SUSTAINABLE BUSINESS

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Response falls short of ecological challenges

Even so, some companies are demonstrating that they understand shrinking natural resources will damage the bottom line. Sarah Murray reports

hen it comes to water consumption, Unilever is looking beyond its own use, to that of the people who buy its products.

Working with a non-governmental organisation in the Indian states of Tamil Nadu and Andhra Pradesh, the Anglo-Dutch consumer goods group calculated that a laundry product it had formulated could - by reducing the amount of rinsing required - generate potential water savings in the region of 14bn litres a year.

Of course, for companies in some sectors, the heaviest environmental impacts may reside in their own operations or at the manufacturing could start to damage companies stage of their goods.

However, the Unilever approach is an example of how companies taking a lead in this area are looking more broadly at what "sustainable business" means.

"Companies are understanding that this is a business matter, and it's here to stay," says Mindy Lubber, president of Ceres, a coalition of investors and environmental groups.

driven by their business agendas alone. External factors are also changing corporate behaviour, and the legislative landscape is a source of growing pressure.

Despite legislative setbacks on curb- turning to alternative technologies. ing greenhouse gas emissions - the Walmart recently announced it would US administration was this year be installing thin film solar panels on tion. But in certain sectors of indusforced to abandon its proposal for a the roofs of up to 30 new sites. When try, there is the potential for compa-

issues such as climate change in their investment strategies.

About 2,500 organisations globally now measure and disclose their greenhouse gas emissions and climate change strategies through the Carbon Disclosure Project (CDP), a non-profit that represents 534 institutional investors, with combined assets under management of more than \$64,000bn.

Even the private equity sector is starting to consider sustainability in its investments. Earlier this year, Carlyle, the US private equity group, launched EcoValuScreen, a due diligence tool developed with Environmental Defense Fund, an advocacy group, to use environmental risks and opportunities as another filter to look at potential acquisitions.

On the risk side, the dangers are becoming clearer. In recent years much attention has been paid to the damage caused to the environment by industrially-generated greenhouse gases, but awareness is also growing that shrinking natural resources profits.

"We have seen a massive decline in natural capital and ecosystem services, and increasing competition from emerging economies for that natural capital," says Dax Lovegrove, head of business and industry at WWF UK. "And that, in turn, presents a huge business risk.

On the other hand, companies are also looking at the potential opportu-Still, companies are not being nities associated with sustainability strategies, the most clear-cut being energy efficiency, through which companies can achieve substantial savings on their energy bills.

Some are making these savings by comprehensive cap-and-trade system - in place, the panels are expected to nies to shift from producing goods to



tainability, it needed to edit it out." The implications of such a move are intriguing. Should companies that are really serious about sustainability simply stop producing and selling things altogether?

This might sound an absurd ques-

'We have seen a massive decline in natural capital and ecosystem services, and increasing competition from emerging economies for that natural capital'

Exhibition

A recent UN Global Compact study bal 500 setting emissions reduction led by Accenture, the consultancy, found that while 85 per cent of chief executives believe companies should integrate the measurement of sustainability into their businesses, only 64 per cent thought their company did so effectively.

And the CDP's most recent assessment found that although climate ing businesses. But the response is change is moving up the boardroom not equal to the global sustainability agenda – with 65 per cent of the Glo-

targets - only 19 per cent of these companies have shown significant emissions reductions.

"There's room for optimism," says Ms Lubber. "But we need to massively jump-start this.'

Mr Lovegrove agrees: "It's starting to happen among a minimum of leadchallenges we face.

Power surge: Walmart is installing thin film solar panels on the roofs of up to 30 new sites. The panels are expected to provide up to 30 per cent of electricity

CEO Summit Gala Reception Conference Awards Careers Under the patronage of the President of the United Arab Emirates H. H. Sheikh Khalifa Bin Zayed Al Nahyan

the regulatory environment is shifting

"Even though we don't have a capand-trade system in the US, effectively companies now need to understand and manage their greenhouse gases from a SEC (the US Securities and Exchange Commission) disclosure perspective," says Chris Deri, head of corporate social responsibility and sustainability at Edelman, the global communications consultancy.

Government incentives on clean energy are also taking effect. A US federal tax credit for solar power that is guaranteed until 2016 has led to an increase of more than 100 per cent in the residential solar market in 2009, according to the Solar Energy Industries Association.

Legislation in Europe and, more recently, the state of California, now controls the use of chemicals that are toxic or damaging to the environment. And while such regulations are limited to products sold in those jurisdictions, the rules covers the products of any company wanting to sell into those markets, regardless of where the business is located.

