



# Translating ESG into sustainable business value

**Key insights for companies and investors**

Report from an international workshop series  
of the WBCSD and UNEP FI

March 2010



**UNEP Finance Initiative**  
Innovative financing for sustainability



World Business Council for  
Sustainable Development

March 2010

# Translating environmental, social and governance factors into sustainable business value

**Key insights for companies and investors**

Report from an international workshop series  
of the WBCSD and UNEP FI

A joint publication by:

The Asset Management Working Group,  
United Nations Environment Programme  
Finance Initiative

Markets & Valuation Work Stream,  
The Business Role Focus Area,  
World Business Council for Sustainable  
Development



## About this document

This document outlines the findings and key insights of a series of global workshops between business, investors and stakeholders about the environmental, social and governance (ESG) and sustainability aspects of company performance evaluation. These workshops build on the learnings of the WBCSD, UNEP FI and key stakeholders from their work on ESG and sustainability reporting and disclosure, and responsible investment through the years.

The WBCSD has been working with its membership of leading global companies and key stakeholders, such as the Global Reporting Initiative, on corporate best practice and the advancement of sustainability reporting since 1995. The WBCSD has also developed many tools, such as the GHG Protocol and others, to help companies measure and report their management of sustainability issues to stakeholders.

UNEP FI, together with a range of partner organisations and key stakeholders worldwide, has pioneered the work of the United Nations with the global financial sector, comprising investment firms, insurance companies and banks, to integrate ESG factors into fundamental financial analysis, decision-making and reporting since 1992.

Over the past decades, the WBCSD and UNEP FI have been working with key stakeholders to articulate the materiality of ESG factors and sustainability to companies, investors and financial institutions, and to advance global reporting and disclosure guidelines in these areas. In addition to the list of stakeholders consulted during the workshops referred to in this document (see Appendix 1), the WBCSD and UNEP FI would like to recognise the work of, and important collaborations with, the Carbon Disclosure Project, Global Reporting Initiative, International Organization for Standardization, Principles for Responsible Investment, and UN Global Compact.

Please also see previous WBCSD reports and tools in this area:

- Ecosystems Valuation Initiative (WBCSD, 2009)
- The Corporate Ecosystems Services Review (WBCSD, 2008)
- Measuring Impact (WBCSD, 2008)
- Investing in a Low Carbon Future in the Developing World (WBCSD, 2007)
- Establishing a Global Carbon Market (WBCSD, 2007)
- Sustainable Procurement of Wood and Paper-based Products (WBCSD, 2007)
- Global Water Tool (WBCSD, 2007)
- Eco-Efficiency Learning Module (WBCSD, 2006)
- GHG Protocol for Project Accounting (WBCSD & WRI, 2005)
- Beyond Reporting – Creating business value and accountability (WBCSD, 2005)
- The Greenhouse Gas Protocol – A corporate accounting standard (WRI & WBCSD, 2004)
- Striking the Balance – Sustainable development reporting (WBCSD, 2003)
- Tomorrow's Markets (WBCSD & WRI, 2002)

Please also see previous UNEP FI reports and tools in this area:

- The Natural Value Initiative – The ecosystem services benchmark (Fauna & Flora International, FGV & UNEP FI, 2009)
- The Natural Value Initiative – Linking shareholder and natural value (Fauna & Flora International, FGV & UNEP FI, 2009)
- The Materiality of Climate Change – How finance copes with the ticking clock (UNEP FI, 2009)
- The Global State of Sustainable Insurance – Understanding and integrating environmental, social and governance factors in insurance (UNEP FI, 2009)
- Fiduciary Responsibility – Legal and practical aspects of integrating environmental, social and governance issues into institutional investment (UNEP FI, 2009)
- Chief Liquidity Series – Issue 1: Agribusiness (UNEP FI, 2009)
- If You Ask Us – Understanding corporate sustainability disclosure requests (UNEP FI, 2008)
- Human Rights Guidance Tool for the Financial Sector (UNEP FI, 2008)
- GRI Sustainability Reporting Guidelines and Financial Services Sector Supplement (GRI & UNEP FI, 2008)
- CEO Briefing – Human rights (UNEP FI, 2008)
- Biodiversity & Ecosystem Services – Bloom or bust? (UNEP FI, 2008)
- The Working Capital Report (UNEP FI & UN Global Compact, 2007)
- Responsible Investment in Focus – How leading public pension funds are meeting the challenge (UNEP FI & UKSIF, 2007)
- Insuring for Sustainability – Why and how the leaders are doing it (UNEP FI, 2007)
- Half Full or Half Empty? A set of indicative guidelines for water-related risks and an overview of emerging opportunities for financial institutions (UNEP FI, 2007)
- Demystifying Responsible Investment Performance – A review of key academic and broker research on ESG factors (UNEP FI & Mercer, 2007)
- Sustainability Management and Reporting – Benefits for financial institutions in developing and emerging economies (UNEP FI, 2006)
- Show Me the Money – Linking environmental, social and governance issues to company value (UNEP FI, 2006)
- Global Framework for Climate Risk Disclosure (Ceres, IGCC, IIGCC, INCR & UNEP FI, 2006)
- A Legal Framework for the Integration of Environmental, Social and Governance Issues into Institutional Investment (Freshfields Bruckhaus Deringer & UNEP FI, 2005)
- The Materiality of Social, Environmental and Corporate Governance Issues to Equity Pricing (UNEP FI, 2004)

---

## Contents

1. Background	5
2. Takeaways for companies and investors	7
3. Key insights for companies	9
3.1 What investors want	9
3.2 What companies can do	10
3.3 Getting started	12
4. Key insights for investors	13
4.1 What investors need to know	13
4.2 What investors can do	14
4.3 Getting started	17
5. Annex A: Sample ESG considerations by sustainability theme and industry sector	18
6. Conclusion	26
Acknowledgements	28
Appendix 1: Participating companies, institutions and stakeholders	29
About the United Nations Environment Programme Finance Initiative and the World Business Council for Sustainable Development	30

# 1

## Background

*In the wake of the global financial crisis, business leaders and financial practitioners have been forced to rethink the fundamentals of mainstream asset pricing and business models. The crisis exposed the vulnerability of global capital markets and national economies to systemic shocks and the devastating effect these have on economic growth and stability.*

*The exposure of markets to shocks has brought to light the importance of businesses and financial institutions incorporating systemic environmental, social and governance (ESG) factors into fundamental financial analysis and business planning. The impact of climate change on the economic performance of businesses and nations is one such example and has been singled out by Sir Nicholas Stern as the single greatest market failure in human history. This has forced businesses and investors to rethink the basis for sustainable economic performance into the future.*

The member institutions of the World Business Council for Sustainable Development (WBCSD) and the United Nations Environment Programme Finance Initiative (UNEP FI) believe that a company's management of ESG factors, as well as a company's leadership on sustainable development, are at the core of business today and therefore need to be considered by the capital markets. Both organisations believe that ESG factors can be financially material and can enhance long-term, sustainable company value.

In 2008, the WBCSD and UNEP FI launched a series of workshops that provided a platform for institutional investors and companies to discuss how to facilitate the integration of ESG factors into key processes of the capital markets. A series of workshops were held in Europe, North America, Asia and Africa for WBCSD and UNEP FI member companies, institutions, partners and stakeholders to collectively address process and communication barriers to assessing the ESG and sustainability aspects of company performance evaluation, and to chart a course for change.

The workshops involved a large number of institutional investors, principally asset managers, multinational corporations from a cross-section of industries, and key stakeholders engaged on this issue.<sup>1</sup> At each workshop, one-on-one company-investor dialogues were used to formulate a common understanding of the financial materiality of ESG factors and forward-looking ESG and sustainability considerations in business value and investment decisions.

This document provides a summary of key findings from the 2008 WBCSD-UNEP FI workshops. The company-investor dialogues confirmed previous assumptions that several communication gaps are at the heart of the issue of valuing ESG factors and sustainability. It also provides important insights for company managers and investors on how their business and investment philosophy and practices going forward can better address the why, what and how of communicating corporate ESG performance to the capital markets.

It is hoped that this document will be used by business leaders and investors as a tool to continue discussing the needed evolution towards more holistic and realistic capital market valuation processes. It relies on the largest and most comprehensive series of global workshops held to date bringing together companies and investors around the issue of integrating ESG factors and sustainability into corporate and investment decision-making.

---

<sup>1</sup> For the full list of participants, please see Appendix 1

## Commonly used terms

Companies	Stock-listed companies that produce and sell goods and services
Institutional investors ('investors')	Asset managers; asset owners (e.g., pension funds, insurance companies, sovereign wealth funds, mutual funds, foundations)
ESG <sup>1</sup>	<p>The term that has emerged globally to describe the environmental, social and corporate governance issues that investors are considering in the context of corporate behaviour. No definitive list of ESG issues exists, but they typically display one or more of the following characteristics:</p> <ul style="list-style-type: none"> <li>■ Issues that have traditionally been considered non-financial or not material</li> <li>■ A medium or long-term horizon</li> <li>■ Qualitative objects that are readily quantifiable in monetary terms</li> <li>■ Externalities (costs borne by other firms or by society at large) not well captured by market mechanisms</li> <li>■ A changing regulatory or policy framework</li> <li>■ Patterns arising throughout a company's supply chain (and therefore susceptible to unknown risks)</li> <li>■ A public-concern focus</li> </ul>
ESG integration <sup>2</sup>	The active investment management processes that include an analysis of environmental, social and corporate governance risks and opportunities
Sustainable development <sup>3</sup>	Development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'
Sustainability & business <sup>4</sup>	'...leading global companies of the future will be those that provide goods and services and reach new customers in ways that address the world's major challenges – including poverty, climate change, resource depletion, globalization and demographic shifts'

1 Demystifying Responsible Investment Performance – A review of key academic and broker research on ESG factors, UNEP FI Asset Management Working Group and Mercer, 2007

2 See note 1

3 Our Common Future, The Brundtland Commission, 1987

4 WBCSD, 2006

# 2

## Takeaways for companies and investors

*The WBCSD-UNEP FI workshops held globally in 2008, which informed this document, aimed to advance the debate by providing a platform for more companies and investors to meet directly to address the evolution of corporate valuation in the context of ESG and sustainability. The findings of this study represent developed and emerging market perspectives spanning six major investment centres and engaging over 150 multinational, regional and local companies and investors.*

*During the workshops, company managers and asset managers met to understand each other's point of view and to reach agreement on how to advance progress on valuing ESG factors and sustainability in investment decision-making. The following are high-level learnings that stemmed from six global dialogues.*

### **The ESG-financial materiality nexus is evolving**

The companies and financial institutions that participated in the workshops argue that ESG factors can have long-term consequences on a company's financial performance, either for better or for worse. They accept that ESG factors are now at the core of business. However, the depth and breadth of ESG factors are not fully valued by investors and company management. Companies believe that mainstream asset managers currently under or overvalue the long-term intrinsic value of companies because they fail to routinely integrate ESG factors into their investment analysis and decision-making.

