



THE BUSINESS CASE FOR THE GREEN ECONOMY

Sustainable Return on Investment

UNITED NATIONS ENVIRONMENT PROGRAMME



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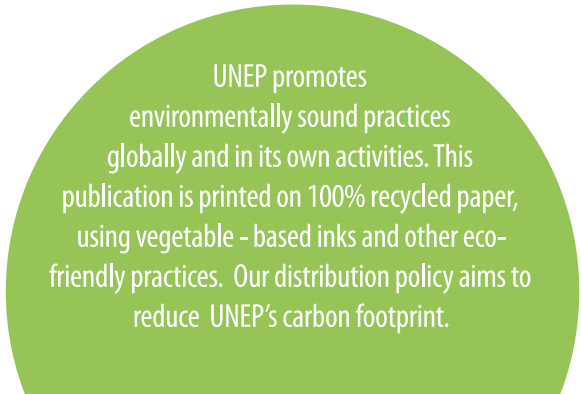
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Foreword

by UNEP

In a world where resources are gathered in one country, processed in another, then sold as products manufactured in yet another, there can be no doubt that protecting our planet, and the resources it provides, is imperative. We live in a world now so interconnected that a drought or flood in one part of the globe can soon challenge supply chains or move commodity markets in another with profound implications for the poor and the vulnerable.

It thus makes sense that as we switch to a more resource efficient and Green Economy – one in which economic growth, social equity and human development go hand-in-hand with environmental security – business and industry will be a key driving force. People, planet, profit is the mantra already adopted by many companies in the pursuit of corporate sustainability, but if we are to truly transform the economic paradigm then it needs to be adopted by many, many more. From corner stores, to medium-sized enterprises and international conglomerates, there needs to be an understanding that nature provides us with valuable resources and services that must be accounted for, and that it is only by safeguarding these resources and services that we improve our own livelihoods and those of future generations.

This report clearly shows that business cannot afford to ignore the benefits that switching to a Green Economy will bring. Compelling economic and scientific data demonstrate the advantages for the financial bottom line, and a wide-ranging collection of case studies gives real-world examples of the Green Economy in action.

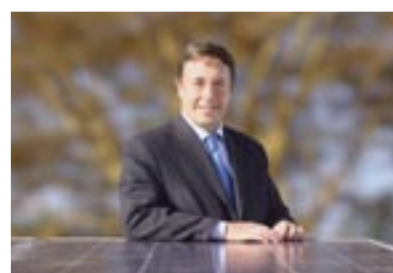
For many businesses the benefits of a Green Economy will not be news, for they have already made the switch or are in transition. PUMA with its Environmental Profit and Loss Account is able to quantify the economic risk (€145 million in 2010) from environmental impact along the supply chain; Kenya's Equity Bank has joined with partners to provide loans to farmers enabling access to water-efficient irrigation technology at a low interest rate and has increased the bank's profit by almost 30 per cent in a year; the Colombian Coffee Growers Federation ensures a sustainable income for more than 27,000 coffee growers with its Rainforest Alliance certified coffee; and Unilever has launched a Sustainable Living Plan which is set to integrate sustainability as the key driver into its business model. For these enterprises, all brave enough and innovative enough to be early leaders, the Green Economy is more than a theory; for them, it is a practice already reaping rewards for them, their customers and communities.

The United Nations Conference on Sustainable Development, Rio+20, provides an unprecedented opportunity to scale-up and accelerate these efforts. As governments gather to consider the Green Economy in the context of sustainable development and poverty alleviation, and the kind of frameworks they need to put in place to protect the future, we invite business to step up and show the role it can play in generating decent jobs, in developing energy efficient technologies and industrial processes, in greening its supply chains and in integrating environmental, social and governance principles throughout their lending, investment and insurance decision-making.

Business has long been a leader. Its ability to embrace ideas, to innovate, to conceptualize and develop solutions in the form of new products and services is something that we will need to emulate at all levels of society if we are to achieve a Green Economy transformation.

Achim Steiner

UN Under-Secretary General and Executive Director
United Nations Environment Programme



Foreword

by SustainAbility and GlobeScan

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Ten years ago UNEP and SustainAbility collaborated on a research report titled *Buried Treasure – Uncovering the business case for corporate sustainability*. In the time since the report's release, the evidence that sustainability is good for business has accumulated. While the treasure is no longer buried, it remains, to a large degree, unclaimed.

Over the 25 years that GlobeScan and SustainAbility have worked on corporate sustainability, we have witnessed time and again the multiple ways that sustainability delivers business value to companies that adopt it as a strategic principle. There is no doubt in our minds: there is a clear business case for an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities – a Green Economy. In fact, the long-term prosperity of businesses is tied directly to our ability as a society to make the transition.

It won't be easy. The survey that we conducted for this project identifies real and significant barriers to the transition, the most prominent of which is the short-term thinking which pervades businesses, governments and consumers. The solutions are neither simple nor quick. *The Business Case for the Green Economy*, however, makes a compelling case for bolder, faster and more substantive change – a transition to a Green Economy that is an essential condition of future business success.

Jeff Erikson

Senior Vice President, SustainAbility



Chris Coulter

President, GlobeScan





Facts and Figures:

- General Motors saved more than US\$ 30 million in 6 years through their resource productivity programme, they also reduced waste volume by 40 per cent.¹
- In the offshore wind sector alone, employment in Europe is projected to grow to 150,000 by 2020 and to over 200,000 by 2030.
- Grupo Bimbo in Mexico saved approximately US\$ 700,000 and 338,400 m³ of water in 3 years through its water reduction programme.
- Markets for biodiversity offsets are predicted to grow to US\$ 10 billion by 2020.
- Global revenues for companies involved in the renewable energy markets are projected to rise to more than US\$ 300 billion annually by 2020.
- Evidence shows that employee engagement can deliver significant productivity gains.

In 2011 UNEP produced a report titled *Towards a Green Economy*. It described an economy that results in improved human well-being as well as social equity, while significantly reducing environmental risks and ecological scarcities.² The report proposed a development pathway for policy makers to transition to a Green Economy that is low carbon, resource efficient and socially inclusive, and whose growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, prevent the loss of biodiversity and ecosystem services and contribute to poverty alleviation. It demonstrates that a Green Economy will stimulate new markets, create more jobs, generate higher rates of GDP growth in the medium term, improve returns on investments, and reduce individual and collective risk, all whilst strengthening environmental, social and human capital.³

The Business Case for a Green Economy, complements and extends the 2011 report. Written for a corporate audience, it illuminates and clarifies the business benefits to companies that pro-actively participate in – perhaps even lead – the transition. Numerous examples and compelling empirical data demonstrate how business strategies that reflect the attributes of a resource efficient and green economy can positively impact the financial metrics of companies of all sizes.

These examples from both developed and developing countries, demonstrate how integrating sustainability into core business activities can generate a positive return on investment. Returns that go beyond the financial component and contribute to the socio-economic and environmental framework conditions necessary for business to grow and operate successfully.

An extensive body of research has been conducted to create this business case publication. Sources include UNEP's wider Green Economy Initiative work, UNEP's partner organizations, and the wider business community. Numerous case studies included in this report reflect a new Green Business Case Model to demonstrate how actions taken by companies to improve their environmental impacts result in improvements to leading indicators of financial success, which result in improvements to six key financial metrics:⁴

6 key financial metrics

- Sales growth
- Duration of sales
- Capital expenditure
- Profit margin
- Tax rates
- Cost of capital

¹ World Business Council for Sustainable Development (WBCSD) (2008). *Sustainable Consumption Facts and Trends – From a Business Perspective*. Geneva: WBCSD. Available at: <http://www.wbcsd.org/pages/edocument/edocumentdetails.aspx?id=142&nosearchcontextkey=true>.

² United Nations Environment Programme (UNEP) (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Available at: <http://www.unep.org/greeneconomy>.

³ Ibid. See also: Organization for Economic Cooperation and Development (OECD) (2011). *Towards Green Growth. A Summary for Policy Makers*. Paris: OECD.

⁴ These metrics are combined into three overall financial drivers in the Green Business Case Model: sales growth and duration; reduced capital expenditure and improved profit margin; and preferable taxation and reduced cost of capital.



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As this report makes evident, the benefits to business of adopting greener and resource efficient practices are obvious, and the consequences to business of ecosystem collapse are disastrous. So, why are sustainability strategies not more widely adopted? Significant barriers remain, most notably the deep-seated financial short-termism that exists in businesses, markets and governments. In addition, many policies, subsidies and incentives offered by governments and markets reward or encourage behaviours and decisions that increase, rather than decrease, environmental impacts. However, as pressure on ecosystems and natural resources increases, changes in public policy, customer preferences, and technology will drive the market for improved environmental performance. Businesses with the foresight to get in front of these changes will gain a competitive advantage. It is estimated that the annual financing demand required to create the Green Economy is in the US\$ 1-2.5 trillion range.⁵ This level of investment represents an enormous opportunity for the private sector to provide the infrastructure, equipment, goods and services that will drive the transition. With this in mind, investors are increasingly considering environmental performance as a proxy for management quality.

The transition to a Green Economy is not an easy path. It is characterized by step changes in resource efficiency and a shift in emphasis from shareholder value to stakeholder value. Some companies, and perhaps whole industries, will not survive the transition. Success over the long-term will require new skills, diverse collaborations, continuous innovation, investments with uncertain returns, and a change in what the market values. Companies, like governments, will need to choose wisely if they are to capitalize on the opportunities it brings.

“

“In a world of constrained resources Unilever sees the only way to double the size of our business is to decouple our growth from our environmental impact. We can do this by making sustainable living the driver of everything we do.”
UNILEVER



The Business Case for the Green Economy at a glance:

Decoupling environmental impact enables companies to position themselves for sustainable business growth. The Green Business Case Model identifies actions companies can take to drive leading indicators of performance and improve financial value drivers.⁶

Green Economy benefits to business include:

- More resilient supply chains
- New investment opportunities
- Increased consumer demand for sustainable goods and services
- Sales growth and duration of sales
- Training and job creation
- Reduced dependency on natural resources
- Mitigation against the negative financial risk from environmental impact

⁵ UNEP (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Available at: <http://www.unep.org/greeneconomy>.

⁶ Please refer to page 10 for the Green Business Case Model.

The gathering of leaders from government, business and civil society at the Rio+20 United Nations Conference on Sustainable Development presents a historic opportunity to accelerate the transition to a Green Economy. Positive business engagement in the conference is critical. Indeed, while public policy is an essential ingredient in making the Green Economy a reality, it is the actions of the private sector that will ultimately determine whether and how quickly it occurs.

Business actions:

- *Enhance resilience and business growth by adopting alternative valuation techniques:* Traditional monetary valuation techniques fail to capture the value of supplies from nature. Alternative techniques more adequately value human, social and natural capital.
- *Drive policy change:* Companies can also drive policy change for market-based regulations of environmental “bads” and cuts in public funding in sectors that deplete natural capital. This can create opportunities for responsible business investing in the technology innovations and entrepreneurship that these new markets require.
- *Move from shareholder to stakeholder value considering the wider operating framework:* Businesses are achieving competitive advantage by looking at their company as part of a wider network of stakeholders and engaging them to make better informed decisions.
- *Ensure employee engagement and enhance resource productivity:* Creating incentives and mechanisms to embed sustainability within company culture in all operations will reap more societal benefits and resource efficient outcomes.
- *Establish sustainability as a permanent item on the Board agenda and communicate its value to investors and consumers:* By placing sustainability at the core of governance, leading companies are planning for the implications of the transition to a Green Economy. Making the link between sustainability and financial reporting will enable the value to be better communicated to investors and consumers

As companies anticipate and drive the transition to a Green Economy, the business case will grow. So the question is: why wait?