"Policy is crucial because it creates a level playing field," says Ms Lubber. "It means everyone is brought into the same systems, rather than having the leaders spend more time on this and the laggards ignoring it.'

In addition, the investment community is helping the drive towards more sustainable forms of business, with institutional investors and large pension funds starting to take account of

generate more than 22.5m kilowatthours of energy a year, providing up to 30 per cent of each site's electricity.

Other opportunities lie in meeting growing customer demand for sustainable products, as Marks and Spencer found several years ago when it launched its "Look Behind the Label" initiative, which promoted ethical and sustainable sourcing for products ranging from clothing to food.

Some companies have even taken environmentally damaging products



On FT.com

The Year of Urban Agriculture Seattle has legalised the keeping of livestock and encouraged the growth of fruit and vegetables. It also has a community garden programme with 2,500 plots, writes Jane Bird

Unlikely partnerships

Coca-Cola and WWF assert that the \$20m tie-up launched in 2007 - on water, energy efficiency, supply chain management and communications is one of the most successful corporate-non-profit groupings. Ross Tieman reports

offering services. The leasing model is starting to appear in new areas of business. For example, companies such as Zipcar and Zilok are running car-sharing services.

But whether companies shift from selling products to leasing them, or even move into new, related businesses (the airline industry, for example, might start to offer business travellers videoconferencing services). such strategies will involve a radical rethink of business models.

This, says Mr Lovegrove, is going to become increasingly necessary. "The dilemma faced by the private sector is that if business growth continues, even with some efficiencies, the net result is higher impacts. And that can't go on forever," he says.

"There's an inevitable ecological crunch looming, where companies are going to have to think quite differently.

It also means bringing about changes in consumer behaviour. "Zipcar doesn't change your access to transport," says Mr Deri. "But it's asking consumers to have a different relationship with their means of transportation."

But while entrepreneurial companies such as Zipcar and Zilok are coming up with innovative ideas, and established companies such as Unilever are reformulating products to have less impact at the consumer end, there is evidence that many companies have not even measured their own impact effectively, let alone reduced it.



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Bad for biodiversity is often bad for business

Saving species

Environmental degradation has far-reaching effects, says Fiona Harvey

The gribble was the scourge of mariners and shipbuilders for centuries, destroying wooden ships by eating holes in their hulls.

Today, scientists are hoping this tiny, woodlouse-like insect could save the world.

Enzymes from gribbles that help the minute creatures digest wood are being investigated as sources of biofuels. If the enzymes can be replicated, then waste could be turned into a biofuel to replace petrol.

of Madagascar, the rosy periwinkle is a pretty little pink flower that could easily be overlooked.

ascribes to it the power of curing diabetes - but modern day researchers have found that it could do even

more. The plant is a source of vinblastine and vincristine, two substances that have been found useful in treating cancers, including childhood leukaemia.

Pyrethrum take many forms, some of which native to the Balkans, Cauand surrounding casus regions – look like common daisies

But their unremarkable appearance belies extraordinary properties - the flow-

Found only on the island ers contain a substance that appears to be toxic to mosquitoes and other biting bugs

It has long been used to Folklore on the island keep away parasites, and attempts are now under way to grow it commercially for use in repellents. The gribble, the rosy peri-

winkle and pyrethrum have joined scores of other unlikely plants and creatures that could provide answers to some of humanity's most pressing problems.

They are living examples of the worth of biodiversity, says Peter Seligmann, chief executive of Conservation International. They remind us that "we need nature". he says. "If nature gets cooked, we get cooked.

The value of nature is



Gribble: fuel of the future

often overlooked by businesses.

Apart from industries such as agriculture, food and pharmaceuticals, many companies seem to have few obvious ties with the natural world.

But, warns Pavan Sukhdev, head of the Green Economy Initiative at the UN Environment Programme, even companies that seem to rely little on plants or animals should be

Continued on Page 3



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Sustainable Business | The Future of Cities

Business needs nature's diversity

Continued from Page 1

aware of how much their wealth depends on preserving natural ecosystems.

Mr Sukhdev, formerly head of Deutsche Bank's global markets business in India, led a study called The Economics of Ecosystems and Biodiversity (TEEB), intended to estimate the costs of neglect and degradation of natural environments.

He says: "All economic activity and most of human wellbeing whether in an urban or non-urban setting is based on a healthy, functioning environment. Nature's multiple and complex values have direct economic impacts on human wellbeing and public spending.'

The TEEB study found that preserving biodiversity in some areas most at risk of species loss would yield about \$4,000bn to \$5,000bn a year in benefits.

Environmental degradation can have far-reaching effects.

Deforestation, for instance, causes floods and mudslides, but also water shortages and dust storms, because the trees create catchment areas for water, and help to hold soil together. Restoring forests can yield enormous benefits.