### **Companies and investors do not agree on which ESG factors are material**

The workshops revealed that there are many misconceptions between companies and investors on ESG factors and their financial materiality. Companies found that they have unique expertise on how and why ESG factors are material and core to their business—they understand their business best. Meanwhile, asset managers have not gained access to this information through current ESG questionnaires and desk research, and tend to focus on reputational issues. Many asset managers generally find the information contained in sustainability reports difficult to use for the purposes of valuing a company.

There is widespread acknowledgement among companies that ESG factors can have a material impact on their intrinsic value, and that ESG factors should have a corresponding impact on their market capitalisation. However, many investors continue to think that ESG is narrowly concerned with reputation and brand issues, or only corporate governance matters. The expertise among mainstream asset managers and corporate investor relations departments about the systemic link between ESG factors and financial performance needs to be enhanced. Furthermore, many mainstream asset managers confuse the ESG integration investment approach with traditional negatively screened ethical investment approaches when they are fundamentally different. ESG integration is an economic assessment and valuation tool to *improve* investment analysis and decision-making—an approach based on a risk-return framework instead of ethical criteria that typically exclude certain companies or sectors.

## Communication needs to be in relative and comparable language

Where companies and investors are able to agree on a material ESG factor, the management of that factor is often not explained by companies in comparable terms; for example, an explanation of why an issue is more material now than before or how one company manages ESG factors better than its competitors. Financial language is a comparative language.

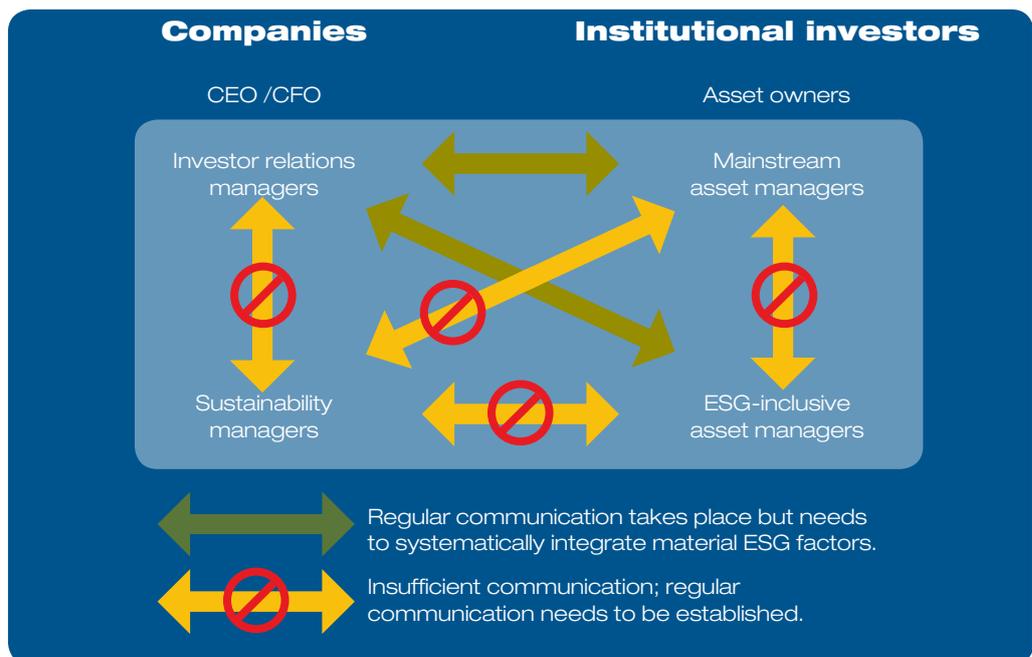
## ESG research needs to focus on financially material issues

The need for change is being driven by company frustrations that ESG questionnaires from investors, ratings agencies, indices and direct questions to companies at reporting times are not asking financially material questions, resulting in missed opportunities. The increasing volume of questionnaires in terms of both detail and frequency of requests is causing a major drain on corporate resources that might be used more effectively in direct dialogue with those seeking the assessments.

## ESG remains outside the mainstream between company managers and asset managers

The depth and breadth of ESG factors are currently not fully integrated into financial valuation models because there is little direct communication between company sustainability managers and asset managers regarding ESG factors, and they do not speak the same language. The gaps in ESG communication run even deeper within individual companies and investment firms. Company sustainability managers and investor relations managers also do not speak the same language and there is little incentive to bridge the gap. Company sustainability managers are crucial to bridging knowledge and expertise on the materiality of ESG factors with investor relations managers and senior management executives on the one hand, and investors on the other hand. Similarly, asset managers that systematically integrate ESG risks and opportunities into the investment process ('ESG-inclusive asset managers') and mainstream asset managers often have the same language barrier.

## ESG gaps between company managers and asset managers



# 3

## Key insights for companies

*We are learning that the technological and societal changes needed to address current global challenges such as climate change, global population growth, and increasing resource constraints are more urgent than we once thought, and they will require large sums of capital sooner than we thought.*

*There is an important link between the global capital markets and enabling sustainable change. One way to fund the change would be to make the capital markets more effective and efficient in integrating ESG factors into the valuation of companies. Progress towards sustainable development must involve the capital markets. For business to wholeheartedly take on the role as provider of goods and services that address global challenges, capital markets, particularly capital market mechanisms (such as business valuations) and incentives, need to be updated and aligned to capture long-term company value and promote a more sustainable path of development.*

### 3.1 What investors want

*Asset managers who participated in the workshops provided insights on what they need from companies to integrate ESG factors and sustainability into investment decision-making.*

### What investors want



'Companies need to provide more data on how ESG factors influence their operations and commercial performance.'

**Workshop 3:  
New York**

'Companies should provide a clear link between ESG factors and its financial materiality in annual reports.'

**Workshop 1:  
London**

'Companies should show ESG as a means to reduce volatility.'

**Workshop 5: Vienna**

'Investor-friendly language is a comparative language. ESG is only relevant if it can be compared to a competitor, past performance, or new market development.'

**Workshop 2:  
Montreux**

'Companies need to report more on social inequities in the workforce, and inequities and lack of transparency in employee remunerations. These issues are acutely material in South Africa.'

**Workshop 6:  
Johannesburg**

'Corporate measurement, monitoring and reporting of environmental issues in Asia are weak. ESG factors that have been included in codes of conduct by multinationals are reported more widely (where Asian companies are linked to MNC supply chains). There is an imbalance in requirements for MNCs and SMEs in Asia.'

**Workshop 4: Kuala Lumpur**



### 3.2 What companies can do

*The workshops revealed several areas where companies can draw ‘quick wins’ in terms of the orientation of corporate communications with the investment community on the financial materiality of ESG factors and sustainability. An immediate roadmap for companies could follow three critical steps:*

#### Step 1

#### **Draw clear links between ESG factors, sustainability, financial performance and strategy**

Disclosure and communication from companies to the investment community currently lack clear links between ESG, sustainability and financial performance, and overall, how this links to strategy. This is a relatively new area for many companies. Expertise among investors and investor relations managers alike is still evolving and needs to be accelerated.

The workshops found that it is becoming more common for investor communications to focus on one element—E, S or G—predominantly on climate change or governance issues; or for companies to bundle ESG factors in the context of reputation and brand issues. However, it is less common for corporate managers to communicate a holistic view of ESG factors and sustainability in the context of their financial materiality.

Corporate sustainability managers can provide valuable expertise on the materiality of ESG factors to support the corporate communication processes involving the investment community. The risk of doing nothing could result in long-term value destruction for companies that do not manage material ESG factors responsibly and are consequently unable to reap the rewards of new market opportunities that directly address global sustainability issues.

#### **ESG is an invisible issue for corporate management at earnings time**

Professor Baruch Lev of New York University tracked the language used in quarterly reporting by US companies via public conference calls from (2002-2007). Lev found that less than 1% of total words in quarterly earnings calls included sustainable development language vs. 80% related to earnings, income, etc. Only 2-3% of all calls mentioned any sustainable development words with only a slight increase in sustainability language from 2002-2007 (0.3%).

Lev’s analysis concludes that shares of intangibles-intensive companies are systematically over and undervalued causing excessive cost of capital and suboptimal investment and growth.

## Step 2

### Standardise the disclosure of quantitative ESG data

Building ESG expertise at management level and among investors requires clear and transparent investment language. Investors want ESG data to be:

- Material – where the relationship to financial performance is clear
- Standardised and comparable – across companies and sectors, and through time

Some of the ESG data relevant and material to corporate performance is quantitative and measurable. Company initiatives to develop principles or agreements on what ESG data is material and to disclose such data would be valued (i.e. WBCSD-WRI GHG protocol<sup>2</sup>). Companies uniquely understand the complexities and processes for managing these issues. By coming to a company-led agreement on what ESG data is important, companies can also be better prepared for potential regulations in these areas.