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The Green Economy provides a clear opportunity to boost economic development at a time of low GDP growth and recession. Conventional methods to promote economic recovery are becoming more limited and therefore business and governments are seeking new ways to create long-term prosperity in a resource-constrained world. This transition requires a shift away from business-as-usual.

Drivers of change

Resource pressure

Driven by population growth and additional consumer pressure in emerging economies, global demand across all major environmental resources will increase over the coming years. Between 2010 and 2030, demand is projected to grow by 33 per cent for primary energy, by 80 per cent for steel,⁷ by 27 per cent for food (cereals) and by 41 per cent for water (see Figure 1).⁸ This combined with risks and environmental stresses derived from climate change, such as water and land availability and biodiversity loss, means that the pressures on these resources are considerable and likely to grow.

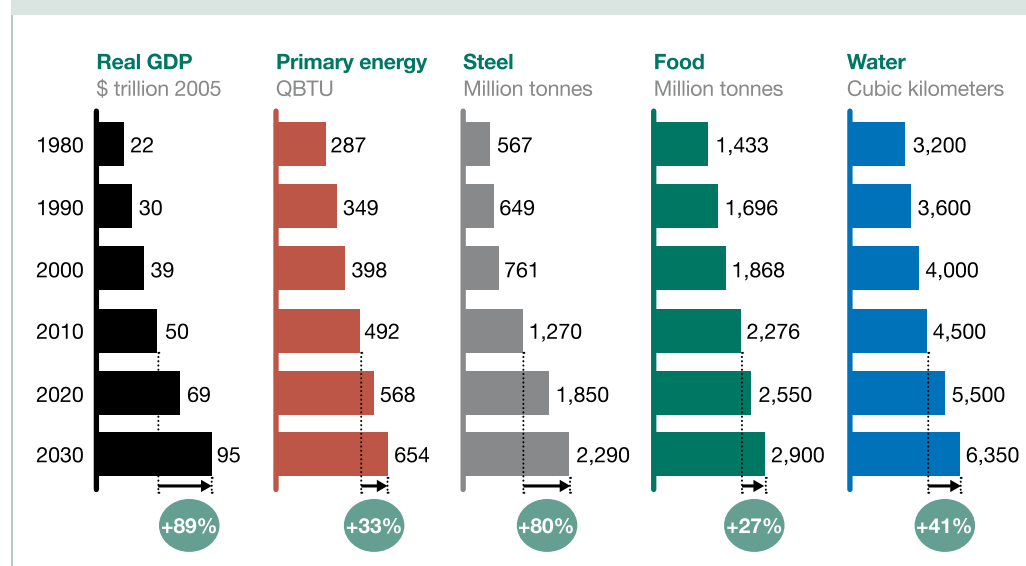
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The private sector is taking steps and indeed identifying business opportunities in the Green Economy because it is a process that requires multi-sectoral interventions, including financial intermediation. This is done by supporting sustainable environmentally friendly initiatives such as beekeeping as a business for honey production. This addresses food security as well as income generation for smallholder farmers in Africa.”

EQUITY BANK



Figure 1. Historical and estimated growth in demand for resources from 1980 to 2030.



SOURCE: McKinsey & Co Global Institute (2011). Resource Revolution: Meeting the world's energy, materials, food, and water needs, p. 35. New York. Available at: http://www.mckinsey.com/Features/Resource_revolution.

Constraints in production

Environmental factors are acting as constraints in production, particularly in the agricultural and energy sectors, heavily dependant on these resources. This confirms that business as usual over the long-term is simply unviable. Companies acting ahead of the game will be able to tap into most of the opportunities available, sustain growth and adjust to changes to the regulatory environment which, in turn, is responding to the growing evidence of environmental degradation.

⁷ Steel has been considered as proxy measure for resource consumption in the global economic context.

⁸ McKinsey & Co Global Institute (2011). Resource Revolution: Meeting the world's energy, materials, food, and water needs, ch. 2. New York. Available at: http://www.mckinsey.com/Features/Resource_revolution.

“

“By reducing environmental impacts, operations and suppliers can reduce exposure to rising costs as governments strengthen taxes to discourage further damage to nature. Understanding these implications can help to mitigate risk in the supply chain and also potentially channel investments to better manage these challenges. This in turn can help PUMA develop a more resilient business model.”
PUMA

Take the manufacturing sector for example. The sector is responsible for 35 per cent of electricity use, more than 20 per cent of CO₂ emissions and over a quarter of primary resource extraction, directly impacting economic growth, the environment and human health.⁹ By implementing sustainability measures the manufacturing sector can boost economic and environmental performance. Improving recovery and recycling, the adoption of closed-cycle manufacturing and extending the lifespan of manufactured goods can help to decouple this sector’s growth from its environmental impact. Examples of this are given throughout the report.

Remanufacturing operations worldwide already save 10.7 million barrels of oil each year. Sustainable production practices can reduce emissions and integrate by-products into the production value chain. As such, return on investment can be substantial and payback periods reduced. There are also positive implications for jobs through opportunities in secondary production.

Consumer demand

Many companies see sustainability as a key driver of innovation and new sales opportunities. Increasingly well-informed consumers are raising their expectations of the private and public sectors. Consumer demand for sustainable products is growing, and there is much untapped latent demand that can be unlocked by companies with a clear vision of a more sustainable future. Leading companies are using sustainability as a strategic driver, informing structural changes, and governance and investment decisions. However, the majority of businesses require more persuasion.

Critical choices

Critical choices need to be made now, to decouple economic growth from environmental impact and resource use, to prepare for the economic reality of tomorrow, and to enable business to seize the scale of the opportunity. To create resilient systems, substantial innovation is required. A more resource efficient and Green Economy provides the framework for a stronger and more sustainable business approach, at the heart of which lies the necessity to ensure sustained financial growth over the long-term.

A Green Economy requires step changes in resource efficiency, investment in clean technologies, the development of alternative products, services and materials, and the ability to obtain value from unavoidable waste. *Figure 2* shows the key material issues and summary implications for a number of selected sectors. Those at the forefront of this evolution are developing new governance models, enhancing management processes, and developing measurement and reporting tools that can more adequately account for the complexities of sustainability.

⁹ UNEP (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, p. 241-286. Available at: <http://www.unep.org/greeneconomy>.



Figure 2. Material issues and implications by selected sectors.

Sector	Material Issues	Implications for transition to Green Economy
Building and construction Housing; industrial and infrastructure construction	• Energy use and emissions • Materials use • Waste • Water • Health and safety	• Resource efficiency • Sustainable innovation • Life-cycle management
Food and Beverage Agricultural production; processing; food production; distribution; retail; and catering	• Overfishing • Increasing meat consumption • Environmental degradation • Health • Resource and energy use • Water • Waste • Worker rights	• Rebuild overfished and depleted fish stocks • Adopt resource-conserving practices • Focus on health and well-being • Improve supply chain conditions
Transport Air; rail; shipping; road vehicles	• Environmental degradation and land use • Alternative fuels • Road safety • Emissions	• Develop lighter vehicles • Increase emphasis on collective and intermodal travel • Increase use of technology to reduce impacts
Tourism Lodging; recreation; restaurants and bars; events; tourism services; culture; tours and excursions	• Environmental degradation • Socio-economic development • Heritage and culture • Water and resource use • Waste • Human rights	• Collectively manage resources between private and public partners • Improved valuation of heritage and culture
Extractives Mining of minerals and metals; oil and gas	• Environmental degradation • Energy and water use • Human rights • Host community benefits including employment, revenues and taxes • Health and safety	• Prepare for a shift in the pricing structure of resources • Increase energy efficiencies • Life-cycle resource management
Utilities Water and waste management; energy production and distribution	• Emissions • Nuclear power • Water use • Waste disposal	• Manage demand • Increase efficiencies • Develop renewable technologies at all scales • A shift in the pricing structure of resources • Waste to resource – reuse, recycling and energy recovery from waste

SOURCE: Two Tomorrows (2012). London.



Collaborative capitalism

Brand value benefits associated with sustainability are influencing business-to-business relationships and opportunities. Corporate customers with active sustainability strategies are placing significant demands on suppliers to meet new standards; for example, on product environmental performance and respecting human rights along the supply chain. We are entering an age of collaborative capitalism, where achieving business objectives are dependent on the creation of shared and common objectives. Stakeholder engagement, life-cycle thinking and value chain management all create the potential to collaborate with a common purpose – increasing resource efficiency and social cohesion.

The current business environment is one of intense competition, pressure on operating margins, and, in some high-profile cases, bankruptcies and business failure. This leads to mixed messages from policy makers and regulators. In efforts to support traditional industries, there are many examples of governments scrapping or scaling back regulatory incentives for sustainable innovation. However, many, including the World Business Council for Sustainable Development (WBCSD), recognize that the introduction of regulation and market incentives at scale can stimulate cleaner economies – the so-called ‘Green Race’.¹⁰ In the past decade, carbon markets have been developed in many countries and have helped to stimulate innovation and efficiency. The valuation and regulation of broader eco-system services may well follow this path.

The value proposition

Pioneering companies with vision create new markets and see the potential where others see risk and liability. Increasing consumer awareness drives demand for sustainable products, and globally expanding businesses see that this is particularly true of emerging markets. A National Geographic/GlobeScan 2010 survey of 17,000 people in 17 countries found that consumers in Brazil, India and China scored the highest in terms of increasing environmentally sustainable consumer behavior.¹¹ This is based on factors such as the energy and resources consumed per household and changes within the categories of personal transportation, food and consumer goods. The new lifestyle markets, markets for sustainable cities, the service markets, the organics and certified markets for aware consumers, are all examples of opportunities to be cultivated and seized.

This value proposition remains strong for all scales of enterprise including Small and Medium-sized Enterprises (SMEs). More sustainable products and services can help SMEs drive up quality and financial and socio-economic benefits. The demand is growing from a larger customer base – 3 billion middle class consumers alone are anticipated in the next decades – and changing public-sector expectations. Collaboration with them will help facilitate this change, building economies of scale.

¹⁰ WBCSD (2010). *The Green Race Is On* [online]. Available at: <http://www.wbcsd.org/Pages/EDocument/EDocumentDetails.aspx?ID=12772&NoSearchContextKey=true>.

¹¹ National Geographical Society and Globescan (2010). *Consumer Choice and the Environment. A worldwide tracking survey*. Toronto: GlobeScan and National Geographic Society.

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There is a compelling case for the transition towards a resource efficient and Green Economy. Decoupling is good for business: rather focus only on cost, an equally pertinent question is, 'to what extent do these actions have a positive impact?' The challenge is how business can justify sustainable decision-making.

The Green Business Case Model

The Green Business Case Model, as shown by *Figure 3* below, demonstrates the correlation between the greening of business and financial value creation and offers a framework to support this process. It highlights actions that improve business resilience, deliver enhanced financial performance, and, at the same time, support broader environmental and socio-economic goals.

The model suggests a circular chain of cause and effect. It has three components:

- 1 Taking action
- 2 Leading indicators
- 3 Financial value drivers



Figure 3. Green Business Case Model



SOURCE: UNEP, DTIE (2012). Paris.

Applying the model

Society has so far failed to translate the clear macro-economic case for sustainable development to a business case at enterprise level. The evidence throughout this report provides examples of how the model is being applied across a range of sectors, geographies and scales of enterprise. Though the business case is sound for all sizes of business, it may be useful to consider it across the value chain and at various scales.

The model highlights a virtual circle driven by the need for sales growth and duration; improved profit margin and reduced capital expenditure; and preferable tax and reduced cost of capital. All of these can be enhanced by taking sustainable actions that improve the leading indicators of business success. The following three sections provide some examples, illustrating the pathways that a number of companies are taking to develop business value and to help ensure long-term resilience. The strength of the Green Economy concept is that there are innumerable options for business to use financial value to drive improvements in leading indicators through a broad range of sustainable actions.¹² To assist the reader in understanding these pathways, **Sustainable Actions** are highlighted in green, **Leading Indicators** in blue and **Financial Value Drivers** are highlighted in red.

