



Is corporate Singapore ready for the green economy?

About this report

This report summarises the ACCA roundtable held in Singapore on 17 April 2012, one of a series of events addressing sustainability issues relevant to the business community in Asia.

This session looked at the concept of a green economy – one which is low carbon, resource efficient, and socially inclusive. As well as underpinning the sustainable development of a region, the UN Environmental Programme (UNEP) has identified a green economy as a potential generator of growth, with real potential for encouraging employment and alleviating poverty. What does this mean for Singapore and its future development? What decisions have to be made by business and government, what skills have to be acquired, and what metrics should be used to evaluate success?

CONTENTS

About this report	2
Introduction	3
Enabling the transition towards a green economy	4
The business perspective	6
Taking concrete action	9
Case studies	11
The accountants' perspective	15
Debate and discussion	17

Introduction

The 'green economy' is a concept that is gaining support around the world as a potential means of balancing the two conflicting issues of economic growth and sustainable development. These issues are of particular relevance to Singapore and the surrounding region, where economic growth has been spectacular in recent decades, but at a significant environmental cost.

This event was held in advance of Rio+20 (the UN Conference on Sustainable Development, which took place in Brazil in June 2012) and as a result of which, the green economy – what it means, what it demands, and how it can be measured – has once again been put on the international agenda. UNEP (the United Nations Environment Programme), defines a green economy as one which is low carbon, resource efficient and socially inclusive, and therefore has the potential to encourage economic growth, generate employment and alleviate poverty while remaining sustainable.

If an economy is to be 'greened', then business and government need to place more value on the natural capital underpinning all economic sectors, identify the metrics that will enable them to judge success, and identify the skills required for an economy to operate within this new context.

THE PARTICIPANTS

The event was hosted by ACCA Singapore and chaired by Gordon Hewitt, ACCA sustainability adviser, who was joined by:

- Adam Tomasek, global leader, Heart of Borneo Initiative, WWF
- Holly Lindsay, country director, CSR Asia
- Durreen Shahnaz, founder and chairwoman, ASIA Impact Investment Exchange
- Kevin Lee, sustainability manager, PowerSeraya
- Esther An, head of CSR, City Developments Ltd (CDL)
- Rob Daniel, technical adviser, PricewaterhouseCoopers.

Enabling the transition towards a green economy

When considering how to move towards a green economy, Adam Tomasek of WWF referenced both the UNEP definition, and the work of the Green Economy Coalition (GEC), a diverse set of organisations (including WWF) and sectors with a mission to accelerate the transition to a green economy. GEC focuses on four 'pillars' of change: improving governance; influencing financial flows; valuing natural capital; and the greening of key economic sectors. 'Inclusiveness' is also essential and extends from those organisations making decisions to those benefiting from the results. From Mr Tomasek's perspective, 2012 is a watershed for the transition process; as economic growth in many regions begins to slow this is an opportunity to identify the issues involved in achieving a green economy, and to encourage greater participation by civil society in the decision-making process.

This is a global vision. When considering the Asia Pacific region, Mr Tomasek noted the general acceptance that Singapore is not well placed to make the transition to a green economy. A recent report by the Asian Development Bank, UNEP and the UN Economic and Social Commission for Asia and the Pacific shows that economic growth



Adam Tomasek, global leader, Heart of Borneo Initiative, WWF.

has not been decoupled from resource use and, as a result, issues of resource scarcity are already translating into challenges for growth. In addition, although work is under way to understand how the green economy can become part of mainstream government decision making, much of this work remains theoretical.

Real-world examples, such as the WWF's Heart of Borneo project are therefore invaluable; this aims to protect one of the world's last and largest areas of tropical rainforest. Local economies are very closely tied to this natural ecosystem, but it is also politically and economically important to countries across the region, especially Indonesia, Borneo and Malaysia. Ecological and economic development requires regional cooperation across three main areas: the felling of tropical timber (the second largest contributor to the region's GDP); the cultivation of palm oil; and the mining industry.

In the Heart of Borneo, economic development is firmly rooted in natural capital, but also very exposed if this capital is eroded, and so governments across the region must collaborate

to ensure the area's sustainability. WWF is providing a scientific basis for the understanding of natural capital in the context of economic decision making, and helping governments analyse the role of business in promoting a different type of growth for the region, one which requires government, the private sector and civil society to work together.

