

A lush green forest with tall trees and dense ferns in the foreground.

**B4E**

**Business  
for the  
Environment**  
Global Summit 2009

**The Green Imperative:**  
Leadership, Innovation  
and Technology

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Palais des Congres  
Paris, France

Summary Report





**Business  
for the  
Environment**

Global Summit 2009

“Investments will soon be pouring back into the global economy - the question is whether they go into the old, extractive, short-term economy or a new and more sustainable green economy that deals with multiple challenges while generating economic and social opportunities for the poor and the well-off alike.

Mobilizing and re-focusing the global economy towards investments in clean technologies and ‘natural’ infrastructure such as forests and soils is the best bet for achieving real growth, combating climate change and triggering an employment boom in the 21st century”

Achim Steiner, Executive Director, United Nations Environment Programme





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## Opening Address I

Achim Steiner, Executive Director, United Nations Environment Programme and Under-Secretary General, United Nations



It is a great pleasure to be here in Paris. In many ways the environmental issues of the 20th century were driven by imperfect knowledge but recognition of something happening that, in the end, would turn into a problem. And when we talk about the environmental agenda of the 21st century, then I think what we are talking about is essentially how things are connected. Increasingly I am convinced that environment is not an agenda, a sector or a concern in its own right. It is increasingly becoming a way of thinking, a way of understanding, a way of practicing or doing business for that matter. We have developed over the last 30 - 50 years, a significant amount of expertise, particularly the science and the scientific understanding of our environment, connections and linkages of systems and the causality of acting in one domain with what it has on another.

You do not have to be a green believer to implement an environmental agenda. Why would you not favour the development of vehicle engines that can transport you from A to B at 50% of the energy cost that you have to invest? Why would you buy a light bulb that uses 5 times more electricity? Why did it take us 50 years to get that patented technology from the drawer to the supermarket shelves when in fact we knew how to light up our homes, rooms, and streets with 1/5 the amount of power that we actually have to use today? These are examples of ideas beginning to be connected in different ways.

I believe that the business schools of tomorrow will increasingly teach notions of Factor 4 and Factor 10, concepts such as bio-mimicry and circular economies; increasingly articulated both scientifically and in government policies. China for example is looking at how concepts such as the Triple R has evolved over the last 30 years in Japan and will become guiding principles for economies and for businesses.

Climate change has in many ways, accelerated the process. In less than 20 years, greenhouse gases and in particular, CO<sub>2</sub> is not only one of the most serious factors but is beginning to drive policies, incentives and regulatory frameworks that would guide our economy. Who would have thought that we would talk about carbon markets 10 years ago that will probably in 5 to 10 years exceed the value of 100 to 200 billion dollars?

What we need to do in such meetings is to provide a voice not only driven by science, but also by the capacity and potential of entrepreneurs, of the business world, of citizens and consumers, to validate our willingness and our ability to make transformational choices. This is what UNEP in our discussions with ministers of the environment globally call, The Green Economy.

In the midst of a financial crisis, the world has allocated 3,000 billion dollars to stabilise, the economy. We have prepared a policy brief that you will see during this conference called the Global Green New Deal calling for a significant portion of that extraordinary mortgage be invested to transform our economies from an

energy, resource efficiency point of view. Any country that does not take advantage to invest in tomorrow's technologies, business opportunities, markets, products, and consumer preferences, would actually be making a tragic mistake.

We have seen leadership in part of the financial crisis and economic stabilisation measures in Korea, United States, China, Japan, Europe and South Africa. There is willingness by politicians to take a bigger step forward but they cannot succeed unless they are validated by the business world, which has always been its litmus test in the public domain of whether something will help the economy or harm it. Businesses also give the public consumers the courage and conviction that they can believe in the transformative capacity of our markets and technologies and that public policy in guiding the market is not a contradiction. It is perhaps the most opportune public-private partnership that we have ever needed if we are going to deal with climate change and the broader agenda of environment.

Ladies and gentlemen, welcome to this conference here, which is beginning to grow into an event where we are finding a level of interaction and a level of specificity that is quite clearly setting a discourse in many of our operational realities. I hope we would succeed this year in maintaining that momentum and build on it because sealing the deal in Copenhagen will be the litmus test for decades to come on whether that Green Economy becomes perhaps, a dream of the early 21st century, or indeed, one of the threats through which we will move forward in the future.

## Opening Address II:

Georg Kell, Executive Director, UN Global Compact



We are reminded that we are standing at the threshold, with choices to be made. United Nations Secretary General Ban Ki Moon called this year the year of climate change and he called on all of us to mobilise efforts to ensure that the Copenhagen meetings will be successful with a comprehensive and effective conclusion. Most of you here, I believe, hopefully all, accept the scientific evidence. What I want to do is to make the case “Why the time is now for business to take on an even bigger role”.

First the Copenhagen Climate Conference is not just about climate change but also about multi-lateral cooperation and the ability of keeping markets open, rule based and non-discriminatory. In the last three decades, liberalisation was deliberate, and requires policy-needs to be earned on an on-going basis. We cannot assume that the next three decades will just be the same. The best way for business to ensure that global integration can continue is to make the case for a successful climate conference in Copenhagen. I hope that all those business associations that still do not work for climate but rather against climate will hear this message and will reflect on it.

Secondly, we need to recognise that governments need to lead. They need to lead in Copenhagen and they need to be challenged to look into the future and have a truly long-term view. We should also remind them that history will not just judge them or probably will even forget them in the next elections. But history would judge them on what they will do in Copenhagen.

Another important point for business is that global integration and non-discriminatory trade and investment are necessities in tackling climate change. Business is contributing enormously in the diffusion of clean technology through

technology transfer, investment and commercial transactions. I witnessed in China, big new initiatives and projects taking shape as we speak. All of them are based on commercial transactions, supported and guided by the right policy decisions. Technology transfer, where some government delegates still treat as a black box, is in reality diffusing rapidly through commercial transactions. It will continue to flow if we maintain an open trading system and non-discrimination in investment. Not supporting non-discrimination would also mean denying developing countries the opportunity to improve their standards.

Much has been said about financial regulation. The point is that much of the malaise is the result of focusing too much on short-term profit maximisation as opposed to long-term value creation. Chasing quarterly profits and incentive structures encouraging reckless behaviour is not a recipe for long-term sustainable development or for business success. We must work to shift major perspectives of market players and evaluators to move from an obsession with quarterly and yearly results to a long-term view of success. This I believe is one of the biggest challenges if we are to integrate environmental, social and governance issues into market incentives.

The fifth point is about systemic risks. We accept that one of the biggest drawbacks of markets is that human beings run it and we are captured in our own relativity. While we pretend to be rational, in reality, we follow the herd and wait for others to take action first. Systemic risk issues such as water scarcity; where 1.2 billion people lack access to fresh water, but equally critical for business operations or natural disasters; wrecking havoc on people's lives, but also disrupting business chances, to food security;

the most basic precondition for survival but also a critical component in market building and security aspects. Stepping back and looking at these systemic risks will reveal that climate change connects all these issues. By reflecting on these risks, I am convinced that you will discover that much of the United Nations work present a complementary partnership for us to work together.

Finally, there is the business case for early action on climate and environmental change. I expect that we will hear many great examples of innovation happening, new efforts made, promising new initiatives being launched and new market opportunities emerge. We need to work much harder to bring these all together and to mainstream it. Our contribution will be to recognise good performance and to work on enabling environments, so that incentive structures rewards good environmental stewardship, markets recognize, support and mainstream such activities even within the UN Global Compact, through Caring for Climate, the CEO Water Mandate related activities. I believe that this event here today and tomorrow will significantly help to advance this agenda.

You will see in your conference material, The Green Imperative Manifesto from this B4E Summit. This is a one-page summary of the outcome we hope to achieve at this meeting. Please read this document carefully and we very much hope to receive your support by the end of tomorrow, in order to have an outcome document which shares our collective understanding of these issues

## Opening Plenary: The Green Imperative – Leadership, Innovation and Technology



- Chair : Charles Hodson, Anchor,  
CNN International
- Panelists : Aron Cramer, President & CEO,  
Business for Social Responsibility (BSR)
- Philippe Huet, Senior Executive Vice  
President, Electricite de France (EDF)
  - Shi Zhengrong, Chairman & CEO,  
Suntech Power Holding
  - Tulsi Tanti, Chairman & Managing  
Director, Suzlon Energy
  - Bertrand Lebel, Executive Vice  
President, Air France

### Key Points

Governments can either be constructive or obstructive in the environmental debate but business leaders and politicians need to work together to protect the environment and create a low- or zero-carbon economy. Businesses need to be one step ahead of politicians because when they finally understand how serious the issues are and change policy accordingly companies will need to have sustainable strategies and technologies in place. This is the CEOs' responsibility.

### Aron Cramer

We face a three-pronged crisis: a deep economic recession, serious and immediate ecosystem destruction, environmental and natural resource challenges and a collapse of trust in business. But these challenges also represent an opportunity to build a new, low-carbon economy and to reach and create new markets. Businesses and governments need to work together to create new market rules that weave non-financial considerations, such as the environment, into business practice. Businesses must become more efficient and invest more in technology. A realistic carbon price must be set to allow businesses to invest in low-carbon technologies with confidence.

### Philippe Huet

EDF is taking the lead in sustainable business practice in three main ways: long-term investment focused on carbon-free power generation including nuclear energy; continual research and development into technologies such as tidal and geothermal power; and financial support through private-public partnerships.

