



# Overview of Green Business:

*Enabling Policies and Private Sector Examples*

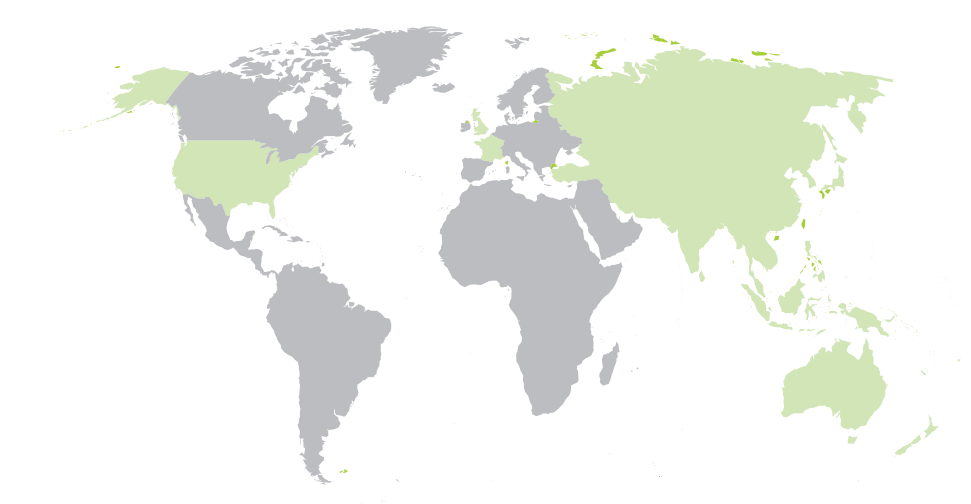


**POLICIES and BEST PRACTICES for a GREEN ECONOMY  
in the CONTEXT of POVERTY ERADICATION  
and SUSTAINABLE DEVELOPMENT**



**Greening of Economic  
Growth Series**

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## Foreword from Katinka Weinberger, Officer-in-Charge, a.i., Environment and Development Division



**A**s the global drive to deliver on the United Nations 2030 Agenda for Sustainable Development kicks into gear, the Asia-Pacific region stands at an important crossroads. Economic growth over the past decades has supported significant gains in eradicating poverty and achievement of the Millennium Development Goals, improving the lives of millions of people. At the dawn of this new development era, if the region is to sustain the growth needed to achieve its development objectives, it must shift to an inclusive and ecologically sustainable trajectory that puts people at the centre of development.

When critical social and environmental values are externalized by markets and institutions, this leads to unbalanced investment, putting unsustainable pressure on the foundations of economic development: human, social, and natural capitals. All forms of capital require investment and protection, incentivized and facilitated by market interventions and by strengthened institutions and governance arrangements.

The private sector is a key stakeholder and can play a major role in achieving sustainable development far beyond acting as a source of finance. This role as a driver of sustainable economic growth brings with it opportunities in value creation as well as important responsibilities for business.

While business clearly has a key role to play in delivering on the 2030 Agenda for Sustainable Development, governments must set the stage for corporate action at the national and regional levels. Governments have a unique and fast closing window of opportunity to support the scale up of business contributions to sustainable development by putting in place the policy frameworks and institutions to facilitate and incentivize private sector engagement.

The *Overview of Green Business: Enabling Policies and Private Sector Examples* focuses on the ecological sustainability of economic development and the key role that both governments and the private sector have to play in harnessing its potential for inclusive and sustainable development. It highlights a number of initiatives in the Asia-Pacific region that demonstrate the diversity of approaches available to policy-makers to engage the private sector as an active development partner, and to deliver ecological sustainability and resilient, sustainable economic growth.

Katinka Weinberger  
Officer-in-Charge, a.i., Environment and Development Division  
United Nations Economic and Social Commission for Asia and the Pacific



## Message from Carson Wen, Chair of the Task Force on Green Business

**A**s the Chair of the Task Force on Green Business under the ESCAP Business Advisory Council (EBAC), I am pleased to introduce this *Overview of Green Business: Enabling Policies and Private Sector Examples*.

Established in 2004, EBAC has brought insightful contributions to enhance the role of business in achieving inclusive, resilient and sustainable development in Asia and the Pacific. The objective of EBAC is to provide business perspectives on development issues to the ESCAP member States. EBAC established this Task Force on Green Business in 2013, aiming to promote eco-efficient business practices—green business—and thus contribute to greater environmental sustainability. This publication is the product of significant efforts and knowledge of the Task Force.

In the past decades, the countries in Asia and the Pacific have made significant progress in addressing poverty reduction through their socio-economic development. Today more than ever, however, we increasingly need a strong business voice and action in addressing openly and transparently the world's major challenges, including resource depletion, pollution and climate change. Sustainable economic growth goes hand in hand with environmental security, where business together with governments has a crucial role to play. The shift towards conducting green business is a driving force for boosting sustainable economic growth and tackling global development challenges, while preserving global natural resources and securing the well-being of future generations.

In this context, I strongly believe that this overview constitutes a significant achievement and contribution to our mission to promote sustainable development and economic growth in the region. Through comprehensive reviews and analyses, the overview provides useful examples of how business has developed and adopted better sustainability practices.

Taking this opportunity, I would like to express my deepest appreciation to ESCAP's Environment and Development Division and Trade and Investment Division as well as my colleagues at the Task Force, in particular Kris Schneider, Bao Yu, Ivan Chu and William Yu, for their exceptional contributions to this publication.

Carson Wen  
Chair  
Task Force on Green Business  
ESCAP Sustainable Business Network

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## Acronyms and abbreviations

BEA	Business Engagement Architecture
DEWATS	Decentralized Wastewater Treatment
DRE	Decentralized Renewable Energy
EBAC	ESCAP Business Advisory Council
EEl	Energy Efficiency Indicator
EICC	Electronic Industry Citizenship Coalition
EIP	Eco-Industrial Park
EP	Equator Principles
EPFIs	Equator Principles Financial Institutions
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ESG	Environmental, Social and Governance
FIT	Feed-in Tariff
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GPP	Green Public Procurement
GRI	Global Reporting Initiative
GTBR	Green Tax and Budget Reform
GTFS	Green Technology Financing Scheme
ICLEI	Local Governments for Sustainability
ICMM	International Council on Mining and Metals
ILO	United Nations International Labour Organization
ISO	International Organization for Standardization
MBIs	Market-based Instruments
MDGs	Millennium Development Goals
OECD	Organisation for Economic Co-operation and Development
PCF	Product Carbon Footprint
PPP	Public-Private Partnership
PRI	Principles for Responsible Investment
PSI	Principles for Social Investments
PV	Photovoltaic
R&D	Research and Development
SDGs	Sustainable Development Goals
SFBC	Sustainable Fashion Business Consortium
SHS	Solar Home System
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNGC	United Nations Global Compact
US\$	United States Dollar
WBCSD	World Business Council for Sustainable Development

## Executive Summary

In 2015, governments agreed to a new set of universally applicable development goals — the 2030 Agenda for Sustainable Development — that expands the scope of internationally agreed development priorities to incorporate the rich tapestry of interconnected social, economic and environmental concerns. To respond to this imperative, development trajectories must be both inclusive and green. Inclusive in that economic dynamism is driven by investments in human capital and social justice, and green in that ecological sustainability and economic resilience together drive economic systems and growth.