The result is a 'real world' plan, a measurable approach to green growth which details the decisions and priorities relevant to all those involved in – and affected by – the changes proposed, and which considers the role of corporate governance and civil society. The plan describes how a green economy can be introduced into a region with a history of overuse where those involved now definitely want to do things differently. It also shows how a green economy can boost GDP, help alleviate poverty, and support income equality, by lowering costs (especially energy costs), reducing carbon emissions, controlling issues concerning land use, and by improving food, water and energy security.

The business perspective

UNEP's vision for green economic growth is dependent on the success of sustainability initiatives in both the corporate and NGO sectors. Holly Lindsay, country director of CSR Asia Singapore, asked what particular elements are expected of business in order to realise the UN's vision of a green economy.

Ms Lindsay indicated that there are three fundamental shifts required. First, UNEP anticipates that the private sector will be the main source of funding for change (as is the case for the UN Millennium Development Goals). In order to bring about the desired 50% reduction in ecological footprint by 2050, it is expected that business will need to invest an amount equivalent to 2% of annual global GDP each year. (This is roughly equivalent to current global military spending.) Secondly, economic growth must be decoupled from increased consumption. Thirdly, the mentality of business and consumers must change from 'do no harm' to 'do good'. Both internal thinking and the external business environment must radically change if environmental and social externalities are to be internalised.

Resource scarcity management and technological innovation are central to successful business



Holly Lindsay, director of CSR Asia, Singapore.

strategy for sustainable companies. Business must assess how changes to resource availability will affect economic viability; they must find new opportunities for growth, including disruptive innovation and innovative risk management.

There is evidence to suggest that some of these changes are already under way. For example, in the last 10 years, natural resource prices have risen (after falling in the 20th century) and, if these rises continue, businesses must and will adapt further. A changing resource landscape will lead to both new risks and opportunities. A January 2012 McKinsey Quarterly report entitled *Mobilizing for a Resource Revolution* analysed the economic attractiveness of 130 opportunities arising from resource constraints on energy, water, land and steel.

Four opportunities represented 75% of the forecast returns: energy efficiency; reduction in food waste; creation of the next generation of vehicles and transport; and the manufacture of high-strength steel. Many companies are harnessing the potential returns of energy efficiency. For example, the fastest-selling elevator in Otis's 150-year history is the GEN2, which uses 75% less energy than conventional

elevators. Major companies such as GE and Siemens are investing heavily in clean energy and clean water opportunities ranging from wind turbines to industrial energy efficiency. With 20%–30% of all food in the value chain wasted, the opportunities for returns from improving food processing, packaging, storage and distribution are significant, particularly in developing countries. More than 60% of the food supply opportunity lies in reducing perishable waste. The latter requires energy-efficient cold storage systems and better transport approaches, in Asia as well as elsewhere. The future of electrical vehicles depends on technological developments leading to better batteries and electrified engines; opportunities abound for companies to make breakthroughs in battery design and production. The McKinsey analysis suggests that if battery costs were to fall to US\$100 per kilowatt hour by 2030 from US\$500 today then the sale of electrical vehicles would increase to represent 30% of the total market share.

There are, however, significant risks in the transition to a green economy that must be assessed and monitored. For example, as natural resource prices rise and remain volatile, businesses must gain a better understanding of

their exposure to such rises across the supply chain, appreciating where dependencies lie and managing risk accordingly. Technical discontinuities will also emerge as the transition progresses; further regulatory change will prove challenging; and there is also the risk of societal backlash when changes directly affect factors such as employment, despite the potential for growth that a green economy promises. Consumer preferences will also change as green issues gain more prominence.

For Ms Lindsay however, the biggest risk is insufficient change. The size of the challenge of climate change illustrates the need for a paradigm shift in economic thinking. From 1980 to 2007, the global carbon intensity of production fell from 1kg per dollar of GDP to 770g per dollar of GDP. By 2050 the global population is expected to be 9bn people and the global economy is expected to expand by 2% each year. In the face of these challenges, the carbon intensity of world economies must fall to 6g per

dollar of GDP in order to limit global temperature rises to 2% in 2050. This is 0.83% of today's level – requiring an annual fall in carbon intensity of 11% per annum. This compares with a fall of 0.7% a year between 1980 and 2007. Another way of looking at this is that the carbon revolution needs to progress three times faster than the industrial labour productivity rise during the industrial revolution. In addition, there must be an 11-fold increase in the carbon productivity of the global economy in two to three decades, whereas the industrial revolution took around 125 years. While Ms Lindsay is optimistic about the capacity for business to innovate and change, she said that it would be difficult for this level of change to occur over such a relatively short period of time.

