SANITATION

Globally, water stress levels stood at 18.2% in 2020, though with significant regional disparities. Approximately 2.4 billion people lived in water-stressed countries in 2020, with nearly 800 million residing in highly or critically stressed areas. Nevertheless, water-use efficiency improved by 9% globally, from \$17.4/m³ in 2015 to \$18.9/m³ in 2020, and agricultural efficiency increased the most (20%) since 2015, compared to the industrial (13%) and service (0.3%) sectors (United Nations Department of Economic and Social Affairs, 2023. p. 25).

Enhancing water-use efficiency requires improved irrigation, better agricultural management, leakage mitigation, and optimization of industrial processes.

The Business Case for the SDG 6- Access to Water and Sanitation

Business strategies designed to align with the objectives outlined in Sustainable Development Goal 6 (SDG 6) demonstrate the potential to concurrently facilitate developmental objectives while enhancing business outcomes.

Enterprises can undertake the **development and execution of comprehensive water strategies that embrace a holistic approach and prioritize the protection and restoration of water-based ecosystems** surrounding their **operations** and throughout their **supply chain**. Enterprises can also ensure access to clean water and sanitation by **addressing the impacts of their company and supply chain operations on local water supplies**. In addition, businesses can **implement water conservation measures** such as greywater recycling, and drip irrigation systems to reduce water consumption in manufacturing processes, agricultural operations, and office buildings, and invest in **water-efficient technologies** and equipment, knowing that an **investment of one dollar in water and sanitation yields an**

6 CLEAN WATER AND SANITATION

economic return of 4.30 dollars through augmented productivity (Guy Hutton, 2012).

Companies can also **develop premium water-related products or services** such as purified drinking water, water filtration systems, or water-saving devices that offer enhanced quality, reliability, and sustainability, or offer value-added services such as water quality testing, water treatment consulting or water management solutions. In 2020, **171 water-related opportunities disclosed were linked to new products, services, or markets**. These opportunities were valued at **674 billion dollars** (CDP Water Security, 2020). Neglecting an appreciation of the multifaceted risks—physical, regulatory, reputational, and financial—entailed in inadequate water management may result in considerable expenditures, underscoring the imperative of proactive risk mitigation. Moreover, **the financial investment required for preemptive measures is typically markedly lower than the potential fiscal consequences of unaddressed risks**. In the year 2020, enterprises reported that their expected financial benefit from water risks was around 285 billion dollars, which is five times higher than addressing these risks, at 52 billion dollars (UN Global Compact et al., 2021).

6 CLEAN WATER AND SANITATION

Practical Examples of the SDG 6- Access to Water and Sanitation Business Case

Procter and Gamble: Revolutionizing Clean Water Access for Underserved Communities (P&G Purifier of Water Packets - a Simple Way to Clean Water, n.d.)



Procter and Gamble (P&G) is an American multinational consumer goods corporation headquartered in Cincinnati, Ohio, with 65 brands serving more than 5 billion consumers all over the world.

P&G has created a new business model through the development and introduction of a novel product in collaboration with partners, that strategically addresses SDG 6, and specifically targets 6.1, 6.3, 6.4. As part of the Program *ChildrenSafe Drinking Water*, the company endeavors to provide assistance to individuals lacking access to potable water on a daily basis (**target 6.1 - Achieve universal and equitable access to safe and affordable drinking water for all**).

Laundry scientists of P&G, initially focused on devising methodologies for the purification of soiled laundry water, innovated a technology capable of converting 10 litres of contaminated water into potable water, thereby introducing the "P&G Purifier Of Water" product line (**Target 6.3 Improve Wastewater Treatment and Safe Reuse and Target 6.4 Increase Water-Use Efficiency**).

The "P&G Purifier Of Water" comprises a 4g sachet containing powdered ferric sulfate and calcium hypochlorite, strategically formulated to eradicate diseases instigated by microorganisms (World Health Organization, 2015). This formulation exhibits remarkable efficacy in the elimination of a wide spectrum of common waterborne pathogens, including those responsible for cholera and hepatitis A, alongside protozoa, thereby substantially reducing the incidence of diarrheal

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diseases in underserved regions by up to 90%. Additionally, the product excels in its capacity to eliminate particulate matter and other pollutants, rendering the water potable and safe for consumption by individuals across all age groups, including infants.

The technology was classified by the World Health Organization as providing comprehensive protection. Since 2004, several global emergency relief organizations have provided clean drinking water using P&G product.

Coca-Cola Water Stewardship: Promoting Efficiency, Sustainability, and Community Engagement (Skylar Bee & Caroline Schaer, 2015. p. 37)



Coca-Cola is the largest beverage company in the world, including 500 brands and over 3,600 products, and generating more than USD \$1 billion in annual retail sales. Reducing costs and ensuring the economic sustainability of projects system-wide water efficiency of Coca-Cola has improved for 12 straight years – from 2004 to 2012 - and water efficiency increased by 21.4% (Target 6.3 Improve Wastewater Treatment and Safe Reuse and Target 6.4 Increase Water-Use Efficiency), avoiding approximately USD \$600 million in costs. Achieving the goal established in 2007 of replenishing 100 % of extracted water by 2020, avoiding a further \$1.2 billion in costs.

The company's water stewardship strategy also creates important incentives for plant managers. The first incentive is to improve water use efficiency and to reduce the amount of water used in the plant that is not physically part of the manufactured products so that the “sustainable balance target” is lessened. Second, quantifying the benefits of community water partnerships in volume incentivizes project

6 CLEAN WATER AND SANITATION

partners to ensure these water stewardship projects remain in service. This also ensures the partners can continue to count the annual project benefits as a balance to consumptive use, which further incentivizes local investment and capacity building. The water stewardship activities of Coca-Cola have enabled the company to better understand that water is not only critical to operations but also to the communities where they operate and distribute products (Target 6.5 Implement Integrated Water Resources Management, Target 6.6 Protect and Restore Water-Related Ecosystems, and Target 6.b Support Local Engagement in Water Management). Without enough clean water, production, markets, and the overall business of the company is affected.

The approach of Coca-Cola exemplifies how a company can conduct business through SDG 6 - Clean Water and Sanitation, fulfilling targets 6.3, 6.4, 6.5, 6.6, and 6.b. These actions have reinforced responsible water management and have led to the reduction of costs for Coca-Cola, promoting long-term environmental and economic sustainability.

Renewable Energy

Affordable and Clean Energy

Energy Efficiency

Access to Electricity

Sustainable Power

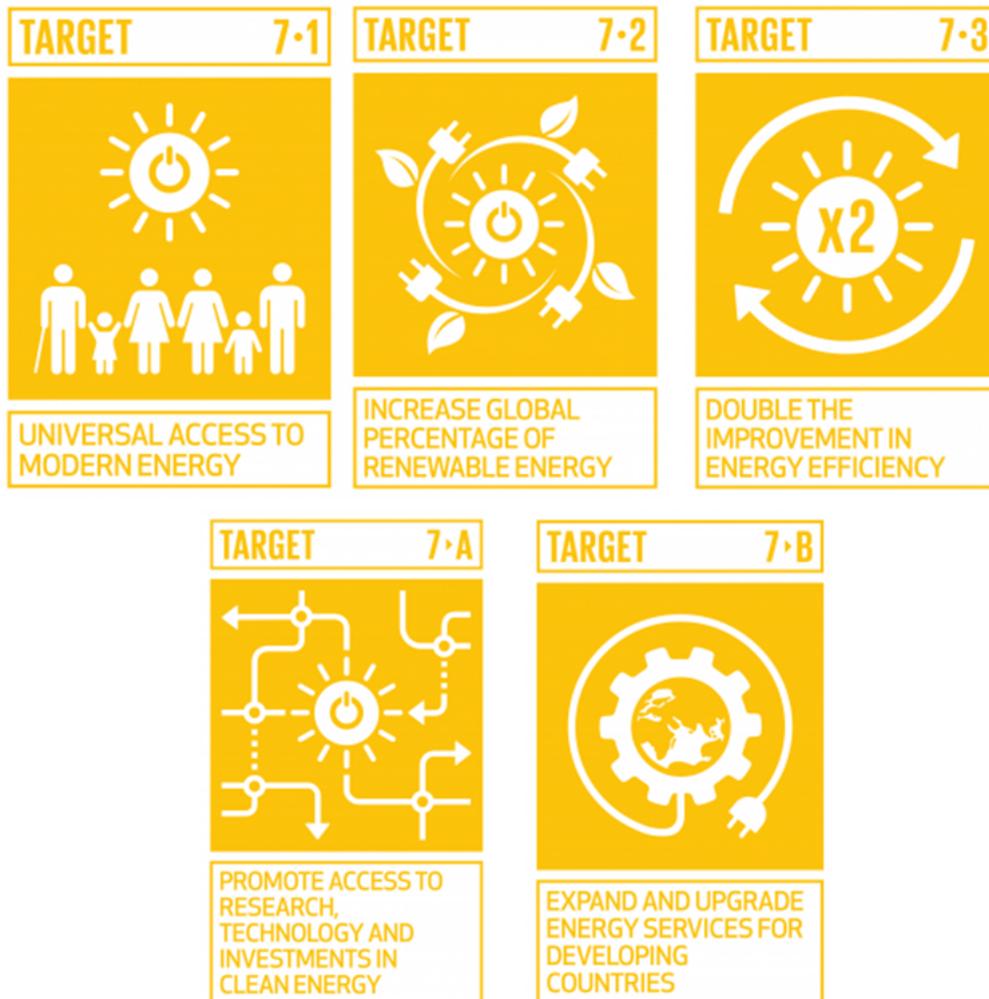
Clean Cooking

7 AFFORDABLE AND
CLEAN ENERGY



7 AFFORDABLE AND CLEAN ENERGY

TARGETS: SDG 7- AFFORDABLE AND CLEAN ENERGY



7 AFFORDABLE AND CLEAN ENERGY

SUSTAINABLE DEVELOPMENT GOAL 7 - AFFORDABLE AND CLEAN ENERGY

SDG 7 promotes Affordable and Clean Energy. More than 40% of the worldwide population currently lacks access to clean fuels and advanced cooking technologies. Moreover, approximately 15% of the global population, primarily residing in rural areas, lacks access to electricity, amounting to over 1 billion individuals. Simultaneously, energy stands as the predominant contributor to climate change, constituting approximately 60% of the aggregate global greenhouse gas emissions. (United Nations Global Compact, 2017. p, 65).

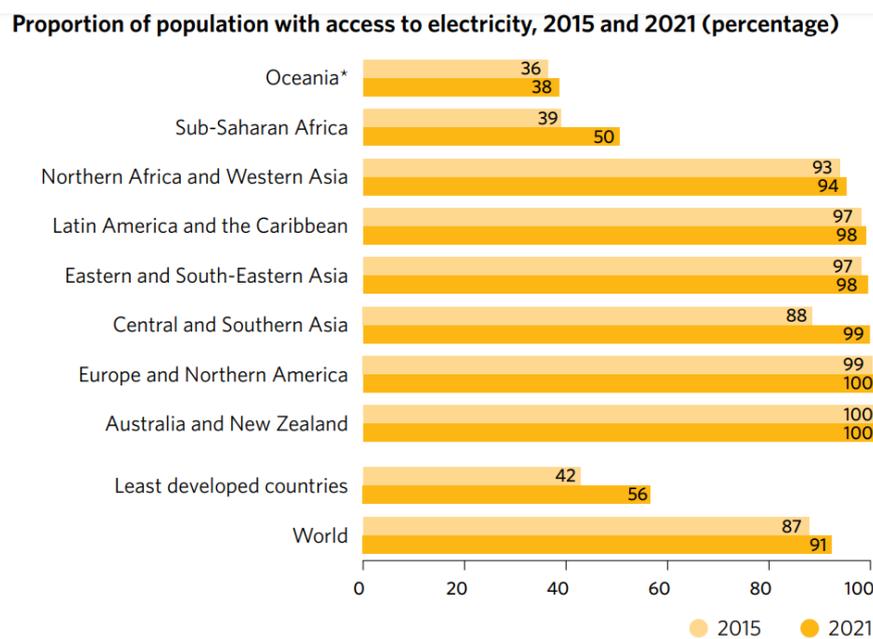


Fig. 7 Proportion of Population with Access to Electricity **Source:** The Sustainable Development Goals Report Special edition, 2023., p. 26.

In fact, renewable energy alternatives are experiencing a paradigm shift towards enhanced affordability, reliability, and efficiency. However, despite recent strides, the share of renewable energy in final energy consumption remains

7 AFFORDABLE AND CLEAN ENERGY

stagnant at around 18%, with a significant portion derived from hydroelectric power, notwithstanding advancements in solar and wind power (Credit Suisse, 2020. p, 1.). Moreover, the imperative for mitigating climate change demands the adoption and implementation of progressive renewable energy solutions. There is a critical need for the seamless integration of renewable energy into various end-use applications within all domains, mainly the most energy-intensive ones, like buildings, transportation, and industrial sectors.

THE BUSINESS CASE FOR THE SDG 7- AFFORDABLE AND CLEAN ENERGY

Companies play a pivotal role in the path towards the attainment of Goal 7. The private sector represents 50% of the global energy consumption and the SDG 7 **requires an annual investment of \$1 trillion to be accomplished**. Moreover, enhancing global access, efficiency, and sustainability in energy provisioning also presents a noteworthy business opportunity (Credit Suisse, 2020).

Businesses can invest in **energy efficiency measures** such as upgrading lighting and HVAC (Heating, Ventilating and Air Conditioning) systems, **adopting renewable energy sources such as solar panels, wind turbines, or biomass generators, generating clean energy, or implementing smart grid technologies and energy storage systems** to optimize energy usage, reduce energy consumption and lowering utility bills.

In addition, companies can **target emerging markets or regions with limited access to reliable electricity** by offering off-grid or decentralized energy solutions such as solar microgrids, portable solar kits, or solar home systems, expanding market reach and capturing new customer segments. Moreover, companies can **develop partnerships with electric vehicle manufacturers and**

7 AFFORDABLE AND CLEAN ENERGY

charging infrastructure providers to capitalize on the growing demand for sustainable transportation solutions. In 2023, the global renewable energy market alone was valued at 1085 billion dollars. **Projections indicate a promising trajectory, with an estimated market value of 2,5 trillion dollars anticipated by 2032** (Research, 2019).

Furthermore, enterprises can **devise and execute business models aimed at disseminating sustainable energy technologies** such as energy-as-a-service models by offering subscription-based energy solutions, **investing in distributed energy resources** such as rooftop solar, battery storage, or microgrids to create virtual power plants, and **developing innovative financing mechanisms** such as green bonds and energy investment funds (United Nations Global Compact, 2017. p, 65). In 2024, a study from the project Risky Business concluded that the transition towards a low-carbon, clean energy system offers **substantial opportunities for investors and businesses due to the considerable return on capital investments and the potential for long-term savings in fuel costs** (Risky Business, 2016. p, 4).

PRACTICAL EXAMPLES OF THE SDG 7- AFFORDABLE AND CLEAN ENERGY BUSINESS CASE

Pepsi Co: A Green Fleet (UN Global Compact & KPMG, 2016. p, 30)



PepsiCo is a multinational food and beverage corporation established in 1965, that offers a wide range of snacks, beverages, and food products worldwide. PepsiCo has one of the most extensive fleets of electric delivery trucks globally,

7 AFFORDABLE AND CLEAN ENERGY

boasting 280 vehicles. Additionally, the company maintains a fleet of over 200 compressed natural gas (CNG) vehicles, constituting more than 20% of its overall fleet. In 2014, through these new mechanisms of renewable energy transportation, PepsiCo achieved substantial financial savings, exceeding US\$3 million, concurrently achieving a reduction in emissions exceeding 20% in comparison to conventional diesel engines.