Rising to this challenge is perhaps most urgent in the Asian and Pacific region, where future development is at risk due to its over-burdened ecological carrying capacity, resource scarcity and growing populations.

*Overview of Green Business: Enabling Policies and Private Sector Examples* focuses on the ecological sustainability of economic development and the key role that both governments and the private sector have to play in harnessing its potential for inclusive and sustainable development for all.

Both governments and the private sector are increasingly aware of the convergence between sustainable development and market priorities. Business clearly has a key role to play in delivering on the 2030 Agenda for Sustainable Development, and governments must set the stage for corporate action at the national and regional levels. The greening of the economy will not occur through market mechanisms alone. Governments now have the opportunity to support the scaling up of business contributions by putting in place policy frameworks that facilitate and incentivize sustainable economic growth.

Government policies that encourage long-term value creation over short-term profit motivations open up space for new forms of collaboration to reduce investor risk and foster ecological innovations. Governments and the private sector must work together to effectuate a shift from brown development models to green economic sustainability.

For each of the proposed goals under the new international development framework, there exists a clear business case for engagement. The private sector is not only a source of financing for these developments but is also a key stakeholder. This dynamic role brings with it opportunities in value creation as well as important responsibilities.

Based on the principles proposed in *Low Carbon Green Growth Roadmap for Asia and the Pacific* published by ESCAP,<sup>1</sup> this publication provides policymakers with an overview of selected policy tools that have been leveraged to support transformation to green sustainable economic development models. Through case studies of government- and private sector-led initiatives from across the region, the following chapters showcase the diversity of measures that can be incorporated into legislative, normative and operational frameworks of the public and private sectors.

# 1.0 Introduction

## 1.1 SETTING THE SCENE

The outcome document of the United Nations Conference on Sustainable Development, (Rio +20) *The future we want*,<sup>2</sup> places people squarely at the centre of sustainable development, and commits to “sustained and inclusive economic growth, social development and environmental protection and thereby to benefit all.” This same outcome document launched an intergovernmental and multi-stakeholder process that has defined the United Nations 2030 Agenda for Sustainable Development — a set of internationally agreed development goals that will deliver on the unfinished agenda of the Millennium Development Goals (MDGs) all the while expanding the scope of development priorities to incorporate the rich tapestry of interconnected social, economic and environmental sustainability concerns. The 2030 Agenda for Sustainable Development 17 goals and 169 targets are “integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental”<sup>3</sup> (see box 1). Further, the Agenda calls on “all countries and all stakeholders, acting in collaborative partnership” to implement the plan.<sup>4</sup>

### Box 1: Balanced, integrated sustainable development

In 2015, the Economic and Social Commission for Asia and the Pacific (ESCAP) Theme Study *“Balancing the Three Dimensions of Sustainable Development: From Integration to Implementation”* laid out four key concepts to underpin, in an integrated and balanced way, action on the three dimensions of sustainable development.

- (1) Economic activity should be in the service of all human needs while safeguarding the biophysical systems necessary for life on Earth.
- (2) All forms of capital — financial, natural, produced, human and social — require investment and protection, incentivized and facilitated by market interventions and strong institutions and governance arrangements.
- (3) Sustainable consumption and production must permeate across the economy, and take place within the carrying capacity of ecosystems.
- (4) Definitions of progress and growth should be broadened beyond GDP to include measures of well-being and environmental performance.

SOURCE: ESCAP (2015)

One way to respond to this imperative is to focus development strategies on delivering inclusive and green growth.<sup>5</sup> Inclusive growth means that economic dynamism is driven by investments in human capital and social justice, placing people at the centre of the development agenda and ensuring a productive labour force. Green growth is an approach for investment in natural capital for ecological sustainability and economic resilience that synergizes economic growth and environmental protection.<sup>6</sup>

Rising to this challenge and meeting these global commitments is perhaps most urgent in the Asia and the Pacific region, not only to unleash the potential for shared prosperity, but importantly, to mitigate the high risk of dangerous impacts resulting from inaction. Over the past decades, the Asia-Pacific region has been the focus of much of the world’s recent economic growth, enabling significant progress in reducing poverty and enhancing the quality of life for millions of people. However, despite rising resource constraints, the region as a whole uses twice as many resources as the rest of the world to create one unit of GDP.<sup>7</sup> Developing countries in the region are also shouldering an increasing share of regional and global production-related environmental burdens that are harming the biosphere and having a detrimental effect on population health. To halt and reverse the increasing levels of greenhouse gas emissions, water contamination, air pollution, environmental degradation and biodiversity loss, reductions in energy and materials intensity and cleaner production processes are urgently needed.

## 1.2. THE ESSENTIAL ROLE OF THE PRIVATE SECTOR

Delivering on sustainable development will require mobilizing the means of implementation – finance, science and technology, capacities and enabling market and institutional frameworks – through a global partnership that fully engages all stakeholders. Over the past decades, the ‘business case’ for action on corporate sustainability – understood as “both eliminating negative impacts and improving the positive contribution of business to sustainable development”<sup>8</sup> (see box 2) – has been strengthened by changing norms and expectations for business and by market based drivers that reward responsible and sustainable operations.<sup>9</sup> Both governments and the private sector are increasingly aware of the convergence between sustainable development and market priorities (see figure 1).<sup>10</sup>

While the role of the private sector in delivering on the 2030 Agenda for Sustainable Development is clear, “there is a growing recognition that, in a globalized world, general prosperity can only be built on the foundations of collaboration between public and private sectors.”<sup>11</sup> Business, after all, is the driver of economic growth. Balancing the roles of the private and public sectors requires a rethink of macroeconomic policy to strengthen the development role of the public sector and its capacity to engage the private sector in pursuit of sustainable development objectives.<sup>12</sup>

### Box 2: Corporate sustainability defined

The UN Global Compact (UNGC) defines corporate sustainability as “the delivery of long-term value in financial, environmental, social and ethical terms. This embodies the dual approach of respecting and supporting universal principles. It means that businesses must avoid causing or contributing to harm, for example, in the form of adverse human rights impacts or environmental degradation. In addition to this minimum responsibility to respect, businesses are encouraged to take additional supportive actions through their core business, philanthropy, collective action and public policy advocacy – which is done as a voluntary complement and not a substitute or trade-off for the requirement to respect universal principles. Thus, corporate sustainability is effectively rearticulating the concept of responsible business, with an orientation towards the “sustainability” in sustainable development. This new business imperative also entails a multi-stakeholder approach – that is, an effort to involve a range of key stakeholders – including civil society organizations, labour groups, academia, and other interests – in strategy setting and implementation.”