A step change in resource productivity and a technology-enhanced expansion of supply is simply not enough – business leaders need to prepare their organisations for potentially radical change, while consumers need to reduce the intensity of their resource consumption.

Taking concrete action

Considering how to develop a green economy in Asia, Durreen Shahnaz looked at the growth in 'impact investing', an activity now supported by the Impact Investment Exchange Asia (Asia IIX), of which Ms Shahnaz is founder and chairwoman. To provide some context, Ms Shahnaz looked at the inequality existing within Asia's population of 800m people, where even though 3.3m are classed as high-net-worth individuals, the majority (around 753m) live on less than a dollar a day. As global warming could cause the south-east Asian economy to lose 7% of combined GDP by 2100, something clearly has to be done to address this economic disparity.

Over the last 60 years, many initiatives have attempted to address social inequality, but only the social enterprises that have emerged in the last 10 years may actually be able to bring social issues into mainstream economic activity. 'Conventional' business organisations may express commitments to CSR or green practices, but these are seen as philanthropic gestures rather than core to their business model. Social enterprises take a more holistic approach. As 'mission-orientated, for-profit' organisations, they focus on addressing issues such as poverty elimination, gender equality and sustainable



Durreen Shahnaz, founder and chairwoman, ASIA Impact Investment Exchange.

development, while delivering a triple bottom line return – financial, social and environmental. Such organisations have the principles of the green economy ‘written into their DNA’, explained Ms Shahnaz, and as a result have the potential to change current economic models. To do this, however, they need investment.

Currently, \$50 trillion to \$80 trillion is held in globally managed assets, compared with \$300bn assigned to philanthropic and other related investments. There is significant opportunity to shift this balance, and there have already been moves in this direction: ESG (environmental, social and governance) funds represent an asset class worth around \$20 trillion, and socially responsible investments now amount to \$7 trillion whereas 15 years ago this figure was zero.

Estimates place the value of impact investments at \$1 trillion in five years’ time, showing that capital is ready to go into this market. As a result, Asia IIX was set up to provide a platform where money can be exchanged across a spectrum of

opportunities. It is set to launch across Asia in summer 2012, with the aim of attracting global investors such as private banks, foundations, direct investors, and pension and social investment funds.

To enable the development of Asia IIX, Ms Shahnaz and her team are also launching Shujog, a second company set up with a remit of ‘action, advocacy and research’ to help social enterprises raise growth capital by showcasing, measuring and evaluating their financial stability, social and environmental impact, and sustainability. This holistic approach to accountancy looks at the impact value chain, considering aspects such as organisational mission, activities, and outputs, and adds a new element: ‘outcome’. This represents any change to a social system that can be measured, such as improved education or better levels of health. The aim is to identify what happened as a result of an intervention – and what would have happened without it – and is an approach that the business community could embrace more widely.

Case studies

Bringing the debate closer to home, and providing an opportunity to share best practice, three Singapore organisations already implementing green economic principles made presentations.

YTL POWERSERAYA PTE LIMITED

Sustainability manager Kevin Lee explained how his organisation, YTL PowerSeraya, was preparing for the green economy by implementing wide-ranging, innovative and award-winning sustainability programmes and reporting structures.

YTL PowerSeraya is wholly owned subsidiary of YTL Power International Bhd, a multi-utility player listed on the Kuala Lumpur Stock Exchange (KLSE). Its interests include power generation and



Kevin Lee, sustainability manager, PowerSeraya

oil tanking, and it supplies around one-third of Singapore's electricity needs. Over the last 10 years the company has reduced its carbon footprint by 30% by making greater use of less-carbon-intensive natural gas and from a programme of efficiency improvements. The company therefore already recognises the opportunities represented by a green economy, but has also noted some important risks.