The TEEB study looked at the transformation of Hiware Bazaar, a village that now has one of highest average rural incomes in India.

In the 1970s, the village suffered severe water shortages, partly the result of increased run-off owing to deforestation and vegetation loss.

Then villagers started to regrow trees. The shortage was alleviated, agriculture saved, and poverty drastically reduced. Businesses must play a big

role in maintaining biodiversity, says Dax Lovegrove, head of business and industry at WWF UK.

"There's a dangerous assumption that companies can continue to rely on ecosystem services, especially when those ecosystems are in such rapid decline," he says.

He warns that the rate of decline poses a real economic threat. "Businesses need to think differently or fail. The increasing competition around



Upwardly growbile: an SOA architect plan for a high-rise with a farm

Multi-storey farms in a city centre near you

Urban agriculture

high, the students concluded - lite using small amounts of Senegal; Fortaleza in Brazil; and clearly impractical for many nutrient-charged liquid. Ammam, Jordan.

Political spending does not always match CSR values

Lobbying

Sarah Murray says companies have not involved their government affairs teams in this area

In January this year, a US Supreme Court ruling removed limits on corporate spending in political campaigns.

The decision, which is expected to release into the election process a wave of corporate and special interest money, has revived questions about how companies claiming to espouse principles of corporate responsibility should behave when it comes to their lobbying and political activity.

Even before the decision was made, some had been questioning corporate behaviour with respect to influencing politics and legislation.

A 2005 report produced by Accountability, the UK research and advisory institute, and the Global Compact, the UN citizenship initiative, identified a gap between the public corporate responsibility statements and sustainability commitments of many companies and their lobbying activities that push for

narrow commercial interests. "You've got to be consistent in making these commitments," says Bennett Freeman, senior vice-president for social research and policy at Calvert, the socially responsible investment management company.

"It just doesn't cut it to be saying one thing in a CSR report and then directly or indirectly lobbying in Washington, London or Brussels to undermine the same objectives.

Much of the indirect lobbying companies engage in is conducted through business associations. Here too, contradictions have been emerging between companies' sustainability agendas and what the business associations are pushing for.

In the US, the Chamber of Commerce has come under the teams rarely participate. spotlight, with several compa-

policies on diversity yet when they made a political spending decision they didn't look at how it would impact the company more broadly," says Mr Freed. Mr Freed argues that trans-parency and accountability on

political spending should be considered part of a company's responsibility credentials.

To start the ball rolling, the CPA has launched a corporate political accountability and disclosure database to track direct and indirect corporate political spending and allow comparisons between companies.

Meanwhile, shareholders are starting to put more pressure on companies to align their values and their political spending and lobbying activities, and become more transparent about how spending decisions are made.

In August, investors including Calvert, Walden Asset Management and Trillium Asset Management filed shareholder proposals with both Target and Best Buy, which also made donations to the Minnesota gubernatorial candidate. The resolutions drew attention to the mismatch between the contributions and the companies corporate values and requested a review of political spending.

"We've seen dozens of shareholder resolutions focused on disclosure of political contributions, and I think we'll see an upsurge in resolutions focusing on closing the gaps in companies' CSR positions and their lobbying," says Mr Freeman.

Part of the reason behind these gaps is organisational. Over the past decade, compa-

nies have gradually been bringing a wider range of departments - from legal to procurement - into discussions about CSR and sustainability. How-



ever, their government affairs

Mr Power notes: "The inconnies - including Apple and Nike venient truth here is that the - withdrawing from the cham- vast majority of companies still ber or expressing dissent in have government affairs discon-

the globe for natural resources and ecosystem services, which are already in steep decline, means companies have to adapt fast to the declining availability of natural capital.'

These views are not confined to green campaigners. This summer, the consultancy McKinsey identified biodiversity as "the next environmental issue for business"

The company's survey of top executives found just over half thought biodiversity should be one of the top 10 items on the corporate agenda – "the same share that, in 2007, said climate change should be a priority'

Water scarcity headed the list of concerns, but respondents also mentioned other risks. including infectious disease, insecurity, flooding, food droughts and desertification, and soil degradation.

Their reasons for worrying were also revealing. Only 12 per cent said their companies faced a significant risk of a shortage of crucial inputs resulting from biodiversity problems. Many more said they expected to face pressure to change their operations to reduce their impact on biodiversity. Overall, companies also saw a positive side - about six in 10 saw protecting biodiversity as more of an opportunity than a threat.

Projects are small for now. Being able to show economic impact would help. Jane Bird reports

agricultural Tith land under pressure from climate change, soil erosion and population increase, the solution is to create "vertical farms", high rise buildings in or near cities that could be used to grow food.