Section 3a examines how action areas can contribute to **Sales Growth** and **Duration** with a number of case studies. Section 3b addresses how **Reducing Capital Expenditure** and **Increasing Profit Margins** can flow from taking actions. Section 3c considers pathways that lead to **Preferable Taxation** and **Reduced Cost of Capital**.

3a. Sales Growth and Duration

As market and regulatory demand for sustainability grows, the business that makes effective use of tools such as **design for sustainability** and the delivery of more **sustainable goods and services** will be in a position to boost its ability to innovate and to **attract more customers**, which in turn will show positive results through **sales growth and duration**.

Attracting more customers

Consumer interest in sustainable products is progressing from early fears about assumed higher cost to a trend in which positive environmental and social elements are an inherent part of product quality. Recent survey results¹³ suggest that in future business-to-business (B2B) and business-to-consumer (B2C) customers and other stakeholders will expect all products to be environmentally and socially responsible. Demand has generally been resilient with many customers willing to pay a premium for sustainability credentials across most categories.

¹² These actions can include the range of sustainability tools and approaches that can assist in assessment, measurement, implementation and communication.

¹³ PricewaterhouseCoopers (PwC) (2011). *Sustainable Growth. 14th Annual Global CEO Survey*. Available at: <http://www.pwc.co.uk/ceo-survey/whats-on-the-mind-of-communications-ceos.jhtml>. See also: KPMG (2011). *International Survey of Corporate Responsibility Reporting 2011*. Amsterdam: KPMG.



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Attracting more customers depends on the effective promotion of the benefits of sustainable consumption, which can include:¹⁴

- a. **eco-innovation** and **design for sustainability** to deliver maximum societal value at minimum environmental cost
- b. choice influencing through marketing communications and awareness-raising campaigns
- c. choice editing by removing unsustainable options from the market place.

For example, product service models enable a move beyond business-as-usual approaches that encourage the quick disposal of products or “rapid obsolescence” and its related waste of resources. Business for Social Responsibility (BSR) argues that sustainable consumption can drive and define innovation in the world’s fastest growing markets, noting that nearly 80 million people are joining the middle class in emerging markets every single year.¹⁵ This shows the clear need to rethink how economic growth is pursued and business models applied. The reorientation of consumer choices and lifestyles will play a crucial role.¹⁶

Information across all markets and sectors is not always available, but most surveys and data indicate **sales growth**. For example, major markets for organic food and beverages have expanded by 10-20 per cent in the past decade.¹⁷ When done accurately and well, to robust standards, labels and certification can improve access to more reliable information and help to inform consumers and boost the uptake of more **sustainable goods and services**.

i

General Electric

saw sales of its Ecomagination products reach US\$ 18 billion in 2009, with the company predicting revenue growth from these products at twice the rate of the total company revenues over the five years to 2015.¹⁸



¹⁴ WBCSD (2011). *A vision for sustainable consumption - Innovation, collaboration, and the management of choice*. Geneva: WBCSD.

¹⁵ Business for Social Responsibility (BSR) (2010). *The New Frontier in Sustainability - The Business Opportunity in Tackling Sustainable Consumption*. San Francisco: BSR. See also: World Economic Forum (WEF) and Accenture (2012). *More with Less: Scaling Sustainable Consultation and Resource Efficiency*. Geneva: WEF.

¹⁶ UNEP (2011). *Paving the way for Sustainable Consumption and Production: The Marrakech Process Progress Report*. Available at: <http://www.unep.fr/scp/marrakech>.

¹⁷ Based on the data from Sahota, A. (2009). The Global Market for Organic Food & Drink. In: Willer, H. and Kilcher, L. (eds.) *The World of Organic Agriculture: Statistics and Emerging Trends 2009*. FIBL-IFOAM Report

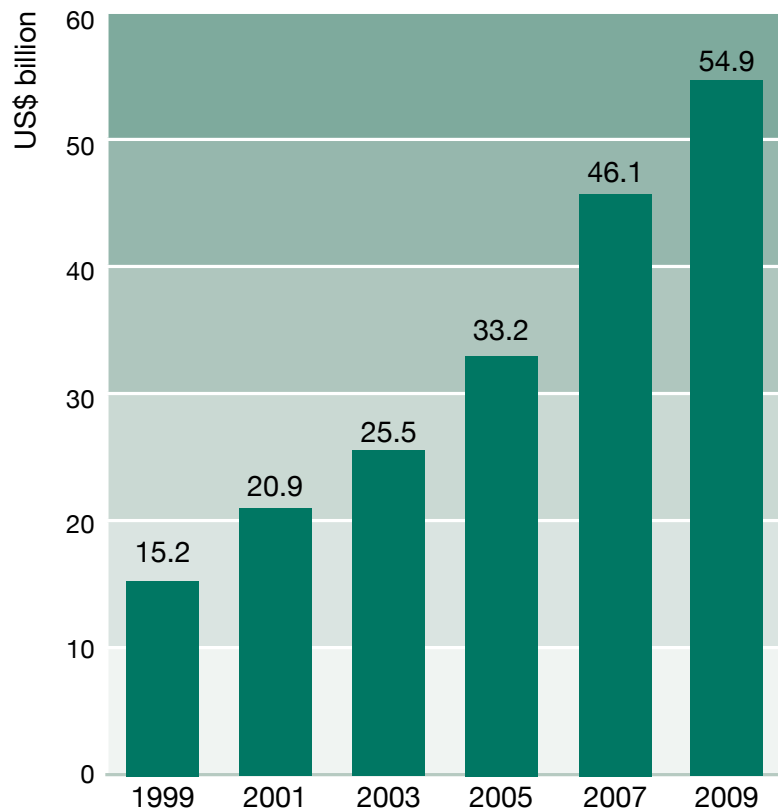
¹⁸ Porter, M. and Kramer, M. (2011). Creating Shared Value. *Harvard Business Review* (January-February), p. 53-67.



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Figure 4. Global trade in organic food and drinks (1999-2009).



SOURCE: Prepared by Asad Naqvi, Pratyancha Pardeshi based on the data from Sahota, A. (2009). Cited in Green Economy Report (UNEP 2011), p 49.

Businesses are in the position to proactively create and shape consumer demand and boost related sales. For example, Japanese insurance company *Sompo* created an innovative insurance product that enables Thai farmers to mitigate the risks of low rainfall, which triggers insurance payments. The company initiated a training and education programme for its consumer base, which, in turn, has opened new markets for its product.



© UN



Case: Sompo Japan Insurance Inc.



Public private partnerships can provide the enabling conditions and help manage risk in the transition to a Green Economy.

Project Example: Sompo Japan introduced a Weather Index Insurance in northeast Thailand in 2010. This product helps rice farmers reduce economic damage caused by drought. Mindful that the region is short of water resources and that its farmers often struggle to pay back loans, Sompo Japan developed the insurance product with Thailand's Bank for Agriculture and Agricultural Cooperatives (BAAC). If cumulative rainfall data published by the Thai Meteorological Department fall below a determined value, farmers receive insurance payments equivalent of up to 40 per cent of their insured loan. By using rainfall data as a trigger, the traditional need of actual damage investigation is not necessary. This enabled it to provide insurance coverage at an affordable price and also leads to immediate compensation for the loss of profit or expenses for preventing revenue decrease. The insurance is paid via the BAAC as policyholder to the farmers as insured parties.

Environmental/Social Value: Insurance solutions such as these are enabling communities to **manage risk** related to climate change and environmental stresses while sustaining their livelihood. This has enabled the company to **attract customers** and increase their **brand value**.

Financial Value Drivers: Sales Growth and Duration of Sales. Sompo Japan Insurance Thailand (SJIT) has expanded sales of the product to five provinces receiving 6,173 applicants in 2011. In 2012, four provinces will be added which brings the total sales area to nine provinces. The insurance programme of SJIT and BAAC is becoming widespread among farmers and the project has also enabled Sompo Japan to enter new markets abroad. Support from the Thai government has enabled an increase in the installation of secure weather stations which was effective for SJIT to launch the weather index insurance. This will make it easier for Sompo Japan Insurance to expand its business to other provinces.

Example of: Education and Training, Risk Management, Sustainable Goods and Services.

PROFILE

SECTOR:
Insurance

HEADQUARTERS:
Japan

ANNUAL SALES:
US\$ 15,112 million

NUMBER OF EMPLOYEES:
18,708

GEOGRAPHICAL PRESENCE:
164 cities in 28 countries



i

Promigas, Colombia improves customers 'ability to pay' for green products and services.

Based on its experience of providing natural gas connections to thousands of low-income households in Colombia through a downpayment scheme, Promigas introduced a new financing product to offer clients credit for making home improvements, such as increasing energy efficiency. Promigas has achieved net revenues of US\$ 30 million in 2010, up from US\$ 1.5 million in 2007 when the new financing product was started, and Earnings before Interest, Taxes, Depreciation, and Amortization (EBITDA) of US\$ 14 million.¹⁹

New markets

Considerable new market opportunities lie in developing sustainable business models that help improve the lives and environments of low-income consumers. Four billion people at the base of the pyramid, with annual incomes below US\$ 3,000 in local purchasing power, live in relative poverty yet represent a market of US\$ 5 trillion. Combined with the growing affluence of the new middle classes, emerging economies represent key market growth opportunities. **Unilever**, for example, expects 70 per cent of its business to come from Asia within 10 years.

Environmental policies and regulations are also creating new commercial opportunities, for instance through carbon and ecosystem service markets. Markets for biodiversity offsets are predicted to grow to US\$ 10 billion by 2020, and global revenues for companies involved in the wind, solar and biofuels markets have seen a ten-fold rise to US\$ 116 billion over the five years to 2008. Despite the setback in 2009, due to the global recession, the long-term prognosis is still for a rapid rise, to more than US\$ 300 billion annually by 2020.²⁰ As the **Siemens** case study illustrates, more efficient **clean technologies** at scale are increasingly competitive and driving **sales growth and duration**.



¹⁹ International Finance Corporation (IFC) (2011). *Inclusive Business Models – Guide to the Inclusive Business Models in IFC's Portfolio: Client Case Studies*. Washington, DC: IFC.

²⁰ Bishop, J. (ed.) (2011). *The Economics of Ecosystems and Biodiversity in Business and Enterprise*. London: Earthscan.



Case: Siemens AG, Germany – Offshore Wind

SIEMENS

The Green Economy offers growth potential and employment opportunities through the increased deployment of new clean technologies.

Project Example: More than half of the installed capacity of offshore wind turbines worldwide comes from Siemens (2,000MW). This capacity saves about 4 million tonnes of CO₂ annually, relative to conventional power generation. A recent project is Gunfleet Sands in the United Kingdom. The total capacity of 173 MW is equivalent to that generated by a large conventional power plant and it can cover supply power to about 120,000 households. Compared to fossil fuel-derived power, the wind park saves about 400,000 tonnes of CO₂ every year. Through the **eco-innovation** of **cleaner technologies** Siemens is **securing investment** and **attracting customers**.

Environmental/Social Value: Increasing the scale of renewable energy use is essential to mitigate the negative impacts on ecosystems and human health caused by the production and use of fossil fuels. In addition to the positive environmental effects, the expansion of renewables also has a positive impact on economic growth and job creation. In the offshore wind sector alone, employment in Europe is projected to grow to 150,000 by 2020 and to well over 200,000 by 2030.

Financial Value Drivers: **Sales growth and duration.** The expanding offshore wind industry is an example of an extensive market opportunity, with Germany intending to have 10,000 GW capacity installed by 2020 – this is 2.5 times the global amount today. The annual **growth** rate of installed capacity over the past decade has been 45 per cent. In 2011, Siemens announced investments of € 150 million to offshore wind R&D activities and the expansion of its wind business.