Asset managers in all six workshops specified that sector-specific key performance indicators listing what quantitative ESG data is financially material to companies operating in a particular sector would be an essential output to assist them in investment decision-making. This data must then be disclosed at fixed frequency.

Disclosure must include both data on past performance and forward-looking assessments. Such assessments can include forecasts on how ESG factors are projected to affect cash flows over a period of time. Investors say that insufficient forecasts in corporate disclosure are an impediment to pricing the long-term implications of ESG factors.

## Step 3

### Formalise a communication process for qualitative ESG data

The difficulty with qualitative information is that it is not readily reducible for mathematical models and investor spreadsheets—it is not ‘user-friendly’ for asset managers. However, a review of the brand valuation journey demonstrates that qualitative data can be measured and valued.

The workshops found that conversations are the real tool in allowing investors to better understand the intrinsic and long-term value of a company’s business in a way that databases cannot. Currently, investor-company conversations are usually limited to asset managers (and other investment service providers) and company investor relations managers who primarily focus on traditional factors such as earnings and growth prospects and put too much emphasis on short-term gains without giving appropriate consideration to material ESG risks and opportunities associated with long-term value creation, resilience and sustainable development.

This document recommends that:

- Companies and investors build knowledge and expertise on how qualitative ESG factors can enhance long-term and sustainable company value (e.g. how a company responds to issues, policies, practices and outcomes)
- In-depth one-on-one investor-company dialogues be integrated as an effective means to communicate qualitative ESG factors to investors and to increase the flow of both qualitative and quantitative ESG data

#### Investor quote, Kuala Lumpur:

‘Investors are not receiving enough information to make sustainability decisions; for example, on environmental issues in Southeast Asia. Different sectors should come together to address issues relevant to their industry (e.g. plantation, IT, construction).’

2 The Greenhouse Gas Protocol was developed through a partnership between the World Resources Institute and the World Business Council for Sustainable Development in collaboration with businesses, governments and environmental groups. It is the most widely used international accounting tool for government and business leaders to understand, quantify and manage greenhouse gas emissions.

### **3.3 Getting started. Putting ESG performance into investor-friendly language**

The type of ESG factors relevant for valuing companies will differ across industry sectors and geographies.

In order to get started and as an initial discussion piece, a sample of key performance indicators (KPIs) for quantitative ESG disclosure and qualitative considerations are shown in Annex A. This is followed by examples of sector-specific KPIs—these are the types of KPIs investors want companies to come together and agree upon sector by sector. Finally, concrete individual company examples and practical sector-specific guidelines, overviews and tools show how ESG factors have been and can be applied to corporate reporting and engagement with investors.

These are only intended as guidelines and are meant to show how ESG factors can be financially material to business performance, and to underscore the importance of comparative, market competitive data. Ultimately, they need to be decided on by companies within sectors, and discussed with investors.

## 4

## Key insights for investors

*In recent years, conviction has grown around the belief that increased and systematic consideration of ESG factors by investors can enhance long-term company value and lead to superior risk-adjusted returns, create more responsible and sustainable capital markets, and contribute to the sustainable development of societies.*

### 4.1 What investors need to know

*Companies that participated in the workshops provided insights on questions capital market actors and asset managers might ask companies about financially material ESG factors and sustainability.*

### What investors need to know



<p>'Improve questionnaires to be more specific with focus on material ESG factors.'</p> <p><b>Workshop 3: New York</b></p>	<p>'Communicate to markets, clients and especially investee companies the type of ESG factors needed for mainstream investment analysis.'</p> <p><b>Workshop 1: London</b></p>	<p>'Investors should ask about ESG factors in risk management and market opportunities, as well as forward-looking, longer-term assessments that show enhanced fair value.'</p> <p><b>Workshop 5: Vienna</b></p>
<p>'There are strong perceptions and misconceptions in the investment community about what ESG factors are material to a company or sector.'</p> <p><b>Workshop 2: Montreux</b></p>	<p>'Investors globally need to settle on a common view on what new information associated with material ESG factors needs to be measured, standardised and disclosed.'</p> <p><b>Workshop 6: Johannesburg</b></p>	<p>'New tools are needed to assist asset managers (e.g., expert advisors, standardisation of material ESG factors, and online tools such as 'open SRI or PRI', SRI and PRI ratings online).'</p> <p><b>Workshop 4: Kuala Lumpur</b></p>



## 4.2 What investors can do

*The workshops revealed several areas where asset managers can draw 'quick wins' in terms of integrating financially material ESG factors into investment decision-making. An immediate roadmap for investors could follow three critical steps:*

### Step 1

#### Build expertise on the fundamentals of ESG valuation

The first step for investors is to build expertise and knowledge on how ESG factors impact intrinsic company value. Some helpful starting places for building expertise are:

- Talking with companies themselves
- Approaching specialist investment research houses and brokers
- Direction from international initiatives (e.g. UNEP FI, WBCSD, Principles for Responsible Investment<sup>3</sup>)

Companies strongly believe that ESG factors can drive long-term and sustainable value creation in their businesses. However, it is important to bear in mind that each company needs to be valued differently according to three variables:

- The regional geography of the company's operations
- The company's sector
- The particular ESG factors (the environment, social forces or corporate governance) to which the company is most exposed

### Step 2

#### Use both quantitative and qualitative data in investment analysis

Standard financial models in mainstream investment houses are almost entirely dependent on quantitative data inputs. However, these quantitative inputs often require qualitative judgements. For example, the Discounted Cash Flow valuation method can be seen as a funnel through which today's numbers are moulded with

<sup>3</sup> The Principles for Responsible Investment (PRI) is an investor initiative in partnership with UNEP FI and the UN Global Compact. Launched in 2006 by then UN Secretary-General Kofi Annan and endorsed by current UN Secretary-General Ban Ki-moon in 2007, the Principles were established as a framework to help investors achieve better long-term investment returns and sustainable markets through better analysis of environmental, social and governance issues in the investment process and the exercise of responsible ownership practices. As of December 2009, over 650 signatories worldwide from the institutional investment community (e.g., pension funds, mutual funds, insurance companies, asset managers) representing approximately USD 19 trillion in assets under management have committed to implement the Principles.

**Investor quote,  
London:**

‘Investment tools such as company valuation models need to be further developed to be able to adequately capture ESG data.’

tomorrow’s expectations to generate an output. The analyst must decide what assumptions to use to make the model forecast the best representation of the company’s performance in the future.

These judgement calls are where ESG factors play a crucial role for particular companies according to country, industry and product line. A significant proportion of the value captured by ESG factors is through qualitative data. There is sizeable opportunity for asset managers to expand their valuation models to build a bridge between qualitative ESG factors and measurements of financial performance.

Companies are uniquely qualified on how and why ESG factors are core to their business – they understand their business best. For quantitative data, this document advises companies to develop principles or agreements on a common set of ESG factors, criteria and indicators that are financially material by sector and by region, where necessary. Investors should actively support and monitor this process so that data is standardised and comparable across companies within a given sector, as well as through time.

While an ESG framework will help break down key considerations on a company’s management of its operations, additional qualitative information is also required to assess the longer-term outlook and resilience of a company’s business model. Such information might include:

- Judgement calls on where the market is heading
- Market entry strategies
- Strategies for capital growth
- Ideas for new product development
- Local manifestation of ESG and macro sustainability issues (e.g., climate change, water scarcity, social friction, overexploitation of natural resources)

This document advises investors to integrate qualitative information more formally into their investment analysis procedures and buy/sell strategies.

Some of the world’s most successful investment strategies are founded precisely on capturing qualitative information in valuation. This requires skills that can be developed with expertise, knowledge and business acumen rather than sophisticated modelling.

### **Examples of qualitative investment approaches**

- Benjamin Graham and Warren Buffet’s ‘value investing’ ➔ This strategy requires making an assumption about the discount rate of future cash flow in order to derive a firm’s intrinsic value. This involves judgement of the underlying value of the business and its market position over the long-term.
- George Soros’ theory of ‘reflexivity’ ➔ Soros’ investment principles involve a judgement of how investors overreact to good and bad news. His philosophy is therefore fundamentally premised on a qualitative judgement about human behaviour.
- Sir Ronald Cohen, leading venture capitalist ➔ ‘Venture capital is an investment in the management of a firm.’

### Step 3

#### Formalise a process for gathering qualitative ESG data

The difficulty with qualitative information is that it is not 'user-friendly' for mathematical models and investor spreadsheets.

Based on insights from company-investor dialogues, this document recommends two approaches as a starting point to increase the flow of both qualitative and quantitative ESG data:

- Standardised inputs for quantitative ESG data
- A formalised process for regular meetings and communications with companies to discuss the value and application of qualitative ESG data

The impetus for the first strategy must come from companies with the support of investors (see Step 2 above).

**Investor quote, Vienna:**

'I found that the conversation was the real tool. It's hard to translate into data what the conversation was about, but having had it I would value that business differently now.'

The impetus for the second strategy must come from investors with the support of the companies. The current investor method of using questionnaires has been criticised by companies as missing the mark.

Two processes that investors at the workshops found useful for investment analysis were:

- Frequent company-investor conversations to discuss the top ESG factors
 

Conversations are the real tool in allowing investors to understand the value of a company's business in a way that databases cannot. Currently, investor-company conversations are usually limited to asset managers (and other investment service providers) and company investor relations managers. They primarily focus on traditional factors such as earnings and growth prospects and put too much emphasis on short-term gains without giving appropriate consideration to material ESG risks and opportunities associated with long-term value creation, resilience and sustainable development. These conversations need to be updated to adequately consider the evolved set of material ESG factors and should become instituted as a frequent and formalised investment procedure.
- Open-source dialogue and tools to share information between investors and companies
 

There is an open door for new models of inclusive dialogue and advanced tools (e.g. online tools) for information sharing between leaders and learners, investors and the companies they invest in. Information sharing is a crucial part of accelerating progress towards agreement on standardised qualitative methods.