### Shi Zhengrong

Businesses must stay ahead of government policies because it's their job to come up with new technologies. CEOs must not leave it to politicians. Five years ago in China no one believed in solar energy. Today, after subsidies from a number of countries including Japan and Germany, and the ingenuity of local entrepreneurs, China's solar industry has become the world leader.

### Tulsi Tanti

Innovative business models are crucial. In 1995 in India, the wind industry wasn't taken seriously. Now thanks to some innovative business models, almost 20% of India's energy is supplied by wind, showing it is possible to have a sustainable business model and create jobs.

### Bertrand Lebel

Aviation's CO<sub>2</sub> emissions are not one of the biggest contributors to climate change as is widely believed — in fact they represent just 2% of the global total. But as an industry, it needs to recognize that it will face a major challenge to control these emissions in the future. So far, the industry has done this by developing more efficient aircraft, but it will need to come up create greener fuels, make air traffic control more efficient and improve internal operations. The airline industry has to find long-term solutions as soon as possible.

### Discussion

What is the future of green energy? Carbon pricing will be critical — but with the current lack of strong price signals (be it fuel or carbon) there is not a level playing field. The carbon price per ton varies between US\$35 and US\$100 but needs to settle around the upper end of the range for the required CO<sub>2</sub> reductions to be achieved.

Governments can play an important role by subsidising renewable industries' development until they become financially viable. At the same time, consumers have a responsibility to make green purchasing choices, and global networks must foster an increasing willingness to pay for low-carbon products and services. Growth and performance needs to be re-thought of in terms of efficiency rather than volume. The way to reduce energy consumption is through new product development, and business processes such as local sourcing policies.



## Climate Change: The Next Generation.

Joseph Alcamo, Chief Scientist, UNEP, Intergovernmental Panel on Climate Change (IPCC)



We have heard lots of reasons today about why we should pursue green business and now I am going to tell you about another one that I think is the most important, at least for me. I will not tell you anything too radical because scientists tend to be conservative.

Two years ago, in Brussels, I participated in the conference with 100 government delegations giving their final approval to the set of climate reports in 2007 from the IPCC. I had the role of being on the podium defending the text I was responsible for coordinating, on climate impacts in Europe. The government delegations went through the summary line by line, word for word and at 2am in the morning, the chair of an important delegation asked, "Professor Alcamo, it says here in the text, that the heat wave in 2003 was unprecedented. Unprecedented? In what way was it unprecedented?" If any of you were there, you would have been astonished with that remark at 2am in the morning. Nevertheless, I finally got around to saying that I thought that unprecedented wasn't a bad word to describe 35,000 heat related deaths.

Nine years ago, my colleagues and I at the IPCC wrote a report on the long-term trends of emissions of greenhouse gases of this century. Our assumptions, projections of demography, technology changes and economic growth modeled a range of estimates of greenhouse gas emissions in the future. Yet today, current emission trends are far above the highest of our emissions scenarios. We are getting evidence that we have underestimated the tempo of climate change and its potential impacts.

A couple of months ago, evidence showed that the West Antarctic has been warming over the past several decades. Melting of the entire West Antarctic ice shield will result in a sea level rise of 5m. The fact that we know that the Antarctic is warming increases the risk of a higher and more rapid sea level rise. Ice coverage acts like a mirror and very effectively reflects the strong solar radiation to space without raising the surrounding temperature dramatically. Without it, the ocean will end up absorbing a lot more of the radiation and accelerate the heating effect. Atmospheric research just found out that this heating effect extends up to 1500km into the land masses, usually covered by permafrost, which for centuries, has locked in its structure vast amounts of methane and other carbon compounds.

I want to emphasise that these events are not inevitable. But I also want to point out that the faster the tempo of climate change, the faster the climate changes and the higher the risks. If there were two things that climate scientists have in common with business is that we all recognise risk and we all want to minimise it.

The surest and safest way has to be through reducing emissions. In order to prevent pushing thresholds in the earth's system, we need to hold temperature increase to 2 degrees. It is also critical to reduce global emissions by at least 50% by 2050. We know that in the recent year or two, emissions are increasing and as the economy improves, it will continue increasing rather rapidly. In fact it is possible that by 2030, we will have up to a 40 to 50% increase in our global emissions.

World energy systems and various industries and sectors account for over two-thirds of total emissions in the world. Green businesses can obviously be very effective in reducing our emissions through being low carbon, through green vehicles, renewable energy and energy efficient buildings. There is a direct connection between green business and lowering the risk to our climate system. Every ton of greenhouse gas emission reduced, and saved and not put into the atmosphere means a slower tempo of climate change and a lower risk to our climate system. Green business is about more than making money, which is a good thing of course. It is more than creating jobs, and more than protecting local water and air quality. Green business can be an insurance policy against the growing risks to global climate.

## Leadership Perspective, Ben Verwaayen, Chief Executive Officer, Alcatel-Lucent



I am quite sure that everyone in the audience doesn't need to be convinced. You know what the problem is, you know you need to do something about it and here we are sitting together to discuss it. My question is, it's great for today and tomorrow, but what about those people out there who don't get it? What's the purpose of getting together with all the people who already understand the issue if we don't think about how we reach out to others? Let me share with you a few of my experiences.

Two years ago, in London I had the task of bringing together eighteen of the largest companies in the world that are together, responsible for approximately 1% of the output of CO2 emissions. The eighteen people at the table started by sitting with crossed arms, trying to be there, but not wanting to be involved in something where you know the beginning but you don't know the consequence. We were lucky because a year later, the eighteen companies have committed to probably the most far-reaching, voluntarily agreed, programme, to reduce carbon emissions. We understood after awhile, that this is not just CSR, corporate social responsibility, but is something to do with the way you look to your consumers, your customers and the way you look to the ability to renew.

Sir Terry Leahy, CEO of Tesco said "You need to be green to grow, but you need to understand that in day to day reality, you go to the shop as a consumer, the number one criteria to deal with is price." If you have this wonderful item model with technology that is not totally green, and you

can take it away for about 100 Euro or you can have this wonderful new green model for 700 Euros. It's much better from a green perspective but guess what you take home? The issue is not do we have well intended leaders. The issue is not to go out and say it's your responsibility to have a heart for society. And certainly it is not to give more of the depressing numbers that we have. We have a depression already in the economy.

What we need is a real understanding of a creation of a market. The issue is not intention; the issue is ability for households to make those decisions and to bridge the initial investment period from a cash flow perspective. It is true that we can develop with technology, a lot of new products and actually at a time of a crisis it may be the rally point that we need. Every crisis in history had at a certain point in time, something new and something that was an inspiration. To get out of the crisis, you need something like that.

In the 30s we had the radio, and all of the sudden it was the gelling point where people were thinking about new stuff. In the 80s, we had Internet. So perhaps, today, we could have today, Green. But we need them to be consistent. We need to be consistent and here's the problem. Even in times of war, consistencies and policies have never lasted longer than 5 years. Go back to the history books and you'll find it. The problem we have today is that policy makers, regulators and business have to have consistency over a 30-year period.

Business for Green is not the issue whether you can inspire people to do the right thing in the short period. You can and you have already done that. You have won the hearts and minds of groups of people that Green is important. But the question is, are we consistent and do we get the benefits? That will require more than a couple of nice speeches. That will require the very hard work. For example, if you look at taxation, and you think it is important to act on emissions from buildings, which is 30% of the total problem, we should not tax on square meters but tax on the difference between benefits of low emission and high emissions.

This is an example to illustrate that if you want the policy to be successful, business in its by itself should play its role. Business will play its role and it will be a source for innovation and new products but it will only be effective if it goes hand in hand, step by step with public policy and regulation.







## Panel Discussion

### Building the Green Economy – Policy for a Changing Planet



Chair : Achim Steiner, Executive Director, UNEP

Panelists : Juan Rafael Elvira Quesada, Secretary of the Environment, Mexico  
- Georg Kell, Executive Director, UN Global Compact  
- Kevin Conrad, Executive Director, Coalition for Rainforest Nations  
- Laurent Stefanini, Ambassador for Climate Change, France  
- Pascal Husting, Executive Director, Greenpeace, France

#### Key Discussion Point

What policies do we need to bring about the transformation to a low carbon economy? What is the role of political leaders in this process?

#### How can political leaders drive forward the climate change agenda?

##### Juan Rafael Elvira Quesada

In Mexico, we need a green agenda with political and financial support including a green budget and clear policy signals. The Mexican Government has already started to address these with the following initiatives: a 60% increase in its sustainability budget; sustainable management covering about 30% of the country; generating 23% of its energy from renewable sources; a US\$700 million fund for renewable energy development; a US\$1.6 billion investment by the private sector in water management; and a planned US\$362 million investment in public transport. It is also working with Central America and the EU (especially the UK) to finance climate change projects, and has proposed the setting up of a "Green Fund" that all countries would contribute to help create a global green economy.

#### What is required to achieve the massive changes we need to tackle climate change?

##### Georg Kell

We need an incentive-based structure to encourage green behavior, greater public sector involvement and the creation of an entrepreneurial talent pool. The leading environmental countries are the most competitive — look at South Korea and China, both of which have dedicated large portions of their economic stimulus packages to environmental issues. Business leaders should inspire change but ultimately political leaders need to step up, too.

#### How can governments manage relationships with their peoples?

##### Kevin Conrad

We have to start with people — their values and needs but governments must do their bit too. They need to set up incentive schemes, and recast politics to achieve a more sustainable outcome. Businesses must be encouraged to operate in the space between consumers and government. We need to take a fresh look at the value of services. In the past, oil made people wealthy; modern society needs to create value from forests, wind energy and solar power.