Challenges: Important steps still need to be taken towards cost-efficient installation and an industrialization of all processes in order to reach benefits of scale. In addition, the right policy landscape, including policies that create transparency, longevity and certainty, needs to be established to provide stability to investors, and any potential conflict with other users of the same marine areas needs to be addressed.

Example of: Eco-Innovation, Clean Technology, Sustainable Goods and Services.

i

Green Economy Report on Renewable Energy.

“The cost of renewable energy is increasingly competitive with that derived from fossil fuels. Improved cost-competitiveness is due to rapid R&D progress, economies of scale, learning effects through greater cumulative deployment and increased competition among suppliers.”²¹

PROFILE

SECTOR:
Diversified
Industrials

ANNUAL SALES:
US\$ 98 billion (2011)

**NUMBER OF
EMPLOYEES:**
360,000

GEOGRAPHICAL PRESENCE:
192 countries

²¹ Extract from the Renewable Energy chapter of the Green Economy Report, UNEP 2011.



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Case: AVIVA UK



Insurance solutions for sustainable goods and services represent a new market opportunity that has the potential to incentivize green businesses and effective risk management.

Project Example: AVIVA launched its insurance product for Low-Carbon and Environmental Goods and Services (LCEGS) in 2011. The LCEGS sector is comprised of companies that provide products or services aiming to comply with environmental regulations and minimize negative environmental impact, such as renewable power-generation technologies, environmental analysis and consultancy, waste management or recycling. As the sector is growing rapidly, so are the market opportunities for tailored solutions to their specific risks. By providing a sustainable product to compliant companies, Aviva is enabling sustainable companies to improve their **risk profile** while tapping in on a growth opportunity.

Environmental/Social Value: Sustainable insurance is an important enabling mechanism for companies to make the transition to a resource efficient, Green Economy. AVIVA's activities in the LCEGS sector have environmental and social value in the medium to long-term with the provision of adapted insurance solutions enabling companies to work for a positive environmental impact.

Financial Value Drivers: **Sales Growth and Duration of Sales.** In view of the strong growth potential of the LCEGS sector, AVIVA estimates related economic benefits during the first five years at UK£ 5 million Gross Written Premium by 2015 (New Business only). Supported by government decisions and financial incentives, this sector is expected to increase by UK£ 45 billion by 2015.

Challenges: Industry conditions and growth potential factors change rapidly as the market is driven amongst other things by standard economic conditions and governmental forces. Also, the limited experience of insurance companies in this field provides challenges particularly in entering an emerging market.

Example of: Risk Management, Sustainable Goods and Services.

PROFILE	SECTOR:	HEADQUARTERS:	ANNUAL SALES:	NUMBER OF EMPLOYEES:	GEOGRAPHICAL PRESENCE:
	Financial Services	UK	US\$ 1.130 billion	17,500	Part of Aviva Group, world 6th largest insurance group (28 countries)

Systems and life-cycle thinking also drive new market development such as the emergence of vertical integration along supply chains. To this end, a number of manufacturing firms are moving into project development, retailing, installation, product take-back and after-sales services.

The **Colombian Coffee Growers Federation** case study on page 19 illustrates how collaboration along the value chain based around ecological preservation, continuity of supply and guaranteed prices has secured market access for more than 27,000 coffee growers and significantly increased their revenues. The case study of the **SEKEM Group** from Egypt explains the development of a systems-based commercial model which generates revenue growth from composting, verified carbon emission reductions, soil **productivity** improvements and organic food production. Both of the case studies illustrate potential of positive impacts at local level to improve living conditions through elements such as skills enhancement and job creation.



Case: SEKEM Group



Adding value to a resource stream not only protects the environment, it also creates new employment opportunities and generates revenues from new markets.

Project Example: SEKEM launched a commercial compost project in 2007, operated jointly by the SEKEM company LIBRA and Soil & More International BV. Applying integrated **supply chain management**, this project improves the company's resource efficiency and generates additional revenues by transforming waste products from SEKEM's agricultural activities into compost, a high-value and **sustainable good**. The compost is either used for SEKEM's own agricultural production or sold to farmers (e.g. in 2010, 74 per cent of the compost was used internally, whereas in 2011, 82 per cent was sold to farmers). Today, SEKEM-LIBRA runs two compost sites, which are operating at near full capacity.

Environmental/Social Value: SEKEM's commercial compost project stimulates additional employment opportunities up and down the value chain. It creates new jobs at the composting facilities and provides arable land to hundreds of farmers in Egypt through land reclamation projects in drought-prone and desert areas. **Productivity** and sustainability of farming is enhanced by building up nutrient and carbon-rich soils. Also, between 2007 and 2011, more than 300,000 tonnes of CO₂ equivalents were saved through low emission composting, contributing to international climate change mitigation efforts.

Financial Value Drivers: **Sales Growth and Duration of Sales.** Since the start of the compost project in 2007, sales have increased considerably from EGP 788,400 to more than EGP 10.5 million (2010). In 2010, the compost project accounted for 53.9 per cent of SEKEM-LIBRA's total sales. In addition, TUEV²² issued 80,000 verified emission reduction (VER) credits to SEKEM-LIBRA (in 2010), providing extra income to the company. Duration of sales and sales growth is further promoted through the compost project by building up nutrient and carbon-rich soils and by applying organic and biodynamic agricultural production methods, thereby increasing agricultural productivity and sustainability of the farming business.

Challenges: Changing producer and consumer perceptions that compost is not a waste management system but a process to generate a high-value product proved to be a challenge for SEKEM-LIBRA's project. Also, as compost is typically perceived as a waste product with no homogenous quality, a challenge has been to introduce the concept of quality in the compost market.

Example of: Supply Chain Management, Resource Efficiency, Sustainable Goods and Services.

PROFILE

SECTOR:
Food and
textiles

HEADQUARTERS:
Egypt

ANNUAL SALES:
US\$ 40 million
(2010)

**NUMBER OF
EMPLOYEES:**
1,856 (2010)

²² TÜV-Nord Cert Germany, is a UNFCCC accredited DOE (Designated Operational Entity) and the credits generated are registered at MarkIt registry.



Case: Federación Nacional de Cafeteros (FNC), Colombia



Sustainable supply chains allow SMEs to reap the benefits of the Green Economy transition.

Project Example: In 2009, Federación Nacional de Cafeteros (FNC) together with Nespresso developed a new Grand Cru “Rosabaya® de Colombia” from coffee grown in Cauca and Nariño provinces. Currently 27,312 coffee farmers are engaged in the Nespresso AAA Sustainable Quality™ programme. This cooperation develops high-quality coffees in a sustainable way, preserving more than 29,000 hectares of farmed land. Since the launch of “Rosabaya® de Colombia” in 2009 about 2,500 farms have been certified by Rainforest Alliance in Colombia. Some 5,000 ecological wet processing facilities, 2,700 sewage systems, 8,000 septic tanks and 6,500 waste treatment units have been built. Additionally, improved drying systems for coffee beans for small producers using solar energy have been installed. The cooperative system optimizes **productivity** and **brand value**.

Environmental/Social Value: By bringing them into the global **supply chain**, FNC is securing a sustainable income for more than 27,000 coffee smallholders and their families. The projects also include capacity building through **environmental education programmes** for the growers and their communities. **Training** also includes a broad range of environmental standards, including water and soil conservation, planting shade trees and wildlife preservation. Young farmers are also encouraged to apply best practices for land conservation and sustainable production techniques.

Financial Value Drivers: Sales Growth and Duration of Sales

- Nespresso has increased its sales of capsules by more than 54 per cent (164 million capsules sold by the end of 2011). In 2011, “Rosabaya® de Colombia” accounted for 12 per cent (by value) of all Colombian coffee purchased by Nespresso.
- Thanks to FNC’s domestic buying structure, premiums paid to coffee growers for high-quality coffee such as “Rosabaya® de Colombia” are on average 20 per cent above conventional coffee base prices.
- Farm **productivity** has been increased through the application of technical support programmes, the modernization of infrastructure, and assistance from 82 FNC agronomists.

Example of: Education and Training, Supply Chain Management, Sustainable Goods and Services.

PROFILE

SECTOR:

Agriculture - coffee production

HEADQUARTERS:

Colombia



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The Integrated Multi-Trophic Aquaculture (IMTA) approach employed by China's **Zhangzidao Fishery Group** offers an alternative to monoculture methods, providing a more balanced ecosystem that takes into account local conditions, operational limits and environmental quality. This enabled the company to see revenue grow annually by 40 per cent between 2005 and 2010, compared to the industry average of 13 per cent. Its average EBITDA margin was 31 per cent.²⁴

Building brand value

Businesses that actively promote more **sustainable goods and services**, backed up by consistently recognized standards and labels, will benefit from enhanced **brand value and reputation**. This enables them to sustain **growth of sales** with longer **duration**, reflecting greater loyalty among existing customers and continual improvement in reaching new customer bases.²⁵

Unilever, for example, with its Sustainable Living Plan is actively promoting more **sustainable goods and services** with time bound public targets and progress reports. This action has a high potential for increasing its brand value (see case study on the next page).



Green Economy Report on Sustainable Agriculture:

Scaling up green agriculture has the potential to be a net creator of jobs that provides higher return on labour inputs than conventional agriculture. This can happen through expanding smallholder production through green agricultural practices, greater commercialization, and integrating smallholders into supply chains and creating more rewarding jobs in rural areas.²³



²³ UNEP (2011). Investing in Natural Capital: Agriculture. In: *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Available at: <http://www.unep.org/greeneconomy>.

²⁴ WEF (2011). *Redefining the Future of Growth: The New Sustainability Champions*. Geneva: WEF.

²⁵ SustainAbility and UNEP (2001). *Buried Treasure: Uncovering the Business Case for Corporate Sustainable Development*. London: SustainAbility.



Case: Unilever Sustainable Living Plan



Integrating sustainability into business models responds to increasing consumer demand, encourages innovation and drives cost efficiencies.

Project Example: Unilever is working to decouple growth from environmental impact in order to double the size of its business and increase the positive social benefits of its products. The Unilever Sustainable Living Plan sets out about 60 time-bound, publicly-reported targets designed to reduce costs, support customers and grow its brands, opening up new markets in a sustainable way. Targets include halving the environmental footprint of Unilever's products and sourcing 100 per cent of agricultural raw materials sustainably by 2020. Measures include **investments** in R&D and development of **sustainable products** and **resource efficient** factories. In 2011, 100 per cent of the electricity purchased for Unilever sites in Europe and Canada came from renewable sources.

Environmental/Social Value: The value of the plan lies in its potential to reduce Unilever's environmental impact across the whole value chain (i.e. from sourcing of raw materials to product distribution and disposal of waste). Socio-economic benefits include engaging at least 500,000 smallholders and 75,000 small-scale distributors in Unilever's supply network by 2020, thereby building economic resilience along the supply chain and enabling SMEs to benefit from the growth of the business.

Financial Value Drivers: Sales Growth and Duration. According to Unilever the business case for this strategy is compelling. Integrating sustainability into its brands will encourage innovation, drive cost efficiencies, and create a competitive advantage as retailers and consumers increasingly demand sustainable options. Through the action areas, Unilever will ultimately reduce its operational expenditure through effective management of supply-side risks and efficient use of resources. Reductions have already been made through a range of initiatives, including the introduction, between 2008 and 2011, of combined heat and power (CHP) systems in many of its European factories which has led to savings of more than € 10 million a year (by the end of 2011). Unilever has noted that reformulating products or creating innovative new products adapted to a world of more constrained resources has translated into commercial gains. For example, a fabric conditioner was developed for handwashing laundry, 'One Rinse,' which reduced the amount of water required to rinse detergent from clothes by two-thirds. This saves an average of 30 litres of water per wash. In 2011 they launched Surf One Rinse in the Philippines and expanded the Comfort One Rinse range in Indonesia, Thailand and Vietnam. Unilever's One Rinse products are now used in 12.5 million households worldwide, a 60 per cent increase on 2010. Adapting its product portfolio to fit a future of limited resources will drive growth in new markets.