SOURCE: UNGC (2014)

## 1.3 THE ENABLING ROLE OF GOVERNMENTS

Governments must set the stage for corporate action at the national and regional levels. Despite increases in the numbers of corporations engaged in green business, the overall ratio remains proportionately small.<sup>13</sup> It is clear that the greening of the economy will not occur automatically through market mechanisms alone. Among other reasons, this is because a gap exists between current market prices and the real costs of natural resource use and ecosystem services, and between the short-term benefits of ecological resource use and their long-term impacts. As a result, the market is distorted and an ecological deficit is created.

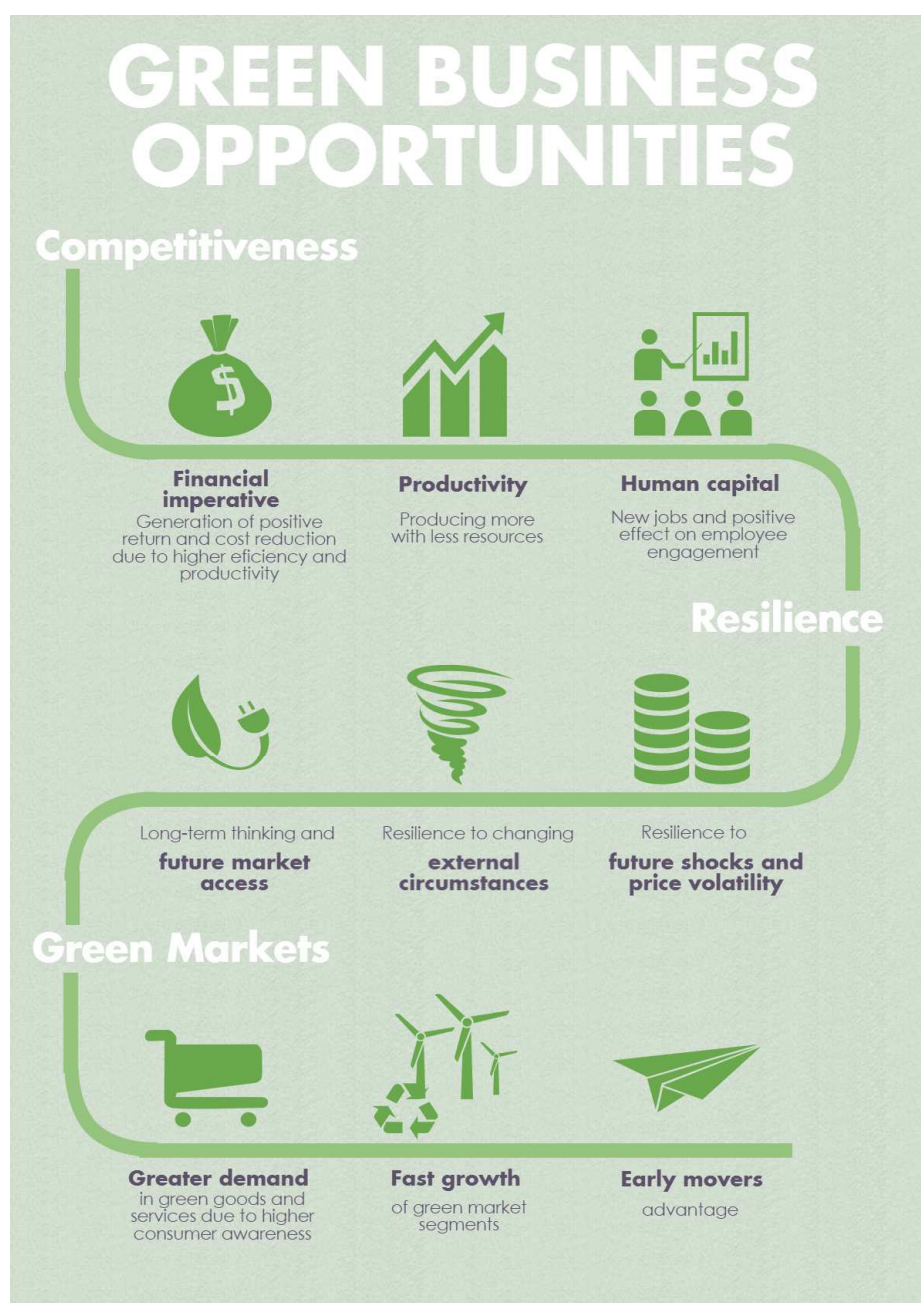


Figure 1: Green business opportunities for the private sector

Poverty and ecological destruction surely impede revenue growth and productivity, while companies that are contributing to the advancement of sustainable development are seizing opportunities that increasingly lead to strategic market advantages and positions of long-term strength. In this regard, “harnessing global business as a force for sustainable development represents one of the biggest opportunities in the post-2015 era – and a necessity for a new set of development goals to be implemented”.<sup>14</sup> Governments have a unique and fast closing window of opportunity to address these gaps and support the scale up of business contributions to sustainable development by putting in place the policy frameworks to facilitate and incentivize sustainable economic growth.

## 1.4 GREEN BUSINESS OVERVIEW

The *Overview of Green Business: Enabling Policies and Private Sector Examples* focuses on the ecological sustainability of economic development – that is green growth – and the role of both governments and the private sector. It provides policy and decision makers with information on existing initiatives that support active engagement of the private sector in sustainable development, with a focus on ecological sustainability. The Overview further shares practical examples of green businesses and the greening of business in the Asia and the Pacific region, including from case studies contributed by the ESCAP Business Advisory Council's (EBAC) Task Force on Green Business members.

Chapter two presents the regulations and soft policy measures that are increasingly being employed by governments to encourage green business development. This includes putting in place policy frameworks and incentives that support and ramp-up the engagement of the private sector in green business and ecological sustainability, while at the same time setting the right example through fundamentally incorporating principles of ecological sustainability into state-owned enterprises, infrastructure investments and other sources of public funds. Chapter three discusses government and private sector driven voluntary initiatives, followed by concluding comments in chapter four.

## 2.0 Government Policies to Promote Green Business

In 2012, the ESCAP *Low Carbon Green Growth Roadmap for Asia and the Pacific* proposed a comprehensive list of policy options and practical implementation strategies for policymakers that support the achievement of 'green growth', a strategy adopted by the region at the fifth Ministerial Conference on Environment and Development in Asia and the Pacific<sup>15</sup> as one of the key means to achieving sustainable development. The Roadmap highlighted how environmental sustainability requires a transformation of the current economic system to a focus on the quality, as well as the quantity, of economic growth. While there is no one-size-fits-all approach to green growth, the roadmap proposes five key tracks (see figure 2) that governments can tailor to country-specific circumstances with due consideration to the characteristics of the market and its actors. This chapter delves further into the types of government policies that have been deployed in the region to encourage green business development.