This is the view of Dickson Despommier, professor emeritus of public health at Columbia University, New York, who invented the concept in 1999.

He argues that it would enable year-round crop production safe from droughts, floods and pests, make efficient use of water, and reduce fossil fuel consumption by avoiding the need for heavy machinery and transport. Rural land could be returned to nature.

But when he asked his students to design some prototypes, the results were discouraging. To feed 50,000, the building would need to be the size of a football stadium and 30 storeys

cities More recently, Prof Despommier has designed smaller farms that could be constructed incrementally. "They might start in research departments of universities with sponsorship from government, gradually local integrating with schools, hospitals and apartments in a series of smaller iterations that would spread out throughout the city," he says.

Fitting farms into old cities without damaging their culture and history is the main challenge, says Augustin Rosenstiehl, chief executive of SOA, a Paris-based architect. "We can't restrict urban farms to such places as Dubai," he says.

SOA is working on alternative models for urban agriculture. "A few farms could be the size of large industrial sites, others on the scale of a Carrefour shopping mall, and some 300 sq m properties suitable for small

businesses Such buildings could deploy a range of growing techniques including hydroponics (soil-less growing), which uses tubes of liquid, aeroponics – air and mist - and more recently ultrasonic foggers to deliver a thicker brew of nutrients.

In the Netherlands, farmers are growing plants on plastics,

tion as a big concern.

usage.

worldwide, conducted by from a largely electro-

more sustainable.

Technology companies

A large element of their

prescription for sustainable

such as IBM, Cisco, Micro-

soft and Google clearly

As yet, a real vertical farm doesn't exist, says Mr Rosenstiehl, who refuses to count restaurants growing their own tomatoes and garlic. The barrier is not technology, he says, but political will and the fact that land is so expensive.

Unless city authorities are prepared to allocate land exclusively for agricultural use, it will not be economic he argues. 'The tomatoes will be too expensive."

In northern Europe and the



US, urban farming tends to be seen as an aesthetic issue or a hobby, says Mark Redwood, programme leader of Canada's government-funded International Development Research Centre. But in lots of developing cit-

ies, urban agriculture is fundamental," he says. "It's rare to see an empty space that isn't being put to productive use in places such as Ahmadabad, Îndia, or Cairo, Egypt.'

IDRC is helping schools in Santiago, Chile, grow produce to sell in local supermarkets, and is working on urban farming rockwool, perlite and vermicu- projects in Lima, Peru; Dakar,

One problem is a trend to use untreated waste water, which being nutrient-rich saves on fertilisers but contains pathogens that can spread disease.

In Accra, Ghana, and in Bamako, Mali, communities are learning to reduce contamination by avoiding specific parts of the plants, washing, and cooking them. In Mexico City, urban farmers are using raised beds known as chinampas, and, when the water is particularly contaminated, growing flowers rather than food.

Urban agriculture was an oxymoron 15 years ago, but now it is recognised as having a big role in food security and the economy, says Mr Redwood.

"The problem is that nobody has done any proper accounting to see much value is tied up in urban farming. Being able to demonstrate its economic impact would be enormously helpful," he explains.

In addition to securing the food supply, urban farming is increasingly seen as a way to create a green city.

"If you're going to have parks, why not make them produc-tive?" says Mr Redwood.

This is beginning to happen with the integration of agriculture into the design of cities such as Beijing and Rosario, Argentina, he says.

other ways at the organisation's opposition to the introduction of a cap and trade system to tackle global warming.

Moreover, few trade associations – beyond those focused on sustainability - are members of the Global Compact. "We have yet really to penetrate the ranks of traditional business associations," says deputy director Gavin Power. "This is a strategic imperative for the next 10 vears.

Bruce Freed, president and a founder of the Center for Political Accountability (CPA), a Washington-based non-profit organisation, points out that for companies, the gap between their policies and those of the business associations that represent them can be about more than values.

"The whole area of risk is central to this," he says. "On climate change, for example, some companies have developed a business strategy based on carbon trading.'

Reputational damage is also a risk for companies, when their political spending does not match their broader values. For example, Target, the US

discount retailer, has faced public ire over its contributions to a gubernatorial candidate in Minnesota opposed to gay rights. "The company has very good

nected from their CSR strategies and policies. Typically, they haven't been brought to the table.

And while companies have committees on compensation, governance, auditing and compliance, says Mr Power, "very few have board-level committees devoted to looking at key global issues as defined in public policy terms"

One of the ways the CPA hopes to help change this is through the publication of a handbook on Corporate Political Activity by the Conference Board, a research organisation.