Companies and capital market actors in developing countries want to be included in the decision-making to ensure that global standardisation reflects the perspectives and needs of a diversity of regions. The WBCSD and UNEP FI may be ideal platforms for these inclusive dialogues.

## Customer retention and satisfaction as key indicators

### Lessons from the brand valuation journey

The brand valuation company, Interbrand, draws links between valuing brand and valuing sustainability. Brands create value by creating demand and securing future earnings for the business. A company's brand value is today's value of the earnings it will potentially generate in the future. It is a function of the magnitude of those earnings and the risks to which they are exposed. Brand risk is a function of the company's risk exposure, adjusted by the strength of its brands. This depends on many factors, including the investments it receives (quantity and quality), brand image (brand's perceived personality and reputation) and customer franchise (relationship with customers).

In this way the concept of sustainability value has many parallels to that of brand value—the more a company proves to the financial markets and other audiences that it is a sustainable business, the lower are a series of risks associated with that company (and the lower the rate used to discount future earnings). Sustainability is not a fad—it is a way of doing business. We can determine the influence corporate ESG performance has on the overall business and its brands, but there is no standard solution. Companies need to assess the relevance of sustainability issues to their business, current perceptions about their brands on this matter, potential upsides of investing in sustainability-related projects, and the reputational risk of not doing so. Brand value is a way to summarise all this.

## 4.3 Getting started. What investors should ask

### Company quote, New York:

‘There is a very high volume of questionnaires which are time and resource consuming and often don't have relevant questions from a business perspective. The result is that company ESG performance assessments are not often related to material issues.’

The types of ESG factors relevant for valuing companies will differ across industry sectors and geographies.

In order to get started, sample ESG quantitative data that could be integrated into corporate valuation models and some qualitative issues that investors could raise with companies are shown in Annex A below. The questions under 'quantitative data' should be understood as an effort by investors to supplement the ideal periodic disclosure by companies of standardised quantitative data and, where possible, standardised qualitative data. Investors should work with companies to elaborate on key performance indicators (KPIs) and the types of ESG quantitative data that need to be disclosed.

This is followed by examples of sector-specific KPIs—these are the types of KPIs companies should come together and agree on sector by sector. Finally, concrete individual company examples and practical sector-specific guidelines, overviews and tools show how ESG factors have been and can be assessed and integrated into company disclosure and investment analysis and decision-making.

These are only intended as guidelines and are meant to show how ESG factors can be financially material to business performance, and to underscore the importance of comparative, market competitive data. Ultimately, they need to be decided on by companies within sectors, and discussed with investors.

## 5

## Annex A

## 5.1 Sample ESG considerations by sustainability theme

KPI	'E' factor	Quantitative data	Qualitative data
ENVIRONMENTAL	Energy use and efficiency (From WRI/WBCSD GHG Protocol)	<ul style="list-style-type: none"> <li>Breakdown of energy costs and forecasts (power, manufacturing, mobility, buildings, consumers)</li> <li>Breakdown of carbon costs and forecasts – primary effects (grid &amp; off-grid electricity, industrial processes, fugitive emissions, waste emissions, storage or removal of emissions) and secondary and tertiary effects (supply chain)</li> <li>R&amp;D in plant and equipment to reduce energy use</li> <li>Expected cost savings from energy-related R&amp;D</li> <li>% of renewable energy to energy consumed or generated</li> </ul>	<ul style="list-style-type: none"> <li>What is the company's exposure to future carbon regulation?</li> <li>What is the company's current position on climate change, its responsibility to address climate change, and its engagement with governments and advocacy organizations to affect climate change policy?</li> <li>What are significant actions the company is taking to minimize its climate risk and to identify opportunities? What specific actions is the company taking to reduce, offset or limit greenhouse gas emissions?</li> <li>What are the company's corporate governance actions on climate change? Has the Board been engaged on climate change? Are there executives in charge of addressing climate risk? Is executive compensation linked to meeting corporate climate objectives?</li> </ul>
	Greenhouse gas emissions (From UNEP FI Climate Change Working Group, 2006)	<ul style="list-style-type: none"> <li>Actual historical direct and indirect emissions since 1990</li> <li>Current direct and indirect emissions</li> <li>Estimated future direct and indirect emissions of greenhouse gases from their operations, purchased electricity and products and services</li> </ul>	
	Water use (From WBCSD Water Working Group 2009 and the UNEP FI Water & Finance Work Stream, 2009)	<ul style="list-style-type: none"> <li>Volume of water consumed by the company annually (giga liters) – per sales, per product?</li> <li>Water footprint (metrics being developed by the Water Footprint Network)</li> <li>Past and forecasted cost of water</li> <li>R&amp;D in plant/equipment to recycle water</li> <li>Forecasted cost savings from water-related R&amp;D (e.g., from reduced energy use)</li> <li>% of recycled water to total water used</li> </ul>	<ul style="list-style-type: none"> <li>Where does water consumed come from (groundwater, desalination)?</li> <li>Does the company operate in water-stressed areas?</li> <li>Do employees have access to sanitation?</li> <li>Does the company have secure access to water rights over the long term? If not, how does it intend to secure the access to water in the future?</li> <li>Has the company consulted long-term water resource forecasts that take into account climate change and increasing consumption?</li> <li>Has management carried out sensitivity analysis of the operational and financial effects of different levels of water availability and quality?</li> <li>What efforts has the client made to reduce the water footprint of its facilities?</li> </ul>
	Use of ecosystem services – impact & dependence (From WBCSD Business & Ecosystems 2007 and the UNEP FI Biodiversity & Ecosystem Services Work Stream)	<ul style="list-style-type: none"> <li>% of forest product inputs that are certified (e.g., timber, pulp)</li> <li>Number and/or % of production or extraction sites close to biodiversity hotspots and protected areas</li> <li>% of marine product inputs that are certified (e.g., timber, pulp)</li> </ul>	<ul style="list-style-type: none"> <li>What are your impacts and dependence on ecosystem services (covering direct operations, suppliers and customers)?</li> <li>What is the status of relevant ecosystem services? How do key trends affect your core business? How is your company reducing ecosystem impacts and scaling up solutions? What policies have you put into place?</li> <li>Are there opportunities emerging in response to ecosystem changes, including new technologies, markets, businesses and revenue streams?</li> <li>How is your company advancing the sustainability of ecosystem services externally – with research organizations, NGOs, industry associations and governments?</li> <li>Are biodiversity losses addressed as part of the selection of site locations and site design? Are biodiversity offsets purchased?</li> <li>In developing countries, do biodiversity-related risk management measures and standards only comply with local regulation or do they comply with OECD-level regulation?</li> </ul>
	Innovation in environment-friendly products and services (UNEP FI work on Green Financial Products)	<ul style="list-style-type: none"> <li>Sales forecast in new energy, water or ecosystem efficient product or service lines</li> <li>% of current and forecasted sales of resource-efficient and/or recyclable products to overall sales</li> </ul>	<ul style="list-style-type: none"> <li>Are there any opportunities in the market to introduce a new product or service addressing an environmental problem or need?</li> <li>Results of market research on consumer demand for energy, water or ecosystem efficient product or service lines</li> </ul>

KPI	'S' factor	Quantitative data	Qualitative data
<b>SOCIAL</b> (From WBCSD Measuring Impact working group 2009 & WBCSD Facts & Trends on Sustainable Consumption, 2008)	Employees (UNEP FI Human Rights Toolkit)	<ul style="list-style-type: none"> <li>■ Future labor demand given expected rate of growth</li> <li>■ Retention rate of employees</li> <li>■ Labor intensity of business</li> <li>■ Health and safety measurements (illness, fatalities)</li> <li>■ Employee training costs and return on training in productivity terms</li> <li>■ Average employee remuneration relative to national, regional and sector average</li> <li>■ % of equity held by non-management staff</li> <li>■ Average working hours per week relative to national, regional and sector average</li> <li>■ % of salary paid during sick leave; temporal length of paid salary during sick leave</li> </ul>	<ul style="list-style-type: none"> <li>■ How dependent is your business model on human talent?</li> <li>■ How are you working towards being employer of choice in your industry?</li> <li>■ How are you avoiding employee churn?</li> <li>■ What programs do you have in place to ensure continuous improvement of employee health, safety and well-being?</li> <li>■ How does this compare with your competitors?</li> <li>■ Are the ILO labor standards applied in all sites around the world? Are suppliers chosen under consideration of their labor standard credentials?</li> <li>■ In developing countries: Do employee health and safety standards comply only with local regulation or also with OECD-level standards?</li> </ul>
	Poverty and community impact (UNEP FI Human Rights Toolkit)	<ul style="list-style-type: none"> <li>■ Number of people at the bottom-of-the-pyramid served by products and services (and aspect of life improved as a result)</li> <li>■ Number of people whose annual income the company has improved?</li> <li>■ Average employee remuneration relative to national, regional and sector average</li> <li>■ Amount of social investment (investments in special projects or infrastructure around operations)</li> <li>■ % of social investment relative to turnover</li> </ul>	<ul style="list-style-type: none"> <li>■ How do your products and services improve the lives of the poor?</li> <li>■ How much education or guidance is given with products and services to ensure that products are being used sustainably and as intended for maximum benefit?</li> <li>■ How have social investments decreased risk for the company and secured its license to operate?</li> <li>■ How are you demonstrating that your company is contributing positively to the societies, communities and well-being of people where you operate?</li> <li>■ What programs does the company have in place to protect its 'license to operate'? For instance, are families of employees provided with access to healthcare if the conventional healthcare infrastructure is insufficient (particularly in remote areas of developing countries)?</li> </ul>
	Supply chain management	<ul style="list-style-type: none"> <li>■ Number and % of suppliers disclosing adherence to labor standards</li> </ul>	<ul style="list-style-type: none"> <li>■ Where do product components and raw materials come from?</li> <li>■ How is information assured as credible?</li> <li>■ How are processes assured as legal according to country and global standards?</li> <li>■ Have the needs of local communities or indigenous peoples been addressed?</li> <li>■ How are issues of environmental protection and bio-capacity addressed and secured?</li> <li>■ Are fundamental human rights being respected in labor practices?</li> </ul>