#### What is France doing to tackle climate change?

##### Laurent Stefanini

We are facing challenging times and are working on three fronts by taking responsibility, setting timeframes within which to achieve targets and encouraging technological developments. France has two specific plans. Both address housing, public works and investment, and aim to create jobs and maintain employment — especially in the green sector. France currently has around 400,000 green jobs but wants to increase this to one million by 2020. The Grenelle de l'Environnement [France's national sustainable development strategy] was planned before the current economic crisis and is worth Euros 19 billion over two years. This is in addition to the financial stimulus package, which is worth Euros 28 billion. The aim is to reform the whole economy by stimulating the creation of green jobs.



### **Is France a leader in the transition to the green economy?**

#### **Pascal Husting**

President Sarkozy should implement a strong regulatory system by the end of the year. Current French government spending is simply "rearranging chairs on the Titanic". A new form of democratic pressure is needed — the Grenelle agreement is a refreshing example of this kind of pressure and has forced the Sarkozy Government into action. People need to join together to form new alliances so the green movement can gain critical mass.

#### **Discussion**

### **What makes it difficult to accelerate and scale-up the transition to a green economy?**

In Mexico the main barriers to becoming green are collecting the data needed to inform action; obtaining finance from Congress; getting different stakeholders to work together to promote a green agenda; and working with industry. The country's national strategy for climate change was implemented two years ago. By 2020, developments in the following areas are planned: adopting a green agenda, clean energy production, energy efficiency and co-generation.

### **Europe used to lead the way on the environment. Is it losing its place as the global leader on green issues to countries such as South Korea?**

The South Korean and Chinese green strategies seem more radical when compared to their environmental positions in the early 1990s. Europe is still implementing innovative policies. In France, for example, people can get a subsidy (a Euro 1,000 reimbursement from the government) to encourage them to buy more fuel-efficient cars and there are loans available to help them make their homes more energy efficient.

### **How can we encourage governments to spend more?**

There is a need to convince governments to create incentive schemes and to develop environmental technologies in all sectors.

### **How can we move beyond the rhetoric? How do we define "green jobs" and how do we count them? How do we make the system accountable?**

Massive changes need to be made to incentive structures, and pressure needs to be put on politicians to act, especially at Copenhagen. Rapid changes are hard to implement, as business leaders are not interested in reacting quickly; they generally prefer the comfort of the status quo. However, the financial crisis provides us with a good opportunity to move beyond rhetoric.

### **How can we create a low-carbon market?**

Discussions at Copenhagen will be difficult because there is no money on the table. With no money on the table, there will be no climate deal. To overcome this, levy a US\$5 tax per barrel of oil in order to raise the required capital of US\$100 billion a year over the next five years. The money would buy the world a future and allow the funding of an environmental revolution. This would be "brilliant but impossible".

### **How important is funding to making change possible?**

Making changes depends on encouraging political leaders to act and shake up the status quo. In terms of political economics, there needs to be a shift towards internalizing externalities. Governments need to make strategic investments since individuals and businesses tend to focus on their own agenda.

The panel considered that money is not that important in effecting a shift to a green economy. They pointed out that, as shown over the past few months by the massive spending on the financial crisis, money is theoretical. What is important is to address both behaviors and attitudes. Ultimately it comes down to valuation. Sustainability needs to become a currency, to have value. The other half of the panel said money was important and was essential for successful international agreements.



## Lunch Speaker

Jean-Philippe Cotis, Executive Director, National Institute of Statistics & Economic Studies & Former Chief Economist, OECD



The Commission on the Measurement of Economic Performance and Social Progress's chaired by Nobel Laureate Joseph Stiglitz aims to identify the limits of gross domestic product (GDP) as an indicator of economic performance and social progress, and to identify any additional information required to build up a more accurate picture of the actual situation. It will try to make economic data more comprehensive, more intelligible to the public and more relevant for policymakers by taking into account factors such as environmental degradation and quality-of-life indicators.

There have been increasing concerns about the adequacy of current measures of economic performance; in particular those figures based on GDP and per capita income. Moreover, there are broader worries about the relevance of this data as a measure of quality of life and sustainability.

GDP is a measure of production, not quality of life. The current economic focus on GDP must be shifted to include net-adjusted, real disposable income for the entire economy, taking into account depreciation, resource depletion, environmental degradation and appropriate price indices that reflect quality-of-life changes and other aspects of society.

It is important to examine the impact of environmental variables (such as air and water quality) on quality of life, both directly and indirectly (through costs of production and health), and the impact of market failures (such as the current financial crisis) on standard monetary measures of sustainability. The use of alternative metrics in valuing environmental changes and incorporating resource depletion and environmental degradation into various "green" measures of income should also be considered.

When defining quality of life, there is a need to go beyond the conventional measures (such as psychological, capability-based, etc). Indicators should also include both subjective and objective aspects. The challenge is to narrow the gap between these two perceptions.

Subsequent questions from the audience focused mainly on the efficiency and efficacy of the index that the Commission is developing, and its potential impact on businesses. The audience voiced concern that the national statistics authorities were not yet able or willing to measure these new metrics. Moreover, these new measurements are not currently integrated with most companies' business models and therefore it will likely take some time before they are adopted as common practice.

## Afternoon Opening Address

Jean-Pierre Clamadieu, Chief Executive Officer and Chairman, Rhodia  
Chairman, Sustainable Development Commission, MEDEF



It is a pleasure to address this audience and what I will try to do is to bring complementary views. I bring a micro-perspective from someone who is involved in a management of a company on a day-to-day basis and someone who spends time with other French CEOs and managers who think about sustainable development.

Some people think and wonder why business leaders are gathering today in the worst part of a deep economic crisis to think about environment. We have plenty of short-term issues to solve but at the same time, when you lead a company, when you manage businesses, you need to be able to deal with various types of problems. The most urgent one is to make sure that our companies progress safely through the very difficult economic times, but at the same time, taking into account medium and long term horizons. I strongly believe and am absolutely convinced that sustainable development and green economies are big trends that will change the way we operate in the future.

When we do strategy work within companies, we look at the big trends and the big changes that we expect. Trends like emerging countries, aging population, the move towards a green economy and demand for sustainable development are major trends that are shaping the future. If you discuss with a top executive of the automotive industry, currently facing very tough challenges, they will tell you that one of the reasons for their challenges is the financial crisis and the difficulty for people to finance new cars. But if you spend a bit more time with them, they will conclude, from my personal discussions with them, that

carmakers are not producing the types of vehicles that people want to buy. They know that the financial system will adjust but they need to rethink the type of product to offer, because of changing needs and expectations.

When I look within my companies and discuss with our employees, their needs and expectations of us as a corporation is also changing. If we want to ensure we retain very skilled and motivated people, we need to offer them some perspective on how we operate as a company. Stakeholders are pressing us with change towards more sustainable development. It is not just the "flavour of the month" or the "latest fashion" in management. It is a huge change in the landscape that we operate in.

As companies, we have two ways of looking at that. Firstly, what does it bring in terms of strategy and business opportunities? Secondly, how do we operate as a company? There are plenty of options in terms of strategy and market opportunities as we heard in previous presentations. New businesses and new markets are created. If we look internally at the way we operate, there are alignments between the objectives of sustainable development and our own economic efficiencies. Conscious efforts to minimise your footprint and your impact on the environment is a way to optimise operations and management. Examples include optimising raw material usage, energy usage and the very important point of risk management. A sustainable development approach looks at the various types of risks and making sure we address the risks accordingly.

Politicians and business leaders often ask my opinions on who are the winners and losers as we move into this "Green economy"? They ask with expectations of which sectors will suffer the most and which sectors will find opportunities. I strongly believe that the answers are not in sectors but in the early adapters. Two years ago we looked at our business and identified sales linked to products or services enabling our customers to achieve sustainable development goals. We arrived at an impressive figure of 30%. Given today, even in this current economic situation the figure remains steady. This trend is here to last. Companies that understand the magnitude of the challenges and opportunities will be the winners in this translation towards a green economy.

## The Green Economy Initiative: Building a better future

Pavan Sukhdev, Project Leader, The Green Economy, UNEP World Conservation Monitoring Centre and Study Leader, The Economics of Ecosystems & Biodiversity (TEEB)



What is a Green Economy? Firstly, it is not one that consumes capital. Specifically, if you have a business that destroys its asset in addition to not recording that destruction, you do not have a proposition of sustainability. As a society, our ecological footprint has already surpassed 1.3 times and that's almost twice as it was 40 years ago. It means that we are consuming more ecological production than the earth has, by a factor of 30% or 40%. That is not a green economy.

The second aspect is taking extreme risks and therefore, risk sustainability. The fact is that we are emitting 4 or 5 times as much as the earth can absorb on an ongoing basis. That is a significant risk that we are taking. So, by both these counts, I will say that our global economy today is not a green economy.

The Green Economy Initiative is not an initiative but a family of projects spawned by various stages at the G8+5, by the United Nations and by individual governments including the Economics of Ecosystems and Biodiversity (TEEB) project; which presents the case about early action, cost of early action versus the cost of inaction. We are talking about demonstrating that greening is in fact, not a drag on growth but a new engine for growth. It is not a net cost on employment but in fact, is a source for green new jobs and decent jobs. Most importantly it is a better way of solving persistent poverty on a long-term basis.