"It's about how to infuse this throughout an organisation,"Mr Power says. "And how to ensure senior-level executives understand that their decisions have to be driven by these types of values.'

Greater transparency and accountability on political funding and lobbying will help companies protect themselves against reputational and business risks, yet the corporate sector also has the potential to use its lobbying as a positive force on labour standards, climate change or corruption.

'Companies should get on the front foot and lobby for positive action on issues that will benefit not just society but also their bottom line," says Mr Power.

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Data will be crucial to the better use of energy

IT & urbanisation

Jessica **Twentyman** on smart meters and other initiatives

More than half the world's population lives in cities. That level of urbanisation is unprecedented and, according the UN's Population Division, the trend is

set to continue. By 2050, the UN estimates, the urban population will grow by 2.5bn, reaching 70 per cent of the total. City-dwelling on this scale will bring many challenges. Minimising the impact on the environment sense a bonanza. is just one and there is much to be done. In a recent survey of cities involves a transfor-2,250 residents of 15 cities mation of the power grid

the Economist Intelligence mechanical system to a Unit, one-third of responddigital network, or "smart grid", across which inforents said poor air quality had a severe negative mation about consumption impact on quality of life. flows seamlessly between One in two cited congesutilities, consumers and government.

The smart-grid opportu-On a more positive note, nity, Cisco chief executive almost three-quarters (74 per cent) claim they would John Chambers has said, probably change their "may be bigger than the energy and water consumpwhole internet". tion if they had better

IT companies will provide the networks, hardinformation about their ware and software needed That points to the signifito store, analyse and cant role that the informapresent consumption data in ways meaningful to both tion and communications technology (ICT) sector has utilities companies and the consumers they serve. to play in making cities

However, a vital prerequisite will be the installation of "smart meters" capable of taking these readings, says Andy Slater, Emea marketing director at US-based meter company Sensus.

Sensus provides meters for electricity, water and homes

of a consortium, alongside BT, broadcast signal distribution specialist Arqiva and BAE Systems subsidiary Detica, on a pilot project to roll out smart

Reading, UK.

of the population will respond to different incentives

This trial, he says, will form the basis of the consortium's pitch for the UKwide, government-backed Smart Metering Initiative. The idea behind the consortium's proposal, says Mr Slater, is simple. "It's a single, intelligent network that can measure water, electricity and gas to and businesses

gas and is working as part across the UK and collect the data in a central repository, from where it can be sent to the relevant utilities companies."

But to make a real difference to the environment, information collected by smart networks must find its way into the hands of corporate and residential end-users, says Darrin Hill, an energy specialist with PA Consulting, the management consultancy.

"Different sections of the population will respond to different incentives," he says.

"Some may wish to curb their consumption purely for the good of the planet; others will be motivated by the prospect of a lower electricity bill.

"Either way, users need the information to help them make the right choices.

Much will depend on the

willingness of energy providers to share data with corporate and residential customers and to introduce variable pricing rates that reflect real-time demand.

For example, they might offer a cheaper rate, encouraging consumers to run washing machines or companies to perform vital computer backup routines during off-peak hours. With that in mind, both

Google and Microsoft have unveiled online energy management tools that promise to connect customers to utility companies' systems and allow them to monitor how much electricity they are using - and at

what price band. Meanwhile, in San Francisco and Amsterdam, Cisco Systems has launched Urban EcoMap, an interactive website that helps raise citizens' awareness about carbon

emissions in their area. Users can look up emissions by neighbourhood in categories such as transport, energy and waste management, set goals and chart their progress.

In the rush by technology companies to sell systems and software to the largest utility companies often lured by the prospect of the generous government funding such companies are receiving – initiatives that focus on the enduser seem small.

But they could be the ones that make the real difference.

"We can talk a lot about smart cities, but in the end, it's all about people having the information they need to make choices, behave differently and use energy and transportation differently," says Mr Hill.

"That's what makes a city smart.'

meters to 200,000 homes in

'Different sections

Sustainable Business

Investors push to know more about non-financial risks

Corporate reports

Jane Bird says the lack of a global standard format is a stumbling block

The BP oil spill in the Gulf of Mexico has shown that an environmental disaster can be as financially devastating for a company as a downturn in business - let alone the reputational dam-

Yet vulnerability to this thing you could spot by trawling through a conventional annual report.

increasingly Investors

impact on the environment cial crisis could have been in annual reports, to help avoided," Mr Hinkel says. judge potential risks. Reflecting this trend,

Portfolio managers and investment companies want to value businesses in a broader sense, says Patrick Eastwood, managing partner at Further, a Londonbased branding agency.

have signed up to the UN's Principles for Responsible Investment, accounting for \$2,200bn – 10 per cent of global capital markets. The goal is to nudge com-