Since the commencement of its fleet programs in 2010, PepsiCo has collectively realized a significant reduction of 55,000 metric tons in greenhouse gas emissions, concomitant with a nearly 24% decrease in fuel consumption. This strategic approach underscores the dedication of the company to environmental responsibility and highlights its proactive efforts in mitigating the environmental impact associated with its transportation operations.

PepsiCo exemplifies a paradigm of business aligning with SDG 7 and its associated targets, specifically targeting 7.2, 7.3, and 7.a. Through its extensive fleet of electric and compressed natural gas vehicles, PepsiCo significantly reduced its reliance on fossil fuels, thus fulfilling the **target 7.3 - Double the Improvement in Energy Efficiency**. By achieving a reduction in emissions exceeding 20%, PepsiCo demonstrates its commitment to **target 7.2**, which seeks to **Increase the Global percentage of Renewable Energy** in the global energy mix. Furthermore, the adoption of new vehicles with twice the fuel economy compared to conventional trucks not only contributes to **target 7.a Promote Investments in Clean Energy** but also showcases the company's focus on reducing greenhouse gas emissions.

These actions not only fulfill environmental targets but also result in significant cost reductions, reflecting a strategic approach that aligns profitability with

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sustainability. Through its proactive efforts in transportation operations, PepsiCo sets a precedent for businesses to prioritize environmental responsibility while simultaneously optimizing operational costs.

Partnership between CTT and EDP: Solar Neighborhoods



CTT (Correios de Portugal) is the national postal service provider of Portugal, established in 1520. EDP (Energias de Portugal) is a multinational energy company headquartered in Portugal, founded in 1976. It operates in the generation, distribution, and supply of electricity, gas, and renewable energy. The collaboration between CTT and EDP in the *Solar Neighborhoods project* exemplifies a strategic incorporation of Sustainable Development Goal 7, resulting in added value and contributing to the achievement of broader sustainability objectives through collaborative partnerships.

The Solar Neighborhoods initiative entails the installation of solar energy production facilities in over 30 CTT locations across Portugal, with the primary purpose of supplying renewable energy to CTT buildings. Additionally, these installations serve the broader community by providing energy to approximately 8,000 families and businesses. The project anticipates significant cost savings, with **potential reductions of up to 35% in the energy bills of CTT**. The installation involves approximately 12,000 solar panels, projecting an annual production of 8.8 GWh. This initiative prevented over 1,600 tons of CO₂ emissions. Families and businesses in the vicinity of chosen CTT locations are eligible to join these Solar Neighborhoods, with EDP undertaking the investment, maintenance, and operation of the solar panels.

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The partnership is characterized by mutual benefits: for CTT, it signifies substantial energy savings, marking a crucial milestone in the company's decarbonization strategy. On the other hand, EDP perceives this project as a manifestation of its core business activities and a relevant contribution to accelerating the development of renewable energies in Portugal.

By installing solar energy production facilities across Portugal, and extending its benefits to approximately families and businesses, the project directly addresses targets 7.1 Universal Access to Modern Energy and 7.2 Increase Global percentage of Renewable Energy, target 7.3 Double the Improvement in Energy Efficiency, and target 7.a Promote Investments in Clean Energy.

The project not only provides a substantial energy source and subsequent cost savings for CTT, but also supports the core business activities of EDP and its commitment to advancing renewable energies in Portugal, increasing its market share.

Job Creation

Decent Work and Economic Growth

Fair Wages

Economic Development

Labor Rights

Entrepreneurship



8 DECENT WORK AND ECONOMIC GROWTH

TARGETS: SDG 8 - DECENT WORK AND ECONOMIC GROWTH

| | | | | | |
|--|---|---|--|---|---|
| <p>TARGET 8-1</p>  <p>SUSTAINABLE ECONOMIC GROWTH</p> | <p>TARGET 8-2</p>  <p>DIVERSIFY, INNOVATE AND UPGRADE FOR ECONOMIC PRODUCTIVITY</p> | <p>TARGET 8-3</p>  <p>PROMOTE POLICIES TO SUPPORT JOB CREATION AND GROWING ENTERPRISES</p> | <p>TARGET 8-4</p>  <p>IMPROVE RESOURCE EFFICIENCY IN CONSUMPTION AND PRODUCTION</p> | <p>TARGET 8-5</p>  <p>FULL EMPLOYMENT AND DECENT WORK WITH EQUAL PAY</p> | <p>TARGET 8-6</p>  <p>PROMOTE YOUTH EMPLOYMENT, EDUCATION AND TRAINING</p> |
| <p>TARGET 8-7</p>  <p>END MODERN SLAVERY, TRAFFICKING AND CHILD LABOUR</p> | <p>TARGET 8-8</p>  <p>PROTECT LABOUR RIGHTS AND PROMOTE SAFE WORKING ENVIRONMENTS</p> | <p>TARGET 8-9</p>  <p>PROMOTE BENEFICIAL AND SUSTAINABLE TOURISM</p> | <p>TARGET 8-10</p>  <p>UNIVERSAL ACCESS TO BANKING, INSURANCE AND FINANCIAL SERVICES</p> | <p>TARGET 8-A</p>  <p>INCREASE AID FOR TRADE SUPPORT</p> | <p>TARGET 8-B</p>  <p>DEVELOP A GLOBAL YOUTH EMPLOYMENT STRATEGY</p> |

8 DECENT WORK AND ECONOMIC GROWTH

SUSTAINABLE DEVELOPMENT GOAL 8 - DECENT WORK AND ECONOMIC GROWTH

Sustainable Development Goal 8 – Decent Work and Economic Growth – aims to foster sustained, inclusive, and sustainable economic growth, ensuring full and productive employment with decent work for all. Currently, about half of the global population lives on \$2 a day, often in precarious, low-paying jobs lacking stability and benefits. Many workers endure unsafe conditions and long working hours, fearing job loss if they miss a shift. Over 60% of workers lack employment contracts, and less than 45% of wage and salary workers have full-time, permanent positions (UN Global Compact & wbcSD, n.d.).

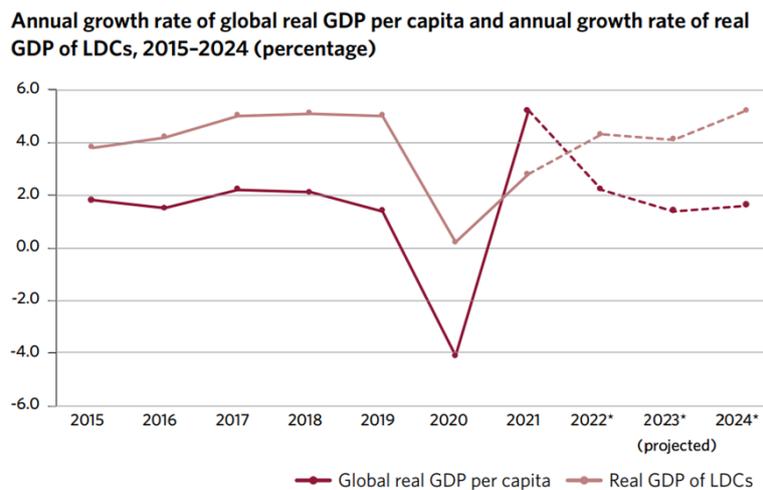


Fig. 8 Annual Growth Rate of Global Real GDP per Capita and Annual Growth Rate of real GDP of LDCs **Source:** The Sustainable Development Goals Report Special edition, 2023., p. 28

The global economy faces challenges including persistent inflation, rising interest rates, and increased uncertainties. Global real GDP per capita experienced an average annual growth rate of 1.8 % between 2015 and 2019. However, in 2020, the onset of the COVID-19 pandemic precipitated a sharp

8 DECENT WORK AND ECONOMIC GROWTH

decline of 4.1 % in the Global real GDP. Forecasts suggested a further decline, with growth projected at 1.4 % in 2023, followed by a modest increase to 1.6 % in 2024. In Least Developed Countries (LDCs), real GDP growth declined from 5 % in 2019 to 0.2 % in 2020. Projections indicate a resurgence in growth, with rates of 5.2 % in 2024. However, the 2024 growth trajectories remain below the objective of 7 % (United Nations Department of Economic and Social Affairs, 2023. p, 28).

THE SDG 8- DECENT WORK AND ECONOMIC GROWTH BUSINESS CASE

Economic growth is intricately linked to the increase of decent employment opportunities (Rodgers, 2009), encompassing the manufacturing of goods or provision of services essential for satisfying human needs, while ensuring a balanced approach that considers the well-being of both present and future generations (Kufeoglu, 2022).

Businesses, as economic agents, play a crucial role in fostering decent work and economic growth, aligning with SDG 8. To advance Goal 8, businesses can assume a leadership role by **investing in innovation, labor, and capital to foster robust, sustainable, and equitable economic growth** that generates decent jobs. Four key areas lend themselves to effective business action: **implementing policies and practices to support decent working conditions for all employees across the business and supply chain, collaborating with suppliers to enhance their capacity, and supporting the efforts of stakeholders**. Additionally, businesses can lead by **educating and training the labor force, particularly focusing on vulnerable groups**, ensuring they acquire the necessary skills for

8 DECENT WORK AND ECONOMIC GROWTH

productive labor or for transitioning from informal to formal sector work in the evolving labor market.

The reciprocal benefits for businesses engaging in these endeavors are evident. Higher growth results in stronger returns, increased demand, and improved profitability. Similarly, providing decent work conditions creates a conducive environment for healthy, satisfied, and productive employees, fostering innovation and loyalty.

The study “Doing Well by Doing Right?” from 2020, concluded that **companies with greater Corporate Social Responsibility on the protection of human rights in their operations, combating forced labor and human trafficking, mitigated financial losses stemming from occurrences, fostered consumer loyalty and trust. Therefore, this can potentially bolster sales and serve as a means to attract and retain a more skilled workforce while simultaneously enhancing job satisfaction, work engagement, and overall productivity levels** (Kristoffer Marslev, 2020. p, 33).

PRACTICAL EXAMPLES OF THE SDG 8- DECENT WORK AND ECONOMIC GROWTH BUSINESS CASE

Tony’s Chocolonely: A Journey to 100% Slave-Free Chocolate (Tony’s Annual FAIR Reports, 2023)



Tony’s Chocolonely is a chocolate company in the Netherlands, created in 2006 with the mission to eradicate slavery in the chocolate supply chain under the slogan “100% slave free in chocolate”. The cocoa industry is plagued by numerous instances of human rights violations and environmental challenges.

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More than 60% of the cocoa is produced by smallholder farmers, who endure inadequate compensation. This precarious circumstance compels them to resort to illicit labor practices, notably child labor, and contribute to deforestation activities. In 2022/2023, Tony's Chocolonely saved 1.752 children out of child labor in Ghana and Côte D'Ivoire, contributing to **Target 8.7 - End modern slavery, trafficking, and child labor** and **Target 8.8 Protect Labor Rights**.

The commitment of Tony's to rectify these systemic issues led to the development of a model aimed at addressing their root causes. The manifestation of this commitment materializes through Tony's Open Chain, a collaborative initiative designed to engage other corporate entities in mitigating exploitation within the cocoa supply chain. Central to this model are Five Sourcing Principles: ensuring cocoa bean traceability, empowering farmers, offering equitable remuneration, fostering long-term relationships, and emphasizing quality and productivity standards (**Target 8.5 Full Employment and Decent Work**). The company is proving that this model is replicable and scalable, with its 14 Mission Allies growing yearly.

Despite the requisite investment in procuring their primary raw material at elevated prices, Tony's has demonstrated commendable financial performance, as evidenced in the company's Annual Fair Report 2022/2023: "net revenue showed a steep increase of 23.2%, meaning we generated €150.2 million in revenue compared to last year's €121.9 million. This represents the largest absolute annual revenue growth for Tony's to date." (**Target 8.2 Innovate for Economic Productivity**)

The strategic integration of SDG 8 into Tony's Chocolonely's corporate strategy has catalyzed the development of a **new business model**, where the production of chocolate, is highly demanding on the working conditions, and specially the

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risk of child and hard-labor which is a unfortunate characteristic of the chocolate manufacturing process, which allows the company to implement higher prices.

Pirelli: *Leading the Way in Sustainable Occupational Health and Safety* (Pirelli, 2022. p, 56)



Pirelli is a multinational tire manufacturer headquartered in Italy founded in 1872. As part of its corporate commitment to the well-being of its workers, Pirelli has proactively implemented an occupational health and safety management system. This system has been extended to cover all Group production sites, with compliance, and encompasses all processes and activities, facilitated by centralized procedures and guidelines that establish a coherent framework. (Target 8.1 Sustainable Economic Growth, and Target 8.5 Full Employment and Decent Work).

Pirelli is resolute in leveraging advanced technologies to attain excellence in occupational health, safety, and environmental protection. Moreover, the company upholds sustainable labor practices by steering clear of child and forced labor, ensuring compliance with relevant laws and industry standards on working hours, and guaranteeing wages sufficient to meet the basic needs of personnel (Target 8.7 - End modern slavery, trafficking and child labor and Target 8.8 Protect Labor Rights). In collaboration with DuPont Sustainable Solutions, a global consulting firm, Pirelli initiated the "Excellence in Safety" program in 2014, expanding gradually to encompass all production sites.

Notably, in the UK only, Pirelli, between the start of the program in January 2014 and 2016, cut Lost Time Injuries by 71%, slashed Total Days Lost by 74%, and reduced the Incident Frequency by 73%. In 2022, a heightened focus on risk

8 DECENT WORK AND ECONOMIC GROWTH

assessment was incorporated into the program. The recorded Lost Time Injury Frequency Rate, demonstrated a reduction over the three-year period, reaching 0.20 per 100,000 hours worked. The accident frequency index in 2022 stands at 2.007 compared to 2.07 in 2021, confirming the steady downward trend (Pirelli UK, 2022. p, 1). This commitment is further underscored by a detailed breakdown of injury types, emphasizing contusions, cuts, fractures, and sprains. (Target 8.5 Full Employment and Decent Work).

By prioritizing occupational health and safety labor practices advancing SDG 8, Pirelli not only ensures the rights of its workforce but also reduces costs associated with injuries and accidents, demonstrating how sustainable business practices can lead to both social and economic benefits.

Technological Advancement

Industry, Innovation, and Infrastructure

Infrastructure Development

Innovation Ecosystem

Sustainable Industrialization

Connectivity

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

TARGET: SDG 9 – INDUSTRY, INNOVATION AND INFRASTRUCTURE

TARGET 9-1



DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURES

TARGET 9-2



PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION

TARGET 9-3



INCREASE ACCESS TO FINANCIAL SERVICES AND MARKETS

TARGET 9-4



UPGRADE ALL INDUSTRIES AND INFRASTRUCTURES FOR SUSTAINABILITY

TARGET 9-5



ENHANCE RESEARCH AND UPGRADE INDUSTRIAL TECHNOLOGIES

TARGET 9-A



FACILITATE SUSTAINABLE INFRASTRUCTURE DEVELOPMENT FOR DEVELOPING COUNTRIES

TARGET 9-B



SUPPORT DOMESTIC TECHNOLOGY DEVELOPMENT AND INDUSTRIAL DIVERSIFICATION

TARGET 9-C



UNIVERSAL ACCESS TO INFORMATION AND COMMUNICATIONS TECHNOLOGY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

SUSTAINABLE DEVELOPMENT GOAL 9 – INDUSTRY, INNOVATION, AND INFRASTRUCTURE

SDG 9 aims to build resilient infrastructure, promote sustainable industrialization, and foster innovation. Promoting resilient infrastructure, inclusive industrialization, and innovation is crucial for economic growth and societal benefit. Statistical data reveals a deceleration in global manufacturing growth, plummeting from 7.4 % in 2021 to 3.3 % in 2022 (United Nations Department of Economic and Social Affairs, 2023. p, 30).