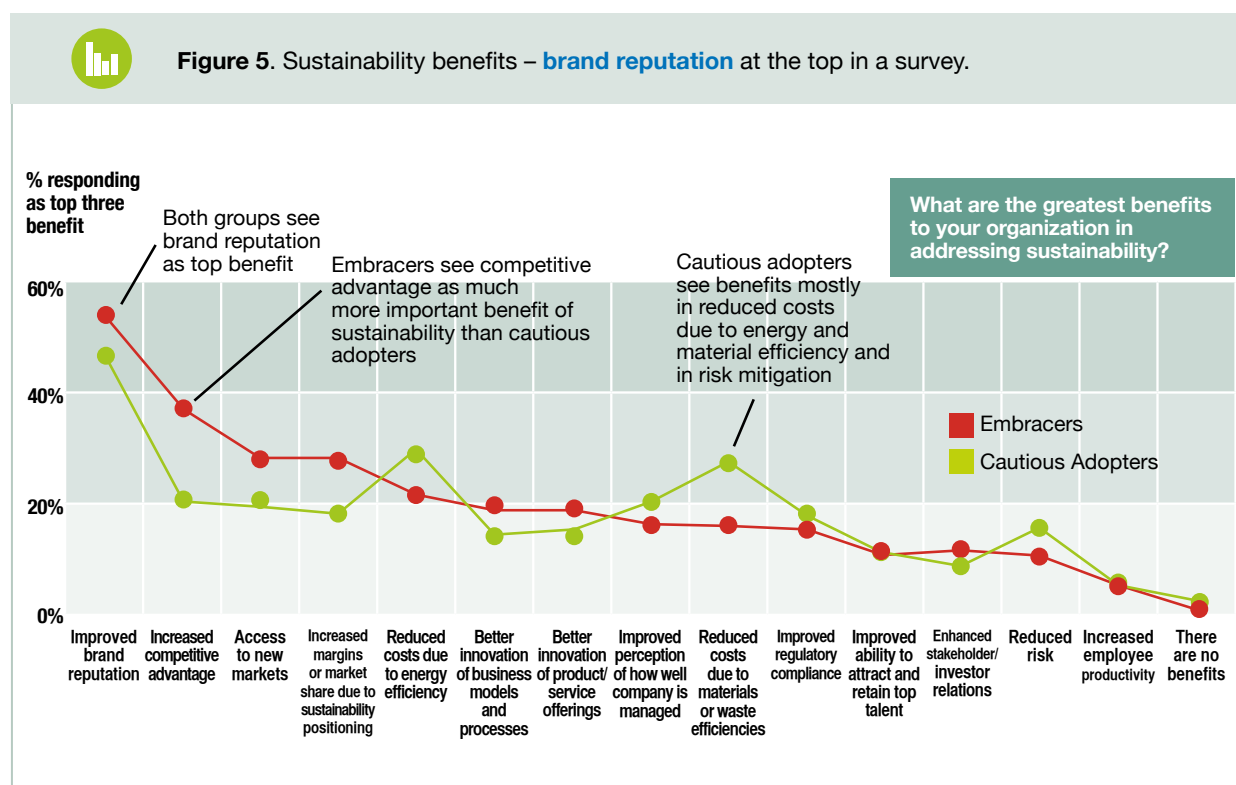
Example of: Design for Sustainability, Resource Efficiency, Supply Chain Management, Risk Management, Sustainable Goods and Services, Engagement and Reporting.

PROFILE

SECTOR:	HEADQUARTERS:	GEOGRAPHICAL PRESENCE:
Consumer Goods	UK & Netherlands	Distribution of products in more than 190 countries

There is evidence of a correlation between a company's visible commitment to environmental and socio-economic commitment and principles, and the value of that company's corporate and product brands.²⁶ Since **brand value** is vulnerable to reputational risks, including, for instance, human rights, bribery and corruption or environmental incidents, transitioning to a resource efficient and Green Economy is expected to have a positive impact on **brand value**.

The global digital revolution has improved access to information regarding companies and their brands and this has the potential to make or break a company's reputation. Poor reputations take a long time to fix and good reputations are strongly linked to resilience and enduring organizational success. *Figure 5* highlights how brand reputation is often seen as the most important reason for organizational response to sustainability.



SOURCE: Management Review and The Boston Consulting Group (2011). *Sustainability: The "Embracers" Seize Advantage*. Boston: Massachusetts Institute of Technology and BCG.

²⁶ SustainAbility and UNEP (2001). *Buried Treasure: Uncovering the Business Case for Corporate Sustainable Development*. London: SustainAbility.



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3b. Reduced Capital Expenditure and Improved Profit Margin

More sustainable resource use, and more efficient supply chains, are increasing operating and net profit margins, with businesses earning more per dollar of sales thanks to lower production costs and **reductions in capital expenditure**. For example, improved **resource efficiency** is driving better use of fixed assets such as land, buildings, equipment and vehicles. In the case of working capital, efficiency improvements serve as a driver for innovation in the way inventory and customer and supplier relations are managed.

Resource productivity

Operational **resource efficiency** activities have been widely adopted – though far below their potential – as they generally ‘pay in’ using traditional cost/benefit analysis. However, due to the scale of change required if companies are to operate within a Green Economy, there is still enormous scope for further improvements by building on **efficiency** (doing the same with less) to **resource productivity** (doing better with less). While existing literature demonstrates that massive improvements in **resource efficiency** exist at the process level, many companies are rethinking the way they do business from a systems perspective, leading to **resource productivity** improvements. While any enterprise can benefit, this is especially critical to industries in very competitive markets.²⁷

Take the example of **General Motors**, which implemented its Resource Management Programme at many of its manufacturing facilities. Through improvements in **resource productivity**, the company has saved more than US\$ 30 million and reduced waste volume by 40 per cent from 2000–2008. Furthermore, **General Motors’** efforts to transform waste into valued by-products created US\$ 6 million in sales.²⁸

Businesses can improve their **efficiency** by adhering to recognized standards and adopting cleaner technologies, both of which are conducive to more sustainable resource use. They also improve efficiency through **resource productivity** which involves re-thinking systems to maximise value-added of the resources used. An example is to move from selling a product to a product-service system, which can lead to more resource efficient and durable designs amenable to repair and recycling. Chemical leasing is one such service-oriented business model, where there is a shift from the sale of chemicals to the sale of functions performed by the chemicals, thus reducing inputs and waste outputs. There are increasing examples available in technology and systems options for energy, water and supply chain efficiency and waste reduction measures as well as new innovative resource **efficiency** and **productivity** options, through which businesses will ultimately develop a structural cost advantage.²⁹

²⁷ UNEP (2011) *Decoupling natural resource use from environmental impacts and economic growth*, A report of the International Resource Panel, Available at: <http://www.unep.org/publications/>.

²⁸ WBCSD (2008). *Sustainable Consumption Facts and Trends – From a Business Perspective*. Geneva: WBCSD. Available at: <http://www.wbcd.org/pages/edocument/edocumentdetails.aspx?id=142&nosearchcontextkey=true>.

²⁹ McKinsey & Co Global Institute. (2011). *Resource Revolution: Meeting the world’s energy, materials, food, and water needs*. New York. Available at: http://www.mckinsey.com/Features/Resource_revolution.



Case: Shree Cement, India



Win-win opportunities exist in closed-cycle manufacturing by generating efficiencies in cost and resource use.

Project Example: Shree Cement's 'Waste Heat Recovery' (WHR) project makes use of the high amount of thermal energy contained in the flue gases generated during the clinkerisation process of its cement plants. This conversion of 'waste into energy' is part of a green power project aiming to save water and generate electricity. Flue gases generated during the process contain a very high amount of thermal energy. This energy has the potential to be re-used, conserving also large amounts of water that would otherwise be required for cooling purposes.

Environmental/Social Value: Shree Cement's closed-cycle manufacturing method significantly reduces the negative impacts cement production has on the environment and public health. For a 46 MW WHR unit, this includes efficiency in the amount of water used to cool waste gases (reduction of 1,250 kl/day), a reduction in CO₂ emissions by about 1,312 tonnes/day, reduction in SO_x emissions by 30 tonnes/day and a reduction in particulate matter emissions by 0.520 tonnes/day.

Financial Value Drivers: **Reduced Capital Expenditure & Increased Profit Margin.** By saving on water and electricity costs Shree Cement is not only **reducing capital expenditure**, but also decreasing its dependency on natural resources over the long-term. The capital cost of setting up a WHR plant is US\$ 1.8 million/MW and although the return on investment is after seven to eight years, Shree Cement is setting itself up for long-term benefits significantly greater than the business-as-usual scenario. It is also making use of opportunities such as the Clean Development Mechanism (CDM) by registering the project with the United Nations Framework Convention on Climate Change (UNFCCC).³⁰ The expected CDM benefits will further strengthen the business case. Today Shree Cement is the largest generator of power using waste heat recovery in the global cement industry outside of China.

Challenges: The significant challenge in successful execution of this project was managing the time it took to optimize the circuit to full potential. Shree Cement succeeded in completing the project in 17 months, against an industry standard of 24 months.

Example of: Eco-Innovation, Resource Efficiency, Clean Technology.

PROFILE	SECTOR:	HEADQUARTERS:	ANNUAL SALES:	NUMBER OF EMPLOYEES:	GEOGRAPHICAL PRESENCE:
	Cement	India	US\$ 883 million	3645	India

This case study of the Indian company **Shree Cement** demonstrates how waste heat recovery leads to considerable carbon, sulphur and particulate emissions reductions with a return on investment of seven to eight years. Operating in a capital-intensive industry, this is an acceptable return for the company with longer-term success in mind. **FEMSA's** 'Smart Store' energy efficiency monitoring equipment, which it rolled out to its OXXO convenience stores across Mexico and Colombia, reduced energy use by 14 per cent, delivering a return on investment of 2.9 years. The case study of **Grupo Bimbo** (see next page), the Mexican Food products company, shows how it has done all of these things. It invested in the largest wind farm in the food industry worldwide to cover the electricity needs of most of its production, reducing fuel consumption by 75 per cent, making savings of almost US\$ 4 million. Its water reduction programme has saved approximately US\$ 700,000 with a return on investment of three years and its waste reduction programme has reduced its CO₂ emissions by 1,349 tonnes.

³⁰ United Nations (2011). *Framework Convention on Climate Change*. Durban: UNFCCC.



Case: Grupo Bimbo, Mexico



Investment in reducing the environmental footprint of a company provides increased operating margin as well as improved reputation and branding.

Project Example: Grupo Bimbo is aiming to reduce its carbon, water and waste footprints. It is constructing “Piedra Larga”, the largest wind farm in the food industry worldwide. The farm is due to generate almost all of the electricity consumed by Grupo Bimbo in Mexico. The company has also invested in water saving equipment with the implementation of dry and semi dry cleaning in production lines and 70 per cent reuse of treated water for irrigation and vehicle washing. Grupo Bimbo reports its sustainability progress using the GRI Guidelines.

Environmental/Social Value: The Piedra Larga wind farm’s installed capacity of 90 Megawatts is expected to generate 333 GWh, leading to the reduction of 180,000 tonnes of CO₂ per year– representing more than 40 per cent of emissions from all facilities in Mexico. Acting on its water footprint, Grupo Bimbo has achieved a reduction of 338,400 m³ of water consumption in three years. Grupo Bimbo has also reduced its fuel consumption by 75 per cent in three years. In solid waste management, Grupo Bimbo has been developing different projects to reduce packaging materials. Since 2009 the Group reached a global reduction of 860.8 tonnes of plastic material and a related reduction of 1,349 tonnes of CO₂ emissions.