KPI	'G' factor	Quantitative data	Qualitative data
<b>Governance</b> (From WBCSD Beyond Reporting 2006)	Codes of conduct and business principles	<ul style="list-style-type: none"> <li>■ Number of sustainability initiatives and networks where the company is an active signatory or member</li> </ul>	<ul style="list-style-type: none"> <li>■ How does your business model provide value to society?</li> <li>■ What core business decisions and new market opportunities have been driven by your understanding of material sustainability issues?</li> <li>■ What drives value in your business and what sustainability issues are central to those drivers?</li> </ul>
	Accountability	<ul style="list-style-type: none"> <li>■ Number of independent directors on the Board</li> </ul>	<ul style="list-style-type: none"> <li>■ How are corporate functions, management and employee incentives aligned to value drivers and understanding of material sustainability issues?</li> <li>■ What processes are in place to work with stakeholders according to key accountabilities?</li> <li>■ Based on drivers of value, what is the company accountable for and who is the company accountable to?</li> </ul>
	Transparency and disclosure	<ul style="list-style-type: none"> <li>■ Number of legal disputes against company filed</li> <li>■ Fees paid for litigation costs</li> <li>■ Remuneration of senior management and board members in absolute terms; and relative to national, regional, sector average and company (internal) average</li> </ul>	<ul style="list-style-type: none"> <li>■ What policies does your company have to communicate market sensitive information to investors as soon as it arises?</li> <li>■ What policies do you have to prevent bribery and corruption within your company?</li> <li>■ How does your proposed M&amp;A activity affect your company's corporate disclosure obligations?</li> </ul>
	Implementation – quality and consistency	<ul style="list-style-type: none"> <li>■ Code of conduct</li> </ul>	<ul style="list-style-type: none"> <li>■ Is your company's code of conduct consistently implemented? Is it biting (reinforcing good practice)? Is there evidence that the code of conduct contributes to overall performance?</li> </ul>

## 5.2 Sample ESG considerations by sector

Sector	ESG factor	Quantitative data	Qualitative data
Electricity Utilities (From WBCSD Power to Change, 2009)	<ul style="list-style-type: none"> <li>■ Carbon footprint, power supply</li> <li>■ Infrastructure</li> <li>■ User awareness and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>■ Current carbon emissions per MWh of electricity</li> <li>■ Forecasts for future carbon price and carbon costs</li> <li>■ Current renewable energy generating capacity within the company's asset base</li> <li>■ Investment in related infrastructure</li> <li>■ Investment in R&amp;D for resource and end-use efficiencies, and smart grid technology</li> <li>■ Investment in awareness building campaigns for end-user efficiency</li> </ul>	<ul style="list-style-type: none"> <li>■ Explain what strategies the company is deploying in response to foreseeable changes in energy/carbon regulation and costs</li> <li>■ What opportunities exist for the company in a diversified fuel mix and clean technologies?</li> <li>■ What R&amp;D is the company undertaking in new generation innovations, including 'smartening' grids?</li> <li>■ What are your strategies to get more power to more people?</li> <li>■ How are you increasing awareness with consumers regarding personal use efficiency?</li> </ul>
Forest Products (From WBCSD Forest Products Principles 2007 and PwC-WBCSD Sustainable Forest Finance Toolkit, 2010)	<ul style="list-style-type: none"> <li>■ Sustainable forest management</li> <li>■ Legality</li> <li>■ Certification</li> <li>■ Pollution and environmental management systems</li> <li>■ Local communities and indigenous people</li> <li>■ Forest carbon and ecosystem services</li> </ul>	<ul style="list-style-type: none"> <li>■ Satisfactory environmental and social impact assessment</li> <li>■ Carbon management</li> <li>■ Forest certification</li> <li>■ Traceability</li> <li>■ Health and safety</li> <li>■ Investment in tree improvement</li> <li>■ Greenhouse gas emissions from sourcing, transport, manufacturing, etc.</li> <li>■ For full list, refer to 'Key sustainability issues across the value chain of an example forest products company' in PwC-WBCSD Sustainable Forest Finance Toolkit, 2009</li> </ul>	<ul style="list-style-type: none"> <li>■ Is a strategic/management plan in place to obtain forest management unit/chain of custody certification?</li> <li>■ How are these policies communicated and implemented and who is responsible?</li> <li>■ Can management provide copies of these documents and evidence of procedures (e.g., whistle-blowing hotline; forest management permits, licenses and agreements available for inspection)?</li> <li>■ For full list, refer to Management interview template in PwC-WBCSD Sustainable Forest Finance Toolkit, 2009</li> </ul>
Cement (From WBCSD Cement Sustainability Initiative)	<ul style="list-style-type: none"> <li>■ Climate protection</li> <li>■ Fuels and raw materials use</li> <li>■ Employee health and safety</li> <li>■ Emissions reduction</li> <li>■ Local impacts</li> <li>■ Reporting and communications</li> </ul>	<ul style="list-style-type: none"> <li>■ CO2 Accounting Protocol: Calculating CO2 emissions from the production of cement</li> <li>■ Fuels and raw materials use</li> <li>■ Employee health and safety</li> <li>■ Emissions reduction</li> <li>■ Local impacts</li> <li>■ For more see WBCSD Cement Sustainability Initiative <a href="http://www.wbcscement.org">www.wbcscement.org</a></li> </ul>	<ul style="list-style-type: none"> <li>■ How are you managing the improvements in energy efficiency and emissions reductions (i.e., use of clinker substitutes such as slag and fly ash)?</li> <li>■ How are you increasing the use of lower carbon or carbon neutral alternative fuels (e.g., biomass and waste fuels)?</li> <li>■ How are you upgrading plant technology (e.g., dry kilns with pre-heaters and pre-calciners, now industry standard)?</li> </ul>
Water Utilities (From UNEP FI Water & Finance Workstream, 2007)	<ul style="list-style-type: none"> <li>■ Affordability and social inclusiveness</li> <li>■ Environmental sustainability of water resources</li> </ul>	<ul style="list-style-type: none"> <li>■ Absolute and relative amounts of water leakage</li> <li>■ % of target population covered?</li> <li>■ Price of water relative to the international, national and regional average, as well as the local average income per capita.</li> <li>■ % of wastewater treated? % of wastewater recycled?</li> </ul>	<ul style="list-style-type: none"> <li>■ At project start: Has the utility assessed the affordability of the services it will provide to the local community? Has it adapted the level of service to the purchasing power of the target communities?</li> <li>■ Does the utility promote supply and/or demand-side efficiency measures? Through which measures and mechanisms?</li> <li>■ Have alternative sustainable sources of raw water supply been identified and assessed as potential back-ups?</li> <li>■ Is the company aware of maximum levels of water extraction above which the underlying ecosystem would be overexploited?</li> <li>■ Does the utility have cross-subsidy mechanisms in place to support poor customers?</li> <li>■ Does the utility have programs in place aimed at expanding coverage to poor communities and districts?</li> <li>■ Are watershed protection measures and payments in place?</li> </ul>

### 5.3 Examples of ESG factors in corporate disclosure

'In 2008 we applied a screening method to estimate the total reduction in CO<sub>2</sub> facilitated by the application of our enzymes. The method is based on conventional product lifecycle assessment (LCA, in accordance with ISO 14040). The outcome of the calculations is our carbon footprint, in other words the sum of emissions from suppliers of energy and raw materials, emissions from enzyme production, and the emission reductions achieved from the use of enzymes by our customers. The project has undergone third-party review by PricewaterhouseCoopers LCA experts.

'For 2007 our carbon footprint has been estimated at 25 million tons of CO<sub>2</sub>. This means that using enzyme technology instead of conventional technologies has led to considerable reductions in emissions. Extrapolation indicates that corresponding emission reductions in 2008 were around 28 million tons of CO<sub>2</sub>. The estimation of the 2007 carbon footprint is the starting point for the 2008 estimate and our 2009 target.'