"They need to include panies to provide environmental, social and corpomeasures such as sustainability data. BP was doing rate governance (ESG) data everything right but for one voluntarily, rather than legsimple non financial issue.' islating. Some 3,100 of the largest Hans-Joerg Hinkel, strategic planning manager at companies now produce

Mitsubishi Electric, agrees that analysts want data on type of hazard is not some- non-financial matters, such as use of raw materials and energy consumption. "There is a strong feeling

tainability because they are responsible for data quality across Europe that if we want companies to include had a better understanding control, says Harry Morriinformation about their of this, much of the finan- son, general manager of the

UK-based Carbon Trust Standard Company, an international initiative more than 800 investors focused on carbon measurement and reduction. "Moreover, trading schemes and taxes on emissions mean carbon data are money."

But data are often too vague, lacking order and integrity, and there is no agreement internationally over what a sustainability report should comprise.

The world's most widely used framework is the USbased Global Reporting Inisustainability reports, comtiative, developed in collabpared with about 300 in oration with the UN. But: "The GRI is too big with too 1996, according to Further. much information," says Mr Financial directors are becoming involved in sus-Morrison. "It's not a standard, just a framework."

Other initiatives include the FTSE4Good Index Series and the Dow Jones

Sustainability Indexes. "But they tend to look at a broad set of challenges rather than focusing on one area," Mr Morrison says.

The International Organization for Standardization (ISO) is working on sustainability with the develop-



ment of its ISO 26000 standard. But it is intended as a guidance document, not a certification. In recognition of the

need for standards, the EU has begun consulting on regulations to govern the non-financial parts of

issues being considered are whether sustainability reporting should be compulsory and if it should include key performance indicators.

Whatever the outcome, companies should have the freedom to report in a way that is relevant for their business and sector, and also be given options, so it is not too much of a burden, says Mr Hinkel.

In Mr Eastwood's view, many organisations pay lip service to sustainability reporting, but fail to understand how it can help innovate, reduce risk, enhance internal culture and build

external reputation. "They treat it as a boxticking exercise, and pro-

company reports. Among disclosing everything and making it difficult for readers to see the wood for the trees.

> Mitsubishi Electric is well aware of the potential of sustainability reports to boost image and save money. Its reports have evolved since 1994, when they were mainly about factories and pollution, to focus on energy consumption. Its efforts have been rewarded with a high score by sustainability rating agency, Oekom Research,

based in Germany. Darren Strange, Microsoft's head of environmen- cuss issues it felt were tal sustainability, says if important, says Mr Eastyou are not one of the companies disclosing details of record, vide too much information, asked... This is driving bones, or it will fail.'

compliance much faster than legislation."

published Microsoft's material commits it to reducing its carbon footprint by 30 per cent in the five years to 2012.

Most companies face "a giant leap" in taking sustainability reporting to the next level, says PA Consulting. The trend towards direct consumer reporting will force them to be much more open to scrutiny.

Ironically, BP was a pioneer: Lord Browne broke with oil industry tradition to meet Greenpeace and diswood. However, he notes, "Sustainability reporting your carbon needs to be something that "questions are runs through a business's

Companies see benefits of 'friendlier' formulas

Green chemistry

More sustainable products can mean tricky trade-offs in energy and water use, notes Sarah Murray

alifornia's Green Chemistry Initiative means that from next year, companies selling products in the state will be required to identify specific chemicals in those products and reduce or eliminate any that are harmful.

While regulators are partly responsible for advancing the "green chemistry" agenda, companies are also seeing benefits

says Peter Hsiao, a member of law firm Morrison & Foerster's environmental and clean tech practice.

"So having a legislative motivator in one jurisdiction affects the industry nationwide. The European Union has played a similar role.

Its Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach) legislation covers chemicals used by companies producing everything from aerospace engines to electric kettles.

And the EU's Restriction of Hazardous Substances Directive (RoHS) limits the amount of six chemicals that can be used in electronic products.

Producing for EU markets therefore means complying with between companies, internal the rules – regardless of where collaboration is necessary for customers that want to pay for such developments, says Neil the company is based. Meanwhile, manufacturers are

accolades for their efforts. In the

Chemistry Challenge Award -

Protection Agency – recognises

technologies that move from the

research lab to the marketplace.

were BASF, the German chemi-

cals group, and Dow Chemical,

Among this year's winners

environmentally

sustainable



Together, the two companies needed by being more active per unit of mass," he savs. developed a way to make pro-

"But there's a growing body of pylene oxide - one of the most frequently used industrial chemevidence indicating their production could well be more enericals – using hydrogen peroxide, which eliminates waste and gy- and water-intensive than the reduces water and energy use. alternatives.