In the current financial crisis the G20 and a few other nations have collectively put together an array of nearly 2.5 to 3 trillion dollars of fiscal stimulus. The question to be asked is what is the future of the stimulus? What is the return that it would produce, what effectively is the future liability that it will generate? How sustainable is the growth that ensues post recession? We need to rethink how to spend this stimulus and the Global Green New Deal is the research around the subject of green investments versus a shopping spree.

The Centre for the American Progress analysed 100 billion dollars spent on renewable and sustainable energy projects, building retrofits and projects of that nature versus the same amount invested in oil and gas industry or spent on a shopping spree. The first option would create 2 million jobs, the shopping spree would create 1.7 million jobs but 1.7 million jobs paid on average less because of the knowledge content of those jobs and that the oil and gas investment of the same amount would create 550,000 jobs with a higher pay due to the nature of the industry.

We need to rethink our economic strategies with the fact there exists triple win solutions; simultaneously targeting decent jobs and growth, lowering risks and getting a higher return on the investment. A study by the World Resource Institute highlights that investing 1 billion dollars into renewable energy would create 30,000 jobs, result in significant cost reductions and partly lower utilisation of energy of 450 million dollars over three years and save emissions of 600 megatons.





The Green New Deal was proposed to revive the world economy, to create new and decent jobs and to protect the vulnerable. It was intended from a risk-oriented aspect, to reduce the carbon dependency of our economy, ecosystem degradation and water scarcity.

In India I worked on an NGO project looking at the externalities and the values of ecosystem services delivered and the results accounted for 7.3% of GDP. To that extent, classical GDP values are understated. When asked, to whom do these benefits flow? We are asking who benefits from the flow of water and nutrients from the forests, to the aquifers and to the fields. Who benefits from the raw timber and products from the forest? The beneficiaries are the poor farmers, the subsistence farmers, those involved in animal husbandry, the coastal fishing folks and the people who rely on gathering from the forests. If we find out how much ecosystem services are, as a fraction of the GDP of the "poor", the answer is staggeringly different - 57% of the GDP of the poor.

Another aspect of the study was the sheer size of natural capital being lost because of business as usual. Based on a range of discounting assumptions, the total natural capital lost amounted to 1.5 trillion euros and 3 trillion euros. We are talking about a size of natural capital loss every year for the last 20 years comparable to the biggest loss we have seen in the financial industry.

The Green Economy Report also looks at sectors, the enabling conditions and the showcases. The sectors include sustainable cities, waste management, clean technology, sustainable transportation, agriculture, utilities and highly ecological infrastructure; or forests, water bodies and wetlands. Just as electricity companies provide electricity, ecological infrastructures also provide water, climate protection and climate mitigation services. The challenge of a green economy takes many different layers and not just the local, but also cross border. The Amazon rainforest is effectively nature's water pump and facilitates evapo-transpiration, seeds the rainfall, which then provides water to the La Plata Basin, feeding the entire agricultural economy of Latin America, worth 1 trillion dollars per annum. The loss of rainfall is not just a biodiversity problem but will be an irrigation problem. It will be very much in the interest of those nations to get together and solve that as a problem.

There is a huge opportunity here. The prospects of natural capital or revenues and the flow of services is larger than the combined total of the car, steel and IT industry, and yet the total people employed is a tiny fraction of those numbers. In South Korea over 350,000 jobs are created just in river cleaning and reforestation alone. They do not typically enter our minds as classical or traditional areas of business and the economy and yet they are real jobs, real work, and they are getting real money for that.

Finally I would like to remind us of our context here today. Here is the S&P chart for the last 14 years. We encountered the Asian Crisis and around 7 years of plenty and eventually, an unforgettable market correction today. If this sort of market correction should ever happen to the world of natural capital to punish us for the ecological debt that we have taken, mirroring the physical credit debt that we have taken in the financial markets, we are in trouble. We need not go there and the good news is that if we work towards a green economy, less consumption of materials, lower use of energy and using clean energy, I think there is a solution that we have. To conclude, let me share this final example. Here is a real engine (powerpoint slide). General Electric designed it and its beauty is that it uses the same braking system as my Prius does. As it brakes, it regenerates electricity and the net result is 50% less emissions and 20% energy saved versus a normal engine. The best of it is that it goes into production next year. So there you go, ladies and gentlemen, this is all possible! Thank you.

## Panel Discussion

### Changing Mindset, Changing Behaviour: Consumers advancing the green agenda



Chair : Aron Cramer, President & CEO, BSR  
Panelists : Helio Mattar, President, Akatu Institute  
- Joost Martens, Director General, Consumers International  
- David Michael Jerome, Senior Vice President, Intercontinental Hotels Group  
- Ron Gonen, Co-Founder and CEO, RecycleBank

#### Aron Cramer

Consumers are cynical about sustainability. Businesses are cynical about what consumers say they want to do versus how they actually behave.

#### Helio Mattar

Consumers don't always understand the impact that their purchasing decisions have on the environment. Four steps are needed to change consumer behavior: consumers must be educated about climate change; they must better understand how it impacts their lives; they must overcome the misconception that individuals have no influence on environmental changes; and each consumer must be identified as a multiplier of his or her model of consumption. Companies need to lead by example and encourage consumers to change their behavior when it comes to the choosing, using and discarding of products.

#### Joost Martens

Research shows that consumers are concerned about the environment and want to see businesses and governments work together to create green policies. There is a crisis of confidence among consumers about whether companies will do what they say they are going to.

#### David Michael Jerome

There are three myths around sustainability and the consumer: that green products are more expensive, that action is not needed now and that consumers spend according to their principles. These are not true. Consumers do care — the environment is a more mainstream concern than we think. In fact, it is the eco-skeptics who are now on the sidelines of the debate. Meeting consumer expectations will inform policy requirements.

#### Ron Gonen

How can we create incentives to encourage people to be greener? Environmental initiatives often work well in low-income urban areas as they help maintain healthy communities and families. Green policies must benefit all stakeholders.

#### What are the most immediate issues to be addressed to achieve results?

More education is required to make sure that environmental principles are passed down the supply chain. Successful partnership need to be created by having work carried out at a local level and these mustn't get lost in the broader, global picture. In terms of marketing, only a few marketers really understand the issues; inaccurate marketing is the easiest way to lose trust. To avoid this, there needs to be more investment in training marketing staff.

#### Should we get rid of the term "green"?

The term "green" is not a problem but the way that companies communicate the term is not always accurate. When evaluating a company, consumers look at a large number of attributes. If a company does one thing that consumers perceive as "wrong" that can taint everything the company does. In order to gain the trust of consumers, companies need to be transparent. This involves communicating everything they are doing well as well as everything they are doing badly.

#### Is it best to communicate with consumers directly or indirectly?

It is better not to push "sustainability". The word is overused. Customers should come to their own realization that it is the best choice. However, the green message is not for everyone, therefore consumers must be better educated on the seriousness of climate change to encourage a change of attitude. We need to find new ways of debating the issues to increase understanding and improve communication. Sustainability reports are not effective and are not consumer-friendly.

#### Can marketers change consumer behavior?

Companies are not in a position to change consumer behavior but can respond to customers, and drive and create markets. The way to communicate with consumers is via stakeholders. Stakeholders are more credible than marketing departments. Note that advertising is too important a tool with which to only sell products.

#### Where is leadership going to come from?

Expect to see political leadership at Copenhagen. Companies should also be proactive in leading the way. Green marketing can only be successful if products have genuine environmental features — leadership is derived from a vision that people respond to. Businesses must convey to customers that purchasing decisions can have a collective impact. Are you in touch with consumers? Develop a deep emotional connection with customers. Listen to consumers instead of lecturing them and educate them as to how they can contribute to change. Leadership is required to create a vision that consumers can buy into.

## Panel Discussion

### Solving Environmental Challenges Through Innovation and Technology



Chair : Bryan Walsh, Editor, TIME Magazine

Panelists : James Leape, Director General, WWF International  
- John Gaffney, Executive Vice President, First Solar  
- Graeme Sweeney, Executive Vice President, Shell International Petroleum  
- Chul-Ki Ju, Secretary General, UN Global Compact Korea Network  
- Janine Benyus, President, Biomimicry Institute  
- Bunker Roy, Founder, Barefoot College

#### Bryan Walsh

There is a need for new technologies, which must be scaled up so businesses can use them. This panel intends to explore how the mainstreaming of these innovations can take place, the factors influencing its spread as well as, new areas for exploration of new innovative methods.

#### James Leape

There is a need for national action and investment, which will ultimately have a global impact on climate change. Increased efficiency can lead to opportunities for businesses. Take Wal-Mart China, which is achieving economies of scale throughout its supply chain. One of its initiatives is the use of solar-powered trucks for goods distribution. More resources need to be put into stimulus packages, and research and development budgets. OECD countries should work together to allocate money for technology for developing countries.

#### John Gaffney

Companies can't sell sustainable products if there is no market for them. Even though solar panels have been well received, renewable energy will not attract enough customers unless it costs the same as its fossil fuel counterparts.

#### Graeme Sweeney

Efficiency is key. The world needs to take a short and long-term view of environmental challenges. The focus should be on developing advanced bio-fuels, which could be available to use within five years. Carbon capture and storage should be deployed by 2020. Companies and governments have to work together to agree an international climate treaty.