Source: Novozymes' Annual Report 2008

<b>Risks and opportunities summary: Mondi</b>			
<b>Priority ecosystem service</b>	<b>Potential risks</b>	<b>Potential opportunities</b>	<b>Type of risk / opportunity</b>
Freshwater	<ul style="list-style-type: none"> <li>■ Increased water scarcity due to:               <ul style="list-style-type: none"> <li>▷ Invasive alien species proliferation</li> <li>▷ Increasing demand among nearby, inefficient water users (farmers)</li> <li>▷ Climate change</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Internal efficiency improvements in freshwater use</li> <li>■ (Co)financing water efficiency improvements of nearby landowners</li> </ul>	Operational
Water regulation	<ul style="list-style-type: none"> <li>■ See above</li> </ul>		
Biomass fuel		<ul style="list-style-type: none"> <li>■ New biomass-to-energy markets for carbon sequestration</li> </ul>	Market and product
Global climate regulation		<ul style="list-style-type: none"> <li>■ Emerging markets for carbon sequestration</li> </ul>	Market and product
Recreation and ecotourism		<ul style="list-style-type: none"> <li>■ Ecotourism or recreation-based revenue streams from company-managed wetlands/grasslands</li> </ul>	Market and product
Livestock	<ul style="list-style-type: none"> <li>■ Reduced plantation productivity due to increasing grazing pressures</li> <li>■ Increased scrutiny from nearby stakeholders for perceived "under-utilization" of Mondi land set aside as wetlands / grasslands</li> </ul>		Operational  Reputational

Source: WBCSD Ecosystems Services Review 2008

## 5.4 Examples of UNEP FI guidelines, overviews and tools to integrate ESG factors by sustainability theme

Water as an input	Y	N	NA
Has the client assessed the criticality of water as an input in the production process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the client conducted an assessment of security of sustainable water supply? This should include a long-term assessment for both ground and surface waters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the company/facility dependent on:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ a single source of supply?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ supply from a source with many competing users (including ecosystems)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ supply from another region or country?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ infrastructure for the delivery of water? Is this adequately maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the client used long-term water resource forecasts that take into account climate change and increasing consumption?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the financial impact of water risk been assessed ('water due diligence')?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ Has the management carried out sensitivity analysis of the operational and financial effects of different levels of water availability/quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ Has the management quantified the impact of water risks and made this information available? This would take into account the cost impact of alternative water supplies and the revenue impact of operating interruptions or restrictions due to inadequate water availability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source: 'Half Full or Half Empty? A set of indicative guidelines for water-related risks and an overview of emerging opportunities for financial institutions', UNEP FI Water & Finance Work Stream, 2007

Human rights expectations from companies
<p>Companies should respect and promote the following rights:</p> <ul style="list-style-type: none"> <li>■ Right to equal opportunity and non-discriminatory treatment.</li> <li>■ Right to security of person.</li> <li>■ Rights of workers. Specifically, companies should                             <ul style="list-style-type: none"> <li>▷ Not use forced or compulsory labour</li> <li>▷ Respect the rights of children</li> <li>▷ Provide a safe and healthy workplace</li> <li>▷ Pay workers a fair wage</li> <li>▷ Ensure the freedom of association and the right to collective bargaining.</li> </ul> </li> <li>■ Respect for national sovereignty and human rights. This includes:                             <ul style="list-style-type: none"> <li>▷ Respecting the rights of children</li> <li>▷ Not paying bribes</li> <li>▷ Ensuring that the company's goods and services are not used to abuse human rights</li> <li>▷ Respecting civil, cultural, economic, political and social rights in particular the rights to: development, adequate food and drinking water, highest attainable standard of physical and mental health, adequate housing, education, freedom of thought, conscience and religion, freedom of opinion.</li> </ul> </li> </ul>

Source: 'Human Rights' CEO Briefing, UNEP FI Human Rights Work Stream, 2008

Sector overview of biodiversity risks		
Industry sector	Major risks to biodiversity	Attendant risks to business
Agriculture & biofuels	<ul style="list-style-type: none"> <li>■ Conversion of natural habitats and marginal land being brought back into production (biofuels is a major driver of both)</li> <li>■ Indirect risks (e.g. through changes in water quality and quantity to downstream users or cumulative issues)</li> <li>■ Land use change (generally, conversion from natural state) or farming systems (livestock and rice) resulting in significant GHG emissions</li> <li>■ The introduction of alien species as part of production or pest management systems</li> <li>■ Use of agrochemicals without an integrated pest management system and without a full assessment of input requirements</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduced production and profitability from the failure to implement better/best management practices in relation to soil and water management (resulting in damage to soil through mechanisation, poor farming practices and lower production, and over abstraction and use of water, drainage of wetlands, and salinisation)</li> <li>■ Lost revenue and productive capacity because of failure to assess the real economic costs of farming marginal lands</li> <li>■ Loss of access to markets and finance if poor practices are more widely reported</li> </ul>
Construction & building materials (including cement)	<ul style="list-style-type: none"> <li>■ Cement production uses large quantities of limestone as raw materials and the mining of this can be extremely damaging to biodiversity associated with limestone habitats. Additionally, cement production is a major emitter of GHGs with attendant climate change risks. Mitigation of emissions and impacts to limestone habitats should be considered</li> <li>■ Mining for other construction materials (e.g. rock, gravel, sand) and also the use of timber can have biodiversity impacts if sourcing from areas of biodiversity and/or ecosystem service value.</li> </ul>	<ul style="list-style-type: none"> <li>■ Loss of access to land and resources and reputational damage</li> <li>■ Constrained production and operational efficiencies as carbon controls and limits become more demanding</li> <li>■ Long-term sustainability of operations will be affected where renewable natural resources (e.g. timber) are an important element of company products</li> </ul>
Electricity generation & supply	<ul style="list-style-type: none"> <li>■ Power generation involving fossil fuels adds to atmospheric carbon and is a significant contributor to GHGs</li> <li>■ Power generation can also have significant effects on the biodiversity of water courses (through the discharge of heated cooling waters)</li> <li>■ Roads and transmission corridors for power lines can fragment habitats and allow increased access to previously undeveloped areas, leading to potentially significant impacts from land conversion, small-scale mining, hunting and logging</li> <li>■ Wind turbines may adversely affect wildlife, particularly birds</li> </ul>	<ul style="list-style-type: none"> <li>■ Loss of access to land and resources and reputational damage</li> <li>■ Profitability of hydro operations may be affected by reduced capacity in reservoirs (as a result of catchment land use change and soil erosion), as well as changing rainfall. Drainage arising from climate change</li> <li>■ Public campaigns and action against large emitters of GHGs</li> <li>■ Thermal power generation will be affected by GHG emission limits and potential liabilities</li> </ul>
Food, beverages & pharmaceuticals	<ul style="list-style-type: none"> <li>■ The primary risks associated with this sector are via supply chain impacts associated with food, beverages and pharmaceuticals production. These may be diverse and complicated (e.g. water use to grow grain for chicken feed)</li> <li>■ Particular care needs to be taken when prospecting for pharmaceuticals (and new varieties of foods) since intellectual property rights in relation to biodiversity may need to be met</li> <li>■ The other key biodiversity risk associated with this sector relates to 'food miles' (the distance travelled by food items and the carbon/GHG burden they have accumulated), and embedded water (the amount of water required to produce a product/food products – e.g. 11,000 litres of water for a pair of jeans, and 400,000 litres for a car). Options for offsetting carbon emissions associated with food miles is an area in which many retailers and food producers are currently exploring</li> </ul>	<ul style="list-style-type: none"> <li>■ Reputation and market access drivers will increasingly affect both retailers and supply chains</li> <li>■ Security of supply (for fish and some types of timber) is increasingly an issue</li> <li>■ Forward-looking retailers and food producers are beginning to assess environmental and social impacts through the supply chain, but to date these have largely failed to assess biodiversity issues (except where there are clear and widely recognised risks – e.g. oil palm and fisheries). BES impacts are far more widespread than generally recognised and environmental management systems should specifically include supply chain BES risk capacity</li> </ul>

Sector overview of biodiversity risks		
Industry sector	Major risks to biodiversity	Attendant risks to business
Forestry & paper	<ul style="list-style-type: none"> <li>■ The primary risk is from the unsustainable and illegal harvesting of natural forest in emerging markets (with impacts on BES and local communities)</li> <li>■ Additionally, there are often significant impacts on soil and water biodiversity from forestry/logging operations, and GHG emissions from conversion and logging</li> <li>■ Indirect impacts (particularly relating to improved access to previously inaccessible areas which encourage new settlements and activities – including hunting and illegal logging) may also be an issue in some locations</li> <li>■ For plantations, biodiversity impacts arise as a result of the conversion of original habitats to plantation (and use of non-native species) and ecosystem changes resulting from large-scale plantation development (particularly water availability)</li> <li>■ For pulp mills, in addition to assurance needs relating to the sourcing of wood supply (legal, from sustainable sources), GHG emissions from pulp mills and effluent quality can affect biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>■ Access to capital is becoming more complex for forestry and paper companies that cannot demonstrate sustainable practices</li> <li>■ Reputational and market access issues are also becoming more significant</li> <li>■ For some types of wood, security of supply is also becoming an issue as natural stocks are depleted</li> <li>■ Certification under an acceptable and credible forest management programme is becoming an essential ticket to market for producers wishing to sell in Western Europe and the United States</li> <li>■ The social issues related to land tenure and access to BES for local communities are also important in many emerging markets</li> </ul>
Leisure & tourism	<ul style="list-style-type: none"> <li>■ The siting of hotels and resorts (particularly if these are located in coastal or mountain areas) can have BES impacts through direct loss of habitat and also a range of indirect and cumulative impacts (the sector is particularly prone to cumulative biodiversity risks as a result of the development of a number of resorts/hotels owned and operated by different companies in close proximity)</li> <li>■ Linked to resort development, there are often BES impacts associated with supporting infrastructure and recreational facilities (including airports, waste water treatment facilities, power plants and golf courses) which can have a range of indirect BES impacts</li> </ul>	<ul style="list-style-type: none"> <li>■ Access to land is becoming more complicated and stronger evidence that hotels will be developed in a sustainable fashion is becoming important</li> <li>■ Reputational risks to operators (who may be the developers of assets) is increasing as green branding becomes a significant part of a hotel's brand</li> <li>■ Potential loss of fundamental source of revenue (e.g. if coral reefs are destroyed)</li> </ul>
Mining	<ul style="list-style-type: none"> <li>■ Land take and habitat conversion from exploration and extraction – including associated facilities such as access roads, tailings dams</li> <li>■ It is estimated that three quarters of active mines and exploration sites overlap areas of BES value</li> <li>■ Induced impacts from increased access to remote areas (in-migration, artisanal mining by third parties, increased hunting, and clearance of natural habitat by third parties)</li> <li>■ Water use and quality often decline as a result of acidity and elevated levels of suspended solids, which can have significant impacts on downstream BES and local communities who depend on these natural resources</li> </ul>	<ul style="list-style-type: none"> <li>■ Legacy issues associated with poor closure practices and the risks of incidents which release large volumes of polluted water with BES impacts will restrict access to new sites and may tarnish the industry more broadly across regions and countries</li> <li>■ Access to new land and access to capital increasingly viewed through the lens of sustainability (including BES issues)</li> <li>■ Liabilities and clean-up costs associated with long-term pollution and ecosystem damage (e.g. tailings dams collapse and acid mine drainage) will increase</li> </ul>