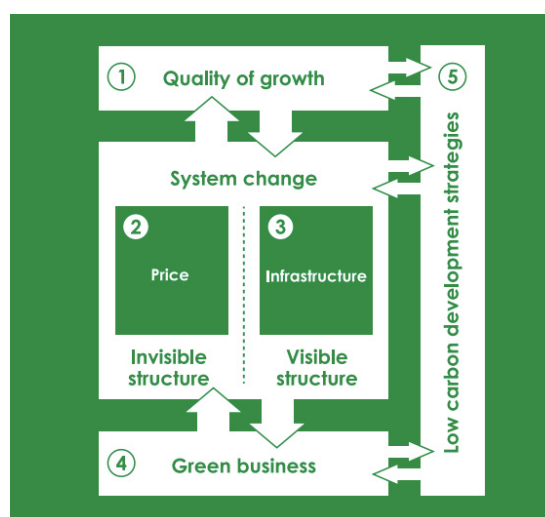


Figure 2: Five tracks for low carbon green growth (ESCAP, 2012)

## 2.1 LOW CARBON GREEN DEVELOPMENT NATIONAL STRATEGIES

Business requires stable institutions and robust regulatory frameworks to be able to operate effectively. A national low carbon green development strategy — developed in consultation with stakeholders, empowered by an inclusive and multi-sectoral institutional architecture, and supported at the highest level of government — provides a clear signal and long-term certainty to the private sector. This stability creates an enabling environment for the growth of sustainable enterprises and green business.

Governments in the Asia-Pacific region are launching national strategies to promote greater environmental sustainability and are providing enterprises with the legal framework they require to conduct their business in a sustainable way. This includes, among many others, Mongolia's *Green Development Policy*,<sup>16</sup> Papua New Guinea's *National Strategy for Responsible Sustainable Development*,<sup>17</sup> and Cambodia's *National Green Growth Roadmap*.<sup>18</sup> These experiences from across the region point to the "potential for deepening and widening the scope of commitment to sustainable development and for engaging stakeholders in taking



action”.<sup>19</sup> By taking an integrated and inclusive approach to policy and decision-making, governments can promote the greening of business at the national level. Further, national strategies send signals to regional markets, and set the tone for regional trade and cooperation. High-level political commitment and a long-term vision that integrate the three dimensions of sustainable development are essential for mainstreaming sustainable development and ecological sustainability into economic development.

## 2.2 ALIGNING THE INVISIBLE STRUCTURE OF THE ECONOMY TO ECOLOGICAL SUSTAINABILITY

To encourage green business to emerge and existing business to integrate ecological sustainability into core operational plans, governments can create an enabling environment through reforming legal and institutional frameworks. Regulation and soft policy measures serving to realign the invisible structure of an economy - that is, factors that affect the way an economy operates including market prices, fiscal policy, financial systems, governance institutions, know-how and technology transfer – are vital for greening of business.

### 2.2.1 Market-based instruments

Market-based instruments (MBIs) “encourage behaviour through market signals rather than through explicit directives”,<sup>20</sup> and provide incentives for businesses to innovate and make environmentally friendly choices and investments. MBIs include, among others, taxes, tradable permits, price-guarantees, subsidies, grants, rebates and loans.

For example, green tax and budget reforms (GTBR), when designed based on thorough evidence, are effective fiscal MBIs that can facilitate the transition to green growth and spur environmental innovations. By shifting the tax burden from traditional areas of taxation,<sup>21</sup> such as income, savings, and capital gains, to environmentally harmful products and activities, GTBR can diminish environmental impacts while maintaining revenue neutrality – a net-zero increase in the level of taxation. Another form of GTBR targets perverse subsidies that encourage environmentally damaging activities (for example, fossil fuel subsidies) and, based on a thorough analysis of their impacts and beneficiaries, appropriately redirects them towards more environmentally sustainable sectors (for example, subsidies that encourage the uptake and development of renewable energy sources).

In essence, the underlying idea is that governments will start taxing “bads” and subsidizing “goods” to internalize negative externalities, and stimulate private-sector investments towards sustainability. GTBR must be carefully designed, as they may have direct impact on social groups and businesses. Changes could be phased-in gradually, mitigating the potential impact on poor households, and giving businesses time to adjust. Savings achieved as a result of GTBR could be reinvested to support the transition. Governments may consider compensatory measures to avoid negatively impacting market competitiveness. In addition, the outcome of any GTBR must be carefully monitored to ensure no undesired impacts, and, to support the phase-out of GTBR initiatives once objectives have been achieved - for example, the market viability of a subsidized good.

Another form of MBI is the feed-in-tariff (FIT), a performance-based incentive that supports the development and dissemination of renewable power generation by allocating a premium rate for electricity fed back into a country’s electricity grid from a renewable energy source.<sup>22</sup> Many countries across the region, such as Australia,<sup>23</sup> China,<sup>24</sup> India,<sup>25</sup> the Republic of Korea,<sup>26</sup> and Kazakhstan<sup>27</sup> have introduced FIT legislation and obtained positive results.

### Box 3: Feed-in-tariff | Kazakhstan

Kazakhstan has set national targets for a 50 per cent share of renewable energy in the country's energy consumption mix by 2050.<sup>a</sup> To support expansion of the share of renewables, Kazakhstan adopted the *Law On Supporting the Use of Renewable Energy Sources* in 2009. The Law establishes a fixed tariff on renewable power to be purchased by a centralized accounting and finance centre. The centre is responsible for the purchase and sale of renewable power generated and supplied to the common power grid of Kazakhstan. The Law also targets support to local producers of PV panels, leveraging a fixed tariff over 15 years on energy produced by Kazakhstani silicon photovoltaic modules at 70 tenge/kWh (USD 0.29).<sup>b</sup> According to the Ministry of Energy of Kazakhstan, energy generated from renewable sources reached 578.17 million kWh in 2014, an increase of 8.9 per cent compared to 2013 levels.<sup>c</sup>

SOURCE: <sup>a</sup> Nazarbayev (2012); <sup>b</sup> Samruk Energy (2014); <sup>c</sup> Republic of Kazakhstan, Ministry of Energy (2015)

Quantity-based tradable permits are yet another form of MBI that set specific limits on pollution and allocate emission allowances above and beyond these limits that may be bought and traded on the market. Examples include transferable quotas for fisheries, tradable depletion rights to mineral concessions, marketable discharge permits for water-borne effluents and carbon dioxide emissions trading.<sup>28</sup> It is important to ensure that the permit market is competitive: firms should be able to buy allowances at prices which reflect their marginal abatement costs, to encourage all abatement-cost-reducing emissions trades to take place.<sup>29</sup> Tradable permits should be developed to suit national needs – for example, the Tokyo Emissions Trading scheme covers office and commercial buildings in metropolitan areas,<sup>30</sup> while Kazakhstan's emissions trading scheme covers oil, coal, and gas production, mining and metallurgy, the power sector, and chemical industries.<sup>31</sup>

### Box 4: Emissions trading schemes | Republic of Korea

In January 2015, the Republic of Korea launched a cap-and-trade system as part of the country's plans to reduce GHG emissions by 30% from 2005 business-as-usual levels by 2020, in line with its Framework Act on Low Carbon, Green Growth. In the scheme, businesses are allocated emissions permits and are able to sell or buy surplus from other companies. Any revenues made from the scheme (in the form of fees, fines, etc.) are reinvested into green growth initiatives. The scheme is being implemented in three phases, coming into full force by 2026.