#### Chul-Ki Ju

Governments should take the lead in reducing environmental impacts by investing in research and development, and education. They should adopt legislation to support renewable energies in order to stimulate a market. However, the onus is also on companies to develop innovative renewable energy technology. Green technology must be transferred to developing countries and carbon credits should be permitted when needed. Overall, a long-term strategy of increasing renewable energy generation must be pursued. For example, South Korea has a target of increasing renewable energy use by 11% by 2030 and 20% by 2050, and nuclear energy use from 16% to 30% over the same period.

#### Janine Benyus

Biomimicry is a growing area of research. Examples include artificial photosynthesis — a photovoltaic cell that works like a leaf — and manufacturing cement by bubbling CO<sub>2</sub> through water. Nature-inspired innovation can reduce energy consumption — changing the front of a bullet train into the shape of kingfisher's beak could improve fuel efficiency by 15%. Similarly, incorporating the shape of a humpback whale's flippers in the design of airplane wings could reduce drag by 30%.

#### Bunker Roy

My organization, "The Barefoot College", teaches uneducated, illiterate women how to become solar engineers. The college first taught women in 600 villages in India how to install solar energy units, followed by 100 villages in Afghanistan and 100 villages in Africa. To date the project has cost US\$1.5 million. The cost of installing solar energy in the 100 villages in Afghanistan was the equivalent of maintaining one UN diplomat in Kabul.



## Panel Discussion

### Resource Efficiency and the Green Transformation of Business



- Chair** : Sylvie Lemmet, Director, UNEP Division of Technology, Industry & Economics
- Via Live Video** : Amory Lovins, Chairman, The Rocky Mountain Institute
- Panelists** : Neil Hawkins, Vice President and Chief Sustainability Officer, Dow  
- Toshio Arima, Executive Corporate Advisor, Fuji Xerox  
- Anthony Hodge, President, International Council on Mining and Metals  
- Philippe Carli, Chairman and CEO, Siemens France  
- Steffen Frankenberg, Vice President, Deutsche Post WorldNet

#### Amory Lovins

Energy saving through greater efficiency is the biggest, most unexploited, low-cost opportunity that we have for reducing CO<sub>2</sub> emissions. For example, energy usage in houses could be reduced by 90% — even a drastic high-tech retrofit can have as short a payback period as three years. Business's traditional view that marginal costs go up through diminishing returns is not accurate — the economics of renewable energy change when energy use is efficient. A new business model is required that minimizes waste.

#### Neil Hawkins

We need to create a culture of sustainability that will unite people. The Dow Chemical Company's own history of sustainability shows what can be done. Its 2005 sustainability goals were aggressive and strictly monitored, helped achieve returns of US\$9 billion on a US\$1 billion investment and encouraged collaboration.

#### Toshio Arima

Fuji Xerox uses an integrated sustainability model throughout its supply chain. This has resulted in supplying higher quality and safer products, and delivering a 1.8 million tons reduction in greenhouse gas emissions annually. The goal is to attract more customers while reducing carbon emissions through office-space saving, transport and remote services.

#### Anthony Hodge

The mining industry has been lagging behind other sectors but my organization is trying to effect change by matching resource requirements to services as needed. The concept of efficiency has changed: it's now about minimizing inputs to produce the services required rather than about products. It's not the lack of technology that's the problem, rather the desire to adopt new ways of working. Although the mining industry is about to recruit a large number of young employees, it also needs to teach new concepts to existing employees.

#### Philippe Carli

A green economy means opportunities. Much of the technology needed is currently available; the problem is raising the money and creating the policies to encourage its implementation. Siemens aims to increase its revenue by 10% by focusing on green technology.

#### Steffen Frankenberg

Deutsche Post DHL aims to improve transparency, encourage employees to improve environmental performance, shape the regulatory agenda and improve efficiency.

#### Why have efficient technologies with short payback periods not become more widely adopted?

Integrative design has stalled because there is very little expertise in the field. Factor 10 Engineering (10XE) would spread reforms in engineering, as the present reward system for engineers is based on immediate performance rather than long-term efficiency.

#### What are the limits of an efficiency-focused business model?

We need more success stories for people to be convinced of the potential of an efficiency-focused business model. Fuji Xerox had to work hard with governments over several years to change trade laws to complement its environmental strategy.

#### What role does lobbying play?

The Dow Jones communicates with lobbyists to align their goals, and defends capital by finding ways of transferring from old to new technologies.

#### Concluding remarks

All the success stories discussed above had clear goals and the corporate culture to attain those goals but there is not one single model that guarantees that success.







## Keynote Address

H.R.H Prince El Hassan bin Talal, Crown Prince, Hashemite Kingdom of Jordan



I apologise for not being able to be present in person. I have just come from a West Asia and North Africa (WANA) meeting. Interestingly, the discussions highlighted that many environmental reports do not take into consideration many of the hinterland countries including West Asia, North Africa and South Asia. I spoke of human warning, Al Gore speaks of global warming and I see the two as inter-linked. Water, ladies and gentleman, as you well know, has lead to demonstrations in Turkey whose people are against the pricing of water. That is to say, in water rich Turkey, water should not be a commodity. Water, like clean air should be a human right.

The WANA meeting was in the context of what we now call the "third-sphere" – the inclusive participation of governments, both civilian and military branches of government, because the military has to also be well aware of the importance of national resource management and what they are doing positively and negatively to the economy by cutting off interaction, and the private sector in the broad context of investments. For the first time since the revolution of the '80s, we can reasonably discuss the roles of governments, private sector and regulatory agencies and the most important regulatory agency of course, citizens themselves.

We constantly talk about education for skills, education for knowledge, for life but what about education for citizenship and in particular, green business? I was in the Jordanian desert yesterday. We have drought in the whole of the east of Jordan, and relatively good rains in the west of Jordan, and the varying populations of our neighbouring countries are descending on the relatively sparse and ephemeral spring that we are enjoying. The importance of the water and energy community for the human environment is not a solo journey. No single country can do it alone in this region regardless of juridical rights or historical rights however significant they may be. Multilateralism is the path and a new administration in the USA has signalled its readiness to speak of multilateral solutions and this has coincided with the greater appreciation of the global environmental problems that transcend national boundaries and transcend the artificial divide between physical and human environment

In the '70s, we spoke of hubs of knowledge, knowledge path economies but the fact is that whether it be Africa, Asia or Latin America, we do not know enough about each other. I would like to make a few predictions. Within a few months at least, the liquidity crisis and the credit squeeze may well be alleviated to a certain degree. Within the next 1 to 2 years, several new international and national regulatory regimes will be designed. We may praise many like Grameen Bank rightly, but can we envision those who receive loans from the Grameen Bank, the poorest of the





poor, becoming major shareholders in the Dhaka stock market for example, let alone compete in what is called "a level playing field"? China it is predicted, will rise from the ashes of the present order, followed by the US and probably Europe will become the follower shortly after. I would like to dare hope that we may have new priorities shaping our policies rather than politics, as globalisation or universalisation resumes, but let us not forget the poorest of poor.

Our obsession with Gross National Product does not allow for many things. It does not allow for the health of our children, the quality of their education, the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debates or the integrity of our public officials. In short, it measures everything except that which makes life worthwhile. So in the pursuit of making life worthwhile, recognising the importance of the private sector, CSR is and will not be enough. It is only a public relations exercise but will not take care of public goods.

We must change the calculus of our economics and finance to internalise the full social and environmental costs of our decisions. We must rectify our national accounts, including our forests, giving it a fair value if it is going to be chopped down. We have to look at water once again as the Europeans did with coal and steel; water and energy as a supra-national concept marrying and managed by a supra-national agent with the capabilities, the competence and the openness to be accountable. Is there a possibility of talking about regional information centres?

Ones based on human, national and economic resources. You talk about "carrying capacity" as one of the recommendations in the Manifesto. I would like to talk about "recovery capacity". Both capacities can only be achieved by an interaction with the people. We do not have an aligned movement but maybe the least we could do is be aligned with our own peoples.

We must be concerned with nurturing a natural capital and building a human and social capital as much as we are concerned about growth. In that sense, the happiness of the nomad, despite the hardships, or maybe because of their hardship, is incredible. Their fortitude, and I speak here of 400 to 500 million indigenous people who are being marginalised. They do not blame governments. They are not politicised and they take everything in their stride and in an extraordinarily enduring manner. But this will not continue with extremists on all sides, particularly the political and religious extremists who will exploit them. They do not demand collaterals for their loans but they do demand something far more sinister. So let us not forget the weak and the vulnerable. Let us not forget that there are regions in our part of the world in the environmental contexts that are being degraded as we speak.

We do not count. It is they who count – the generations to come, even those in the 47 least developed countries of the world, the 10% of the world's population who subsist on less than 0.5% of the world's income and the 40,000 people who die from hunger-related causes everyday. People need to be seen in context of productivity, citizens or quasi-citizens and governments must be present to empower the poor, making the law work for everyone and ensuring equity of resources, not the least of all, business and property rights.

I want to leave you with a thought. We are trying to develop a velvet evolution for obvious reasons because if we speak of revolutions, the security hype makes it impossible to establish any headway. The obsession with privatisation has often meant that the public is no longer open to people like ourselves speaking as individuals. I regard myself as an independent speaker, a non-governmental speaker, a universal citizen. Issues do not count to me. What is important is to promote the public good through the joint action of the coalition of the caring. Thank you.