For example, significant financial capital will be required to make a transition which not only reduces environmental impact but also ensures social inclusiveness. This will require an investment in R&D where the accepted success rate may be only in the 5% to 10% range. There are also policy risks associated with any transition, especially regarding reassurance from the government that it will provide the framework necessary to enable PowerSeraya and companies like it to move into renewables. The issue of whether to use biofuels, such as palm oil, is also relevant here, as there are concerns that biofuel farming is affecting food production and water use. There are also trade risks – the recent US duty on Chinese manufactured solar panels has adversely affected the domestic solar industry in China, and future protectionist policies may well affect the direction of green economic policies.

Despite these risks, however, YTL PowerSeraya also recognises the real opportunities associated with a green economy. The innovation required to effect the transition, for example, will encourage greater growth and therefore employment, and the challenge of supporting an integrated ecosystem should lead to more positive collaborations between public, private and civic sectors. The open support of green measures is an important part of talent recognition and acquisition, and also proves attractive to neutral bodies important to future business development. Research by the magazine *Corporate Knights* has found that the share value of sustainable corporations outstrips average performance, demonstrating shareholder value in sustainability.

YTL PowerSeraya launched its latest CSR strategy in 2008, focusing on five key initiatives:

- investment in green capabilities
- moving greenhouse gas emissions onto the management agenda
- building strategic partnerships
- growing with the community, and
- nurturing human capital.

To progress these initiatives, the company has launched a wide range of different activities including:

- actively investing in green capabilities such as desalination plants, thereby reducing dependency on piped fresh water
- investing in power generation plants with efficiencies of up to 50% or 60% (whereas the previous level was 35%), with performance monitored constantly, and selling on the high-pressure steam from the harnessing of waste heat from the power generation process to chemical plants
- offering free energy audits to customers on their 'green' tariffs, and
- working towards a green supply chain by procuring paper for its offices from sustainable sources, and considering the efficiency of office equipment and so on.

The company also runs a flagship sustainability programme called Responsible Energy Advocates Program (REAP) that helps students and households save energy, and engages with staff through regular environmental activities in order to build a sustainability-oriented mindset across the organisation.

CITY DEVELOPMENT LTD – THE PROPERTY DEVELOPER'S PERSPECTIVE

City Development Ltd (CDL) is one of Singapore's leading property developers and biggest landlords, with a diverse property portfolio ranging from luxury residences to industrial space. Esther An, CDL's head of CSR, explained how CDL started to 'go green' 15 years ago, challenging the perception of property developers as environmental destroyers, while also recognising that a green approach offered real opportunities for differentiation.

A range of 'green drivers' continue to support CDL's policy decision. Investor activism is now significant; the Carbon Disclosure Project, for example, now has over 650 investor subscribers – companies hoping to attract funds from these investors must disclose their environmental performance. Local communities now have a high expectation of corporate transparency, especially regarding social and environmental impact, and a good environmental record also helps retain talent. Government-led initiatives are also significant, such as the Energy Conservation Act, which will soon mandate that all organisations with high energy consumption both appoint an energy manager and regularly report energy use.



Esther An, head of CSR, City Developments Ltd (CDL).

Globally, the construction industry does not have a good environmental record, consuming 40% of all energy while contributing 30% of all greenhouse gases. In Singapore, good environmental performance in the building sector has – since 2005 – been recognised by the BCA Green Mark scheme, originally voluntary but since 2008, basic Green Mark certification is now compulsory for all new buildings. Over the last 10 years, up to 5% of each CDL development has consisted of green measures, with the result that CDL has more Green Mark buildings than any similar company in Singapore.

To be truly effective, a green approach must be integrated into core business practices, and also extended across the supply chain. CDL, for example, issues green procurement guidelines for users and suppliers, and demands quarterly environmental performance data from its contractors. It also promotes greater awareness of energy use among its tenants; office workers, for example, are encouraged to support the 'One degree' campaign linked to limiting the use of air conditioning systems.

Nonetheless, Ms An acknowledged that any business considering CSR will ask: 'does going green add value'? For CDL, the policy has generated 'priceless but intangible' benefits, including a listing on the Dow Jones Sustainability Index, international benchmarking showing that the company is on the right track, and many awards and accolades recognising CDL as an excellent example of best practice.