Companies, whose annual emissions exceed 125,000 tonnes of CO<sub>2</sub> emissions, or operating at least one site emitting over 25,000 tonnes of CO<sub>2</sub> emissions per year, must participate in the programme. Under these conditions, 525 companies are currently mandated to participate in the Korea Emissions Trading Scheme (KETS), equating to roughly two-thirds (68%) of the country's total GHG emissions. The KETS has seen a high level of industry participation. All carbon credits allocated by the government have been snapped up at the rate of 10,100 won (\$9.19), leaving a high demand for additional credits. At the same time, a number of companies, enabled by clear regulations set by the government, have converted certified emission reductions (CERs) issued by the Clean Development Mechanism (CDM) under the Kyoto Protocol to Korean Credit Units (KCUUs).

SOURCE: Carbon Market Data (n.d.)

The selection of MBIs above provide examples of but a few of the policy innovations available to policymakers as they strive to develop an enabling and incentivizing environment for green growth and green business. The MBIs are not mutually exclusive, and can be introduced together to suit national needs and circumstances.

### 2.2.2 Green public procurement

Public spending can represent between 8-30 per cent of national GDP.<sup>32</sup> Encompassing ecological sustainability criteria into public procurement policies and processes can thus substantially influence markets for green goods and services.<sup>33</sup> Green public procurement (GPP) or sustainable public procurement is "the process whereby public organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization but also to society and the economy while minimizing damage to the environment."<sup>34</sup>



### Box 5: Green building standards | the Russian Federation <sup>a, b</sup>

In 2010 the first “Green Standard” national voluntary building certification system was launched in the Russian Federation. It aims to incentivize developers, architects and planners, builders and operators to introduce resource and energy saving technologies into their programmes, and to use eco-friendly building materials. The green standards system is a rating scale ranging from silver to platinum that allocates points according to levels of conformity with approved specifications. To encourage uptake, some developments that are financed through public investments are required to be certified by the green standard. For instance, construction of the Central Ring Road in Moscow under a public-private partnership scheme and winter Universiade of 2019 will be undertaken according to the Green Standards. Sustainable building is becoming a leading trend in the Russian Federation and is rapidly gathering momentum, despite the economic difficulties the country is currently facing.<sup>1</sup> The Russian Federation is working towards the inclusion of a green standard certification into the technical building and construction regulations of the Eurasian Economic Union.

SOURCE: <sup>a</sup> Green Standards Eco-Certification Center (2010), <sup>b</sup> Belikov, Roman (2014).

Successful GPP is based on clearly defined policy frameworks and environmental criteria for goods and services, and often prioritizes sectors where green public procurement can catalyze the market for greener products and services. This may bring sustainable consumption and production patterns to the public’s attention, and create positive signals for the private sector to invest in the production of environmentally friendly products and services to take advantage of the public procurement funds.

GPP can be integrated into existing public procurement systems by designating an implementing agency to introduce a standardized system of assessment of products and services and deliver training and capacity development to government procurement officers to ensure the success of the new green procurement policies.

### 2.2.3. Green finance and socially responsible investing

Since the global financial crisis of 2008, concepts of green finance and socially responsible investing have become popular among investors<sup>35</sup> who seek to secure their financial returns in the long run while contributing to sustainability solutions. As financial markets are the drivers of the economy, it is important to re-orient them towards sustainable development. However, many interested investors, businesses and industries are also highly risk-averse, particularly in relation to new technological innovations and environmental products or services. Therefore, governments must mitigate the risks, and improve the attractiveness for green private investments.

### Box 6: Principles of socially responsible investing

Green investing recognizes the value of the environment and its natural capital and seeks to improve human well-being and social equity while reducing environmental risks and improving ecological integrity. There are a number of investor groups who enshrine the principles of sustainability into their decision-making processes, including:

The UN-supported *Principles for Responsible Investment* (PRI) is a coalition of investors representing \$59 trillion of assets cooperating to increase the widespread use and effectiveness of PRI, including by incorporating environmental, social and good governance principles into investment analysis, decision-making processes and ownership policies and practices; seeking the appropriate disclosure of environmental and social actions by the entities they invest in; and promoting the acceptance and implementation of the PRI into the investment industry.<sup>a</sup>

*The Equator Principles* (EP) are a risk management framework, adopted by financial institutions, with an aim to incorporate environmental and social risks into project finance transactions. To date, the EP have been applied to over 70 per cent of all international project finance debt in emerging markets through 80 Equator Principles Financial Institutions (EPFIs) in 35 countries. EP has greatly contributed in spurring the development of other responsible environment and social management practices in the financial sector and banking industry.<sup>b</sup>

*The Principles for Social Investment* (PSI), initiated by the United Nations Global Compact, is a set of voluntary principles to guide the on-going practice of social investment by organizations. PSI seeks to increase the impact and scalability of purposeful, accountable, respectful and ethical contributions to advance economic development.

SOURCE: <sup>a</sup> Principles for Responsible Investment (2015) <sup>b</sup> Equator Principles (2011) <sup>c</sup> UNGC (2010)

The term green finance describes a broad range of funding mechanisms. Though there is no internationally agreed definition, Green Finance is usually defined in two ways: broadly as a range of funding mechanisms directed to environment-oriented technologies, projects and industries; and narrowly covering environment-oriented financial products or services, such as loans, credit cards, insurance and bonds.<sup>36</sup>

Green bonds are a fixed income product developed for institutional investors interested in supporting ecological sustainability with their fixed income assets.<sup>37</sup> These fixed-income securities issued by governments, multi-national banks or corporations help to mobilize private capital for low-carbon and climate resilient projects.<sup>38</sup> The World Bank Group has issued about \$8.5 billion through 100 green bond transactions in 18 different currencies, and developed partnerships with investors and financial intermediaries to customize sustainable investment-focused products.<sup>39</sup> In Asia and the Pacific, the Export-Import Bank of Korea (Korea Eximbank) has become the first non-international financial institution issuing green bonds to investors worldwide. In 2013 their green bond transactions amounted to \$500 million.<sup>40</sup>

#### Box 7: Green technology financing scheme | Malaysia<sup>a,b,c</sup>

In 2010, the Malaysian Government introduced the incentive-based Green Technology Financing Scheme (GTFS). By partnering with financial institutions, the scheme offers loan based financing to Malaysian-owned and operated companies that supply and use green technology. The programme aims to promote development and proliferation of zero and low carbon emissions technology and renewable resources, energy and resource conservation, and environmental sustainability. It targets four key green economy areas – energy, water and waste management, buildings, and transport. The government guarantees 60 per cent of the total approved loan and subsidizes 2 per cent of the total interest rate charged, as well as offering training to improve applicant knowledge of green technology. As of September 2014, 333 project certificates have been issued to companies across the energy, transport, water and waste, and building sectors. Of these projects, 148 have received a total of RM1.94 billion (around \$542.7 million) in financing from 23 participating finance institutions, and have created over 2,000 green jobs.