Global CO₂ emissions from energy combustion and industrial processes, 2000-2022 (billion metric tons)

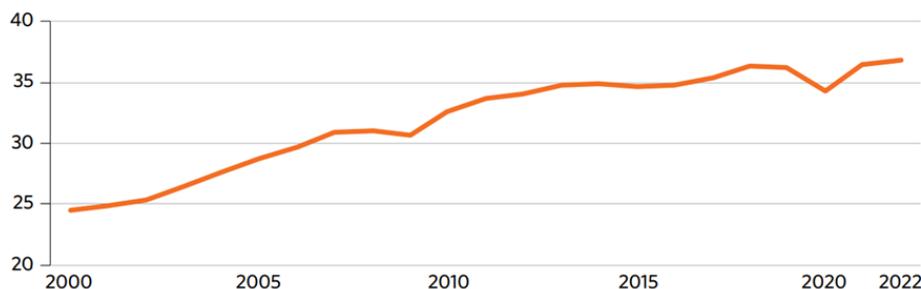


Fig. 9 Global CO₂ Emissions from Energy and Industrial Processes **Source:** The Sustainable Development Goals Report Special edition, 2023. p, 30

Also, the global challenge of climate change is reflected in the statistics concerning carbon dioxide (CO₂) emissions. In 2022, emissions from energy combustion and industrial processes increased by 0.9 %, reaching an unprecedented 36.8 billion metric tons. It is noteworthy, however, that this growth remains below the trajectory of global GDP growth, indicative of a

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

decade-long trend of decoupling emissions from economic growth (International Energy Agency, 2023).

To successfully achieve SDG 9 by 2030, addressing these challenges is imperative. This entails robust support for LDCs, strategic investments in advanced technologies, concerted efforts to mitigate carbon emissions, and endeavors to enhance mobile broadband access. The imperative nature of these interventions is underscored by the urgency to navigate the multifaceted challenges obstructing the full realization of SDG 9.

THE SDG 9 – INDUSTRY, INNOVATION, AND INFRASTRUCTURE BUSINESS CASE

In the pursuit of SDG 9, businesses play a pivotal role as producers, employers, investors, and innovators (Hari Srinivas, 2023). Their contributions are multifaceted, encompassing research, development, and deployment of technologies, financial backing, and the production of capital assets and infrastructure. Simultaneously, embracing SDG 9 represents a significant market opportunity for businesses.

In the realm of sustainable infrastructure development, companies contribute significantly by **researching, developing, and deploying products, services, and business models tailored to challenging conditions**, particularly in developing countries where the demand is acute. Through global value chains, they can **facilitate inclusive and sustainable upgrading of industries by transferring technologies and skills to enhance local capabilities**. Companies can be at the forefront of SDG 9 by playing a crucial role in **creating innovation systems for sustainable development**. They can provide **access to finance**,

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

foster entrepreneurship, and pool financial and research resources in a global knowledge base. Additionally, businesses can take the lead in upgrading and retrofitting infrastructure and industry assets within their operations and supply chains to enhance sustainability and resilience.

As an example of the SDG 9 business case, the annual market value for retrofits and new infrastructure installation stands at 3.7 trillion dollars (World Economic Forum & McKinsey & Company, 2018. p, 4). Participating in delivering such infrastructure enables businesses to access new markets for their products and services, tapping into underserved labor markets and resources, all while adhering to international standards for environmental and social impacts. The global transition to a green, resilient industrial and infrastructure base presents a lucrative investment opportunity, offering substantial rewards for businesses positioned at the forefront of the sectors involved in its realization. Moreover, sustainable industrialization is vital for lifting communities out of poverty, but it requires careful management to avoid negative impacts on people and the environment. In developing countries, addressing a 1 trillion-dollar gap in annual investment spending is essential for sustainable development (United Nations Global Compact, 2017. p, 84).

PRACTICAL EXAMPLES OF SDG 9 – INDUSTRY, INNOVATION, AND INFRASTRUCTURE BUSINESS CASE

Galp: Investing in Bio compounds and Green Hydrogen



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Galp is a Portuguese energy company founded in 1999. It operates in the exploration, production, refining, and distribution of oil and natural gas, as well as in renewable energy and electricity generation. In 2022, Galp announced an investment of 650 million euros in two distinct units, one dedicated to bio compounds and the other to electrolyzers for green hydrogen production in Sines, Portugal (**Target 9.1 Develop Sustainable Infrastructures and Target 9.2 Promote Inclusive and Sustainable Industrialization**). Set to commence operations in 2025, these initiatives represent a strategic commitment to sustainability and technological advancement within the energy sector.

The bio compound production realized through a 75/25 joint venture with Mitsui, one of the largest trading and investment companies in the world, with operations spanning various industries such as infrastructure, energy, chemicals, food, textiles, and finance, entails a total investment of 400 million euros (**Target 9.4 Upgrade All Industries and Infrastructures for Sustainability**). This collaborative effort seeks to transform underutilized oils, such as those from industrial facilities, into road and aviation fuels. Simultaneously, the green hydrogen unit, boasting a 100 MW electrolysis capacity, is poised to generate up to 15,000 tons of renewable hydrogen annually through the utilization of recycled industrial water. **Notably, the water consumption for this hydrogen production is projected to be less than 3% of the average annual consumption of the refinery.** The overall investment for the green hydrogen project is estimated at 250 million euros.

Of particular significance is the commitment to environmental sustainability, as evidenced by the reduction of greenhouse gas emissions by approximately 800,000 tons per annum, attributed to the **production of renewable diesel (hydrotreated vegetable oil – HVO) and Sustainable Aviation Fuel (SAF) from**

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

recycled waste. (Target 9.5 Enhance Research and Upgrade Industrial Technologies and 9.b Support Domestic Technology Development and Industrial Diversification). The partnership with Mitsui integrates the industrial expertise of both entities, leveraging operational and market synergies and facilitating the procurement of the necessary raw materials. Technological implementation involves the use of Axens technology, with the Technip Energies/Technoedif Engenharia consortium selected as the primary Engineering, Procurement, and Construction Management service provider.

The strategic investments of Galp in bio-compound and green hydrogen production units exemplify a paradigm shift towards sustainable business practices in line with SDG 9 but also create a new business model centered around sustainability. By leveraging technological advancements and environmental considerations, Galp also reduces costs associated with traditional energy production methods and fosters innovation within the sector. This transition to sustainable energy production not only positions Galp as a leader in the industry, but also underscores the commitment of the company to environmental stewardship and long-term sustainability.

The Navigator Company: Pioneering Green Aviation Fuel Venture (The Navigator Company, 2022)



The Navigator Company is a Portuguese company founded in 1953, specializing in the production of paper and tissue products from sustainable forestry practices.

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In the context of climate change, The Navigator Company stands out for its continuous work in reducing the intensity of its emissions. This commitment is outlined in its *Roadmap to Carbon Neutrality*, which consists of an ambitious set of investments in renewable energy and new technologies, with the goal of making all its industrial complexes carbon-neutral by 2035 (Target 9.1 Develop Quality, Reliable, Sustainable and Resilient Infrastructure and Target 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable). A notable example is the development of green aviation fuel.

In partnership with the German company P2X Europe, Navigator signed a pioneering agreement in 2022 to produce green aviation fuel. The joint venture combines the extensive know-how of P2X Europe, a pioneer in the production and marketing of synthetic hydrocarbons, and the vast industrial experience of Navigator in managing biorefineries and sustainable forests. The goal of this partnership is the development of a state-of-the-art industrial unit for the production of non-fossil fuels, e-Sustainable Aviation Fuels (e-SAFs). Unlike conventional SAFs, which use plants or cooking oils as raw materials, e-SAFs use electricity generated from renewable energies and biogenic CO₂, a result of the natural carbon cycle. The project takes advantage of the high competitiveness of Portugal in the production of solar and wind energy and the generation of biogenic CO₂ through the burning of biomass in the boilers of The Navigator Company based on circularity principles. (Target 9.2 Promote Inclusive and Sustainable Industrialization and Target 9.b Support Domestic Technology Development and Industrial Diversification, and Target 9.5 Enhance Research, and Upgrade Industrial Technologies).

Biogenic CO₂ differs from fossil-origin CO₂ because it has been previously sequestered from the atmosphere through photosynthesis and stored in trees in a much shorter cycle. The burning of biomass results in the emission of this gas,

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which is then reabsorbed by plants, making it considered carbon neutral by some. E-SAF is an important topic for the refining industry and the aerospace industry due to its significant contribution to reducing carbon footprint and emissions, enabling affordable decarbonization options in this industry. In March 2024, The Navigator and P2X decided to postpone the project due to regulatory adjustments, while both maintaining the interest in power-to-liquid opportunities.

The proactive approach of The Navigator Company to sustainability exemplifies its commitment to SDG 9, focusing on industry, innovation, and infrastructure. By utilizing circularity principles and capitalizing on the renewable energy potential of Portugal, Navigator reduces costs associated with traditional aviation fuel production methods while creating a new business model centered around sustainable alternative products. This initiative not only underscores the commitment of The Navigator Company to environmental stewardship but also positions the company as a leader in driving innovation and sustainability within the aerospace industry.

Social Inclusion

Reduced Inequality

Equity

Redistribution

Marginalized Groups

Tackling Discrimination



10 REDUCE INEQUALITY

TARGET: SUSTAINABLE DEVELOPMENT GOAL 10 – REDUCE INEQUALITIES

| | | | | |
|--|--|---|---|--|
| <p>TARGET 10-1</p>  <p>REDUCE INCOME INEQUALITIES</p> | <p>TARGET 10-2</p>  <p>PROMOTE UNIVERSAL SOCIAL, ECONOMIC AND POLITICAL INCLUSION</p> | <p>TARGET 10-3</p>  <p>ENSURE EQUAL OPPORTUNITIES AND END DISCRIMINATION</p> | <p>TARGET 10-4</p>  <p>ADOPT FISCAL AND SOCIAL POLICIES THAT PROMOTES EQUALITY</p> | <p>TARGET 10-5</p>  <p>IMPROVED REGULATION OF GLOBAL FINANCIAL MARKETS AND INSTITUTIONS</p> |
| <p>TARGET 10-6</p>  <p>ENHANCED REPRESENTATION FOR DEVELOPING COUNTRIES IN FINANCIAL INSTITUTIONS</p> | <p>TARGET 10-7</p>  <p>RESPONSIBLE AND WELL-MANAGED MIGRATION POLICIES</p> | <p>TARGET 10-A</p>  <p>SPECIAL AND DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES</p> | <p>TARGET 10-B</p>  <p>ENCOURAGE DEVELOPMENT ASSISTANCE AND INVESTMENT IN LEAST DEVELOPED COUNTRIES</p> | <p>TARGET 10-C</p>  <p>REDUCE TRANSACTION COSTS FOR MIGRANT REMITTANCES</p> |

10 REDUCE INEQUALITY

SUSTAINABLE DEVELOPMENT GOAL 10 – REDUCE INEQUALITIES

SDG 10 stands as a cornerstone for the establishment of a stable, just, prosperous, and peaceful society. However, contemporary trends reveal an imbalance in the distribution of the advantages derived from economic growth, disproportionately favoring the wealthiest individuals in the world. Within OECD countries, income inequality has reached its highest point in the last fifty years, and in developing nations, it has surged by 11% between 1990 and 2010 (United Nations Global Compact, 2017. p, 94). The economic landscape, as delineated by the incomes of the poorest 40 percent of the population, had exhibited a positive trajectory, surpassing the national average in numerous countries. However, the advent of the COVID-19 pandemic has introduced a potential disruption to this optimistic trend of diminishing within-country inequality, although conclusive evidence remains elusive.

Proportion of the overall population experiencing discrimination, by selected grounds and sex, 2015–2022 (percentage)

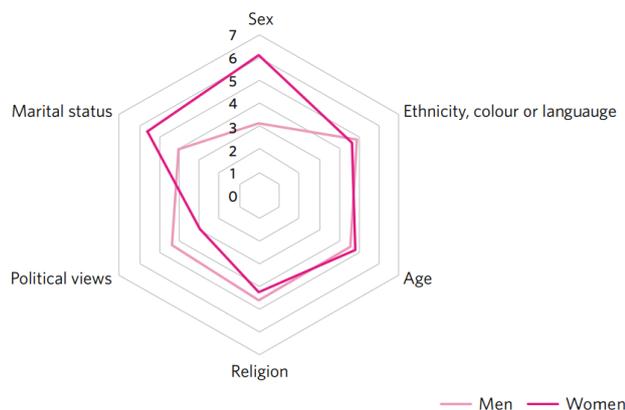


Fig. 10 Source: Sustainable Development Goals Report Special Edition, 2023, p. 33

10 REDUCE INEQUALITY

Furthermore, a disconcerting aspect of global societal dynamics is illuminated by the fact that one in six individuals worldwide has encountered discrimination in various forms, with a disproportionate impact on women and individuals with disabilities. These statistics emphasize the persistent hurdles in fostering inclusive societies, a critical facet of SDG 10 (United Nations Department of Economic and Social Affairs, 2023. p, 32).

These grim statistics accentuate the imperative of addressing the multifaceted challenges encapsulated within the framework of SDG 10, urging a comprehensive approach to redress global disparities and discriminatory practices.

THE BUSINESS CASE OF SDG 10 - REDUCE INEQUALITIES

Business entities wield influence over inequality through the creation of their products, methods of products, prices, and distribution of generated economic value.

Proactive business action is ultimately demonstrated through the implementation of policies and practices **supporting equality across own and supply chain operations, as well as through the design and implementation of products, services, and business models targeting the needs of vulnerable and marginalized populations** (The Brookings Institution, 2006). Companies can further contribute by endorsing the **establishment and expansion of national-**

10 REDUCE INEQUALITY

level social protection measures, complementing governmental initiatives with their expertise and resources (United Nations Global Compact, 2017. p, 94). Nevertheless, the reduction of inequalities not only accrues societal benefits but also enhances the stability of the business environment, and introduces diverse perspectives into the workplace, fostering innovation and profitability. Business action in this context can also transcend routine activities: leading companies are encouraged to **collaborate with local communities and stakeholders to co-create products or services that address specific challenges related to inequality, allowing for pricing premiums based on the added social impact.** Moreover, economic research substantiates that diminishing income inequality positively correlates with heightened economic growth. The ILO underscores the **positive correlation between workforce diversity and enhanced productivity as well as competitiveness within enterprises.** The presence of diversity within the workforce not only **fosters a conducive environment for productivity but also augments the competitive edge of organizations** (International Labour Organization, 2019). Furthermore, enterprises characterized by a diverse workforce serve as attractive investment destinations with access to novel markets, expanding their outreach. Harvard Business Review provides empirical support, reporting a significant **70% increase in the likelihood of diverse management teams successfully penetrating new markets** (Hewlett et al., 2013).

10 REDUCE INEQUALITY

PRACTICAL EXAMPLES OF SDG 10 BUSINESS CASE

Fidelidade: A Tech-Driven Approach to Enhancing Senior Lives (Fidelidade, 2022)



Established in 1808, Fidelidade stands as one of the leading insurance providers in Portugal, specializing in both life and non-life insurance. **Fostering the development of a sustainable society is part of its corporate identity, a principle manifested in its Program Fidelidade Comunidade.** This initiative recognizes entities engaged in areas such as aging, health prevention, and the inclusion of elderly people and individuals with disabilities.