Financial Value Drivers: **Reduced Operating Expenditure & Increased Profit Margin.** Grupo Bimbo has reduced its operational costs through **resource efficiency** which leads to an increased profit margin. They are also positioning their business to be less dependent on natural resources for production which improves the **risk profile** and ensures the financial sustainability of the company against the business-as-usual scenario. So far, the reduction in fuel consumption by 75 per cent reaped savings of US\$ 3,960,716. For the reduction of its water footprint Grupo Bimbo reaped savings of US\$ 712,000 with a positive return on investment after three years.

Example of: Design for Sustainability, Resource Efficiency, Clean Technologies, Engagement and Reporting.

PROFILE	SECTOR:	HEADQUARTERS:	ANNUAL SALES:	NUMBER OF ASSOCIATES:	GEOGRAPHICAL PRESENCE:
	Food Products	Mexico	US\$ 11 billion (2011)	126,000	19 countries including USA, Mexico, Brazil, Chile, Colombia, Peru, Paraguay, Venezuela, Uruguay, Argentina, China, Spain and Portugal

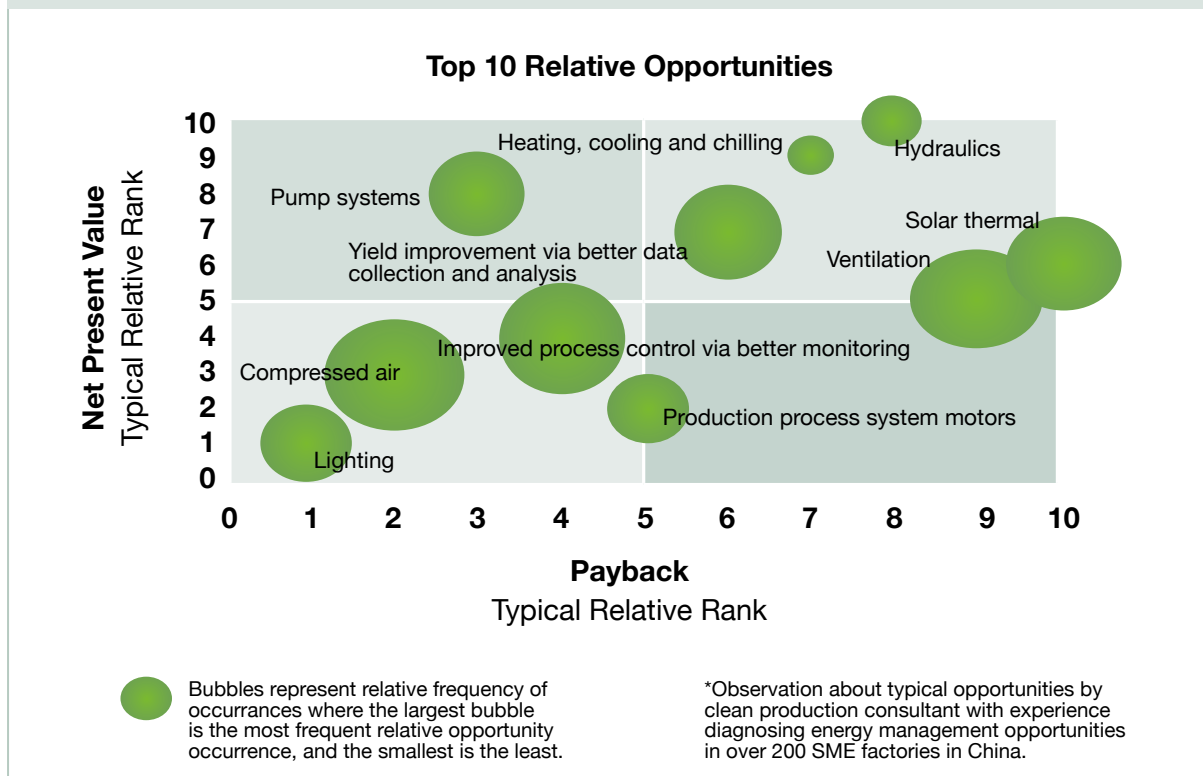
The opportunities for all scales of enterprise are enormous. For example, *Figure 6* highlights the range of **productivity** opportunities through energy efficiency for SMEs in China.



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Figure 6. Energy efficiency opportunities for SMEs in China (BSR 2010)



SOURCE: Business for Social Responsibility (2010). Unlocking Energy Efficiency in China: A Guide to Partnering with Suppliers.

The expansion in scope of the Greenhouse Gas (GHG) Protocol to products and indirect ‘Scope 3’ emissions illustrates how collaborative tools are enabling supply and value chain impacts to be understood and managed. These tools take a life-cycle approach to greenhouse gas accounting, which can draw attention to upstream or downstream opportunities. For instance, **PepsiCo** discovered extensive greenhouse gas emissions associated with the fertilizer applied to the oranges grown for its Tropicana juice. As a result, it worked with its orange growers to adapt the fertilizers used thereby reducing emissions.

Innovative accounting practices can help identify and focus **productivity** opportunities. The case study expands on the example from **PUMA** (see next page), the German sports apparel and footwear company, which has developed an environmental profit and loss account (EP&L) to quantify the value of ecosystem services and impacts. The EP&L provides insight into strategic environmental risks across its operations and supply chain, helping to focus **productivity** efforts where they can be most effective.



Leading businesses are starting to rethink their business and reporting models. They are asking how they drive sustainable, profitable growth, and how they measure other critical information needed to manage risk and opportunity, like the EP&L. This additional information is needed to underpin how value is and will be created, giving a broader perspective of a company's strategy, how it builds competitive advantage – enhancing brand, supporting new product development and ultimately the ability of a company to retain its long-term license to operate.

Alan McGill, Partner,
PricewaterhouseCoopers



Case: PUMA Environmental Profit and Loss Account



Recognizing the value of ecosystems allows quantification of the economic risk from environmental impact along supply chains, therefore reducing potential losses, and strengthening operating margins.

Project Example: PUMA collaborated with PricewaterhouseCoopers and Trucost to conduct the first Environmental Profit and Loss Account (EP&L) for 2010, published in 2011. The EP&L serves as a strategic, **risk management** and transparency tool. The account quantifies the value of ecosystem services and the negative impacts, focusing on GHG emissions, water use, land conversion, other air pollution and waste resulting from core operations and along its entire supply chain. Environmental impacts were valued at € 145 million for 2010. Only € 8 million of this total derived from PUMA's core operations, and the remaining € 137 million from PUMA's external suppliers. PUMA apparel is heavily reliant on the use of water for the production of raw materials and their processing. Sustainable sourcing of raw materials and **resource efficiency** across the tiers will build a more resilient supply chain and translate into a stronger business model to succeed over time. This significantly improves the company's **risk profile**.

Environmental/Social Value: By recognizing the extent of economic risk derived from negative environmental impact PUMA is able to quantify the benefits of integrating sustainability into its global supply chain. With resource limitations clearly in its sights, PUMA is sourcing more sustainable materials in order to mitigate and manage this risk.

Financial Value Drivers: Reduced Capital Expenditure & Increased Profit Margin. The main output from the EP&L is the quantification of the value of the environmental impacts (€ 145 million for 2010), which present an economic risk from environmental factors such as water availability, rising raw material costs and further constraints in production carrying significant strategic implications. In practical terms this amount would translate as a negative financial impact on business. Using the tool allows PUMA to reduce this financial loss thus strengthening its **operating margin** through an early view of emerging risks, enabling the company to respond strategically to protect **long-term shareholder value**. PUMA has publicly committed itself to having 50 per cent of the international collections³¹ made of more sustainable materials by 2015 and is currently well positioned to do so.

Example of: Resource Efficiency, Risk Management, Supply Chain Management, Sustainable Goods and Services.

PROFILE

SECTOR:
Sport &
Lifestyle

HEADQUARTERS:
Germany

ANNUAL SALES:
EUR 3 billion
(2011)

**NUMBER OF
EMPLOYEES:**
10,836
(2011)

**GEOGRAPHICAL
PRESENCE:**
Distribution in more
than 120 countries

³¹ "Collections" refers to Footwear, Apparel and Accessories.



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Productivity (including human capital)

A recognized challenge when assessing sustainable return on investment is being able to understand and demonstrate the links between greater care for human and social capital and environmental responsibility. Synchronous adoption of higher environmental standards with improved human resource management can be achieved through employee engagement programmes with an inherent link to sustainability performance, in addition to reward and incentive schemes.

When sustainability efforts are implemented effectively, businesses can expect to improve their attractiveness to recruit new and top talent, to retain employees and to enhance employee and supplier **productivity**. These drive longer-term benefits such as customer attraction, improved reputation, a boost in operating margin, as well as optimized capital expenditure.

Evidence suggests that even subtler well-being changes can deliver significant **productivity** gains. There are considerable benefits to investing in air quality, lighting and health. The Green Economy Report shows results from a series of studies on the effects of better environmental conditions within workplaces. The advantages of green or sustainable buildings extend beyond environmental gains, to include greater employee productivity and **work quality**, in addition to improved public health as a result of reduced air and noise pollution.³² These indicate significant **productivity** savings:

- Indoor air quality: 6-9 per cent **productivity** gain
- Natural ventilation: 3-18 per cent **productivity** gain
- Local thermal control: 3.5-37 per cent **productivity** gain
- Daylighting: 3-40 per cent **productivity** and sales gain

A number of studies³⁴ conclude that business can improve wellness, prevent chronic diseases and reduced healthcare costs while reaping the dual benefits of improved financial results and heightened employee goodwill.

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Through a Sustainability Framework and Ethical Model Factories, **Marks & Spencer** has worked with factories to improve process efficiency as a means to increase wages, reduce working hours and protect the quality of products. Productivity in its Bangladeshi Ethical Model Factories increased by 42 per cent; staff turnover dropped from 10 per cent to 2.5 per cent; and absenteeism from 10 per cent to 1.5 per cent.³⁵

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Tesco, the UK headquartered supermarket group, for instance, incentivizes its senior managers to improve environmental, social and governance (ESG) performance with the provision of fiscal bonuses based on performance against climate change related KPIs.³²

Woolworths, the South African supermarket group, realized that conventional farming methods were unsustainable and depleting the soil's capacity to produce quality fruit and vegetables. Its 'Farming for the Future' (FFF) programme developed skills and capacity within its farming supply chain to achieve pesticide, fertilizer, energy and water reductions whilst increasing compost use, soil-retained carbon and fresh produce sales. Expanding FFF to its entire fresh produce business, the company is also choice editing for its customers.

³² Carbon Disclosure Project (2010). *Carbon Disclosure Project 2010 – Global 500 Report*. UK: PwC.

³³ UNEP (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Available at: <http://www.unep.org/greeneconomy>.

³⁴ PwC and WEF (2008). *Working Towards Wellness: The Business Rationale*. Available at: <http://www.pwc.com/gx/en/healthcare/working-towards-wellness-business-rationale.jhtml>.

³⁵ Business in the Community (BITC) (2011). *The business case for being a responsible business*. UK: BITC.

“

“By reducing environmental impacts, operations and suppliers can reduce exposure to rising costs as governments strengthen taxes to discourage further damage to nature. Understanding these implications can help to mitigate risk in the supply chain and also potentially channel investments to better manage these challenges. This in turn can help PUMA develop a more resilient business model.”

PUMA

3c. Preferable Taxation and Reduced Cost of Capital

Regulators and capital providers are raising their expectations of business. For example, disclosure and reporting requirements against environmental and social metrics is expanding in scope and sophistication. For companies trailing behind in the race to a more resource efficient and Green Economy, these requirements imply greater burden and cost, but for the leaders, who take early action, the rewards are significant, facilitated by new preferable tax regimes and **reduced cost of capital**.