There are also real financial benefits. When CDL built City Square Mall, Singapore's first 'eco-mall', it dedicated 5% of its construction to green measures. Five years later, reduced energy consumption has generated savings of around \$4 million dollars. In older properties, retrofitting more efficient air conditioning systems has improved efficiency by up to 54%, reduced operational costs and energy consumption by up to 10%, and increased capital value by up to 2%, resulting in a payback period of around seven years.

CDL's business model is therefore 'conserve while constructing'; by actively embracing sustainability challenges, CDL has reduced operational costs, mitigated risks, generated goodwill and improved brand reputation, while contributing towards a better environment for everybody.

The accountants' perspective

The growth of the green economy means that the concept of 'business as usual' has to change stated Rob Daniel, technical adviser at PricewaterhouseCoopers (PwC) in Singapore. To help businesses prepare for such an economy, the accountancy profession must therefore understand not only current issues such as greenhouse gas emissions or financial instability, but also the emerging 'mega-trends' that will have real impact over the next 10 to 20 years.

Of these mega-trends, climate change is obviously one of the biggest and it demands that businesses prepare to adapt to a carbon-constrained world. Yet this world will also experience growing pressure on energy supply, while material consumption continues to rise as emerging economies expand. This, in turn, will deplete natural resources and affect the supply of water and food, resulting in serious global imbalances, exacerbated by an expanding – and increasingly mobile – global population.

It is becoming clear that the green economy has real potential to address these mega-trends, but as currently there is no clear definition of 'green industries' it is hard to put policies or practices in place to support it to fulfil this potential. The



Rob Daniel, technical adviser, PricewaterhouseCoopers.

debate is therefore shifting from 'what is it?' to 'how is it measured?' and it is in this aspect of green economic development that accountants can play an important role, by supporting the development of strategies capable of responding to external drivers, and by helping clients implement these strategies and then valuing risks and opportunities on more than just return on investment (ROI).

Accountants are experts in data management and reporting and, as Mr Daniel noted, 'there is a lot more to count' in a green economy – but accountants are also experts in strategy and systems development, and research. As a result, sustainability will become a major global business opportunity for the accountancy profession, worth an estimated \$25 billion. In Asia, however, accountancy resources in this area are limited (in PwC Singapore, for example, 5 out of 1,000 staff are dedicated to sustainability compared with 80 staff in the London office). Yet despite a lack of dedicated resources, accountants can already contribute to the development of green economy strategies, and in a number of different areas. For example, multi-site measuring and analysis can help organisations make the most of global carbon reduction opportunities; accountants are well placed to understand impact investment strategies; and they can also analyse supply chain performance, especially recognising that 'cheapest is not always best'.

Nonetheless, there remains a significant difference between sustainability accountancy and auditing; while the latter is based on established regulations and is well understood, the former is less well regulated and operates across a much larger spectrum of activities. Many companies will also claim sustainability while only ensuring compliance with essential regulation. Accountants can help develop the strategies required to integrate sustainability across a business in order to generate significant payback, not only by measuring, managing and reporting, but also by monitoring the entire supply chain, because this – in terms of sustainability – is where real damage can be done to reputation in relation to the green economy. A genuine understanding of the 'cradle to grave' concept is therefore essential for any organisation wanting to provide an accurate and transparent view of its social and environmental performance.

Debate and discussion

Following the presentations, members of the invited audience shared their thoughts and questions with the panel. The following questions were discussed.



Left to right: Adam Tomasek, Holly Lindsay, Durreen Shahnaz and Gordon Hewitt..

Palm oil is a significant generator of growth across the region but current cultivation methods are acknowledged as being unsustainable. How can this conflict be resolved?

For Adam Tomasek, action is required from supply to demand, as shown by the Roundtable on Sustainable Palm Oil, formed in 2004, which now brings together over 600 organisations from across the supply chain, from suppliers through to retailers. As a result, 10% of palm oil is now certified as sustainable, but only 5% of this is bought by the market – supply has therefore outpaced demand and this needs to be addressed. Even so, Mr Tomasek also noted that palm oil did not always justify its negative image; it is actually one of the most productive oils, cropping more per hectare than any other edible oil and, from an environmental perspective, is therefore resource intensive rather than expansive in production.