SOURCE: <sup>a</sup> Malaysian Green Technology Corporation (2012), <sup>b</sup> Tiong (2014), <sup>c</sup> Asia LEDS Partnership (2014).

#### 2.2.4. Environmental Standards And Targets

A key hindrance to private sector adoption of innovative eco-efficient technology is uncertainty — both in terms of the viability of the technology itself, but also in terms of market competitiveness. By setting medium to long-term targets, issuing mandatory minimum performance standards and creating incentives for voluntary high-performance standards, governments can decrease uncertainty about the expectations for environmental performance, and encourage enterprises to adopt eco-efficient processes, including through investing in R&D and technological innovations.

Standards, developed through robust consultations and broad stakeholder engagement, should be solicitously revised and improved over time, as businesses adjust to existing ones. Once regulations are in place, continuous monitoring and assessment is required to measure impact both ecologically as well as on business performance. There are a number of environmental standards and targets that are already supporting early adoption and development of environmental technologies (see box 8). Among them, the ISO14000 are voluntary standards and guidelines that define environmental management systems (EMS) and the auditing procedures necessary for their verification.<sup>41</sup> The Eco-efficiency Indicators (EEI), a set of economy-wide and sectoral indicators, captures resource-use in terms of production and consumption and the environmental impact of an economic activity. EEI has been implemented by market leaders including Toyota and Toshiba.<sup>42</sup>

#### Box 8: Asia carbon footprint network

Product carbon-footprint (PCF) labelling is gaining momentum as a standard for estimating the amount of GHG equivalent emitted during the life-cycle of goods and services. PCF may have a great impact on consumers' purchasing decisions<sup>a</sup> while also providing producers with figures to support reduction of expenditure and improvement of environmental performance. Several countries in Asia and the Pacific including China, Japan, the Republic of Korea, and Thailand, are operating PCF programmes. With an aim to promote carbon labeling in Asia, UNESCAP launched the Asia Carbon Footprint Network (ACFN) in partnership with 14 member organizations from South-East and North-East Asia.<sup>b</sup>

SOURCE: <sup>a</sup> Bolwig and Gibbon (2009), <sup>b</sup> ESCAP (2013)

The previous sections have touched upon a number of innovative and long-standing policy tools that have been successfully employed to transform the invisible structures of the economy. The following section turns its attention to the tools that public policymakers can leverage to transform the visible structure of the economy, that is, the tangible assets that support economic development.

## 2.3. ALIGNING THE VISIBLE STRUCTURE OF ECONOMY TO ECO-EFFICIENCY

Changes in price structures and regulatory frameworks should be realized in parallel with changes in the way physical infrastructure is planned and designed. Sustainable infrastructure is one of the main pillars of economic security and social wellbeing, enabling economic development, social inclusiveness and environmental protection. Investment decisions over the next five to ten years will have long-term implications for the growth trajectories of developing and developed nations alike. Governments, as initiators of system change, need to prioritize eco-efficiency solutions and integrate the actual socio and environmental as well as economic costs and benefits of each infrastructure option into decision-making processes. Thorough visioning and planning facilitates prioritization of policies and projects that provide long-term solutions and that channel private investments to sustainable infrastructure projects. The following sections highlight some key strategies for transforming the visible infrastructure of economic development.

### 2.3.1. Sector-Specific Policies

Transport, buildings, water and energy infrastructures should be designed to increase cost-and-resource efficiency while effectively delivering on these essential services. In many middle-income countries, public finance is predominantly used to fund solutions that may not have strong sustainability outcomes. For example, transport constraints are often addressed by widening of roads and constructing flyovers for private vehicles. While investments in efficient road systems are essential, funds could equally be used to invest in sustainable public transportation and connectivity solutions. Bearing in mind that railway and public transport have large positive social benefits but low commercial return, it is important to target public funds for such projects. Public-private partnerships (PPPs) are a useful tool to leverage private capital investments in such infrastructure development projects.

### Box 9: Engaging the private sector in planning

The engagement of business at an early stage of planning and designing of targets and strategies for infrastructure is critical to drive innovative solutions and provide effective decision-making that will result in win-win solutions for both the public and private sectors. At the same time, as the problems and challenges faced by governments are becoming more complex, and are posing greater risks and opening up opportunities for business, it is important to innovate governmental and private sector institutions and policies and improve stakeholder engagement.<sup>a</sup>

Governments need to effectively facilitate the knowledge, expertise and resources of the private sector in the creation of sustainable infrastructure. The Urban Infrastructure Initiative implemented by the World Business Council for Sustainable Development (WBCSD) in partnership with ICLEI considered early engagement of businesses in urban planning and decision-making in several pilot cities, including Gujarat cities in India, Yixing in China and Kobe in Japan. Partnerships showed that private sector involvement in city planning at the early stages allows the communal definition of crosscutting issues and finding innovative solutions in an integrated manner.<sup>b</sup> In rural areas, there is also huge potential for engagement of local businesses and communities.

SOURCE: <sup>a</sup> Nelson (2008); <sup>b</sup> World Business Council for Sustainable Development (2014)

The need to provide access to water and sanitation and energy infrastructure for millions of people in Asia and the Pacific opens huge opportunities for the use of decentralized off-grid business models. Resolving sanitation issues through implementing decentralized wastewater treatment systems (DEWATS) contributes to improved environmental and social conditions, as well as catalyses small-scale private-sector activity and new jobs.<sup>43</sup> The unmet demand in energy across the region creates potential for off-grid energy solutions such as solar home systems (SHS) and decentralised renewable energy (DRE) models. The Climate Group investigated the business case for off-grid energy in India and found that the market size of the DRE sector will reach \$150 million by 2018 and the SHS sector will grow 60 per cent per year reaching \$200-250 million by 2018 in India alone.<sup>44</sup> However, to realize the full potential of these innovative sectors, governments need to put in place incentivizing policies, such as the MBIs discussed in previous chapters, and create an investment climate to foster strong entrepreneurial and business activity.

The newly agreed 2030 Agenda for Sustainable Development emphasizes the spread of information and communication technology (ICTs) and global interconnectedness, which has “great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies.”<sup>45</sup> ICTs are technologies that may open opportunities for employment, as well as social integration and interaction.<sup>46</sup> At the same time, even though ICTs can serve as a prerequisite for economic and social development, there are certain risks associated with their adoption. Immature or unproven technologies may pose high costs, while the fast growth of ICTs requires expansion of regulation in areas such as electronic content, cyber security, and data protection. A strong role for government in bridging those gaps through the introduction of legal frameworks, and providing incentives for businesses to get involved in expansion of ICTs, is critical.

Win-win solutions in sustainable infrastructure exist in all sectors, which may enable governments to spur innovations, and create new jobs, thus alleviating poverty and fostering economic activity and growth. Bearing in mind that the window of opportunities is closing fast, a strong leadership role by governments to initiate decision-making and implementation processes with the active involvement of key stakeholders, including the private sector, is essential.