Licence to operate

Early adapters looking to manage their strategic and operational risks and opportunities are implementing procedures for systematic stakeholder engagement. Building trust in this way can help secure a ‘licence to operate’, which in effect is ‘granted’ by stakeholders such as regulators, politicians, local communities, the general public, the media and civil society. The Conference Board,³⁶ amongst others, found that effective community relations can also decrease the number and extent of local regulations imposed upon the company because of its trusted reputation.

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The Manila Water Company of the Philippines launched a ‘Walk the Line’ programme in which all company staff visited their customers, including residents of informal settlements, to consult with them on service delivery. This led to changes which resulted in a rise from 26 per cent to 95 per cent of customers receiving 24 hour water availability, and water losses from the system were reduced from 63 per cent to 35.5 per cent.³⁷

Tax rates

Policy makers have a key role in improving tax regimes so that they recognize and award sustainable innovations and encourage verifiable improvements in operating conditions. Companies have more leverage where previously externalized impacts are reduced. In Guatemala, for example, tax breaks are provided on equipment for project developers to support a goal of 60 per cent of electricity being generated from hydro and geothermal by 2022. And the town of Caledon, in Ontario, Canada, offers property development fee discounts of five per cent if projects include renewable.³⁸

Rather than higher expectations and requirements leading to a ‘race to the bottom’ with companies fleeing to jurisdictions with the lowest enforcement of regulation, the business case review suggests a ‘race to the top’. Locations with higher environmental standards are already becoming more dynamic and attractive for investment and tax subsidies in favour of environmentally preferable goods and services.

³⁶ Conference Board: Carroll, A.B. and Shabana K.M. (2011). *The business case for corporate social responsibility*. Director Notes. New York: The Conference Board Inc.

³⁷ IFC (2007). *Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets*. Washington DC: IFC.

³⁸ REN21 (2011). *Renewables 2011 – Global Status Report*. Paris, Eschborn: REN21 Secretariat and GIZ.

The OECD has confirmed a growing movement towards environmentally related taxation and tradable permits in OECD economies over the past decade. It highlights the value of green taxes to boost innovation, which is evident through increased investment in research and development and registration of patents on new, cleaner technologies.³⁹



Figure 7. Examples of national and city level tax incentives for cleaner energy.

Argentina, Belgium, Bolivia, Colombia, France, Greece, Ireland, Italy, Lithuania, Slovenia, South Africa, Spain, Sweden, UK, USA: Fuel tax exemptions in favour of biofuels

Brazil, Belo Horizonte: Tax credits for residential solar power

China: Subsidies for purchase of green cars and financing for construction, in five cities, of the infrastructure for charging cars with electric power

India: Carbon tax on coal production, and property tax credit of 10 per cent for solar hot water in new residential buildings in Nagpur

USA, Boulder, Colorado: Rebate of sales and use taxes for solar power

USA, New York, New York: Property tax abatement for solar PV

Zambia: Tax reductions in mining areas to stimulate investment in power capacity, especially renewables

SOURCE: REN21. 2011. *Renewables 2011 – Global Status Report*. Paris, Eschborn: REN21 Secretariat and GIZ; Green Economy Report. UNEP 2011.



Fiat, the Italian car manufacturer, for example, markets itself as having the lowest CO₂ emissions across its model range of any car manufacturer in Europe, appealing to those wishing to minimize tax and wider costs. Fleet and individual customers are able to track their driving efficiency through its *Eco:Drive* innovation. Driving patterns and styles are automatically monitored and analysed with advice provided on driving changes. This can enable efficiency improvements of up to 15 per cent.⁴⁰ The **Toyota** Prius hybrid, with its lower emissions, has become an icon of lower guilt motoring, adopted by celebrities and environmentalists alike.

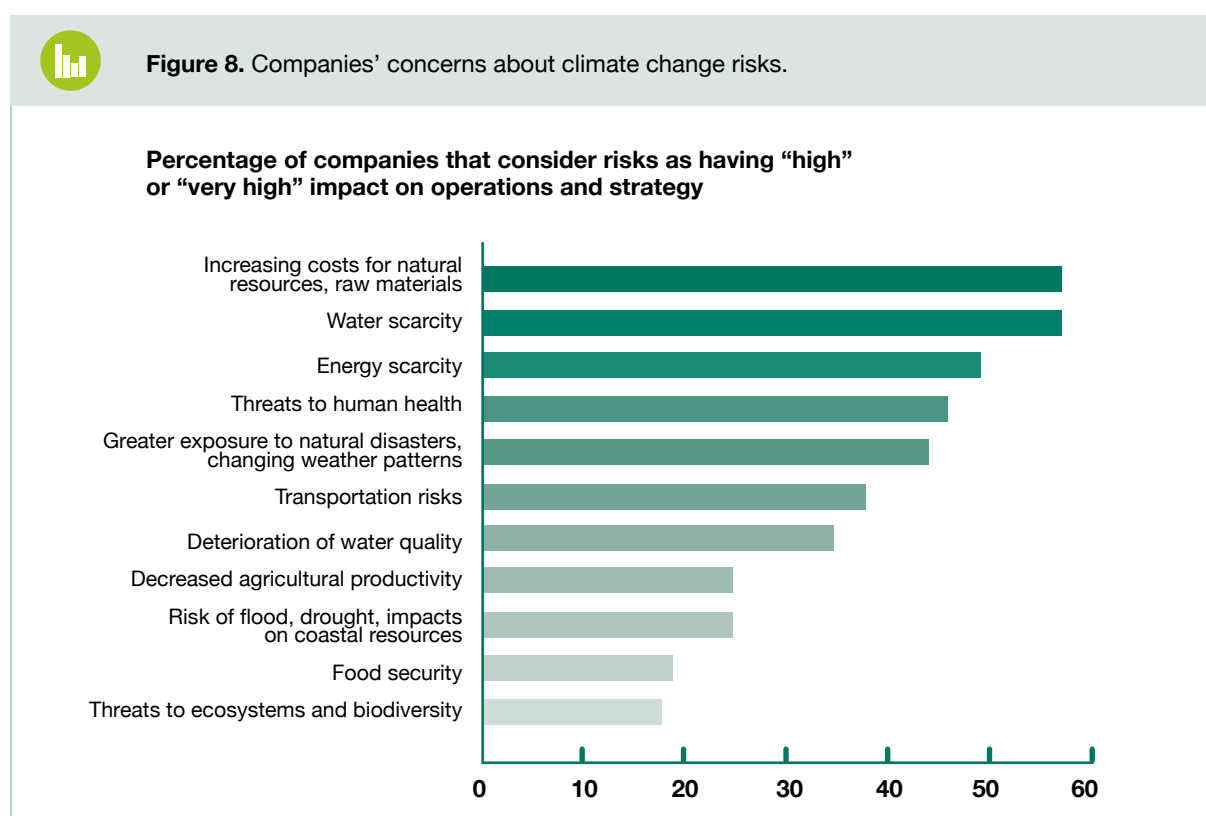
³⁹ OECD (2010). *Taxation, Innovation and the Environment*. Paris: OECD.

⁴⁰ FIAT (2012) *Ecodrive Initiative* [online]. Available at: <http://www.fiat.com/ecodrive/en/default.htm> [Accessed 29th April 2012].

Cost of capital and risk profile

Environment, health, safety and other human well-being issues are starting to feature more predominantly in **risk management**. Businesses with effective and well-communicated environmental and social **risk management** systems in place are in a position to secure a better **risk profile**, thus enabling them to obtain capital at lower cost.⁴¹ This applies to both debt capital and equity capital, and average cost of capital.

The results of a survey of 72 companies by the United Nations Global Compact (UNGC) are depicted in *Figure 8*. It provides an indication of the risks that feature at the top of corporate agendas today, including natural resource scarcity, threats to human health, along with related commodity price volatilities.



SOURCE: United Nations Global Compact, UNEP, Oxfam and World Resources Institute (2011). *Adapting for a Green Economy: Companies, Communities and Climate Change. A Caring for Climate Report*. Available at: http://www.unglobalcompact.org/issues/environment/climate_change/.

Climate change is opening up new opportunities for sustainable products and services in the finance sector. For instance, there is a pressing need to increase availability of capital to sustainability entrepreneurs and to further develop insurance schemes against environmental risks. The case study shows how **Equity Bank** of Kenya has **grown revenues** and **profits** partly through providing loans at market-leading interest rates to farmers who introduce environmentally preferable practices such as drip irrigation and water efficiency projects. The bank also supports farmers' financial literacy and skills development, helping to economically empower them.

⁴¹ Sharfman, M. and Fernando, C. (2008). Environmental Risk Management and the Cost of Capital. *Strategic Management Journal*, Vol 29, p. 569-592. Cf: Mackey A, Mackey T.B, and Barney J.B. (2007). Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies. *Academy Management Review*, 32 (3), p. 817 – 835.



Case: Equity Bank Ltd., Kenya



Tailor-made financial schemes improve access to resource-efficient technology for SMEs, while increasing the bank's profits

Project Example: Equity Bank currently co-finance several projects to enhance the development of drip irrigation systems, strengthening Kenyan smallholders' productive capacity as well as their resilience to climate change and increasingly erratic rainfall patterns. In cooperation with national actors and international organizations, Equity Bank provides bank loans with the lowest available interest rates to farmers and rural agro-businesses. One of the bank's partnerships is with the Alliance for A Green Revolution in Africa (AGRA), the International Fund for Agricultural Development (IFAD) and the Kenya Government's Ministry of Agriculture. Through this partnership, the bank created a fund of US\$ 50 million for loans to farmers and agro dealers. AGRA and IFAD provided a 10 per cent risk-sharing fund in the form of a deposit to Equity Bank. The project has supported more than 46,000 beneficiaries since 2008 with a total of Ksh 2.1 billion (US\$ 26 million).

Environmental/Social Value: Equity Bank is recognized for its interventions at the bottom of the pyramid, with SMEs and in agriculture. It focuses on agriculture because it constitutes a large under-served market, providing the opportunity to promote economic empowerment through improved access to financial opportunities and resources while recognizing the socio-economic benefits of nature conservation. The bank also works in **training** through Equity Group Foundation to improve farmers' financial literacy.

Financial Value Drivers: **Reduced Cost of Capital and Increased Operating Margin.** In 2011 Equity Bank's profit before tax grew to Ksh 12.8 billion from Ksh 9.0 billion. The bank's customer base reached Ksh 7.15 million in 2011, making it the largest bank by customer base in sub-Saharan Africa. Upon completion of irrigation system projects, several smallholders have taken out working capital loans (to date, more than Ksh 2 million, i.e. US\$ 25,000) in order to improve the production of crops (e.g. banana, pawpaw, potato, passion fruit and maize). Furthermore, horticulture companies contracted some farmers to provide agricultural production, providing additional market opportunities. Additionally, through a bilateral cooperation agreement between Government of Kenya and KfW Development bank for smallholder irrigation development, Equity Bank signed a subsidiary loan agreement to support 3,434 beneficiaries covering 1,197.32 ha of land. The amount disbursed to date is Ksh 351,259,166, equivalent to approximately US\$ 4 million.

Example of: Education and Training, Sustainable Goods and Services.

PROFILE

SECTOR:
Financial
Services

HEADQUARTERS:
Kenya

ANNUAL SALES:
US\$ 2.35 billion
(Dec 2011)

**NUMBER OF
EMPLOYEES:**
6243

GEOGRAPHICAL PRESENCE:
Kenya, Uganda, South
Sudan, Rwanda and Tanzania

Securing preferable investment

Companies of all sectors will increasingly see that improved environmental **risk management** enables them to also obtain equity capital at lower cost. A statistical analysis of companies in the United States listed on the Standard & Poor's 500 dataset has shown that firms that lower their systemic **risk profile** through improved environmental **risk management** experience less volatility in performance and are rewarded by lower costs of equity capital and ultimately lower weighted average cost of capital.⁴²

The **Yes Bank** of India promotes investment in cleaner technologies and its responsible equity investment programme, 'Tatva', includes special consideration for SMEs. In Japan, the **Bank of Tokyo-Mitsubishi UFJ** has introduced products including the ECO Accreditation Support Loan, Eco-action Business Loans and Eco Stage Bond with preferential rates and fees for SMEs. Banks such as the Dutch **Rabobank** have also moved into technology leasing, providing environmentally friendly technologies at preferential rates to commercial customers.