Developing materials can be expensive too. "You have to find greener chemistry," says Mr "Sometimes their Hawkins. value chain will support it and sometimes it won't.' Nevertheless, for companies that are taking a lead in this area, benefits are emerging. For a start, embracing green chemistry can precipitate the development of technologies that improve products.

Responsible sourcing means focus on details

Supply chain

Environmental impact is complex and assessing it requires data and transparency, says Fiona Harvey

When Walkers crisps examined its carbon footprint, managers quickly realised most emissions lay outside its direct control – in the ingredients: potatoes, sunflower oil and seasoning.

As a result, the PepsiCo unit advised by the UK governmentfunded body the Carbon Trust, which helps companies reduce their greenhouse gas emissions - began assisting its suppliers to become more energy-efficient.

It is no accident that so many of the businesses that have tended to be most conscious of their environmental performance have been those in the most customer-facing sectors such as PepsiCo, Coca-Cola, Unilever, Nestlé, Walmart, Tesco, and banks such as HSBC and Bank of America Merrill Lynch.

These companies have strong brands they want to protect and often correspondingly long

plier code of our own to set nonnegotiable minimum standards that all our suppliers, their employees, agents and subcontractors, must meet.'

Such processes can involve exhaustive detail. In the case of Dyson, the appliance maker, it extended all the way to working out the carbon impact of each component of its Airblade hand dryer - down to screws weighing 0.9g each.

Many of the principles involved in "green sourcing" are identical to those in ordinary procurement processes, says Sukhendu Pal, managing partner, Centrix Consulting. "Green sourcing is not a departure – it's an augmentation," he explains.

'When considering the tradeoffs between one material, service, or supplier and another, the sourcing function has traditionally measured the value of each by analysing the economics of



expert at PA Consulting, advises that as "green sourcing" can involve more detail than a standard supply agreement, it is even more important to draw up

a watertight contract. "The contract should be designed to avoid any immediate renegotiations," he says.

As part of the contract, pur chasers should ask for "an obligation of continuous improvement", he says. Environmental norms are a moving target companies are expected to lower their emissions year after year, in accordance with scientific advice that global emissions should be halved by 2050.

In addition, "regulations are constantly developing," Mr Schmidt adds. "Suppliers should not be allowed to stand still. There should be an obligation for suppliers continuously to improve, meaning they should be striving to innovate and to adopt regulations, as well as improve the quality of service they deliver.'

One problem with writing all of this into a contract is that so much about green procurement remains hazy and subjective.

How to measure a company's emissions, for instance? There the deal or the deal's impact. are many standards businesses can choose. What counts as an

in reformulating products to use materials that are less toxic and damaging to the environment.

The concept of green chemistry was developed in the early 1990s, when Paul Anastas and John Warner, two academics, came up with 12 principles, including toxicity reduction, biodegradability, energy efficiency and renewability, to assess the impact of products.

Meanwhile, the legislative landscape has been shifting and California's regulations are far-reaching.

While they only apply to products sold in the state, all companies will need to comply, unless they make two versions of their goods

"In the US, California is about one of the US's biggest chemi-20 per cent of the economy," cals makers.

Hawkins, Dow's vice-president starting to re-examine the chemof sustainability. icals they use. To reformulate To develop the new version of many of its cleaning products, propylene oxide, departments SC Johnson uses something it

from across the company had to calls Greenlist, a rating to work together. Tricky trade-offs must also be assess the impact of a material on health and the environment. negotiated when developing sus-Some companies are receiving tainable chemical products. In some instances, toxicity may be US, the Presidential Green reduced, but at the cost of other sustainability principles, such presented by the Environmental

As well as co-operation

as energy and water use. Richard Denison, senior scientist at Environmental Defense Fund, the US-based non-profit organisation, cites nanotechnology and nano materials.

'Some of those materials are being offered with the promise that they might reduce the quantity of material that's

Bioplastics, for example, have allowed food companies to develop breathable packaging. In addition, costs savings can accompany sustainability improvements.

"The principles of green chemistry are that you increase the efficiency of the conversion of raw materials from supply to the product itself," says Mr Hsiao.

supply chains. That can make control hard to achieve, as Walkers found, involving not only extensive information from suppliers, but working with them to try to develop better products. As Walkers also found, involving the supply chain is essential.

For some companies, the process of overhauling procurement processes can be huge. José Lopez, executive vice-president of operations at Nestlé, says: "Our size and breadth mean the standards we set our suppliers are incredibly important to our business and, increasingly, our consumers.'