### 2.3.2. Developing circular economies: Eco-industrial parks and spaces for innovation

The circular economy model balances economic development with environmental and resource protection. It covers the complete life-cycle of products by focusing on aspects of production and consumption, such as cleaner production, eco-industrial park development, and integrated resource-based planning. A circular economy works towards lowering the consumption of energy, reducing greenhouse gas emissions and improving eco-efficiency.<sup>47</sup> Countries like China (see box 10) and Japan have taken the lead in integrating circular economy principles into national development strategies.

One of the most tangible and visible examples of a circular economy is the development of eco-industrial parks (EIP), defined as “a community of businesses that cooperate with each other and with the local

community to efficiently share the resources (information, materials, water, energy, infrastructure and natural habitat), leading to economic gains, environmental quality improvements and the equitable distribution of jobs<sup>48</sup>. The collocation of EIP companies can reduce the demand in natural resources and costs, spur new green business start-ups and mitigate environmental impact. EIPs can provide a basis for industrial recruitment, bringing new green jobs and income opportunities to local communities alongside a reduction of environmental impact from industrial activities. This provides collective solutions, and nurtures cost-effective options for energy supply, wastewater treatment and waste management services.

#### Box 10: Green China Lab and the city air quality open innovation project

Green China Lab is a global innovation and investment collaboration based research centre in Shenzhen, China. Founded in 2008, the Green China Lab helps citizens participate in R&D and innovation processes, impacting and even contributing to future innovation as opposed to being passive consumers. Green China Lab believes a “user and human centric innovation and design” approach is critical to building the future “global open innovation” economy.

In 2012 Green China Lab signed an agreement with CLEEN Ltd Finland and started a joint research project on city air quality. CLEEN Ltd maintains and develops a world-class open innovation platform for market-driven joint research between Finnish industry and academia. Green China Lab and CLEEN have built an open test lab in Shenzhen, which includes a mobile app that enables real-time monitoring of air quality and also acts as the knowledge portal of the city air quality. Collaboration with an SME Pegasor created a new sensor, which has been used in more than ten provinces of China, and was acquired by an international holding group for around US\$10 million in 2014, providing a success story in the Nordic European clean tech industry.

Green China Lab and CLEEN projects showcase a model of open innovation that supports SMEs in the competitive clean tech industry by involving them in early stages of research and design of new solutions.

SOURCE: Green China Lab (2012)

## 2.4 SUMMARY

This chapter has highlighted a number of tools that policymakers can leverage to incentivize, actively engage, and support the full participation of the private sector in delivering on ecologically sustainable growth. The government has a key role to play in norm setting – including through developing national low carbon and green development strategies that clearly articulate a vision and path towards sustainable development and provide long-term certainty for private sector stakeholders.

Governments can also influence and transform the norms that currently guide traditional brown development models towards ecologically sustainable trajectories, including through the use of market-based instruments such as green tax and budget reforms, feed-in-tariffs, and quantity based tradeable permits, among others. Green public procurement supports adoption of green business practices by sending out relevant market signals to producers and consumers, while green finance is a growing sector that is encouraging responsible investments. Setting standards and targets is a useful tool for governments and business organizations to measure, understand and communicate their environmental, social and governance performance; set goals, and manage changes efficiently while ensuring, at the same time, their transparency about risks and opportunities.

Re-alignment of the invisible structure of the economy is not sufficient for system change. Changes in price structures and regulatory frameworks should be realized in parallel with changes in the way physical infrastructure is planned and designed. This includes developing sustainable sector specific policies (transport, water, buildings energy and infrastructure) and encouraging business engagement to deliver on sustainable infrastructure needs. Incubating a circular economy, including through eco-industrial parks, is a way to increase awareness and demonstrate the benefits of this closed loop approach to production and consumption. The engagement of business at an early stage of planning and designing of targets and strategies is critical to drive innovative solutions and provide effective decision-making that will result in win-win solutions for both the public and private sectors.

The following chapter presents on-going initiatives from the Asia-Pacific region that provide further examples of how some of the strategies discussed above have been successfully implemented on the ground.

## 3.0. Examples of Private Sector Practices

The Asia-Pacific region, known as the engine of growth for the global economy over the past decades, now counts among its successes private sector leaders in renewable and alternative energy, green technologies, and eco-efficient industries. The development trajectory of the region has been bolstered by a strong role for the State in encouraging, through normative and legislative policy frameworks, the growth of green business and practices while ensuring political and macroeconomic stability.

The private sector too has taken up the call for green and eco-efficient consumption and production, and has implemented an impressive array of innovations that have had a positive effect on environmental impact, as well as the financial bottom line. This includes banding together through private sector driven issues groups to leverage the strength of a unified voice to shift industry and sector practices towards sustainability.

The following chapter highlights a few cases of private sector driven industry initiatives and global platforms for cooperation, and of specific green businesses operating in the Asia-Pacific region.

### 3.1 PRIVATE SECTOR-DRIVEN INITIATIVES

Recently, private sector entities and other national and international sustainability stakeholders working in similar sectors and industries, realizing the power of collective action to affect change and level the playing field to de-risk first-movers, have launched sector-driven and industry focused initiatives and issues platforms. The United Nations Global Compact calls this “one of the most significant and promising trends”<sup>49</sup> in corporate sustainability, reflecting “the evolutionary arc of the modern-day corporate sustainability movement – from individual organizational learning and implementation to more broad-based action based on notions of collaboration and scale.”<sup>50</sup> These initiatives seek to affect positive change by establishing minimum standards for members to adopt, sharing and learning from best-practice and problem solving collectively around issues of key concern.

#### 3.1.1 Responsible care [Chemicals]<sup>51</sup>

Responsible Care, launched by the Chemistry Industry Association of Canada in 1985, is a global, voluntary initiative active in 52 countries and in around 60 national chemical manufacturing associations that cover approximately 85 per cent of the global chemicals production industry in its drive for continuous improvement in the environmental, health and safety and security performance of the industry. Signatories to the initiative agree to operate according to high standards of performance across these fields, including by acting according to the Responsible Care Global Charter and Product Strategy launched in 2006 at the United Nations-led International Conference on Chemicals Management. The initiative reports that overall, responsible care companies have reduced safety incidents by 53 per cent since 1995, reduced the recordable injury rate by 78 per cent since 1990, improved energy efficiency by 24 per cent since 1992, and decreased the number of hazardous releases into air, land and water by 75 per cent from 1988 to 2013.<sup>52</sup> Other areas (for example water consumption, energy use, carbon emissions) are still lagging on improvements.<sup>53</sup> While these reductions can also be attributed to other factors, such as increasingly stringent government regulations and international conventions on chemicals and waste management, the responsible care initiative has, over the last thirty years, mobilized the sector towards compliance and voluntary corporate responsibility, green operations and transparent reporting.