In alignment with SDG 10, in 2022 Fidelidade launched ALÔ by Fidelidade, a **technological solution dedicated to combating social isolation and promoting technological inclusion among individuals aged 65 and above (Target 10.2 Promote Social Inclusion).** Powered by GrandPad technology, ALÔ by Fidelidade offers a tablet with internet access and unlimited video calls, and it is able to address communication, entertainment, and healthcare needs within the home. The intuitive software includes an Assistance and Support feature enabling access to a diverse network of service providers offering home assistance and cleaning by qualified professionals, personal assistance for special care needs, and well-being services at home, such as sewing, ironing, hairstyling, manicure, pedicure, or meal delivery **(Target 10.3 Ensure Equal Opportunities).** It also offers **medical assistance with remote or home monitoring and support for caregivers, including company to medical appointments or home visits post-hospitalization (upon medical prescription) or providing caregiver relief.**

10 REDUCE INEQUALITY

Fidelidade exemplifies its commitment to SDG 10 by addressing targets 10.2 and 10.3 within its business model. As a result of these actions, Fidelidade has created a new business model that prioritizes social impact alongside financial success. This demonstrates the transformative power of purpose-driven innovation, highlighting the profound impact that businesses can have in advancing societal well-being while achieving commercial success.

LEGO: Building Inclusion with Braille Education



The LEGO Group is a Danish toy manufacturing company that was founded in 1932. Since 2020, the LEGO Foundation made LEGO Braille Brick educational kits accessible to organizations specializing in the education of children with visual impairments. This innovative project emerged through a collaborative partnership with associations dedicated to individuals with visual impairments. **Selected institutions, schools, and organizations specializing in the pre-literacy and literacy processes for children and young people aged four to eighteen were actively involved in the development, testing, and launch of the LEGO® Braille Bricks concept (Target 10.2 Promote Social Inclusion).** And, in 2023, the new LEGO Play with Braille set became available for purchase through LEGO.com, enabling families to experience the benefits and enhance tactile skills in the comfort of their homes.

The set, designed for children aged 6 and above, features bricks in five vibrant colors, fully compatible with other LEGO products. **Each brick incorporates studs arranged to correspond to numbers and letters in the Braille system,**

10 REDUCE INEQUALITY

with the printed version of the symbol or letter situated below the studs (Target 10.3 End Discrimination). The set, packaged with Braille embossing, includes two baseplates for building, fostering a playful and inclusive way for visually impaired children to develop essential literacy skills.

In a continued commitment to accessibility, LEGO announced the forthcoming release of LEGO Audio & Braille Building Instructions at the beginning of 2024. This initiative offers builders the option to access more LEGO building instructions as audio or text for Braille readers, further enhancing the inclusivity and impact of the innovative approach to education and play.

The introduction of the LEGO Braille Brick educational kits and subsequent developments in accessible learning materials directly address SDG 10, specifically, targets 10.2, 10.3, and 10.4. These actions not only contribute to societal well-being but also lead to an [increase in market share](#) for LEGO, as the company expands its reach and attracts new customers seeking inclusive and innovative educational products. In addition, the Braille Bricks also serve as a prime example of how businesses can successfully integrate social dilemmas into their operations while driving commercial success and creating a [new business model](#) focused on inclusivity and accessibility.

Urban Planning

Sustainable Cities and Communities

Resilient Infrastructure

Community Engagement

Green Spaces

Accessible Transport



11 SUSTAINABLE CITIES AND COMMUNITIES

SDG 11- SUSTAINABLE CITIES AND COMMUNITIES

| | | | | |
|---|---|---|--|---|
| <p>TARGET 11-1</p>  <p>SAFE AND AFFORDABLE HOUSING</p> | <p>TARGET 11-2</p>  <p>AFFORDABLE AND SUSTAINABLE TRANSPORT SYSTEMS</p> | <p>TARGET 11-3</p>  <p>INCLUSIVE AND SUSTAINABLE URBANIZATION</p> | <p>TARGET 11-4</p>  <p>PROTECT THE WORLD'S CULTURAL AND NATURAL HERITAGE</p> | <p>TARGET 11-5</p>  <p>REDUCE THE ADVERSE EFFECTS OF NATURAL DISASTERS</p> |
| <p>TARGET 11-6</p>  <p>REDUCE THE ENVIRONMENTAL IMPACT OF CITIES</p> | <p>TARGET 11-A</p>  <p>STRONG NATIONAL AND REGIONAL DEVELOPMENT PLANNING</p> | <p>TARGET 11-B</p>  <p>IMPLEMENT POLICIES FOR INCLUSION, RESOURCE EFFICIENCY AND DISASTER RISK REDUCTION</p> | <p>TARGET 11-C</p>  <p>SUPPORT LEAST DEVELOPED COUNTRIES IN SUSTAINABLE AND RESILIENT BUILDING</p> | |

11 SUSTAINABLE CITIES AND COMMUNITIES

SDG 11- SUSTAINABLE CITIES AND COMMUNITIES

SDG 11, titled "Sustainable Cities and Communities", endeavors to establish cities and human settlements that are inclusive, safe, resilient, and sustainable. SDG 11 seeks to navigate this rapid urbanization by promoting sustainable solutions, with a particular focus on fostering social inclusion, safety, and environmental equilibrium (United Nations Global Compact, 2017. p, 104).

In 2022, the UN disclosed that projections indicated that by 2050, the world's population will nearly reach 10 billion, with approximately 6.6 billion residing in urban areas – a figure double that of 2007 (*Cities' Road to 2050*, 2023). As per data disseminated by UN-Habitat, urban areas, encompassing a mere 3% of the surface of the Earth, exert a disproportionately substantial impact on global dynamics. Notably, cities contribute significantly, constituting 75% of the total global primary energy consumption and over 70% of greenhouse gas emissions (*Urban Energy* | UN-Habitat, n.d.).



Fig. 11 Expected Growing Population in Cities Source: Bright Lights, Cleaner Cities. Economist Impact Web-site

11 SUSTAINABLE CITIES AND COMMUNITIES

The achievement of SDG 11 requires a strategic focus on investing in sustainable infrastructure, prioritizing innovation and research, and implementing inclusive and sustainable industrial practices.

THE BUSINESS CASE OF THE SDG 11- SUSTAINABLE CITIES AND COMMUNITIES

Prominent corporations can actively contribute to the realization of Goal 11 by engaging in research, development, and deployment of initiatives focused on enhancing access to resilient buildings, transportation systems, green spaces, and essential utilities, including electricity, water, and waste management services.

Corporations possess the capacity to leverage their influential position and expertise to safeguard and invest in sustainable cities and communities (United Nations Global Compact, 2017. p, 104). Companies can **undertake research, foster innovation, and implement strategies** to introduce products and services that **enhance accessibility to durable infrastructure, efficient transportation systems, ecologically sustainable areas, and essential utilities**. Businesses can also **implement resources for the conservation and promotion of cultural and natural heritage assets** while simultaneously **investing in their preservation**. Further, **it facilitates equitable access to vital services within diverse settings** such as workplaces, commercial platforms, and local communities.

Businesses can stand to benefit from opportunities to foster the development of more interconnected, resilient, and sustainable urban environments. A concerted commitment to enhancing the sustainability of communities needs

11 SUSTAINABLE CITIES AND COMMUNITIES

comprehensive investment across various sectors such as transport, energy, waste management, and recreation.

The contemporary demographic landscape reveals that **urban areas accommodate more than half of the population of the world, a proportion anticipated to escalate to 70% by the year 2050** (United Nations Department of Economic and Social Affairs, 2023. p, 34-35). This demographic trend underscores the business opportunities related to urban infrastructure, resource management, and environmental sustainability. **Over the next decade, an estimated \$78 trillion will be required for investment in urban infrastructure**, a likely outcome of private sector interventions, including public-private partnerships (Du Plessis, 2022. p, 1). This dedicated effort towards community sustainability promises manifold advantages, including a healthier and more productive workforce, along with enhanced labor market functionality and market accessibility facilitated by improved transportation links.

PRACTICAL EXAMPLES OF SDG 11 BUSINESS CASE

Sonae Sierra: A Tech Hub Leading the Way in Sustainable Building Practices
(Center for Responsible Business and Leadership, 2022)



Sonae Sierra is a multinational real estate company. It was founded in 1989 and is headquartered in Portugal. The commitment of Sonae Sierra to sustainability is demonstrated through its holistic approach, offering a suite of sustainability services that encompass the entire life cycle of buildings.

11 SUSTAINABLE CITIES AND COMMUNITIES

A prime example of this sustainability-driven strategy is manifested in *Sonae Tech Hub*, a prominent building located in Maia, that houses the technological divisions of Sonae. Notably, in 2020, *Sonae Tech Hub* received prestigious recognition by achieving LEED Certification at the "Platinum" level from the US Green Building Council, a globally renowned entity for real estate project certification. This award marked *Sonae Tech Hub* as the most sustainable building in Portugal, securing the highest score ever awarded to a building in the country and positioning it among the top 100 globally.

The environmental principles incorporated during the initial stages of the *Sonae Tech Hub* project significantly contributed to its remarkable eco-efficiency. **Key elements include architectural designs that prioritize natural light, responsible utilization and recycling of construction residues, and investments in sustainable materials and equipment with superior environmental performance (Target 11.3 Inclusive and Sustainable Urbanization and Target 11.6 Reduce the Environmental Impact of Cities).** Notably, the building boasts 570m² of solar panels, resulting in a 40% reduction in electricity consumption. It also features 100% low-energy consumption LED lighting, judicious use of water through rainwater harvesting, and an interior environment emphasizing excellence in air quality and thermal comfort. **(Target 11.1 Safe, and Affordable Housing)**

Overall, the sustainable real estate development of *Sonae Sierra* practices evidences its commitment to promoting inclusive, resilient, and sustainable cities and communities, as outlined in SDG 11, specifically targets 11.1, 11.3, and 11.6. Through its actions, the company not only reduced environmental impact but also created **cost-effective** and environmentally friendly urban spaces, ultimately resulting in the **reduction of costs**.

11 SUSTAINABLE CITIES AND COMMUNITIES

Pestana Hotel Group: Driving Sustainable Tourism and Preserving the Historic Legacy



Grupo Pestana is a Portuguese multinational hospitality company founded in 1972. It specializes in the development, management, and operation of hotels, resorts, and eco-resorts globally. The company is renowned for its commitment to sustainability and the preservation of cultural heritage.

Within the context of SDG 11, which aims to strengthen endeavors in safeguarding the global cultural and natural heritage, Grupo Pestana serves as an illustrative example of a business successfully incorporating this goal into its strategic framework. "Pousadas de Portugal" brand is evidence of the company's dedication to restoring historic buildings, a distinctive initiative focusing on the transformation of historical landmarks such as monasteries, castles, convents, and mansions into hotels that serve the public and stimulate tourism. Beyond the cultural preservation aspect, this strategic move also fuels positive contributions to the local economy. Noteworthy, this is a substantial annual investment, amounting to millions of euros, directed toward the recovery and preservation of classified heritage for the construction of Pestana units.

A striking illustration of this commitment is found in the Vale Flor Palace, now home to the Pestana Palace Lisbon since 2001, a National Monument of cultural significance for Portugal. Another example is the establishment of the Pousada Viana do Castelo, the Santa Luzia Hotel built at the top of the hill in 1918. Santa Luzia Hotel was remodeled and restored in 1979 by Pestana Group,

11 SUSTAINABLE CITIES AND COMMUNITIES

maintaining the characteristics that set it apart with its high, majestic granite walls and wide archways. (Target 11.3 Inclusive and Sustainable Urbanization and Target 11.4 Protect the World's Cultural and Natural Heritage).

The multifaceted approach of Grupo Pestana to sustainable development not only fulfills the targets of SDG 11 but also creates a new business model centered on cultural preservation. The successful implementation of these initiatives opens up the possibility for Grupo Pestana to raise prices, as customers increasingly value sustainability and heritage preservation in their travel experiences.

Circular Economy

Responsible Consumption and Production

Waste Reduction

Sustainable Sourcing

Eco-friendly Practices

Resource Efficiency

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



12 RESPONSIBLE CONSUMPTION

SDG 12 - RESPONSIBLE CONSUMPTION AND PRODUCTION

| | | | |
|---|---|---|---|
| <p>TARGET 12-1</p>  <p>IMPLEMENT THE 10-YEAR SUSTAINABLE CONSUMPTION AND PRODUCTION FRAMEWORK</p> | <p>TARGET 12-2</p>  <p>SUSTAINABLE MANAGEMENT AND USE OF NATURAL RESOURCES</p> | <p>TARGET 12-3</p>  <p>HALVE GLOBAL PER CAPITA FOOD WASTE</p> | <p>TARGET 12-4</p>  <p>RESPONSIBLE MANAGEMENT OF CHEMICALS AND WASTE</p> |
| <p>TARGET 12-5</p>  <p>SUBSTANTIALLY REDUCE WASTE GENERATION</p> | <p>TARGET 12-6</p>  <p>ENCOURAGE COMPANIES TO ADOPT SUSTAINABLE PRACTICES AND SUSTAINABILITY REPORTING</p> | <p>TARGET 12-7</p>  <p>PROMOTE SUSTAINABLE PUBLIC PROCUREMENT PRACTICES</p> | <p>TARGET 12-8</p>  <p>PROMOTE UNIVERSAL UNDERSTANDING OF SUSTAINABLE LIFESTYLES</p> |
| <p>TARGET 12-A</p>  <p>SUPPORT DEVELOPING COUNTRIES' SCIENTIFIC AND TECHNOLOGICAL CAPACITY FOR SUSTAINABLE CONSUMPTION AND PRODUCTION</p> | <p>TARGET 12-B</p>  <p>DEVELOP AND IMPLEMENT TOOLS TO MONITOR SUSTAINABLE TOURISM</p> | <p>TARGET 12-C</p>  <p>REMOVE MARKET DISTORTIONS THAT ENCOURAGE WASTEFUL CONSUMPTION</p> | |

12 RESPONSIBLE CONSUMPTION

SDG 12 - RESPONSIBLE CONSUMPTION AND PRODUCTION

SDG 12 advocates for the implementation of a comprehensive array of measures by businesses, policymakers, and consumers to embrace sustainable practices. It envisions the establishment of sustainable production and consumption patterns grounded in advanced technological capabilities, resource efficiency, and the mitigation of global waste.

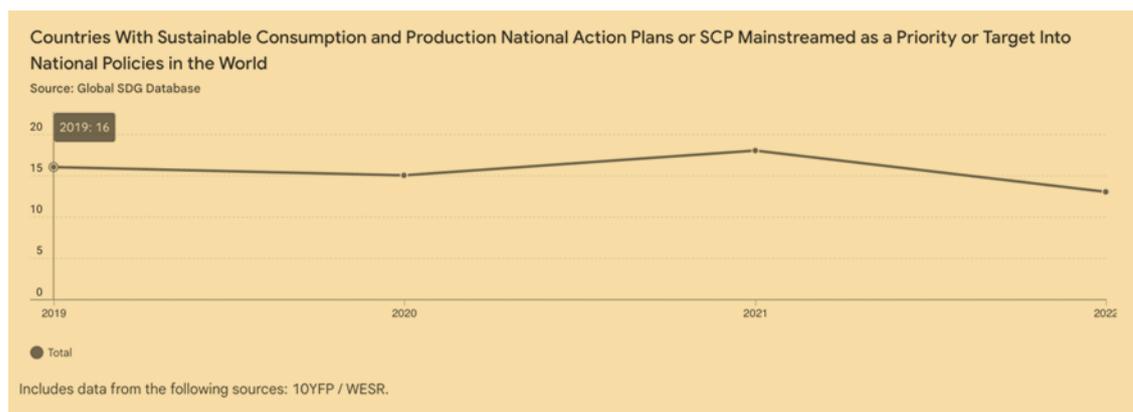


Fig. 12 Countries with Sustainable Consumption and Production National Action Plans **Source:** 10YFP/ WESR

Between 2000 and 2019, global domestic material consumption (DMC) increased by 66%, escalating threefold since the 1970s to attain 95.1 billion metric tons. Concurrently, in 2019, the material footprint in production methods—quantity of materials extracted to meet final consumption demands—equated to 95.9 billion metric tons. Regions such as Northern Africa, Western Asia, Europe, and Northern America exhibited material footprints surpassing DMC by 18% and 14%,

12 RESPONSIBLE CONSUMPTION

respectively. Conversely, Latin America, along with sub-Saharan Africa, demonstrated material footprints lower than DMC by 17% and 32%, respectively. These discrepancies underscore the unequal distribution of responsibilities in production and consumption patterns between import-oriented, export-oriented, high-income, and low-income countries (United Nations Department of Economic and Social Affairs, 2023. p, 36).