## Working Group Leading the Way – Innovating New Business Models for a Changing World



- Chair** : GBS Bindra, Global Director of Innovation, Logica
- Panelists** : Len Sauer, Vice President Global Sustainability, Procter & Gamble
- Anders Wijkman, Parliament Member, European Union
  - Janine Benyus, President, Biomimicry Institute
  - John Elkington, Founding Partner & Director, Volans Ventures
  - Chris Deri, Executive Vice President, Edelman
  - Barend van Bergen, Director, KPMG Sustainability Services
  - Alex MacGillivray, Head of Programmes, AccountAbility

### Key Points

In the past, our quality of life has always been maintained by burning things. Now we need to find new business models so we can switch to a new economic system. To do so, the way we live, work and play must evolve, underpinned by new financial systems, public-private partnerships and fresh policies to reduce the costs of being green.

### Len Sauer

Sustainability is both a responsibility and an opportunity. This realization leads to new company strategies on several levels. Green products need to be designed without a loss of quality, as they will determine how consumers see sustainability. Processes have to be improved to reduce products' environmental footprints at every step of their life cycles from raw material extraction to end-of-life recycling. Social responsibility must become part of any new strategy as companies engage with social issues affecting the environment. Employees and stakeholders are two other important agents in the development of new corporate sustainability strategies. P&G carries out life-cycle analysis when developing new products and reformulating its business model. The biggest obstacle to companies adopting sustainability is consumer acceptance.

### Janine Benyus

If the business community is to lead the way on sustainability, new sources of innovation have to be found. Biomimicry has tremendous potential for creating innovative products and processes.

### John Elkington

The sustainability movement has become competitive and fractured. There needs to be more collaboration between stakeholders. The big breakthrough will come from the large technology companies.

### Discussions

The most urgent changes needed are a re-designing of reward and performance schemes; the creation of a new set of business objectives for a resource-constrained economy that don't only include price and volume; and increased education of the investment community.

A re-examination of consumption is required. We need to move from the current ownership-based models to usage-based ones. We have to re-think the definition of people as consumers. Consumption should not be a measure of progress; it should be replaced with another set of measures. Economic theory needs to be re-thought in the context of limited resources. Sustainability should be promoted in social organizations such as schools, churches and NGOs.

A company's environmental footprint can't be reduced if the number of products used by society increases. Business has to shift from a sales and volumes model to one of efficiency. Current "ownership" based models have to move towards "usage" ones. Companies should not just be changing its business model but providing products for the transition to a green economy.

All new business models need to sustain quality of life in the industrialized world and maximize prosperity in the developing world. More collaboration is required between civil society, the public sector, regulators and the private sector. Social entrepreneurs and businesses should collaborate more, too, as the former can often help companies identify sustainable opportunities. We should look for inspiration in nature and at existing business models in the developing world rather than creating prescriptive business models in closed rooms.



## Working Group Environmental Leadership in the ICT Sector – What More Can be Done?



- Chair** : Molly Webb, Head of Engagement, The Climate Group
- Panelists** : Bruno Berthon, Global Sustainability Lead, Accenture  
- Chris Tuppen, Chief Sustainability Officer, BT Group  
- Dennis Pamlin, Global Policy Advisor, WWF  
- Marc Fossier, Executive Vice President, Chief CSR Officer, Orange  
- Serge Adam, VP South EMEA, South & Central America, Tanberg  
- Naofumi Sakamoto, Senior Researcher, Hitachi Ltd

### Molly Webb

Due to rapidly increasing CO2 emissions, we have to act quickly to achieve 2020 targets — such a plan of action can be summarized as substitution, efficiency and intensity.

### Bruno Berthon

There are seven key components to improving energy efficiency and reducing emissions through ICT-based solutions. These are: smart energy management (smart grids, smart metering); sustainable energy production from renewables; smart buildings and infrastructure, carbon accounting and tracking; meaningful sustainability reporting; new working models including home-working and virtual meetings; smart manufacturing and the de-carbonization of the supply chain; and improved energy efficiency of data centers and electronic devices, and the relocation of data centers.

### Chris Tuppen

British Telecom's global carbon footprint is 900,000 tons. Since 1996, BT has reduced its footprint by 58% and has a target of an 80% reduction by 2016. To complete this goal, BT is working on improving its energy efficiency (network, estate, travel) and increasingly using ICT to do so. It also uses renewable energy such as solar and wind power. When new products are introduced, they have to fulfill certain criteria such as financial viability, social cohesion and individual wellbeing, waste minimization and reduced climate change impacts.

### Dennis Pamlin

ICT companies should collaborate with other industries and offer integrated solutions.

### Marc Fossier

There are two key actions that need to be taken: the eco-design of products and eco-labeling. Generally, there is a lack of standardization.

### Serge Adam

Technology adoption is easier for the internet generation plus many climate-friendly technologies already exist — so there is hope for the future. The standardization of systems would save time and costs. A decrease of 5% in business travelling per year is equivalent to the saving of 5 million tons of CO2.

### Naofumi Sakamoto

Hitachi uses ICT and power-saving designs to reduce energy use. Its air-conditioning system and data center project considers optimum location and energy efficiency, and evaluates results through life cycle system software.

### Discussions

The industry straddles between two ends of responsibilities. Firstly, having to deal with industry focused climate issues such as toxic waste and deepening the analysis of product life-cycle as well as, being an enabler and multiplier of solutions to climate change issues. ICT companies have a role to play in collaboration and integrating applied systems into other industry operations.

## Working Group Sustainable Urban Development: Expertise and Technology Transfer



- Chair** : Arab Hoballah, Chief, Sustainable Consumption & Production, UNEP DTIE
- Panelists** : Stefan Denig, Vice President, Siemens AG
- Barbara Dubach, Senior Vice President, Head CSR, Holcim
  - Jane Drejer Nielsen, Executive Climate Advisor, City of Copenhagen
  - Dominique Heron, Vice President, Veolia Environnement
  - Joe Luthiger, Technical & Sustainability Affairs, Hydro Building Systems

### Stefan Denig

#### How to Build Intelligent Buildings

Infrastructure is the key to attracting investment and funds but costs are high. Siemens has discussed infrastructure priorities with governments. Urban populations are major consumers of energy, water and gas so it's important to tackle their impacts. Using existing technology, green investment could pay for itself and benefit local communities. However, although stakeholders understand the importance of climate change they are reluctant to invest in solutions because the returns are not immediate. There are other barriers to overcome, too, such as the standard contracts between landlords and tenants, which make it hard to develop long-term climate strategies for buildings.

### Barbara Dubach

#### The Impact of Building Materials

The demand for construction materials is on the increase due to the rising number of urban populations. Buildings account for 40% of global CO<sub>2</sub> emissions. Holcim's mission is to develop sustainable buildings and cutting edge technologies to reduce CO<sub>2</sub> emissions. The company is involved with sustainable high-rise buildings in Jakarta, a green mark rating for eco products in Singapore and urban planning in the new city of Masdar, Abu Dhabi. It has also launched an affordable and sustainable housing programme: The Holcim Foundation for Sustainable Construction, set up in 2003, is a forum that discusses sustainability and awards grants for new sustainable building ideas. Sustainable construction can make a contribution to reducing emissions by using the most appropriate materials for a given application.

### Jane Drejer Nielsen

#### The Role of Cities in the Climate Change Agenda

The goal of carbon neutrality by 2025 is ambitious and realistic. To achieve it, public-private partnerships must be formed with energy companies. Improving cycling infrastructure should encourage bicycle travel.

#### Discussions

Apply lifecycle thinking to financial drivers; find appropriate financial incentives and adequate market instruments; clearly identify and communicate the return on investment and the economic benefits of green technologies; develop and implement appropriate legal and certification regimes; ensure that construction is undertaken without integrating eco-efficient infrastructures and services; and encourage and promote the use of energy efficient construction materials and service utilities at the early stages of the construction.

Regarding partnerships and communication, we must promote more multi-stakeholder partnerships, in particular private-public partnerships. Governance must be improved and must emphasize the central role of municipalities in promoting sustainable buildings and green cities by demonstrating and encouraging relevant solutions. Architects and engineers must be involved earlier in the design process so as to integrate sustainability within buildings. Mechanisms are needed to bridge the gap between designers and builders, and owners and users on taking shared responsibility for more efficient building operations. An enabling framework is needed to promote sustainable cities, targeting governments, municipal representatives, business leaders and wider society. Municipalities should request different service companies to work together on buildings and city developments.

In terms of enhancing city life, communities must be consulted to identify their needs and create communication channels. Transport systems should be re-designed to promote green options, such as electric cars and bicycles. Design must focus on compact cities, improving quality of life through the creation of integrated neighborhoods that combine living, work and leisure. Communication and education about the value of sustainable buildings and green cities must be improved, and feedback from stakeholders encouraged. Relevant environmental solutions for existing and new buildings need to be considered, and better networks should be developed to facilitate the transfer of green technologies between developed and developing economies and ensure take-up of existing technologies. Make cities part of the climate change and energy efficiency solution — cities must help seal the deal at the Copenhagen negotiations.

## Working Group Leading the Way – Innovating New Business Models for a Changing World



- Chair : Martin Hancock, Chief Operating Officer, Westpac Institutional Bank
- Panelists : Anne-Catherine Husson-Traore, CEO, Novethic
- Robert Tacon, Senior Sustainability Advisor, Standard Chartered plc
  - Andrew Menzies, Managing Director, Earth Capital Partners
  - Rod Parsley, Partner, Perella Weinberg Partners
  - Matthew Hale, Managing Director, Sustainable Banking, BOA-Merrill Lynch
  - Jules Peck, Advisor to the British Conservative Party

### Martin Hancock

The financial sector has a crucial role to play in promoting sustainability. It brings together many different business components such as retail, commerce, wholesale and insurance, and therefore has the ability to exert influence up and down the supply chain. Many key stakeholders have approached the financial sector for help to support sustainable development. The sector has responded by developing new innovative products and services; however they have had little social value. Where should leadership on promoting and supplying sustainable finance come from? Is it the responsibility of the financial sector or governments?