Sector overview of biodiversity risks		
Industry sector	Major risks to biodiversity	Attendant risks to business
Oil & gas	<ul style="list-style-type: none"> <li>■ Land take and access to remote areas during exploration: There are numerous examples of recent exploration and production programmes which have had impacts in areas of high biodiversity (on and offshore). Concerns about the impacts on deep water biodiversity from offshore extraction are increasing (and concerns about the impacts of seismic testing on whales and other cetaceans are also noteworthy in some regions)</li> <li>■ Pipeline and road development which can fragment habitats and, more importantly, increase third party access to previously inaccessible areas</li> <li>■ The transport of alien marine species in ballast waters has had extreme impacts to native biodiversity and knock-on effects on local and even national economies</li> <li>■ The exploration and production of oil and gas creates significant GHG, and pollution risk from transport, processing and production are concerns</li> </ul>	<ul style="list-style-type: none"> <li>■ Access to new land and access to capital increasingly viewed through the lens of sustainability (including BES issues)</li> <li>■ Liabilities and clean-up costs associated with long-term pollution and ecosystem damage (including potential attribution for responsibilities for climate change) will increase</li> </ul>
Water utilities	<ul style="list-style-type: none"> <li>■ Building of dams for hydroelectric power can profoundly affect biodiversity through loss of terrestrial habitats, restriction of fish migration, and induced effects on catchment land use as a result of reservoir and water supply opportunities</li> <li>■ Excessive water abstraction to service demand lowers soil water tables, which can affect wetlands, soil chemistry and river flows</li> <li>■ Inter-catchment transfers can address water imbalances between regions, moving water between catchments risks the introduction of alien species, as well as more subtle changes in water chemistry and temperature</li> </ul>	<ul style="list-style-type: none"> <li>■ Loss of access to land and resources and reputational damage</li> <li>■ Reputational risk is becoming more significant and financing will become more complex for companies that do not subscribe to international good/best practices (e.g. those espoused by the International Hydropower Association)</li> <li>■ Profitability of hydro operations may be affected by reduced capacity in reservoirs (as a result of catchment land use change and soil erosion), as well as changing rainfall</li> </ul>

Source: 'Bloom or Bust?', UNEP FI Biodiversity & Ecosystem Services Work Stream, 2008

## 6

## Conclusion

‘The binomial ethics-finance is no longer considered an oxymoron. The recent financial crisis has certainly highlighted the need for social responsibility as an unavoidable prerequisite for business sustainability. From now on, it will be easier for financial operators to consider sustainability drivers such as ESG factors when evaluating businesses.’

**Gianluca Manca, Head of Sustainability and Global Non-Profit Business, Eurizon Capital, Intesa Sanpaolo Group & Co-Chair, UNEP FI Asset Management Working Group**

‘Sustainability will become a key driver for all our investment decisions.’

**Idar Kreutzer, CEO, Storebrand & Co-Chair, WBCSD Business Role Focus Area**

‘The severity and amplitude of the crisis provides convincing evidence that there is something fundamentally wrong with this prevailing theory and with the approach to market regulation that has gone with it.’

**George Soros, The Crisis & What To Do About It (2008)**

The recent global financial crisis, which stemmed from the credit crunch in 2007, has forced financial markets and companies to rethink their exposure to systemic risks. As a result, we are finding that the importance of integrating ESG factors and sustainability into corporate and investment decision-making is even more relevant today—it is not something for tomorrow. Companies, financial market actors and regulators are asking new questions, looking at new risks and searching for new opportunities in the markets of the future. There are new approaches to creating sustainable shareholder value that require companies and investors to adopt a systemic and longer term view, and to understand the financial materiality of ESG factors as part of a full spectrum of risks and opportunities.

But financial crises are not new. The Asian financial crisis of 1997, the Russian financial crisis of 1998, the dotcom bubble leading up to 2001 and the spectacular corporate scandals of Enron and WorldCom are all reminders that financial markets are vulnerable to shocks. However, the breadth and depth of the global financial crisis has illustrated the extent of the devastation that systemic shocks can have on the economy at large, including credit markets, property markets and equity markets.

As we consider the failure of the current financial model and the inadequacy of disclosure regulation and risk management tools to price risk, we are forced to ask questions about the systemic shocks posed by failing to integrate ESG factors and sustainability into company valuation. With climate change identified as the greatest market failure the world has seen, investors are beginning to understand the powerful implications of climate change on portfolio performance and the effect of carbon regulation on business operations.

However, climate change is one of many ESG factors that the market has systematically failed to price into mainstream financial analysis to date. A recent McKinsey survey has shown that two-thirds of CFOs, investment professionals and corporate social responsibility professionals believe that the shareholder value created by environmental and governance programmes will increase in the next five years relative to their contributions before the crisis.<sup>4</sup>

## Key takeaways for companies and investors

### BUILD EXPERTISE ON ESG & SUSTAINABILITY FUNDAMENTALS IN COMPANY VALUATION

#### Companies should:

- Build knowledge and expertise on material ESG factors and sustainability in the context of their own companies and sectors
- Systematically integrate financially material ESG factors and sustainability into corporate decision-making and disclosure
- Communicate to investors the clear links between the management of financially material ESG factors and sustainability in the context of their own companies' strategy and in comparison to peer companies (i.e. within the sector)

#### Investors should:

- Build knowledge and expertise on ESG factors and sustainability across companies and sectors, and through time
- Systematically integrate financially material ESG factors into fundamental analysis, company valuation and investment decision-making
- Proactively ask companies about the management of material ESG factors and sustainability and their links to financial performance and strategy

### STANDARDISE DISCLOSURE OF QUANTITATIVE ESG DATA

#### Companies should:

- Form sector-wide agreements or principles on quantitative ESG factors and indicators perceived as financially material to businesses in their sector
- Ensure that corporate and sustainability reports articulate financially material ESG factors, and include both present data and forward-looking assessments

#### Investors should:

- Price quantitative ESG data into their valuation models
- Proactively support companies in the development of standardised ESG and sustainability data to ensure comparability. Use UNEP FI, the Principles for Responsible Investment and the WBCSD as platforms for these dialogues

### STANDARDISE A PROCESS FOR DELIVERING QUALITATIVE ESG DATA

#### Companies should:

- Proactively pursue one-on-one dialogues with investors to discuss qualitative ESG and sustainability issues with links to both past and forward-looking financial performance and strategy

#### Investors should:

- Institute regular one-on-one dialogues with companies to discuss qualitative sustainability issues and links to companies' management of financially material ESG factors
- Use UNEP FI, the Principles for Responsible Investment and the WBCSD as platforms for open-source public dialogue for sharing ESG-inclusive valuation methods and investment approaches, and to keep abreast of corporate management of ESG factors and sustainability across sectors

# Acknowledgements

## United Nations Environment Programme Finance Initiative

---

	<b>Co-Project Lead</b>	<b>Co-Project Lead</b>
Paul Clements-Hunt Head UNEP Finance Initiative	Butch Bacani Programme Officer Insurance & Investment UNEP Finance Initiative	Remco Fischer Programme Officer Climate Change & Water UNEP Finance Initiative

## World Business Council for Sustainable Development

---

	<b>Project Lead</b>
Per Sandberg Managing Director The Business Role Focus Area WBCSD	Cheryl Hicks Assistant Manager The Business Role Focus Area WBCSD

## UNEP FI Asset Management Working Group

---

### Co-Chairs

Gianluca Manca Head of Sustainability & Global Non-Profit Business Eurizon Capital (Intesa Sanpaolo Group)	Dr Julie Fox Gorte Senior Vice President for Sustainable Investing Pax World Management Corp.
---	--

## WBCSD Business Role Focus Area

---

### Co-Chairs (during the workshop series)

Samuel A. DiPiazza, Jr. CEO (now retired) PricewaterhouseCoopers	Idar Kreutzer CEO Storebrand
--	------------------------------------

### Co-Chair Liaison Delegates

Geoff Lane Partner, Sustainability & Climate Change PricewaterhouseCoopers	Elin Myrmel-Johansen Executive Vice President, Corporate Responsibility Storebrand
--	---

## UNEP FI and the WBCSD are grateful to the following institutions and individuals:

In particular, Eric Knight, Lead Academic, and Rajiv Sharma, Supporting Academic, both PhD Candidates at the Oxford University Centre for the Environment.

Barend van Bergen, KPMG, for his work that contributed to starting the workshop series during his secondment to the WBCSD.

The Principles for Responsible Investment (PRI), an investor initiative in partnership with UNEP FI and the UN Global Compact, for directly supporting and participating in the workshops in Kuala Lumpur, Johannesburg and Vienna: Dr James Gifford, Executive Director, PRI, and Narina Mnatsakanian, Project Manager, PRI in Emerging Markets and Developing Countries.

Rita Clifton, CEO, Interbrand, for providing a review of the brand valuation journey and her insights on its links to the valuation of ESG factors and sustainability at the London workshop.

Professor Baruch Lev, Philip Bardes Professor of Accounting and Finance and Director, Vincent C. Ross Institute of Accounting Research, Leonard N. Stern School of Business, New York University, for presenting his work and insights on intangibles, ESG factors and sustainability at the New York workshop.