The company drew up a set of principles for "responsible pracreview their existing preferred large suppliers," Mr Pal warns. tices" across its supplier chain, he says, with a "rigorous sup-

same considerations, but also improvement? For instance, if a takes account of the environcompany's emissions increase in mental impact of a choice.'

provide the necessary transpar-

to be truly green, the purchas-

to more information than is nor-

mal in supplier agreements.

ency is essential."

Green sourcing starts with the

absolute terms, but fall per unit However, he adds, there are of output, is that a success? complications. "Green sourcing What indicators are preferred? If a company reduces its use of requires deeper insight than a traditional strategic sourcing water, or waste sent to landfill, but its overall greenhouse gas programme, because the choices among environmentally friendly output remains static, is that a products and services can be successful outcome? extremely complex, and thus a

In this emerging area, companies must decide these issues network of suppliers that can for themselves. And that is taking many procurement depart-If the end product or service is ments into unexplored territory.

"This can be challenging for ing company must have access many companies and their procurement specialists, because there are no technologies and "Many companies will need to traditional purchasing tricks that can do these things," says Mr Pal. "Only a forward-looking Heiko Schmidt, a sourcing mindset can make it happen.



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NGOs have a crucial role to play

Partnerships

Outsiders can help ensure compliance with rules and mitigate risks, says Ross Tieman

A sustainable business is one that can carry on operating today, next year and a decade hence.

To achieve that, it needs partners: to ensure compliance with rules and regulations; to mitigate present risks; and to identify changes in its operating environment for which it needs to start preparing.

Viewed through that optic, it becomes easier to sift the multitude of potential partners in the sustainbusiness landscape able into groups equipped to help at different levels of the process.

For decades now, environmental awareness has been climbing the corporate agenda.

Protests about pollution have spawned environmental legislation around the world that companies must comply with. Climate change initiatives

have delivered carbon credits, tax breaks and emission reduction targets.

And communication, including with conservation groups, has brought a belief in many boardrooms that building a competitive it moves to the consulting the companies of the future maker seeking to cut carwill be those that lead the transition to a sustainable bon emissions may take a risk-sharing partner to But as Greg Koch, managimplement a heat-recovery process at its kilns.

'They

ing director of global water stewardship at The Coca-Cola Company, says: "In stepping outside the four walls of the plant, we are stepping outside our busi-

Indeed, even within the "core" business, it has efficiency strategies, says become a challenge for Mario Abreu, director of recycling and supply chain many companies to keep up with both compliance oblisupport. gations, and opportunities to reduce their environmen-

Little wonder that diverse partnership models are emerging in the nascent "sustainability industry", says Scott McGregor, chief executive of Camco, a UKlisted company that advises and assists governments and companies on sustainability.

At government level, the private sector, along with academics and others, provides expertise to help design, say, a feed-in tariff for renewable energy.

Once legislation is in mental projects, may use place, companies turn to the environmental arms of for-profit advisers to traditional advisory firms, achieve compliance or to or companies such as help them exploit commercial opportunities. This might take the form of consultancy, or risk-sharing partnership.

Increasingly, says Mr McGregor, "companies see sustainability as part of Once regulation is clearer, ing requests.

advantage". So a cement model." Increasingly, companies are viewing sustainability as a risk-management

are experts in

Tetra Pak

consultants

to plan for

efficiency

financial

hired

energy

energy audits, but can

open our eyes to new tech-

Companies seeking to

manage carbon cap-and-

trade schemes, or take

incentives to fund environ-

Camco to design projects,

sometimes also on a risk-

Yariv Cohen, chief carbon

officer at Camco, says:

"When the risk is high, cli-

ents ask us to share it.

advantage of

sharing basis.

nologies or applications".

activity, says Mr McGregor. "A plant that generates its To help achieve its target own power from waste is at of a 10 per cent fall in CO_2 less risk from energy price emissions, despite a 30 per volatility.' cent rise in sales, Tetra The perception of sustain-Pak, the packaging group, ability as part of risk manhired commercial consultagement is also evident at ants to develop energy-

HSBC Holdings, the banking group, where Francis Sullivan, deputy head of group corporate sustainability, works within the risk management function.

"There is a genuine belief in many companies - and HSBC would be one of them - that NGOs have an important role to play," he says. "They are closer to an issue, speak more freely, and are not waiting for the next cheque."

HSBC draws on NGO expertise in the formulation of its freshwater infrastructure policy and forest land and forest products sustainability policy.

Put crudely, the bank does not wish to finance dams that damage the environment or paper plants that use trees felled in ille gal logging.

So it works with WWF and the Forest Stewardship Council to design policies that will protect its lending and its reputation, and empowers its risk officers to veto non-compliant borrow-

tal footprint.

ness.

economy