### Anne-Catherine Husson-Traore

ESG (Environmental, Social, and Governance) criteria should be integrated into the business sector in order to identify sustainable companies. This would allow the financial sector to consider environmental impacts when making investments.

### Robert Tacon

Governments and regulators should take the lead on the development of sustainability in the financial sector. Cross-border decisions must be agreed.

### Andrew Menzies

The financial sector needs to lobby governments for change so it can make sustainable investment decisions. If it remains unable to do this it will harm its competitiveness.

### Rod Parsley

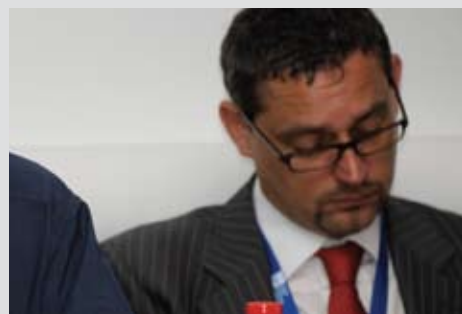
Two words describe the current environmental problems — urgency and complexity. Governments are good at allocating resources at a regional level but poor at controlling global issues such as carbon emissions.

### Matthew Hale

CSR (Corporate Social Responsibility) should be integrated into the business sector because that is the way the banking industry approaches environmental issues. Boundaries between sectors need to be broken down because though banks are willing to contribute to sustainable development, they need help from other sectors such as governments and NGOs.



## Working Group Advancing the Extractives Industry in Reducing Environmental Impact



- Chair : Dominic Waughray, Director,  
Environmental Initiatives, WEF
- Panelists : Tom Burke CBE, Environmental Policy  
Advisor, Rio Tinto
- Catherine Tissot Collet, Executive Vice  
President, Eramet
  - Jean-Yves Gilet, Executive Vice President  
& CEO, ArcelorMittal Stainless
  - Gearoid Lane, Managing Director,  
British Gas New Energy, Centrica plc

### Discussions

The extractives industry is committed to sustainable development and does not see it as a burden. Its long-term goals include: practical risk management planning, partnership and management development, effective local stakeholder engagement and cross-industry networking and discussion. It uses integral core planning and a strategic framework to enable flexibility at local and national level. There is, however, a discrepancy between how the industry views itself versus how the public views the industry. This is the result of a variety of complex issues including differences of opinion as to what drives sustainability and the industry's motives. The industry is currently working on reducing its carbon footprint, improving biodiversity, greening product development, implementing social programmes and supporting local employment.

Corporations are exchanging information between each other and helping to drive the sustainability agenda forward, share best practice and launch new initiatives such as the International Council on Mining and Metals (ICMM).

Change will take time — from working with local cultures and constraints and developing partnerships between governments and NGOs to engaging with organizations to develop solutions for more complex industry issues. Trusted intermediary organizations are required to keep stakeholders informed about progress.

Wider engagement is needed to promote sustainable practices. There is a need for the communication of key risks between the private and public sectors, NGOs and chief financial officers. More in-depth dialogue with governments and communities to develop consistent approaches and set clear long-term pricing signals and incentives is also needed. Large and small companies in the extractives industry need to improve their public communications.

Policy signals are often not clear and this impacts on delivery. Industry has to show progressive and positive leadership to improve relationships with government bodies.

## Working Group

### Tackling the Global Water Crisis: Innovative Solutions for Business and Society



- Chair : Gavin Power, Deputy Director, UN Global Compact
- Panelists : Claus Conzelmann, Vice President, Nestle Group
- Adam Mullerweiss, Director, Global Corporate Water Strategy, Dow
  - Henry Northover, Head of Policy, WaterAid
  - Bunker Roy, Founder, Barefoot College India
  - Ian Walsh, Global Head of Environment, Cadbury
  - Paul J. Williams, Head of Sustainable Development, Nalco

#### Key Points

Water supply impacts everything — from food and energy to climate change and ecosystems. The current global water crisis has highlighted the links between environment, equity and poverty. The main motivation for businesses to adopt the environmental agenda is financial — low pricing and cost savings through improved efficiency. But whether green issues are considered over the short- or long-term, the key is value creation for shareholders and local communities. It is important to consider a number of key points: fairer water pricing; that water access should be a human right guaranteed by governments; suppliers must work with suppliers and form local relationships; and policy makers should implement new regulations more quickly. Sometimes it is not easy to put infrastructure in place because of the political conditions. The main challenge is often social rather than technological. To convert challenges into business opportunities, we need collaboration between stakeholders. Industries must innovate and come up with cleaner production processes.

## Panel Discussion The Green Imperative – Making it Happen



- Chair** : Claude Fussler, Programme Director,  
Caring for Climate,  
UN Global Compact
- Panelists** : Steven Boucher, Programme Director,  
European Climate Foundation  
- Ricardo Young, Founder & President,  
Ethos Institute  
- Ma Lingjuan, Deputy Executive  
Director, Chinese Renewable Energy  
Entrepreneurs Association  
- Pierre Tapie, Dean & President, ESSEC  
Business School & Chairman, GRLI  
- Laurent Corbier, Chair,  
ICC Commission on Environment  
and Energy, Vice President, AREVA

### Key Points

How can the green economy become reality? This differs from country to country, depending on the partnerships between governments, businesses and civil society. Change is not happening fast enough and technological innovations are not of the requisite scale to cope with the challenges ahead.

### Steven Boucher

To address these issues, regulations are needed to set emissions standards, decouple production from income and ensure that significant amounts of carbon auction revenues are re-invested in environmental protection.

### Ricardo Young

Businesses and civil society must take action rather than depend on governments to carry out policy and regulation changes. Developed countries rely more on governments while developing countries rely more on civil society.

### Ma Lingjuan

In general, businesses do not yet understand the opportunities the green economy affords. Those that do, however, such as the Chinese solar industry, are doing very well. Business is not yet ready for the green economy and should avoid price battles that could lead to decreases in quality. This requires big businesses to take the lead in defining product quality standards.

### Pierre Tapie

There is a tendency to look at business school rankings as a measure of performance. These, in turn, are based on measurable objectives such as exit salaries. There need to be new ways of measuring success to incorporate factors such as the environment and long-term strategic thinking. Business schools and businesses must work together to develop sustainable management practices. The current generation of students wants business schools to move in this direction.

### Laurent Corbier

There is a green crisis today that requires greater collaboration, transparency, accountability and tangibility. For these changes to come about and for progress on green issues to accelerate, businesses need to change the way they view collaboration, financing, and research and development. It is important that this progress takes place at all levels, be it at corporate, regional, national or global level. Everyone has a responsibility to carry out these changes.

### Discussion

Both businesses and governments must take advantage of Copenhagen to make major changes to environmental policy. These changes must include the development of global standards, new business performance benchmarks and cooperation on developing new business strategies.



## Plenary Session Feedback from Six Working Group Chairs



- Chair : Arab Hoballah, Chief, Sustainable Consumption & Production, UNEP DTIE
- Panelists : GBS Bindra, Global Director of Innovation, Logica
- Molly Webb, Head of Engagement, The Climate Group
  - Martin Hancock, Chief Operating Officer, Westpac Institutional Bank
  - Dominic Waughray, Director, Environmental Initiatives, WEF
  - Gavin Power, Deputy Director, UN Global Compact

### Key Points

The leadership and innovation workshop focused largely on the need for a paradigm shift in the way business, society and government operates. Performance must be evaluated differently and incentive structures revised. This will require the re-education of both businesses and investors. Consumption habits must change, which may mean re-thinking what consumption is. Are humans nothing more than consumers? Does consumption have to be the dominant measure of success? Collaborative business models must be created where, for example, developed and developing countries work together, and businesses can work more in harmony with the natural world.

While the ICT sector accounts for 2% of global emissions, it sees itself as an enabler and driver for changing the way the world works and improving environmental performance. ICT will be the backbone of new logistical platforms, smart grids, smart motors and other new efficient systems. People can now work in different ways thanks to ICT, whether by teleworking and videoconferencing or by using virtualization technologies — virtual operating systems or servers. The following developments are required: standardization; public procurement policies should include environmental factors; the ICT sector should be treated differently when considering emissions caps as it enables emissions reductions in other sectors through its products and services; and there needs to be a transition to a service-based economy to reduce the need for the physical transportation of goods and people as well as avoid excessive replication of products and services.

Financial institutions have an important role to play in influencing the development of a green economy. Three themes to address are urgency,

relevance and leadership. Investors can make progress on these by changing the companies they invest in, investing over longer time horizons, and pressing for changes to regulations and ratings agencies for the inclusion of environmental factors.

Industry is often accused of being responsible for many negative impacts on the environment, but there is a leading pack of companies that are working on creating green strategic frameworks, which allow flexible operation at local levels. The environmental issues facing industry are not simple yet they represent an opportunity for it to work together to address them. Building this cooperation will require the help of trusted intermediaries to facilitate cross-sector engagement.

The subject of access to clean water and water's role in the environment relates to a number of other environmental challenges. Water is a social, business and environmental issue and some companies are introducing successful water management initiatives. While business opportunities and innovations exist, technology alone cannot solve all water-related topics. Consequently, it is important to take account of local factors when tackling global problems.