THE BUSINESS CASE OF THE SDG 12

In the global landscape, where businesses emerge as primary contributors to the output of the world, their pivotal role in advancing responsible production and consumption becomes evident.

In advancing SDG 12, companies can proactively engage in several strategic actions. Firstly, companies can **design and adopt responsible and circular business models**. Moreover, companies should endeavor to significantly **diminish or close material and energy loops** across both their internal operations and supply chain networks to minimize waste and environmental impact. Additionally, companies should **transition towards offering a diversified portfolio of goods and services that not only necessitate minimal resource utilization but also actively promote sustainable consumption patterns**. Furthermore, companies ought to dedicate efforts towards the **development, implementation, and dissemination of solutions aimed at enhancing traceability and reporting mechanisms pertaining to the sustainability of production and consumption practices**. By establishing robust systems for tracking and reporting sustainability metrics, companies can transparently assess their environmental footprint and social impact, thereby

12 RESPONSIBLE CONSUMPTION

fostering accountability and driving continuous improvement initiatives (United Nations Global Compact, 2017. p, 114).

The provision of more sustainable products and services positions businesses to compete effectively in markets where government regulations and consumer preferences increasingly align with sustainability objectives. **The demand for certified and traceable products among consumers is on the rise, indicating a shift in preferences** (United Nations Global Compact, 2017. p, 114). In addition, responsible production opens a lot of market opportunities. Reductions in production costs for companies with resource-intensive production processes, represent estimated **annual savings of €600 billion for European companies alone**. By 2030, precision **agriculture technologies alone have the potential to foster business prospects amounting to \$195 billion**. Projections suggest a significant enhancement in agricultural yields by approximately 40% through the adoption of these technologies. Such investments are anticipated to yield returns exceeding 10% (*395 Million New Jobs by 2030 If Businesses Prioritize Nature, Says World Economic Forum, 2020*).

PRACTICAL EXAMPLES OF SDG 12- RESPONSIBLE CONSUMPTION AND PRODUCTION BUSINESS CASE

Belcinto: Crafting Sustainability and Fashioning Innovation



Founded in 1961, Belcinto is a Portuguese family-owned small to medium-sized enterprise (SME) specializing in the production of leather goods, including belts,

12 RESPONSIBLE CONSUMPTION

bags, travel sacks, and wallets. Beyond its success as an SME, Belcinto stands out as a socially conscious entity aware of its role and impact on the planet, demonstrating a responsible approach to product acquisition and production methods.

In 2021, Belcinto initiated the "Leather Goods by Belcinto" project, which utilizes leftover scraps from raw materials sourced from previous collections, thereby minimizing waste in the production process. The Leather Goods project aligns with principles of circular economy and slow fashion, emphasizing the creation of a few unique, high-quality, and durable items. (Target 12.8 Promote Universal Understanding of Sustainable Lifestyles) In 2022, the project received the SME EnterPRIZE, a European Sustainability Award, presented by Tranquilidade and the Generali Group.

"Leather Goods by Belcinto" not only encourages creative product design but also produces unique and enduring pieces that transcend fashion trends. This Portuguese company sets an example of best practices by intertwining economic value creation with a commitment to the planet's sustainability. By aligning innovation, creativity, and circular production, Belcinto actively contributes to the achievement of the United Nations' Agenda 2030, specifically addressing SDG 12, particularly Target 12.2 Sustainable Management and Use of Natural Resources, Target 12.5 Substantially Reduce Waste Generation, and Target 12.6 Encourage Companies to Adopt Sustainable Practices and Sustainability Reporting. This initiative not only reduces costs associated with waste disposal but also introduces a new business model focused on sustainability. The approach from Belcinto has garnered attention, allowing the company to gain a new market share and inspire other enterprises to adopt similar practices. Ultimately, Belcinto demonstrates how aligning economic value creation with environmental responsibility can drive success while contributing to a more sustainable future. This

12 RESPONSIBLE CONSUMPTION

exemplary practice serves as inspiration for both small and large enterprises aiming to enhance their positive environmental impact by reusing raw materials in novel and innovative processes, products, and markets.

Jerónimo Martins Group: An Innovative Approach to Food Waste Reduction
(Center for Responsible Business and Leadership, 2023. p, 386)



The Jerónimo Martins Group, a pioneering retail entity in Portugal, has strategically incorporated SDG 12 into its operational framework. The commitment of the group to combating food waste is evident in its pioneering efforts to calculate, validate, and disclose its food waste footprint, showcasing a commitment to transparently assessing progress against self-imposed commitments.

An integral aspect of their food waste reduction strategy involves the utilization of so-called "ugly produce" and the donation of surplus items, exemplifying efficient product management. This initiative significantly contributes to SDG 12, specifically addressing **Target 12.3 Halve Global Per Capita Food Waste**, and **12.5 Substantially Reduce Waste Generation**. Operating in Portugal through Pingo Doce and Recheio, the group acquires "ugly" fruits and vegetables, incorporating them into various products such as soups, salads, and pre-packaged cut vegetables, maintaining a nutritional profile comparable to conventionally sold items. "Ugly" fruit is retailed at a reduced price in Recheio stores. Additionally, Jerónimo Martins Agro-Alimentar incorporates these aesthetically challenged products into the feed for cattle and goats.

12 RESPONSIBLE CONSUMPTION

To further combat food waste, the group sells products with shorter expiration dates at a discount, incentivizing customer purchases. Measures also include offering large-sized fruits, such as watermelons and melons, precut in half, allowing customers to purchase smaller quantities. Surplus food items fit for consumption but unsuitable for sale for various reasons are donated to charitable institutions serving children, the elderly, and vulnerable youth. Communicating its commitment to combat food waste, Jerónimo Martins Group engages in projects aimed at fostering awareness and responsible practices among its customers. An exemplary initiative is the 2020 launch of the book "Desperdício Zero à Mesa" by Pingo Doce, inspiring consumers with tips on reusing meal leftovers and preserving food effectively (Target 12.8 Promote Universal Understanding of Sustainable Lifestyles).

The results of these initiatives are noteworthy, with the group capitalizing on 160,000 tons of "ugly" fruits and vegetables and donating 120,000 tons of food products between 2015 and 2022. Moreover, approximately 20,000 tons of discounted food were sold from 2019 to 2022. These tangible outcomes underscore the successful incorporation of SDG 12 into the strategy of the group.

The proactive approach of Jerónimo Martins Group to combating food waste exemplifies its commitment to SDG 12 while simultaneously driving cost reduction and increasing market share. By leveraging "ugly produce" and surplus items, the group not only minimizes waste but also enhances product management efficiency. The group demonstrates how integrating sustainability into business operations can yield both environmental and economic benefits, setting a precedent for industry-wide adoption of responsible practices.

Carbon Neutrality

Climate Action

○ Mitigation Strategies

○ Adaptation Measures

○ Renewable Transition

○ Emission Reduction

13 CLIMATE ACTION



13 CLIMATE ACTION

TARGETS: SDG 13- CLIMATE ACTION

TARGET 13-1



STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS

TARGET 13-2



INTEGRATE CLIMATE CHANGE MEASURES INTO POLICIES AND PLANNING

TARGET 13-3



BUILD KNOWLEDGE AND CAPACITY TO MEET CLIMATE CHANGE

TARGET 13-A



IMPLEMENT THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

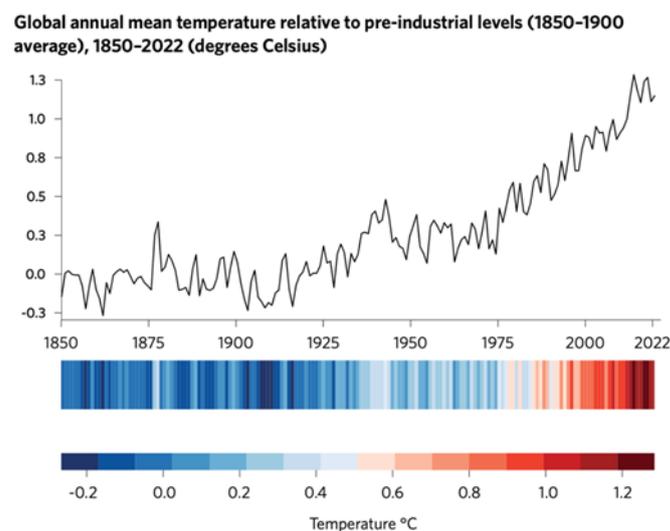
TARGET 13-B



PROMOTE MECHANISMS TO RAISE CAPACITY FOR CLIMATE PLANNING AND MANAGEMENT

SUSTAINABLE DEVELOPMENT GOAL 13 – CLIMATE ACTION

SDG 13 underscores the imperative for urgent measures to combat climate change and mitigate its repercussions, emphasizing the interconnected nature of sustainable development. In response to the climate crisis, nations have collectively ratified the Paris Agreement, a pivotal international treaty designed to limit the escalation of global temperatures, striving to maintain their increase well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees, in comparison to the pre-industrial era.



Source: The figure and climate stripes are drawn from the World Meteorological Organization's State of the Global Climate 2022 report, which combines six international data sets for temperature: HadCRUT.5.0.1.0 (UK Met Office), NOAA GlobalTemp v5 (USA), NASA GISTEMP v4 (USA), Berkeley Earth (USA), ERA5 (ECMWF), and JRA-55 (Japan).

Fig 13. Global Annual Mean Temperature Relative to Pre-industrial levels (1850-1900) **Source:** The Sustainable Development Goals Report Special edition, 2023. p. 38.

The latest IPCC report from 2023 provides unequivocal evidence that human activities, mainly the prolonged combustion of fossil fuels, unsustainable energy and land practices, and unsustainable consumption and production habits, have resulted in a global temperature rise of 1.1°C above pre-industrial levels (Calvin et al., 2023). As a consequence, over the decade 2010 to 2020, regions identified as highly vulnerable,

13 CLIMATE ACTION

accommodating approximately 3.3–3.6 billion individuals, experienced a stark elevation in human mortality rates (United Nations Department of Economic and Social Affairs, 2023). With the prospect of further temperature escalations, these extreme events are poised to intensify and pose heightened challenges for their effective mitigation and management. Moreover, the efficacy of adaptation measures diminishes in tandem with escalating warming trends.



13 CLIMATE ACTION

THE BUSINESS CASE FOR THE SDG 13 - CLIMATE ACTION

The role of business in addressing the Goal 13, pertaining to limiting the global average temperature increase to well below 2 degrees Celsius, and striving for a 1.5-degree Celsius increase, is fundamental to the framework outlined in the 2015 Paris Agreement. In advancing SDG 13, companies can adopt various strategic initiatives. Primarily, companies can **implement measures to mitigate climate-related risks and vulnerabilities while bolstering adaptive capacities**. Furthermore, companies can **adopt comprehensive strategies aimed at minimizing greenhouse gas emissions** across all stages of production, distribution, and consumption. Additionally, companies can transition towards **offering a diversified portfolio of products and services characterized by minimal emissions throughout their lifecycle, encouraging sustainable consumption patterns among consumers**. Moreover, companies can also **provide relevant training and resources and foster collaboration with stakeholders to collectively address climate-related challenges**.

The business case for Goal 13 is robust, underpinned by the imperative to manage financial, regulatory, and reputational risks associated with climate change impacts in operations and supply chains. Moreover, businesses can benefit from the expanding market for low-carbon and climate-compatible technologies and services, with a considerable opportunity to capitalize on climate-related investments, including the **\$100 billion annual climate finance target by 2030**, as stipulated in the Paris Agreement. Internationally, an **investment totaling \$1.8 trillion** in diverse initiatives, including early warning systems, climate-resilient infrastructure, enhanced agricultural practices, **holds the potential to yield a substantial return of \$7.1 trillion**. This return would be derived from a combination of cost savings by avoiding detrimental outcomes and realizing various social and environmental advantages (Nations, n.d.) with the development of new business models.



13 CLIMATE ACTION

PRACTICAL EXAMPLES OF THE SDG 13- CLIMATE ACTION BUSINESS CASE

IBK Seguros and MDS Group: Climate-Proofing Insurance (Norinha, 2022)



IBK Seguros and MDS Group represent two prominent insurance entities operating within the Portuguese market. Both entities have introduced products that are informed by the imperative posed by climate change.

Parametric insurance, a novel offering embraced by both companies, distinguishes itself by streamlining the cost-intensive processes typical of traditional insurance models. This method obviates the necessity for extensive claims evaluations, facilitating expedited compensation procedures. From the perspective of the insured, parametric insurance presents an appealing alternative, as it avoids the requirement for deductible payments and ensures prompt disbursement of compensation precisely when it is most urgently needed.

The adoption of parametric insurance assumes significance against the backdrop of escalating vulnerability across various sectors to the effects of climate change (**Target 13.1 Strengthen Resilience to Climate-Related Disasters**). Farmers and enterprises investing in renewable energy, and others directly impacted by climate-related phenomena have heightened uncertainties, paralleled by similar challenges encountered by insurance providers.

Parametric insurance works differently from conventional insurance, as it guarantees compensation in the event of an accident and not the damage itself. It uses an index or set of pre-determined indices agreed between the insurer and the insured, in which the values present a “threshold” which, once reached or exceeded, entitles to compensation that can progressively increase until reaching the maximum limit provided for in the policy. This benchmark, or set of indices, must be correlatable to the cause of the event and measurable through publicly available information, and produced by third parties,



13 CLIMATE ACTION

generally using sophisticated technology, from diverse data sources, including satellite images, data inputs, weather radar, sensor data and results from meteorological observatories (**Target 13.3 Develop Knowledge and Capacity to Address Climate Change**). It is then modeled using large amounts of data (Big Data) and artificial intelligence algorithms.

Based on this data, in the event of a claim, the parametric insurer determines whether the index “threshold” has been exceeded, without the need to carry out claim assessments. Thus, it quickly processes compensation, helping the insured to have liquidity immediately after the accident. This approach confers exceptional adaptability, as any event posing a potential operational risk to a company or jurisdiction can be effectively underwritten by parametric insurance through the calibration of associated indices. (**Target 13.b Promote Mechanisms to Raise Capacity for Planning and Management**).

The integration of such innovative insurance products into the portfolios of IBK and MDS Group reflects a commitment to advancing SDG 13. Through their proactive engagement with climate-responsive insurance solutions, these entities created a new business model that is able to increase their market share while reducing the cost of their operations.

Olam International: The First Climate-Smart Cocoa



Olam International is a leading agrifood company that operates in 65 countries, with a leading market position in cocoa, coffee, cashew, rice, and cotton.

In Ghana, where cocoa farming is vital to the economy, climate change poses a significant threat. With changing rainfall patterns and increased risks of pests and diseases, cocoa farmers face challenges that could lead to deforestation (as farmers may be compelled to move their cocoa crops to other forested areas) and a decline in productivity. Recognizing these risks, Olam International joined forces with the Rainforest Alliance to



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address the issue. Their collaboration focuses on developing sustainable cocoa growing practices that not only conserve biodiversity but also increase productivity and resilience to climate change, aligning with the goals of SDG 13 (Climate Action). The project, which aims at breaking the link between cocoa production and deforestation while supporting Ghanaian farmers, includes various strategies to achieve the mentioned objectives. First, the company provided training to over 2,000 farmers in sustainable cocoa production, emphasizing practices that enhance resilience to climate change (**Target 13.1 Strengthen Resilience to Climate-Related Hazards**). Additionally, they utilized technology to map deforestation trends, empowering communities to monitor and protect their forests. These actions are fundamental to guarantee climate resilience. Moreover, the project facilitated the development of alternative livelihoods such as beekeeping and grass cutter rearing, reducing the dependency on cocoa farming alone. Furthermore, by investing in forest restoration and protection, Olam aimed to create additional revenue streams through carbon credits (**Target 13.2 Integrate Climate Change Measures into Policies and Planning, and Target 13.3 Build Knowledge and Capacity to Meet Climate Change**).