Holly Lindsay added that the growth of the stakeholders' voice in the palm oil industry, and the growing sophistication of measures employed to bring about change, are making her cautiously optimistic about the future of palm oil, as well as making its production strategy a model for other sectors.

How does ROI compare when considering social enterprises as an investment opportunity; and is there a legal definition for a social enterprise, given that all businesses could argue that they have a positive social impact through their creation of jobs, wealth and so on?

Durreen Shahnaz explained that in 2008 the sector experienced a boom period, with investment in microfinance enterprises generating a 14% return. Now an average of 10% is being reported: this is still good, but it is important that investors consider all the results of their investment in a social enterprise, and there is currently work being done on a measure giving a dollar conversion of social return. Regarding legal status, Durreen noted that a legal structure for social enterprises exists in the UK, and is emerging in the US and in certain countries in Asia, but such status is lacking in many other countries and there is no doubt that it is needed to support growth in the sector.



Left to right: Kevin Lee, Esther An and Rob Daniel.

Is financial return more important than social value when analysing microfinance?

Triple-bottom-line accounting gives financial, social and environmental returns equal status; if growth is to be sustainable, organisations must meet the social and environmental costs of doing business, but higher returns may result in raising these costs even more. Therefore, converting financial returns into social or environmental returns should be rewarded, and this concept forms the basis for impact investment, where social and environmental costs are no longer decoupled from financial return.

The definition of the green economy includes greater integration of human factors, such as poverty, under the green label – is business sufficiently aware of this broader definition?

The latest output report published by the Asian Development Bank emphasises this aspect of the green economy, but also comments that even though poverty reduction has been happening quite quickly, the issue of equality is not being addressed in the same way and, as a result, wealth disparities are still considerable across the region and have to be addressed. Business impact therefore has to be assessed in terms of the different beneficiaries involved, not just positive environmental outcomes, and everyone involved in or affected by a supply chain (including the poorest) must become part of the business equation. Businesses cannot decouple those living in poverty from their decision-making processes.

Related reading



During 2012 ACCA conducted a series of events addressing sustainability issues relevant to the business community in Asia. The following reports of these events are available online.

- ☞ Is corporate China ready for the green economy?
- ☞ Is corporate Indonesia ready for the green economy?
- ☞ Is corporate Singapore ready for the green economy?
- ☞ Is corporate Hong Kong ready for the green economy?

www.accaglobal.com/sustainabilitypublications

ACCA technical publications

ACCA's technical publications address current and developing issues which impact on the accountancy profession and the business community. They highlight and enhance the role that the profession can play in supporting a healthy global economy.

Publications are available to download, free of charge, from the ACCA website.

www.accaglobal.com/library

The ACCA Global Forum for Sustainability

To further its work, ACCA developed an innovative programme of global forums which brings together respected thinkers from the wider profession and academia around the world.

In the context of increasing environmental regulation and the need for businesses to identify and manage a more diverse range of risks, the goal of the ACCA Global Forum for Sustainability is to articulate and communicate the relevance of sustainability issues for the business community and the accountancy profession. The Forum monitors international trends and developments in sustainability and leads ACCA's contribution to policy development in this area.

www.accaglobal.com/globalforums

About ACCA

ACCA (the Association of Chartered Certified Accountants) is the global body for professional accountants. We aim to offer business-relevant, first-choice qualifications to people of application, ability and ambition around the world who seek a rewarding career in accountancy, finance and management.

Founded in 1904, ACCA has consistently held unique core values: opportunity, diversity, innovation, integrity and accountability. We believe that accountants bring value to economies in all stages of development. We aim to develop capacity in the profession and encourage the adoption of consistent global standards. Our values are aligned to the needs of employers in all sectors and we ensure that, through our qualifications, we prepare accountants for business. We work to open up the profession to people of all backgrounds and remove artificial barriers to entry, ensuring that our qualifications and their delivery meet the diverse needs of trainee professionals and their employers.

We support our 154,000 members and 432,000 students in 170 countries, helping them to develop successful careers in accounting and business, with the skills needed by employers. We work through a network of over 80 offices and centres and more than 8,400 Approved Employers worldwide, who provide high standards of employee learning and development.

www.accaglobal.com