In today's societies, cities are the engines of the global economy. Cities in developed countries were often built in inefficient ways using old technologies, while developing countries are in the process of building modern cities. Both approaches have to deal with fundamental environmental issues by rethinking financing, lifecycle management, legislation and regulation. Engagement with construction industries and municipal level organizations is needed to ensure the development of sustainable cities.

## Panel Discussion

### Business and Policy: Towards a more Sustainable, Green Economy



Chair : Charles Hodson, Anchor, CNN International

Via Live Video : Senator John Kerry, Chair, US Senate Committee on Foreign Relations

Panelists : Josh Boger, President & CEO, Vertex Pharmaceuticals  
- Paul Sagan, President & CEO, Akamai Technologies  
- Georg Kell, Executive Director, UN Global Compact  
- Sylvie Lemmet, Director, UNEP, DTIE  
- Aron Cramer, President & CEO, BSR

#### Senator John Kerry

I worked on climate change for many years but truly dedicated myself to the issue in 1998 after hearing Jim Hansen of NASA explain that global warming had already started. The urgency of this issue is greater than ever, especially in the run up to Copenhagen. The US Government is currently working on a cap-and-trade energy bill and a group of senators is meeting weekly to discuss the problem.

The US has been negligent and irresponsible over the past eight years; however a change in power means that action can now be taken using three levers: making money available for renewable energy generation; tackling national security concerns; and investing in grassroots projects.

There is a growing realization that energy prices may increase as a result of new policies but in addition to the long-term environmental benefits, there are some immediate financial positives. New technological developments will quickly reduce the dependency on fossil fuel energy sources. The US Government has a role to play by providing the infrastructure and financial support to stimulate further innovation.

Even the most aggressive targets for CO<sub>2</sub> reduction — currently agreed to by 17 countries throughout the world — are not large enough nor will they be achieved quickly enough to have an impact on global warming. Consequently, the US Government will take the lead to get the ball rolling. The current financial crisis has already helped do this — Detroit automakers will never again produce large, inefficient vehicles, for example. China will play a key role and is already doing so in sectors such as solar power.

Businesses should rush to take advantage of the long-term advantages and financial benefits that a green economy will create.



#### Josh Boger

Economist Adam Smith's "Invisible Hand" concept suggested that social good comes from profit. The world now rejects this idea and recognizes that businesses have a broader social contract with society. There have been three crises of trust in business during the past century, and this time the trust will only be rebuilt when business standards improve.

#### Paul Sagan

One of the keys to addressing environmental issues is ICT, which provides the infrastructure to tackle larger problems. The ICT sector itself needs to become more efficient and minimize its impact on the environment. Yet, as a versatile industry, ICT can reduce emissions in other sectors by providing technologies that create solutions such as smarter buildings and smarter cars. For this to happen, standardization, monitoring and accountability should be adopted by all industries so that ICT can be used to ensure compliance with environmental regulations.

Partnerships are vital for tackling environmental problems as no single organization can handle such a massive issue on its own. Markets and regulations must provide clearer frameworks. The scientific community could play a greater role.

Innovative business ideas can come from anywhere, particularly from supply chain management and small- and medium-sized enterprises. Partnerships are not complete without consumers who must be engaged directly, and whose purchasing power will determine the success of any initiative.

A longer-term view must be adopted via a change in the way that shareholders evaluate companies.

#### Discussion

The incentive structure for companies needs to change, not only as regards environmental performance but in order to re-establish trust and define responsibilities. The environment is a security issue — in terms of both the human race and national security.

Firms need to look for long-term value even though they are often forced by shareholders to adopt short-term perspectives. However, the diversity of shareholders means it will be necessary for companies to pursue both short- and long-term gains. Improving transparency so that all companies are operating on a level playing field and by changing the way pro-environment arguments are presented could do this.

Governments and CEOs should listen to their citizens and employees; re-examine their strategies to incorporate environmental policies; be bold, consistent and live up to expectations; set creative, aggressive environmental performance targets and create new incentives and partnerships to reach them.



## Adoption of B4E 2009 Outcome Document & Concluding Remarks



- Chair : Charles Hodson, Anchor,  
CNN International
- Panelists : Georg Kell, Executive Director, UN  
Global Compact
- Sylvie Lemmet, Director, UNEP,  
DTIE
  - Aron Cramer, President & CEO,  
BSR

### Georg Kell

Ladies and Gentlemen, the fun part is over. I know you have been working very hard for two days and you will recall that we handed out a one-page outcome document of the two days deliberation. There is great news and a lot of encouragement. Many participants conveyed that they think this is a very useful and handy piece of paper, which reflects the spirit of what we discussed. There are a few minor changes that are proposed and I ask that you bear with me for one minute and hopefully we can have an acclamation and share the sentiments of this document.

One of the points highlighted was to introduce the term “sustainable” more often in front of green and to also convey that this is not just green but also blue and the other colors.

The second point was to also call on governments to provide appropriate regulatory and incentive structures to encourage more sustainable consumption protection and send the right market signals for business to act. I believe this was also something that reflects the spirit of the discussions yesterday and today. We agree on this and there was an important addition by our friends from WWF to one of the paragraphs, which adds on building the green economy with transformative improvement, that avoids lock in high carbon and resource inefficient systems.

Finally the last addition was “to shift from a product to a service perspective applying life cycle approaches” and the inclusion here was to spell out supporting cradle-to-cradle strategies in business along all value chains. This also reinforces the sustainability notion we discussed over the last two days. With these very limited amendments that came in over the last two days, I ask everyone through acclamation, to accept this outcome document that reflects the spirit and the efforts invested in the last two days. Thank you very much!

### Charles Hodson

You certainly have my acclamation in support of the Manifesto. We are now in our closing session and to our panel for one quick take away – What is the message we need to take away from this conference?

### Aron Cramer

Let's speed up and scale up.

### Georg Kell

Work towards COP15. Now is the priority. Let us put pressure on everybody who has a decision-making capacity, especially governments.

### Sylvie Lemmet

Everyone has to commit at their own level. We know it is possible so let us work on doing it together.

### Charles Hodson

Thank you. Please join me in thanking an excellent panel and our tireless organizers, who was not only responsible in getting you here but for making all this technological wizardry work. Let me leave you with one final thought. What Georg Kell presented here is a manifesto of sorts, a manifesto we normally associate with rather bloody things, bloody things we call revolutions. What we have here is a revolution, which is actually already underway – it is a slow-burn revolution but it's nonetheless a revolution. But the really great and different thing about this revolution is that it is one that creates value, and where we can make money. This is a very important message to take out of this room, take it on to street and into the minds of those people who still think that green and growth are parallel opposites.

Thank you very much.

## The Green Imperative Manifesto



The global economic downturn has exposed the extent to which markets and societies are increasingly interconnected and interdependent. We, the participants of the B4E Summit 2009, recognize that the economic, environmental and social challenges and risks we face demand a new level of leadership and cooperation. We are confident that by exercising such leadership, restoring trust and by working together we have the opportunity to put our global economy, our markets and lifestyles, our livelihoods and security, and, ultimately, our planet on a sustainable path. We emphasize the following:

- Agreement on a new global climate regime is urgent, offering all countries the opportunity to unlock the potential for sustainable, green innovation and job creation that exist as we head towards the low-carbon society. We call on Governments to complete a comprehensive and successful COP-15.
- We call on Governments to promote global integration, based on fundamental principles of non-discrimination in trade and investment, so that we can more efficiently disseminate clean technologies globally.
- We call on Governments to provide appropriate regulatory and incentive structures to encourage more sustainable consumption and production, and send the right market signals for business to act.
- Now is the time to remove uncertainties, enable green investments to flow, and build scalable public-private partnerships that can leapfrog in terms of technological innovation.
- Capturing the global crisis requires recovery plans that provide for drastically expanded investments in clean technologies and sustainable infrastructure systems, building the Green Economy with transformative improvements that avoid lock-in in high carbon and resource inefficient systems.
- For business, we need increased transparency, a stronger ethical orientation and an expanded risk paradigm that includes not only traditional business and financial factors, but also relevant extra-financial issues in the environmental, social and governance realms.
- We need new due diligence requirements that strike a fair balance between the needs of shareholders and other stakeholders, including future generations.
- We need to shift from a product to a services perspective, applying life cycle approaches that support cradle-to-cradle strategies in business along all value chains and using ecosystem services sustainably.
- We need to shift from the tyranny of "short-termism" to a longer-term orientation of value creation, as embodied in the UN Global Compact.
- We need broad-based use of sustainable procurement and criteria that are both green and decent in the management of our supply chains.
- We need reporting and accountability systems which combine internationally recognized financial and sustainability standards to mainstream forward-looking approaches.
- We recognize the importance of promoting small business development and social entrepreneurship in the making of truly sustainable enterprises.
- We underscore the importance of revamping business education and training in order to properly nurture and develop the leaders and managers of tomorrow.

We offer our energy and commitment to work with Government and society, to jointly take leadership, ownership and accountability for our contribution as responsible citizens, consumers and leaders. This implies our engagement from local to global level, including cooperation with UNEP and others in the UN facilitated process on sustainable consumption and production leading to a 2012 World Summit.

We, the participants of the B4E Summit 2009, underline the need for business to take its part along with Government, the research community and other societal partners - in creating a more sustainable world and drive the way towards the sustainable, green and responsible enterprise. We call on all stakeholders to work together in order to achieve these aims.

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