The outcomes of the project are promising. Over 6,000 hectares of land have already received certification for sustainable cocoa production, indicating reduced deforestation and increased conservation efforts. Additionally, 80% of residents in 34 communities gained awareness of REDD+ and forest carbon standards, enhancing their capacity to address climate change.

The project benefited local communities by improving their resilience to climate change and creating economic opportunities beyond cocoa farming. By supporting sustainable practices and alternative livelihoods, the initiative contributed to economic and environmental sustainability in Ghana's cocoa-growing regions, aligning with the broader objectives of SDG 13. For Olam, the project not only mitigated operational risks but also positioned them as leaders in sustainability. By introducing climate-smart cocoa to the market, they expanded into new commodity markets while gaining reputational benefits, increasing their market share because of their sustainability premiums and the creation of climate-smart cocoa.



Marine Conservation

Life Below Water

○ Biodiversity Protection

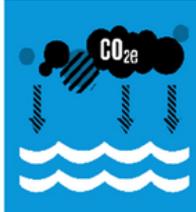
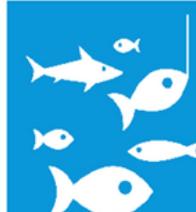
○ Sustainable Fisheries

○ Ocean Health

○ Pollution Prevention

14 LIFE BELOW WATER

TARGETS: SDG 14 - PROTECT LIFE BELOW WATER

| | | | | |
|---|---|---|--|---|
| <p>TARGET 14-1</p>  <p>REDUCE MARINE POLLUTION</p> | <p>TARGET 14-2</p>  <p>PROTECT AND RESTORE ECOSYSTEMS</p> | <p>TARGET 14-3</p>  <p>REDUCE OCEAN ACIDIFICATION</p> | <p>TARGET 14-4</p>  <p>SUSTAINABLE FISHING</p> | <p>TARGET 14-5</p>  <p>CONSERVE COASTAL AND MARINE AREAS</p> |
| <p>TARGET 14-6</p>  <p>END SUBSIDIES CONTRIBUTING TO OVERFISHING</p> | <p>TARGET 14-7</p>  <p>INCREASE THE ECONOMIC BENEFITS FROM SUSTAINABLE USE OF MARINE RESOURCES</p> | <p>TARGET 14-A</p>  <p>INCREASE SCIENTIFIC KNOWLEDGE, RESEARCH AND TECHNOLOGY FOR OCEAN HEALTH</p> | <p>TARGET 14-B</p>  <p>SUPPORT SMALL SCALE FISHERS</p> | <p>TARGET 14-C</p>  <p>IMPLEMENT AND ENFORCE INTERNATIONAL SEA LAW</p> |

SUSTAINABLE DEVELOPMENT GOAL 14 - PROTECT LIFE BELOW WATER

SDG 14 endeavors to safeguard and promote the sustainable utilization of oceans, encompassing objectives such as the mitigation of marine pollution, prevention of ocean acidification, cessation of overfishing, and preservation of marine and coastal ecosystems.

Despite observed advancements, there remains a pressing necessity for enhanced global collaboration to effectively address the persistent challenge of illegal fishing. Estimates indicate substantial annual losses ranging from 11 to 26 million tons of fish, valued economically at up to \$23 billion, underscoring the magnitude of the issue and the imperative for concerted international efforts to mitigate its detrimental effects (United Nations Department of Economic and Social Affairs, 2023. p, 41.)

Calculated surface pH values based on based on representative sampling stations, 2005-2022 (pH total)

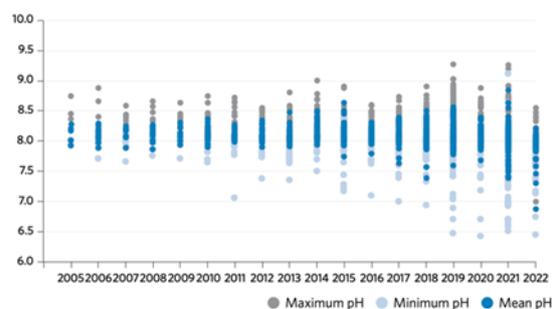


Fig 14. Calculated Surface Ph Values **Source:** The Sustainable Development Goals Report Special edition, 2023. p. 41.

Surface ocean carbonate chemistry measurement locations, 2023 (data-reporting countries and sampling stations)



Fig 15. Surface Ocean Carbonate Chemistry Measure Locations **Source:** The Sustainable Development Goals Report Special edition, 2023. p. 41.

Over the past two to three decades, sustained monitoring at long-term observation sites in the open ocean revealed a consistent decrease in pH levels, signifying a notable trend with profound implications. Presently, the average pH of the ocean stands at 8.1, representing an approximately 30 percent increase in acidity compared to pre-industrial levels (United Nations Department of Economic and Social Affairs, 2023. p, 41). Ocean acidification poses a threat to the viability of marine ecosystems, disrupting intricate

food webs and jeopardizing global food security. Furthermore, this phenomenon exacerbates the degradation of critical marine habitats, including coral reefs, imperiling industries such as fisheries, aquaculture, and tourism. Additionally, heightened acidification impairs the capacity of the ocean to absorb carbon dioxide (CO₂), thus curtailing its role in mitigating climate change (being a carbon sink).

THE BUSINESS CASE FOR THE SDG 14- LIFE BELLOW WATER

Businesses assume a pivotal role as responsible custodians of oceans, seas, and marine resources and ecosystems, given the profound influence oceans exert on the global economy. Over 90% of trade is conducted by sea, amounting to more than USD 2.5 trillion in commercial activity annually, impacting ocean habitats through emissions, chemical leaks, and waste disposal (*Ocean Shipping and Shipbuilding - OECD, n.d.*). In addition, extractive practices, encompassing fishing, offshore oil and gas drilling, and mineral mining, pose potential harm to ocean environments if not managed sustainably. Despite the extensive reliance of many businesses on maritime resources and transportation, Goal 14 is frequently overlooked for business action. Business action in this context needs a comprehensive understanding of the link between business operations and the ocean. Proactive companies can **establish policies and practices to shield ocean ecosystems affected** by their operations, **utilizing their research, development, and deployment capabilities to create solutions that mitigate impacts and contribute to restoration**. Businesses can further **mobilize finance for the protection and development of ocean ecosystems through collaborative partnerships**. They may also **contribute by designing and implementing solutions to accurately** assess and respect natural capital, facilitating similar endeavors by other players like the public sector. Safeguarding healthy ocean environments emerges as a fundamental prerequisite for long-term business operations, presenting a substantial business opportunity. Technologies such as aquaponics, tidal energy, and energy-efficient desalinization offer solutions to this challenge, providing significant prospects for reaping

14 LIFE BELOW WATER

the rewards from the sustainable use of ocean resources. It is estimated that an **investment of \$2.8 trillion at present in four sustainable ocean solutions**—conservation and restoration of mangroves, decarbonization of international shipping, promotion of sustainable ocean-based food production, and expansion of offshore wind production—would result in **net benefits amounting to \$15.5 trillion by the year 2050** (UNCTAD, 2023). Analysis commissioned by the High-Level Panel for a Sustainable Ocean Economy (Ocean Panel) reveals that for every **\$1 invested in sustainable ocean solutions, a minimum return of \$5 is generated** (Konar et al., 2020).

PRACTICAL EXAMPLES OF THE SDG 14- LIFE BELLOW WATER BUSINESS CASE

Interface: Networks, A Sustainable Solution to Marine Waste (Khoo & Turner, 2017)



Interface is an Atlanta-based company and the leader in modular carpet design, production, and sales. The company has effectively integrated SDG 14 into its operations to address the issue of lost and discarded fishing gear, a significant contributor to marine waste. The initiative of Interface, known as Net-Works, established in 2012 through a partnership with the Zoological Society of London (ZSL), exemplifies how businesses can mitigate ocean pollution while achieving economic success.

Lost and discarded fishing gear, particularly nets, makes up 10% of the marine waste of the world. The Net-Works program collects discarded fishing nets from impoverished fishing communities, recycling them into nylon yarn used in carpet manufacturing (Target 14.1 Reduce Marine Pollution, 14.2 Protect Marine Ecosystems and Target 14.b Support Small Scale Fishers). By repurposing waste materials, Interface reduces dependency on virgin resources, cuts energy consumption, and meets the growing demand for sustainable materials in the building and interior design industry. Interface

enhances its environmental footprint through this initiative and strengthens its market position by offering eco-friendly products. Net-Works operates with a sustainable business model that benefits both Interface and participating communities. The program's proceeds from net sales cover financial benefits to communities and operational costs, demonstrating a "triple bottom line approach focusing on people, planet, and profit" (*Interface Inc. Net-Works Programme - Economics of Mutuality Alliance*, 2017).

In the Philippines and Cameroon, Net-Works has reached 35 communities, collected over 142 metric tons of waste nets, and facilitated access to finance for 1,500 families through community banks. Additionally, approximately 62,000 people have benefited from a healthier environment through the initiatives, including engaging with communities to implement sustainable fishing practices, protecting marine habitats, and establishing protected areas (**Target 14.5 Conserve Coastal and Marine Areas and 14.7 Promote Sustainable Fisheries Management**). Furthermore, Net-Works fosters social empowerment by establishing local community banks, facilitating community engagement in marine resource management, and enabling livelihood diversification among fishermen, such as seaweed farming, thereby contributing to a more secure financial future for these communities.

From a financial perspective, Net-Works contributes to Interface by reducing energy use in its supply chain through the recycling of waste nets, generating substantial financial savings for the company and its nylon supplier, Aquafil. By purchasing the ECONYL yarn of Aquafil, Interface leverages its market power to encourage the production of more sustainable materials and manufacturing processes (Target 14.7 Increasing Economic Benefits from Sustainable Use of Marine Resources. Moreover, the program helps Interface capitalize on the growing demand for green and sustainable interior design products, strengthens relationships with business customers, and enhances brand reputation, as evidenced by praise from the United States Department of State and featured in prominent publications and conferences. Additionally, Net-Works has directly connected Interface to over USD 23.5 million in

sales, demonstrating its popularity among customers and its effectiveness in aligning with its sustainability goals and vision.

Interface has innovatively created a new business model that fosters environmental stewardship while meeting market demands for eco-friendly products by repurposing discarded fishing nets into nylon yarn for carpet manufacturing. This new approach not only reduces costs through the use of recycled materials but also opens up new market opportunities for sustainable goods, positioning Interface as a leader in sustainable business practices.

Cermaq: Laser Technology for Sustainable Aquaculture (Fish Welfare, n.d.)



Incorporating SDG 14 into business models is imperative for companies operating in marine environments. Cermaq (fully owned subsidiary of Mitsubishi Corporation), established in 1995, is a notable example of such a company, specializing in salmon and trout farming across Norway, Canada, and Chile.

One of the key challenges faced by Cermaq and similar aquaculture ventures is the proliferation of sea lice, which is detrimental to farmed and wild salmon populations. Due to the high stocking densities in salmon farms, sea lice can proliferate to levels not observed in natural environments. As wild salmon pass near these farms, they become susceptible to lice infestation. This increased exposure is exacerbated by the placement of salmon farms along migration routes, leading to infestation of wild juvenile salmon. Consequently, the presence of a single salmon farm can elevate sea lice pressure on migrating juvenile salmon up to 73 times above ambient levels (Krkošek et al., 2005). The consequences of sea lice infestation can potentially result in diminished health and increased mortality (Godwin et al., 2015). In addition, traditional methods of sea lice control, such as mechanical delousing, can stress the fish and have limited effectiveness in managing infestation levels.

14 LIFE BELOW WATER

To address this challenge, in 2023, Cermaq has embraced innovative solutions rooted in sustainability and technology, to be implemented in 2024. Collaborating with Stingray Marine Solutions, Cermaq is at the forefront of deploying laser delousing technology across its sea sites. **This cutting-edge technology is designed to mitigate sea lice infestation while minimizing stress on the fish. Cermaq aims to enhance fish welfare and ensure sustainable production practices by incorporating preventive measures like lice lasers into its operations.**

The implementation of this new laser technology aligns with the following targets of **SDG 14: Target 14.2 Sustainable Management and Protection of Marine Ecosystems, 14.4 Sustainable Fisheries Management, 14.5 Conservation of Coastal and Marine areas, 14.7 Sustainable Aquaculture), and 14.a Increase Scientific Knowledge, Research, and Technology for Ocean Health.**

In conclusion, the integration of SDG 14 into the business model of Cermaq not only demonstrates its commitment to environmental stewardship but also showcases the potential for profitability through sustainable practices, by enhancing its production, leading to **cost reduction**. Cermaq sets a precedent for responsible aquaculture management that balances economic interests with ecological sustainability by prioritizing innovations like lice lasers and fostering strategic partnerships.

Biodiversity Conservation

Life on Land

○ Deforestation Prevention

○ Land Restoration

○ Wildlife Protection

○ Ecosystem Preservation

15 LIFE ON LAND



15 LIFE ON LAND

TARGETS: SDG 15- LIFE ON LAND

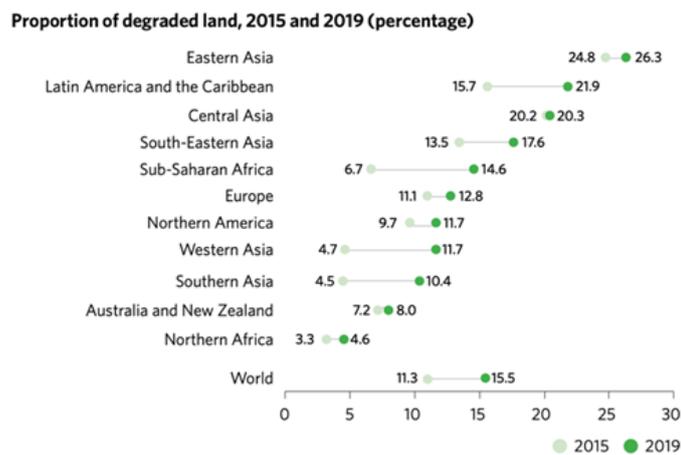
| | | | |
|--|---|---|---|
| <p>TARGET 15-1</p>  <p>CONSERVE AND RESTORE TERRESTRIAL AND FRESHWATER ECOSYSTEMS</p> | <p>TARGET 15-2</p>  <p>END DEFORESTATION AND RESTORE DEGRADED FORESTS</p> | <p>TARGET 15-3</p>  <p>END DESERTIFICATION AND RESTORE DEGRADED LAND</p> | <p>TARGET 15-4</p>  <p>ENSURE CONSERVATION OF MOUNTAIN ECOSYSTEMS</p> |
| <p>TARGET 15-5</p>  <p>PROTECT BIODIVERSITY AND NATURAL HABITATS</p> | <p>TARGET 15-6</p>  <p>PROMOTE ACCESS TO GENETIC RESOURCES AND FAIR SHARING OF THE BENEFITS</p> | <p>TARGET 15-7</p>  <p>ELIMINATE POACHING AND TRAFFICKING OF PROTECTED SPECIES</p> | <p>TARGET 15-8</p>  <p>PREVENT INVASIVE ALIEN SPECIES ON LAND AND IN WATER ECOSYSTEMS</p> |
| <p>TARGET 15-9</p>  <p>INTEGRATE ECOSYSTEM AND BIODIVERSITY IN GOVERNMENTAL PLANNING</p> | <p>TARGET 15-A</p>  <p>INCREASE FINANCIAL RESOURCES TO CONSERVE AND SUSTAINABLY USE ECOSYSTEMS AND BIODIVERSITY</p> | <p>TARGET 15-B</p>  <p>FINANCE AND INCENTIVIZE SUSTAINABLE FOREST MANAGEMENT</p> | <p>TARGET 15-C</p>  <p>COMBAT GLOBAL POACHING AND TRAFFICKING</p> |

15 LIFE ON LAND

SUSTAINABLE DEVELOPMENT GOAL 15- LIFE ON LAND

SDG 15 endeavors to safeguard, rehabilitate, and advocate for the conservation and sustainable utilization of terrestrial ecosystems. This encompasses initiatives to manage forests sustainably, cease deforestation, combat desertification, restore degraded land and soil, arrest the decline in biodiversity, and shield endangered species.