Moreover, financial institutions can themselves benefit from transitioning towards a Green Economy. Environmental and sustainability risks are increasingly impacting credit defaults and banks' loan portfolios. By addressing ESG risks, they place themselves in a better position to access finance from capital markets or from multilateral financial institutions. Banks that incorporate criteria related to environmental **risk management** benefit from increased security and enhance their competitiveness, as more and more businesses align to this approach.⁴³



⁴² Ibid.

⁴³ See for example, the Principles for Responsible Investment (PRI) initiative [online] where integration of responsible investment principles by over 1000 investment institution signatories stands at approximately US\$ 30 trillion. Available at: <http://www.unpri.org/about/> [Accessed 20th April 2012].

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The business case for a Green Economy is becoming clearer, so it is surprising that more businesses are not joining the race 'to the top.' In 2011 GlobeScan, SustainAbility and UNEP conducted a survey of sustainability experts and practitioners,⁴⁴ which showed the perception that policy is not aligned with stated political goals of sustainability.

Financial short-termism

An overwhelming 88 per cent of respondents cited the long-standing problem of financial short-termism as the most important barrier for developing sustainability focused business models. Resource scarcity is driving demand and pushing up prices. Some investors and businesses have sought to exploit these trends through speculation and hedging strategies designed to deliver quick returns rather than protecting the natural assets that business and society depend on.

Acceptable return on investment time frames vary by industry sector, for example from 12 months in the ICT sector to more than 30 years in the power-generation sector. These time frames often conflict with appropriate time frames for regeneration and recovery of ecosystems. Longer return on investment time frames are increasing, but this is not widespread.

Inappropriate regulation

Regulations that inhibit change, combined with a lack of regulation that encourages more sustainable practices, often undermines progress towards a Green Economy, with 65 per cent of survey respondents citing regulatory regimes as a key barrier. To overcome these limitations, businesses can encourage policymakers to adopt policies that support sustainable business practices and innovation.

Inappropriate regulation also means that market failures continue to disincentivize change. Where natural resources are not priced, or are mis-priced, few businesses have a financial case for responding sustainably. For example, water use subsidies in many agrarian regions mean that farmers and agri-businesses largely ignore growing water scarcity. The issue is even more severe when it comes to the costs of dwindling biodiversity stocks,⁴⁵ which are still largely invisible in markets. The business case will be strengthened if these market failures can be addressed.

Lack of understanding of business imperative

Similarly, 65 per cent of respondents to the survey indicated that low awareness of the sustainability imperative among business leaders was also a significant barrier. The survey results imply that if executives understood the risks and the opportunities that issues such as human rights, climate change and water scarcity represented to their businesses, the level of resource commitment – and consequently the pace of change – would be dramatically increased.

⁴⁴ GlobeScan, UNEP and SustainAbility (2012). *The GlobeScan/SustainAbility Survey*. Available at: www.sustainability.com. [Accessed 8th May 2012].

⁴⁵ See The Economics of Ecosystems and Biodiversity (TEEB) (2010). *The Economics of Ecosystems and Biodiversity. Report for Business*. Executive Summary. Available at: <http://www.teebweb.org/>. See also: UNEP (2010). *Are you a green leader? Business and biodiversity: making the case for a lasting solution*. Available at: <http://www.unep.fr/scp/publications/>.



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Generating sufficient market pull

More than half of the respondents indicated that despite increasing market and regulatory demand for sustainable products and services, the low overall base from which this demand is growing indicates that sustainable business practice is not yet mainstream.

Lack of international standards

Half of respondents pointed to a lack of international standards as being a barrier. While there has been tremendous growth in sustainability standards, these have often been voluntary and when legislated, the requirements are often poorly enforced. A number of international guidelines and standards, such as the Global Reporting Initiative (GRI) and the ISO 26000 Social Responsibility Standard, are becoming widely adopted by many of the world's largest enterprises. These leading businesses are now calling for mandatory social and environmental reporting in order to create a level playing field and drive up performance.

Delivery

SMEs face a unique challenge regarding the business case for transitioning to a Green Economy. For them, economies of scale may not be achievable, so there is a need to raise awareness of the potential quality, financial and socio-economic benefits that can be gained through a shift to **resource efficiency**. With the majority of economic activity flowing through SMEs and value chains, mobilizing all parts of the economy fully and quickly is imperative if a sustainable path is to be found.



The transition toward a resource efficient and Green Economy clearly represents an enormous opportunity for business. Those companies that understand and act on that opportunity will have an advantage in the market. However, there is also overwhelming evidence in the Green Economy Report and a number of other research based reports that business as usual is fundamentally undermining the very resource base upon which business success depends. Decoupling economic growth from environmental damage is required to prevent large-scale economic as well as environmental disaster. The drivers of change such as resource scarcity, stakeholder demand, and strategic opportunity are all accelerating. Business as usual is not an option.

The evidence within this report and that garnered during the wider research review upon which this report was based unequivocally demonstrates that positive returns are being achieved on investing in a Green Economy. There is a compelling case that **sustainable actions** lead to improvements in **leading indicators** of success, which in turn enhance **financial value drivers**. Pioneers that are leading the market are reaping the rewards and positioning themselves for sustained success.

Innovating to create more sustainable products has been shown to drive **customer attraction**, increasing **sales growth** and market share. The provision of sustainable products and services bolsters **brand value** and **reputation**, which in turn increases **sales duration**. Improving **productivity** strengthens **profit margins**. Business will be rewarded for sustainable actions through favorable tax regimes which can reduce cost of capital.

It is not always easy to construct and embed a business case for change in the current business climate as barriers remain. Financial short-termism, regulations that encourage unsustainable practices, and low market pull reinforce the status quo. Building a business case for an individual company to change course requires both vision and courage, and must consider the context of the company, its industry, location and resource issues.

Business alone cannot deliver the speed and scale of change required. Collaboration with regulators, customers and the financial community is essential. Public policies linked to clear principles of sustained economic success are necessary to support this transition. Financial institutions play a dual role in the transition towards a Green Economy, through both investing in sustainable projects and integrating environmental, social and governance (ESG) indicators into the decision-making criteria for lending, investment and insurance. ESG performance is increasingly seen as a proxy for management quality, which in part explains the growing interest in sustainability ratings schemes.

From utility companies in the burgeoning urban centres of tomorrow to consumer goods companies in developed markets, **sustainable goods and services** are moving from niche to mainstream. Leading businesses have recognized the risks of financial short-termism and have developed forward-thinking strategies. Those investing in sustainable innovation to increase **resource efficiency** and responsible operations ahead of regulation are achieving competitive advantage and positioning themselves to capture the mainstream markets of the next decade. As market conditions change, the business case will grow. So the question to business is: why wait?

1. Create a vision of what the Green Economy could mean for your business

Step ahead; consider what your company would look like if everything it did improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

2. Enhance resilience and business growth by adopting alternative valuation techniques

Traditional, monetary valuation techniques fail to capture the value of supplies from nature. Alternative techniques are available and developing that more adequately value human, social and natural capital.

3. Move from a singular shareholder value approach to a more inclusive understanding of value

Businesses are achieving competitive advantage by applying a 'duty of care' that looks at their company as part of a wider network of stakeholders and making better informed decisions by learning from engagement with them.

4. Drive policy change

Support market-based regulations of environmental "bads" and cuts in public funding in sectors that deplete natural capital. Responsible businesses can turn this into an opportunity by investing in the technology innovations and entrepreneurship that these new markets require.

5. Capitalize on opportunities presented by regulatory trends

As market-based regulation of poor environmental practices grows and subsidies are reallocated towards those which enhance natural and social capital, companies are capitalizing on the benefits by investing in the technological innovations and entrepreneurship required by new sustainability-driven markets.

6. Secure access to higher quality and/or cheaper capital

Business strategies that are well informed by environmental and social risk and opportunity are increasingly gaining access to higher quality capital at reduced cost.

7. Communicate the value of sustainability to investors

By making the link between sustainability and financial reporting, organizations are better able to communicate to their management and investors the complexity of their efforts and any barriers associated with their contribution to a resource efficient and Green Economy.

8. Establish sustainability as a permanent item on the Board agenda

By placing sustainability at the core of governance, leading companies are planning for the future.

9. Create incentives and mechanisms to embed sustainability within your company's culture

Making incentives to meet your vision and engaging employees to support sustainable decision-making will reap more societal benefits and resource efficient outcomes.

About the UNEP Division of Technology, Industry and Economics

Set up in 1975, three years after UNEP was created, the Division of Technology, Industry and Economics (DTIE) provides solutions to policy-makers and helps change the business environment by offering platforms for dialogue and co-operation, innovative policy options, pilot projects and creative market mechanisms.

DTIE plays a leading role in three of the six UNEP strategic priorities: **climate change, harmful substances and hazardous waste, resource efficiency.**

DTIE is also actively contributing to the **Green Economy Initiative** launched by UNEP in 2008. This aims to shift national and world economies on to a new path, in which jobs and output growth are driven by increased investment in green sectors, and by a switch of consumers' preferences towards environmentally friendly goods and services.

Moreover, DTIE is responsible for **fulfilling UNEP's mandate as an implementing agency for the Montreal Protocol Multilateral Fund** and plays an executing role for a number of UNEP projects financed by the Global Environment Facility.

The Office of the Director, located in Paris, coordinates activities through:

- > **The International Environmental Technology Centre** - IETC (Osaka), which implements integrated waste, water and disaster management programmes, focusing in particular on Asia.
- > **Sustainable Consumption and Production** (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
- > **Chemicals** (Geneva), which catalyses global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
- > **Energy** (Paris and Nairobi), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.
- > **OzonAction** (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
- > **Economics and Trade** (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies. This branch is also charged with producing green economy reports.

DTIE works with many partners (other UN agencies and programmes, international organizations, governments, non-governmental organizations, business, industry, the media and the public) to raise awareness, improve the transfer of knowledge and information, foster technological cooperation and implement international conventions and agreements.

For more information,
see **www.unep.org/dtie**

Environmental stresses are increasingly affecting the financial bottom line of companies all over the world. It makes sense that as we switch to a more resource efficient and Green Economy – one in which economic growth, social equity and human development go hand-in-hand with environmental security – business and industry will be a key driving force. From corner stores, to medium-sized enterprises and international conglomerates, there needs to be an understanding that nature provides us with valuable resources and services that must be accounted for, and that it is only by safeguarding these resources and services that we can improve our own livelihoods and those of future generations. This publication makes the business case showing the tremendous opportunities that business can capitalize on by transitioning to a more resource efficient Green Economy.

The *Business Case for the Green Economy* is primarily targeted at a corporate audience, with recommendations for policy makers. Business has long been a leader of change – with its ability to innovate, conceptualize and develop solutions in the form of new products and services – and has a crucial role to play in the transition.

www.unep.org

United Nations Environment Programme
P.O. Box 30552 Nairobi, 00100 Kenya
Tel: (254 20) 7621234
Fax: (254 20) 7623927
E-mail: uneppub@unep.org
web: www.unep.org



For more information:

**UNEP DTIE
Sustainable Consumption and
Production Branch**

15 rue de Milan

75441 Paris CEDEX 09

France

Tel.: +33 (0) 1 4437 1450

Fax: +33 (0) 1 4437 1474

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