## Appendix 1: Participating companies, institutions and stakeholders

Accenture	Malaysia Institute of Accountants
Acuity Investment Management	Maybank
AIG Environment & Climate	Mitsubishi UFJ Trust & Banking Corp.
AIG Asset Management	MN Services
AkzoNobel	New York University
Allianz	New Zealand Superannuation Fund
Anglo American	Nikko Asset Management
ArcelorMittal	Nokia
Asian Development Bank	NovoNordisk
ASSET4	Novozymes
Aviva Investors	Nuveen Investments
BCSD Austria	OWW Malaysia and Singapore
BNP Paribas Asset Management	P&G
Borealis Group	Pax World Management Corp.
Bursa Malaysia	PepsiCo
Calvert Investments	Perunding Good Earth
Carbon Disclosure Project	Petrobras
Caterpillar	Petro-Canada
CEMEX	Petroliam Nasional
CentreInfo	Philips
Chemical Company of Malaysia	Pictet
Clearbridge Advisors	Pixarus Communications
ConocoPhillips	Principles for Responsible Investment
Counterpoint	PricewaterhouseCoopers
Investment	Pt Chevron Pacific Indonesia
Digi Telecommunications	Public Investment Bank
E.ON	Rio Tinto Alcan
Eni	RiskMetrics
ERM	Sanyo
Eumcci	Shell Malaysia Trading
Eurizon Capital	Sime Darby Holdings
Exelon Corporation	SK Energy Korea
F&C Asset Management	Skali Web Services
Ford	Soeicom
Fox Communications	Sony
FSC Global Fund	StatoilHydro
GDF Suez	Storebrand
General Motors	Sungard Corporation
Goldman Sachs	TCE-International, Cambodia
Green Edge Consult	Tesco Stores
Heitech Padu	Time, Inc.
Henderson Global Investors	TNB Research
Henkel	Trucost
HI Investors	Turkey BCSD
HSBC Global Asset Management	UBS
International Finance Corp.	Umicore
Insurance Australia Group	UNEP Finance Initiative
ITT	US Environmental Protection Agency
Kenanga Investment Bank	Vodafone
Kimberly-Clark	Volkswagen
KLD Research & Analytics	Votoran
Korea Sustainability Investing Forum (KOSIF)	WBCSD
KPMG Financial Advisory Services	WestLB
Lafarge Malayan Cement	Westpac
Light Green Advisors	World Bank
Malayan Banking	World Resources Institute

## About the United Nations Environment Programme Finance Initiative

UNEP FI is a strategic public-private partnership between the UNEP and the global financial sector. UNEP works with over 180 banks, insurers and investment firms, and a range of partner organisations, to understand the impacts of environmental, social and governance factors on financial performance and sustainable development. Through a comprehensive work programme encompassing research, training, events and regional activities, UNEP FI carries out its mission to identify, promote and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations.

Learn more at: [www.unepfi.org](http://www.unepfi.org)  
E-mail: [fi@unep.org](mailto:fi@unep.org)

## About the UNEP FI Asset Management Working Group

The UNEP FI Asset Management Working Group is a global platform of asset managers that collaborate to understand the ways that environmental, social and governance (ESG) factors can affect investment value, and to advance the integration of ESG factors into investment decision-making and ownership practices.

### Co-Chairs

Gianluca Manca  
Dr Julie Fox Gorte

Eurizon Capital (Intesa Sanpaolo Group)  
Pax World Management Corp.

### Advisor

Carlos Joly

### Members

Rachel Davies CFA  
Martin Grosskopf  
Marlys Appleton  
Dr Steve Waygood  
Paul Hilton CFA  
Mary Jane McQuillen  
Olivier Rayrole  
Antony Marsden  
Xavier Desmadryl  
Masahiro Kato  
Yoshitaka Akamatsu  
Akitsugu Era  
Lawrence Prager  
Barbara Evans  
Eugenia Buosi  
Pedro Angeli Villani

Acuity Investment Management  
Acuity Investment Management  
AIG Asset Management  
Aviva Investors  
Calvert Investments  
ClearBridge Advisors  
Groupama Asset Management  
Henderson Global Investors  
HSBC Global Asset Management  
Mitsubishi UFJ Trust & Banking Corp.  
Nikko Asset Management  
Nikko Asset Management  
Nikko Asset Management  
RCM  
Santander Brasil Asset Management  
Santander Brasil Asset Management

Learn more at: [www.unepfi.org/work\\_streams/investment/amwg](http://www.unepfi.org/work_streams/investment/amwg)  
E-mail: [investment@unepfi.org](mailto:investment@unepfi.org)

## About the World Business Council for Sustainable Development

The WBCSD brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Our members are drawn from more than 36 countries and 22 major industrial sectors. We also benefit from a global network of about 60 national and regional business councils and partner organizations.

Our mission is to provide business leadership as a catalyst for change towards sustainable development, and to support the business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

Our objectives include:

- Business leadership – to be a leading business advocate on sustainable development
- Policy development – to help develop policies that create framework conditions for the business contribution to sustainable development
- The business case – to develop and promote the business case for sustainable development
- Best practice – to demonstrate the business contribution to sustainable development and share best practices among members
- Global outreach – to contribute to a sustainable future for developing nations and nations in transition

Learn more at: [www.wbcسد.org](http://www.wbcسد.org)

## About the WBCSD Markets & Valuation Workstream of the Business Role Focus Area

The WBCSD Markets & Valuation Workstream is a working group of the WBCSD Business Role Focus Area that joins a group of WBCSD companies with a group of financial institutions (in cooperation with UNEP FI). The workstream aims to provide a platform for business and actors of the capital markets to discuss the integration of sustainable development or environmental, social and governance performance into the company valuation processes of capital markets.

The Business Role Focus Area aims to define and then advocate the roles of business to all stakeholders to ensure the establishment of appropriate framework conditions in a resource-constrained world. It proceeds by exploring the role of business, influencing stakeholders and implementing sustainable development.

Learn more at: [www.wbcسد.org/businessrole](http://www.wbcسد.org/businessrole)

Email: [sandberg@wbcسد.org](mailto:sandberg@wbcسد.org)

### Business Role Focus Area Core Team:

#### Co-Chairs

Mohammad A. Zaidi  
Idar Kreutzer

Alcoa  
Storebrand

#### Members

Michael Diekmann  
Francoise Guichard  
Christian-Andre Weinberger  
Michael Hastings  
Esko Aho  
Irfan Qureshi  
Ian Powell  
Ryoji Chubachi  
Thomas Leysen

Allianz  
GDF Suez  
Henkel  
KPMG  
Nokia  
Pakistan State Oil  
PricewaterhouseCoopers  
Sony  
Umicore

**Disclaimer notice**

The information contained in the report is meant for informational purposes only and is subject to change without notice. The content of the report is provided with the understanding that the authors and publishers are not herein engaged to render advice on legal, economic, or other professional issues and services.

Subsequently, UNEP FI and the WBCSD are also not responsible for the content of websites and information resources that may be referenced in the report. The access provided to these sites does not constitute an endorsement by UNEP FI and the WBCSD of the sponsors of the sites or the information contained therein. Unless expressly stated otherwise, the opinions, findings, interpretations and conclusions expressed in the report are those of the various contributors to the report and do not necessarily represent the views of UNEP FI or the member institutions of the UNEP FI partnership, UNEP, the United Nations or its Member States, or the WBCSD.

While we have made every attempt to ensure that the information contained in the report has been obtained from reliable and up-to-date sources, the changing nature of statistics, laws, rules and regulations may result in delays, omissions or inaccuracies in the information contained in this report. As such, UNEP FI and the WBCSD make no representations as to the accuracy or any other aspect of information contained in this report.

UNEP FI and the WBCSD are not responsible for any errors or omissions, or for any decision made or action taken based on information contained in this report or for any consequential, special or similar damages, even if advised of the possibility of such damages.

All information in this report is provided "as is", with no guarantee of completeness, accuracy, timeliness or of the results obtained from the use of this information, and without warranty of any kind, expressed or implied, including, but not limited to warranties of performance, merchantability and fitness for a particular purpose. The information and opinions contained in the report are provided without any warranty of any kind, either expressed or implied.

A wide range of WBCSD members reviewed drafts, thereby ensuring that the document broadly represents the majority view of the WBCSD membership. It does not mean, however, that every member company agrees with every word.

**Copyright notice**

The report and the content of the report remain the sole property of UNEP FI and the WBCSD. None of the information contained and provided in the report may be modified, reproduced, distributed, disseminated, sold, published, broadcasted or circulated, in whole or in part, in any form or by any means, electronic or mechanical, including photocopying, or the use of any information storage and retrieval system, without the express written permission from the UNEP FI Secretariat and the WBCSD Secretariat, both based in Geneva, Switzerland, or the appropriate affiliate or partner. The content of the report, including but not limited to the text, photographs, graphics, illustrations and artwork, names, logos, trademarks and service marks, remain the property of UNEP FI and the WBCSD, or their affiliates or contributors or partners and are protected by copyright, trademark and other laws.



**UNEP Finance Initiative**  
Innovative financing for sustainability

United Nations Environment Program Finance Initiative  
International Environment House, 15 Chemin des Anémones,  
1219 Chatelaine, Geneva, Switzerland  
Tel: (41) 22 917 8178, Fax: (41) 22 796 9240  
fi@unep.org, www.unepfi.org

[www.unep.org](http://www.unep.org)

United Nations Environment Programme  
P.O. Box 30552 Nairobi, Kenya  
Tel: ++254-(0)20-762 1234  
Fax: ++254-(0)20-762 3927  
E-mail: [unepub@unep.org](mailto:unepub@unep.org)



**World Business Council for  
Sustainable Development**

Secretariat  
4, chemin de Conches,  
CH-1231 Conches-Geneva, Switzerland  
Tel: +41 (0)22 839 31 00  
[info@wbcsd.org](mailto:info@wbcsd.org), [www.wbcsd.org](http://www.wbcsd.org)

WBCSD North America Office  
1744 R Street NW, Washington, DC 20009  
United States  
Tel.: +1 2024207745, [washington@wbcsd.org](mailto:washington@wbcsd.org)