According to the Millennium Ecosystem Assessment, biodiversity serves as the cornerstone upon which human existence relies. Biodiverse ecosystems not only furnish essential resources like food, water, fiber, and medicines but also deliver invaluable services such as disease regulation and air and water purification (United Nations Global Compact, 2017. p, 432).



Note: Regions and subregions may not include all countries.

Fig 16. Proportion of Degraded Land **Source:** The Sustainable Development Goals Report Special edition, 2023. p. 43.

The emergence of concerning patterns in land degradation underscores the immediate need for concerted efforts toward Earth restoration. Over the period from 2015 to 2019, an estimated minimum of 100 million hectares of previously healthy and productive land underwent degradation annually, exerting significant damages on global food and water security. This loss of land area, equivalent to twice the size of Greenland, directly impacts the livelihoods of approximately 1.3 billion individuals directly exposed to land degradation. Should prevailing trends persist, the restoration of 1.5 billion hectares of

15 LIFE ON LAND

land by the year 2030 becomes imperative for realizing a land-degradation-neutral world (United Nations Department of Economic and Social Affairs, 2023. p, 42).

THE BUSINESS CASE FOR THE SDG 15- LIFE ON LAND

Healthy natural ecosystems are integral to business activities. Ecosystems provide essential business services, including food provision, water purification, hazard protection, and nitrogen regulation. Biodiverse and carbon-rich ecosystems play a pivotal role in air purification and carbon sequestration, contributing to improved health outcomes for workers and increased economic productivity. Forests also harbor abundant genetic and energy-related resources with enduring medical, scientific, and agricultural applications.

Significant potential exists for business action regarding Goal 15. This involves a **comprehensive understanding and appreciation of natural ecosystems**, in both internal operations and the entire value chain. Businesses can demonstrate action by **innovating and providing financial support to preserve and enhance ecosystems**. To accomplish this, **adopting the highest environmental standards and implementing procedures to protect affected ecosystems, including land remediation, rehabilitation, and habitat protection**, are crucial. Protecting and preserving the ecosystems of the Earth offers substantial benefits to companies. Adopting sustainable land management practices and restoration initiatives is a strategic approach to mitigating land degradation. Such endeavors have the potential to yield significant economic benefits, **estimated at up to USD 1.4 trillion annually** (UNDP, 2019. p, 5). Moreover, **restoring 350 million hectares of degraded landscapes by 2030 could generate \$US 9 trillion in ecosystem services** and take 13-26 gigatons of greenhouse gases out of the atmosphere (International Resource Panel of the UN Environment, 2019). **Multi-stakeholder partnerships** and standards can facilitate and encourage these efforts.

As agents of innovation, companies can **commit to research, development, and deployment of new technologies** that decouple economic activity from ecosystem degradation, **resulting in new products and services, ultimately increasing their market share**. By mobilizing finance, businesses can lead initiatives **such as carbon**

15 LIFE ON LAND

sequestration, water purification, or biodiversity conservation to protect, and further develop natural ecosystems. Additionally, businesses can, for example, invest in ecotourism or nature-based recreational activities that generate revenue while promoting the preservation of natural habitats and biodiversity.

PRACTICAL EXAMPLES OF THE SDG 15 – LIFE ON LAND BUSINESS CASE

Corticeira Amorim: Forest Preservation Initiatives Towards a Greener Future (Center for Responsible Business and Leadership, 2022. p. 346.)



Corticeira Amorim is a leading Portuguese company specializing in cork production, serving various industries, including wine, construction, fashion, and aerospace. The preservation of the cork oak is integral to the core business of Corticeira Amorim, as the primary raw material for its activities is derived from this unique tree. The conservation efforts for the cork oak forest and the associated ecosystem have been formally incorporated into the strategic plan of the company, aptly named "Naturally Sustainable," to achieve by 2030.

In practical terms, the endeavors of Corticeira Amorim to ensure the vitality of the cork oak forest and the availability of high-quality raw materials are exemplified through its active involvement in the Forestry Intervention Project (PIF). This collaborative project involves partnerships with forest producers, academic institutions, and local authorities. The Forestry Intervention Project comprises three key areas: Forest Management, Applied Forest Research and Development (R&D), and Fundamental Forest R&D. Through Forest Management, Corticeira Amorim contributes to **new plantations and provides technical support to forestry field owners**. The Applied Forest R&D component aims to establish a center of excellence in cork oak research and good management practices. Lastly, the Fundamental Forest R&D focus is on **developing new production**

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methods tailored to emerging climatic scenarios and potential challenges such as plagues and diseases.

The involvement of Corticeira Amorim in the PIF further illustrates its dedication to SDG 15, specifically, its targets **15.1 Conserve and Restore Terrestrial and Freshwater Ecosystems**, **target 15.2 End Deforestation and Restore Degraded Forests**, **15.5 Protect Biodiversity and Natural Habitats**, **15.8 Prevent Invasive Alien Species on Land and in Water Ecosystems**, and **15. B Finance and Incentivize Sustainable Forest Management**. By actively participating in projects aimed at ensuring the vitality of cork oak forests and the availability of high-quality raw materials, Corticeira Amorim advances sustainability and mitigates risks associated with resource scarcity, ultimately leading to reduced costs and enhanced long-term viability.

Partnership between Herbal Essences and Royal Botanic Gardens, Kew: Innovating in New Products while Protecting Biodiversity (Fierro, 2023)



Herbal Essences, a brand under the control of Procter & Gamble, specializes in hair products inspired by natural ingredients. Founded with a commitment to harnessing the power of nature, Herbal Essences has consistently explored botanicals to create purpose-driven products.

In response to the growing threat to key plant ingredients, Herbal Essence has recognized the imperative of preserving biodiversity to sustain its business model. Partnering with the Royal Botanic Gardens, Kew—an esteemed institution renowned for its plant and fungal research—Herbal Essences aims to safeguard endangered plant species **Target 15.a (Increase Financial Resources to Conserve and Sustainably Use Ecosystem and Biodiversity)**. This collaboration not only facilitates the protection of threatened botanicals (**Target 15.1 Conserve and Restore Terrestrial and Freshwater Ecosystems**) but also leverages the botanical expertise of Kew to identify future ingredients for plant-powered hair care products. Furthermore, by anticipating a shift

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towards greater plant diversification in consumer goods, Herbal Essences demonstrates proactive engagement with sustainable sourcing practices (*Save 20 in 2020 | Herbal Essences, n.d.*).

The partnership with the Royal Botanic Gardens, Kew, underscores the commitment of Herbal Essences to SDG 15, with a specific emphasis on targets 15.1 and 15. a. As a result of these initiatives, Herbal Essence not only enhances its ethical and environmental credentials but also strengthens its market position. By aligning its business practices with SDG 15 targets, Herbal Essence not only secures its supply chain but also cultivates new products and markets. Moreover, by mitigating risks associated with ingredient scarcity and environmental degradation, Herbal Essence achieves cost reductions, thereby enhancing its long-term competitiveness and sustainability.

Rule of Law

Peace, Justice, and Strong Institutions

Human Rights

Access to Justice

Conflict Resolution

Good Governance

16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

SDG 16- PEACE, JUSTICE AND STRONG INSTITUTIONS

| | | | | | |
|---|---|--|---|--|---|
| <p>TARGET 16-1</p>  <p>REDUCE VIOLENCE EVERYWHERE</p> | <p>TARGET 16-2</p>  <p>PROTECT CHILDREN FROM ABUSE, EXPLOITATION, TRAFFICKING AND VIOLENCE</p> | <p>TARGET 16-3</p>  <p>PROMOTE THE RULE OF LAW AND ENSURE EQUAL ACCESS TO JUSTICE</p> | <p>TARGET 16-4</p>  <p>COMBAT ORGANIZED CRIME AND ILLICIT FINANCIAL AND ARMS FLOWS</p> | <p>TARGET 16-5</p>  <p>SUBSTANTIALLY REDUCE CORRUPTION AND BRIBERY</p> | <p>TARGET 16-6</p>  <p>DEVELOP EFFECTIVE, ACCOUNTABLE AND TRANSPARENT INSTITUTIONS</p> |
| <p>TARGET 16-7</p>  <p>ENSURE RESPONSIVE, INCLUSIVE AND REPRESENTATIVE DECISION-MAKING</p> | <p>TARGET 16-8</p>  <p>STRENGTHEN THE PARTICIPATION IN GLOBAL GOVERNANCE</p> | <p>TARGET 16-9</p>  <p>PROVIDE UNIVERSAL LEGAL IDENTITY</p> | <p>TARGET 16-10</p>  <p>ENSURE PUBLIC ACCESS TO INFORMATION AND PROTECT FUNDAMENTAL FREEDOMS</p> | <p>TARGET 16-A</p>  <p>STRENGTHEN NATIONAL INSTITUTIONS TO PREVENT VIOLENCE AND COMBAT TERRORISM AND CRIME</p> | <p>TARGET 16-B</p>  <p>PROMOTE AND ENFORCE NON-DISCRIMINATORY LAWS AND POLICIES</p> |

16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

SUSTAINABLE DEVELOPMENT GOAL 16- PEACE, JUSTICE AND STRONG INSTITUTIONS

Sustainable Development Goal 16 seeks to advance the promotion of peaceful and inclusive societies by ensuring universal access to justice and fostering the development of effective, accountable, and inclusive institutions across all levels of governance.



Fig 17. The Economic Cost of Violence **Source:** Economic Value of Peace 2021: Measuring the global economic impact of violence and conflict, 2021.

Advancements in the promotion of peace and justice, coupled with the cultivation of effective, accountable, and inclusive institutions, represent a significant global challenge. In 2019, violence incurred a cost equivalent to 10.5% of the Gross Domestic Product of the world (\$1,895 per person) (United Nations Global Compact, 2017. p. 153). Despite a decline in homicides and improved global access to justice for citizens, there has been a notable increase in violent conflicts in recent years.

Moreover, the International Monetary Fund estimated the annual economic toll of bribery alone to range between \$1.5 to \$2 trillion in 2016 (United Nations Global Compact, 2017. p. 153). The detrimental impact of bribery and corruption is evident in impeded business growth, elevated transaction costs, and the creation of an uneven playing field. These consequences, in turn, contribute to social instability, foster mistrust in public officials and institutions, and erode the foundations of the rule of law. Notably, an estimated 4 billion people worldwide continue to reside beyond the protective reach of legal frameworks.

16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

THE BUSINESS CASE FOR THE SDG 16 – PEACE, JUSTICE AND STRONG INSTITUTIONS

Businesses bear a crucial responsibility in upholding and promoting peace, justice, and robust institutions globally and within their operating countries. An increasing number of business leaders acknowledge their pivotal role in advancing anti-bribery and corruption initiatives, as well as supporting peace and the rule of law. It is emphasized that their efforts should complement, not replace, government actions.

Enterprises can exhibit proactive engagement with ethical imperatives through **adherence to legal frameworks** and fostering **collaborative partnerships with pertinent stakeholders** encompassing governmental bodies, civil society entities, and non-governmental organizations. Furthermore, enterprises may **adopt a stringent stance against instances of violence, exploitation, abuse, and corrupt practices**, undertaking comprehensive assessments of both direct and tangential ramifications stemming from their operational and supply chain activities. Additionally, corporate entities can manifest **commitment to fostering accountable and inclusive institutional frameworks**, actively participating in initiatives aimed at peace consolidation, and fortifying administrative capabilities within the public domain. This may encompass the **deployment of technological advancements, expertise enrichment endeavors, and logistical facilitation within areas afflicted by conflict and humanitarian exigencies**.

The research delineated in the publication "Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict," has substantiated the efficacy of endeavors aimed at peacebuilding and the preservation of peace in terms of both human lives and economic resources. The study underscores that intensified preventive measures have the potential to generate substantial net savings, ranging from \$5 billion to \$70 billion annually. Moreover, it posits an estimate indicating that **for each dollar allocated to prevention initiatives, a noteworthy sum of \$16 could be saved in crisis mitigation expenditures** (United Nations General Assembly, 2022. p, 4).

16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

PRACTICAL EXAMPLES OF THE SDG 16 – PEACE, JUSTICE AND STRONG INSTITUTIONS BUSINESS CASE

Nestlé: Contribution to Post-War Reconstruction Through Dairy Development (UN Global Compact & Principles for Responsible Investment (PRI), 2013. p, 48.)



Nestlé is a leading global nutrition, health, and wellness company headquartered in Switzerland. The subsidiary of Nestlé in Sri Lanka, Nestlé Lanka, has been operating in the country for over 100 years and is one of the top food and beverage companies in the country.

Sri Lanka experienced a 30-year civil war ending in 2009. Despite the end of the conflict, the Northern and Eastern provinces, most affected by the war, lagged in growth and development. Recognizing the need for post-war reconstruction, Nestlé Lanka aimed at creating shared value by **enhancing dairy production while contributing to the socio-economic development of local farmers and communities. By investing in the dairy sector, Nestlé Lanka not only sought to address milk shortages but also to foster economic stability and empower marginalized groups.**

To achieve these goals, Nestlé Lanka implemented various strategies, including training farmers in best practices, providing financial assistance and incentives for infrastructure development, and establishing milk collection points and chilling centers. These efforts increased local milk production and also generated employment opportunities, particularly in rural areas, and supported the resettlement of internally displaced persons, thus contributing to peacebuilding and social cohesion. Furthermore, the commitment of Nestlé Lanka to human rights and ethical business practices was evident through its Human Rights Impact Assessment and compliance with international standards. By ensuring fair treatment of farmers and fostering transparent

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communication channels, Nestlé Lanka promoted accountability and trust, essential elements for building strong institutions and fostering peace and stability.

In essence, the dairy development initiative of Nestlé Lanka stands as a compelling example of a business case for SDG 16, specifically enhancing its **Target 16.1 Reduce Violence Everywhere** and **Target 16.6 Develop Effective, Accountable and Transparent Institutions at All Levels**. By aligning corporate objectives with societal needs and promoting peace, justice, and strong institutions, Nestlé Lanka addressed milk shortages and, through this, gained a new market share and enhanced local livelihoods but also contributed to post-war reconciliation efforts and social cohesion.

Holcim: Fostering Peace by Securing Safety (UN Global Compact & Principles for Responsible Investment (PRI), 2013. p. 29.)



Holcim is a multinational corporation headquartered in Switzerland. The company's operations span various sectors, encompassing the manufacturing and distribution of cement, as well as the production, processing, and distribution of aggregates such as crushed stone, gravel, and sand.

The incorporation of SDG 16 into the business model of Holcim Philippines is vividly demonstrated through its implementation of **Target 16.1, which desires to Reduce Violence Everywhere** and **Target 16.4, which aims to Combat Organized Crime**, and **Target 16.b, focused on Strengthening National Institutions to Prevent Violence and Combat Terrorism and Crime**.

In July 2005, the Holcim facility situated in Norzagaray, Bulacan, approximately 45 kilometers north of Manila, fell victim to an assault perpetrated by a group of 20 to 30 armed individuals associated with the New 'People's Army (NPA), a communist insurgent faction. This incident resulted in significant damage, estimated at \$120,000, due to the deliberate ignition of the equipment of Holcim. Subsequently, an inadvertent discharge

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of a weapon occurred at another Holcim operational site in the ensuing years, compounding the security challenges faced by the company. The incidents were followed by other instances with the same kind of violent nature.

In response to security challenges faced, Holcim Philippines took decisive actions to mitigate risks and enhance safety. One significant measure was the adoption of a strict no-firearms policy across all its plants and sites nationwide. **By prohibiting security guards from being armed and implementing stringent selection criteria for security contractors, Holcim Philippines ensured compliance with its security policy while fostering a safer working environment. This move not only reduced the risk of armed attacks but also minimized operational issues, further damages, and potential harm to employees due to misfires, resulting in tangible corporate benefits through cost savings and improved employee safety.**

Furthermore, Holcim Philippines conducted a comprehensive impact assessment in 2011, involving extensive consultations with stakeholders to identify and address security-related risks. This assessment led to adjustments in security protocols and intensified community engagement initiatives, such as community visits, volunteering activities, and partnerships with local authorities and human rights organizations. These proactive measures enhanced the effectiveness of the no firearms policy as well as strengthened collaboration among company stakeholders, including employees, guards, police, and local communities, thereby reinforcing societal cohesion and trust in national institutions.

By investing in the reduction of violence and organized crime and strengthening national institutions to prevent violence and crime while reaping corporate benefits such as **cost reduction** and enhanced safety, Holcim Philippines sets a compelling example of how businesses can drive positive social impact while achieving long-term financial viability.

16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

Aid Effectiveness

Partnerships for the Goals

Collaboration

Multi-stakeholder Engagement

Global Solidarity

Capacity Building



17 PARTNERSHIPS FOR THE GOALS

TARGETS: SDG 17- PARTNERSHIPS FOR THE GOALS

| | | | | | | |
|--|---|---|--|--|--|--|
| <p>TARGET 17-1</p>  <p>MOBILIZE RESOURCES TO IMPROVE DOMESTIC REVENUE COLLECTION</p> | <p>TARGET 17-2</p>  <p>IMPLEMENT ALL DEVELOPMENT ASSISTANCE COMMITMENTS</p> | <p>TARGET 17-3</p>  <p>MOBILIZE FINANCIAL RESOURCES FOR DEVELOPING COUNTRIES</p> | <p>TARGET 17-4</p>  <p>ASSIST DEVELOPING COUNTRIES IN ATTAINING DEBT SUSTAINABILITY</p> | <p>TARGET 17-5</p>  <p>INVEST IN LEAST DEVELOPED COUNTRIES</p> | <p>TARGET 17-6</p>  <p>KNOWLEDGE SHARING AND COOPERATION FOR ACCESS TO SCIENCE, TECHNOLOGY AND INNOVATION</p> | <p>TARGET 17-7</p>  <p>PROMOTE SUSTAINABLE TECHNOLOGIES TO DEVELOPING COUNTRIES</p> |
| <p>TARGET 17-8</p>  <p>STRENGTHEN THE SCIENCE, TECHNOLOGY AND INNOVATION CAPACITY FOR LEAST DEVELOPED COUNTRIES</p> | <p>TARGET 17-9</p>  <p>ENHANCE SDG CAPACITY IN DEVELOPING COUNTRIES</p> | <p>TARGET 17-10</p>  <p>PROMOTE A UNIVERSAL TRADING SYSTEM UNDER THE WTO</p> | <p>TARGET 17-11</p>  <p>INCREASE THE EXPORTS OF DEVELOPING COUNTRIES</p> | <p>TARGET 17-12</p>  <p>REMOVE TRADE BARRIERS FOR LEAST DEVELOPED COUNTRIES</p> | <p>TARGET 17-13</p>  <p>ENHANCE GLOBAL MACROECONOMIC STABILITY</p> | <p>TARGET 17-14</p>  <p>ENHANCE POLICY COHERENCE FOR SUSTAINABLE DEVELOPMENT</p> |
| <p>TARGET 17-15</p>  <p>RESPECT NATIONAL LEADERSHIP TO IMPLEMENT POLICIES FOR THE SUSTAINABLE DEVELOPMENT GOALS</p> | <p>TARGET 17-16</p>  <p>ENHANCE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT</p> | <p>TARGET 17-17</p>  <p>ENCOURAGE EFFECTIVE PARTNERSHIPS</p> | <p>TARGET 17-18</p>  <p>ENHANCE AVAILABILITY OF RELIABLE DATA</p> | <p>TARGET 17-19</p>  <p>FURTHER DEVELOP MEASUREMENTS OF PROGRESS</p> | | |

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SUSTAINABLE DEVELOPMENT GOAL 17- PARTNERSHIPS FOR THE GOALS

Partnership and cooperation are indispensable elements for the realization of the Global Goals. The international community has actively advocated for the establishment of collaborative frameworks among stakeholders, encompassing businesses, to collectively attain shared objectives. The attainment of the SDGs is contingent upon the cultivation of partnerships that strategically capitalize on the inherent strengths and competencies of each partner. Only through the forging of such alliances can the ambitious aspirations embedded in the SDGs be effectively realized (United Nations Global Compact, 2017. p, 162).

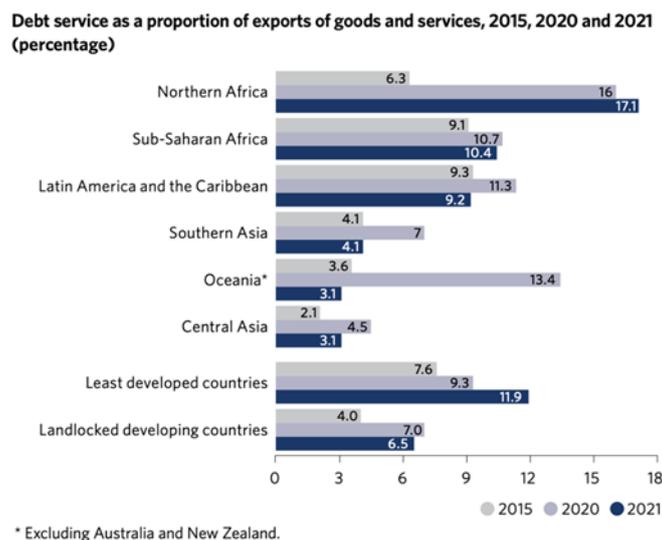


Fig. 18 Debt Services as a Proportion of Exports of Goods and Services Source: The Sustainable Development Goals Report Special edition, 2023. p. 47.

In the aftermath of the COVID-19 pandemic, many developing countries are confronting a severe debt crisis characterized by record-high debt levels and escalating economic risks. The total external debt of low- and middle-income countries soared to \$9 trillion in 2021, primarily driven by an increase in short-term debt. This surge has been

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exacerbated by challenges such as high inflation, competing fiscal priorities, and rising borrowing costs. As of November 2022, over half of the world's poorest countries, comprising 37 out of 69 nations, are either at high risk of or already experiencing debt distress, highlighting the urgent need for intervention to address this critical issue. A problem that critically aggravates one of the most important targets of SDG 17, target 17.4 (Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief, and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress).

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THE BUSINESS CASE FOR THE SDG 17- PARTNERSHIPS FOR THE GOALS

Companies emerge as significant contributors within the spectrum of SDG stakeholders, offering a set of competencies, know-how, resources, knowledge access, and innovation capacities. However, the transformative potential of the 2030 Agenda cannot be reached through solitary corporate endeavors alone. To underpin the achievement of the SDGs across diverse geographies, companies should collaborate alongside national and regional governmental bodies, multilateral institutions, civil society actors, and scientific establishments. This collective effort is geared towards engendering and nurturing multi-stakeholder partnerships that foster the mobilization and dissemination of knowledge, expertise, technologies, and financial resources.

At a foundational level, all companies should strive to comprehend the pivotal partnerships pertinent to their operational framework and actively engage where their contributions hold substantive significance. Distinguished companies can spearhead and bolster collaborative initiatives by **channeling financial resources towards sustainable development, facilitating the exchange of technological insights and knowledge dissemination** across developing regions, undertaking capacity enhancement endeavors, and leading the establishment of consortia aimed at fostering innovative technologies and business paradigms. Moreover, companies can prioritize the **inclusion of marginalized communities**. These partnerships should be anchored in fundamental principles and tailored to address prevailing needs, leveraging local capacities and ensuring transparency, accountability, and inclusivity.

Taking action towards Goal 17, and thus advancing all Global Goals, emerges as imperative for business prosperity. Substantial revenue prospects and cost-saving potentials stem from business modalities that integrate respect for human rights and environmental stewardship. These benefits can be fully realized through collaborative endeavors with diverse stakeholders. **Partnerships facilitate the exchange of**

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information, knowledge, and technologies, thereby enhancing risk mitigation, safeguarding value, and identifying mutually beneficial business prospects.

PRACTICAL EXAMPLES OF THE SDG 17- PARTNERSHIPS FOR THE GOALS BUSINESS CASE

NOS and Grupo Luz Saúde: Creating Connections with the First 5G Hospital Project in Lisbon



In pursuit of its overarching corporate strategy, centered on unequivocal leadership in the 5G domain, NOS, a telecommunications company, and Grupo Luz Saúde, both Portuguese companies, collaborate in the initiation of the first 5G Hospital project, thereby exemplifying the creation of a business case by aligning with SDG 17 and generating added value. The primary objective of the first 5G Hospital project is to underscore the transformative potential of 5G technology within the healthcare sector, aligning with the technological metamorphosis in healthcare provision. This initiative, anchored in the principles of connectivity and the utilization of artificial intelligence, not only aligns with the strategic vision of NOS but also exemplifies a strategic partnership aimed at showcasing the societal applications of cutting-edge technology.

The partnership with Grupo Luz Saúde opens avenues for future healthcare practices by fostering technological advancements in medical research and healthcare provision. The project facilitates simulations of remote operations and remote training for medical professionals, thereby contributing to the enhancement of medical expertise. Implemented in the Hospital da Luz in Lisbon, the early stages of 5G technology integration are evident in the training programs for both students and professionals. Virtual reality applications are leveraged to create novel scenarios and virtual environments for training, diagnosis, and treatment, showcasing the tangible impact of

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5G on healthcare education and practice (Target 17.6 Knowledge Sharing and Cooperation For Access to Science, Technology, and Innovation).

Moreover, the incorporation of 5G technology extends to palliative care within the hospital, fostering connections between patients and their homes and enabling greater proximity to their families. The agility afforded by 5G in the operational and technical functions of the hospital is transformative, culminating in the conversion of the facility into a "smart building." (Target 17. G Enhance the Global Partnership for Sustainable Development). The remote monitoring and control of systems optimize operational costs and time efficiency, leading to cost reduction while aligning with the principles of sustainable development embedded in SDG 17.

This collaborative project exemplifies the core business values of both NOS and Grupo Luz Saúde, as the technology of NOS is strategically employed to enhance the provision of health services by Luz Saúde, generating a new business model (Target 17.17 Encourage Effective Partnerships). In doing so, the companies strengthen their respective business positions, while simultaneously contributing to societal well-being. Through their joint action, they actively contribute to the advancement of the 2030 Agenda, showcasing how the incorporation of SDG 17 into business strategy can create added value for both the companies involved and the broader community.

Vale and Espírito Santo State: Building a Symbiotic Climate Resilience



Vale, a leading Brazilian metals and mining company, has showcased a compelling business case for Sustainable Development Goal 17 - Partnerships for the Goals, through its collaboration with the state Government of Espírito Santo, by actively tackling SDG 13-Climate Action (Target 17.6 Enhance the Global Partnership for Sustainable Development, and Target 17.17 Encourage Effective Partnerships).

The Tubarão port, a crucial asset for Vale's operations, faced significant risks from extreme weather events, including storms and strong winds, which have been further intensified by the effects of climate change. These extreme weather and climate-related

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events encompass intense storms and strong winds, such as those experienced in 2010, which resulted in the failure of two ship unloaders, leading to a temporary shutdown of Tubarão port operations, and ultimately, an increase of expenders.

These hazards not only disrupted operations but also posed safety concerns for personnel and assets. **Recognizing the need for proactive measures, Vale partnered with the Government of Espírito Santo to establish the Capixaba Hydrometeorological Monitoring Center (CCMH).**

The implementation of the CCMH equipped Vale with state-of-the-art weather forecasting capabilities. Through a network of long-range radar, automatic weather stations, and powerful computational systems, Vale gained access to real-time weather data and forecasts. This technological infrastructure empowered Vale to anticipate extreme weather events, enabling timely decision-making and risk mitigation. Vale contributed to enhancing the overall capabilities of the Operational Control Center (CCO), enabling the state government's Civil Defense department to effectively mitigate high-impact weather events in all 78 cities across the state, where reconstruction costs, following the 2013 natural hazards, exceeded 289 million dollars. SDG 17 emphasizes the importance of technology transfer and capacity-building, which were integral to this initiative. In addition, Vale also participated in and sponsored a series of studies aimed at comprehensively understanding the risks posed by climate change to both the mining industry and the local region of Southeast Brazil. Organizations partnered with Vale for this research included LABHIDRO, from the Institute of Astronomy, Geophysics, and Atmospheric Sciences (IAG) (**Target 17. 6 Knowledge Sharing and Cooperation for Access to Science, Technology and Innovation, and 17. 18 Enhance the Availability of Reliable Data**).

This case demonstrates the strength of partnerships between the private and the public sectors. Here, both Vale and the state of Espírito Santo, as well as other organizations, came together to tackle a common issue posed by extreme weather events, that resulted in different challenges and benefits for these entities. By joining efforts and working in partnership towards resilience regarding climate change, tackling SDG 13, Vale was able to reduce costs from the natural hazards inflicted by climate change, and

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the state of Espírito Santo was able to enhance the safety of its population and avoid reconstruction costs caused by climate-induced phenomena.



CONCLUDING REMARKS

Aligning business strategies with the SDGs presents a compelling business case for companies across various industries. By integrating SDG targets into their operations, companies can not only contribute to global sustainability efforts but also realize significant advantages such as cost reduction, increased prices, expanded market share, and the creation of innovative business models. Embracing the SDGs enhances corporate reputation and brand value and fosters long-term resilience and competitiveness in a rapidly changing global landscape.

It becomes clear that companies are not solely concerned with short-term returns but often prioritize anticipating and mitigating future business implications associated with phenomena such as water scarcity, biodiversity loss, or climate change, which appear to worsen over time. This strategy is aimed at securing the resources and scenarios that form the foundation of their core business operations. By acting in this manner in the present, they aim to ensure a sustainable future, recognizing the interconnectedness between their actions today and the viability of their operations tomorrow.

Another notable observation stemming from our research into practical examples of business cases for the SDGs is that a significant majority of companies exhibit commendable sustainability practices. However, there is a prevalent trend among these companies to either not communicate these practices beyond mandatory reports or not frame them within the SDG framework. One of the more evident challenges encountered throughout the development of this written piece was the scarcity of practical business cases that effectively demonstrate the benefits of sustainability initiatives. Many companies appear hesitant to showcase the advantages these initiatives could



bring to their businesses. There is a prevailing fear that consumers might misconstrue their efforts to achieve a balance between profit and purpose as mere *socialwashing* or *greenwashing* tactics. Overcoming this hesitancy requires transparent communication to build trust with consumers. By dispelling misconceptions and demonstrating tangible benefits, companies can navigate toward a more sustainable future while fostering a deeper connection with their stakeholders.

As businesses continue to recognize the interconnectedness between sustainable development and economic prosperity, embracing the SDGs becomes not only a moral imperative but also a strategic business imperative for future success.

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