#### 3.1.2 International council on mining & metals (ICMM) [Resource extraction sector]<sup>54</sup>

The International Council on Mining & Metals (ICMM) serves as an international body dedicated to improving sustainable development performance in the mining, minerals and metals industry. The Council is led by private sector companies, and based on implementation and measurement of performance standards, and on transparent and accountable reporting practices. Currently, it is comprised of 22 mining and metals companies as well as 32 national and regional mining and global commodity associations.



In 2003, ICMM and its member companies committed to “contribute to conservation of biodiversity and integrated approaches to land-use planning” and to “not explore or mine in World Heritage properties”.<sup>55</sup> A review of the ICMM members’ biodiversity performance since 2003 prepared in collaboration with the IUCN<sup>56</sup> highlights that ICMM members have shown a significant increase in the extent and sophistication of biodiversity management systems, though the report also highlights that much work still needs to be done, particularly in improving the quality, impact and reporting of the management systems.

### 3.1.3 Electronic industry citizenship initiative [Electronics manufacturing sector]<sup>57</sup>

A small group of eight electronics companies founded the Electronic Industry Citizenship Initiative (EICC) in 2004 to create industry-wide whole-of-supply chain standards on social, environmental and ethical issues. At present, more than 100 electronics companies with a combined annual revenue of \$2.6 trillion, and directly employing over 5.5 million people have signed up to the EICC ‘Code of Conduct’ – a set of standards that reference international norms and standards including the Universal Declaration of Human Rights, the United Nations International Labour Organization (ILO) International Labour Standards, the Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, and EICC Carbon Reporting initiatives among others. As of the end of 2012, 100 per cent of EICC member companies were applying the code at their suppliers’ facilities, and more than 80 per cent were using EICC tools to conduct supplier risk assessments.<sup>58</sup> EICC members have also banded together to address certain common issues – for example, developing the EICC’s Conflict Free Sourcing Initiative<sup>59</sup> in 2008, now incorporating over 180 participating companies from seven different industries. While challenges such as resource commitments, varying levels of expertise and operations covering a broad range of materials and processes remain, the initiative continues to develop industry standard best practice and work with industry leaders to share knowledge, and voluntarily improve socio and environmental performance indicators.

## 3.2 PRIVATE SECTOR COMPANY CASE STUDIES

Many businesses across the Asia-Pacific region have either implemented or are now developing their own green strategies, focusing on adopting and promoting eco-efficient production activities, investing in human resources as well as marketing profitable green products and services that enhance peoples’ livelihoods. The following case studies demonstrate but a handful of some of the examples ongoing in the region.

### 3.2.1 ISA TanTech [Manufacturing sector]

Established in 1995, ISA TanTech<sup>60</sup> is a manufacturer of high-performance, eco-friendly leather and leather accessories for the shoe, automotive and apparel industries. Production facilities in China, Viet Nam and the United States of America use a Low Impact to Environment (LITETM) technology and a patented resource and energy-efficient manufacturing system. LITE classification allows downstream customers to register carbon and water footprints into their leather products, and product labels provide resource conservation and sustainable production information directly to end-of-line consumers.

ISA TanTech is founded on the philosophy of competitiveness as more than simply price competition; and that environmental protection can be a profitable business approach, fostering resilience and additional eco-business opportunities. It seeks to develop a zero-waste process in the leather industry, through the pursuit of energy efficiency and waste re-usage in the manufacturing system. The current manufacturing process consumes 30 per cent less energy and 50 per cent less water, and emits 35 per cent less carbon dioxide than contemporary industry standards. In an 18-month period, the manufacturing plant in Heshan, China, reduced re-tanning electricity consumption by 76 per cent and heavy oil use by 28 per cent, while generating 30,000 litres of hot water per day from solar thermal devices.

### 3.2.2 Crystal group [Manufacturing sector]

The Crystal Group<sup>61</sup>, a garment manufacturer and trader, produces 300 million garments annually through factories in China, Viet Nam, Sri Lanka, Bangladesh and Cambodia. It boasts approximately 48,000 employees, across 20 locations worldwide, and an annual turnover of \$1.6 billion in 2013. The company’s objectives include building a healthier, cleaner and more sustainable business through the development of environmental policies, objectives and targets. These include targets to reduce carbon emissions, waste production, water and energy use, and to increase renewable energy use. Environmental stewardship is endorsed as a driver for improved productivity and profitability. A key strategy is the integration of green

solutions in a number of sectors, including wastewater treatment technologies, green roofs, solar panels and solar heating, as well as rolling out environmental assessment tools. A founding member of the Sustainable Fashion Business Consortium (SFBC), the Crystal Group also developed a Restricted Substance List and guidelines for sourcing, handling of chemicals, chemical use and waste handling, and regular waste monitoring. As of 2014, the company has exceeded reduction targets for freshwater (32 per cent) and energy consumption (10 per cent), and operating targets for water recycling (54 per cent) and renewable energy (40 per cent). It has also reduced its CO<sub>2</sub> emissions by 3 per cent and material usage by 18 per cent.

### 3.2.3 Wipro Ltd [Information technology sector]

An IT outsourcing company established in Bangalore, Wipro Ltd.<sup>62</sup> employs over 150,000 people globally with annual revenues of \$7.3 billion recorded in the 2013–2014 financial year. Wipro Ltd. believes in embedding sustainability across its operations for environmental improvement, risk management and development of new opportunities. The corporate sustainability strategy seeks to: decrease carbon and water footprints and waste production, while similarly reducing costs and pursuing green development opportunities; and, develop aspirational goals relating to water, waste, biodiversity, carbon emissions, supply chain management, workplace diversity, education and community engagement. So far, 22 per cent of energy consumption is derived from renewable sources, and 32 per cent of water use is from recycled sources. Wipro Ltd. has been recognized as a global sustainability leader (one of the World's Most Ethical (WME) Companies, topping the Carbon Disclosure Leadership Index, and as a member of the Dow Jones Sustainability Index and the Morgan Stanley Capital International Global Sustainability Index). Key success factors include the setting of environmental goals; adoption of the Global Reporting Initiative (GRI) reporting framework for environmental, social and economic performance; the development of information technology applications to help consumers reduce their environmental impact; and working towards inclusion of all stakeholders in programme actions.

### 3.2.4 Beqa Adventure Divers [Ecotourism sector]

Launched as the Fiji Shark Project in 2003, the Beqa Adventure Divers<sup>63</sup> have transformed into an ecotourism operator offering shark dives and marine conservation projects, through the establishment of a Shark Reef Marine Reserve. The company is committed to the protection of sharks and the reef environment. It also strives to further reduce its ecological and carbon footprint, and to make a contribution to enhancing Fiji's international reputation and the prosperity of its people. Among its goals is to become a completely carbon neutral business and equally, to offer carbon offset opportunities to their clients. The company initiated the Mangroves for Fiji project, which plants mangroves to reduce its carbon footprint. The project is open for other business participation. The company also runs a number of research projects, such as the Fiji Bull Shark Tagging Programme, exploring traditional ecological and local ecological knowledge along Fiji's major rivers to improve community-based coastal resource management (CBCRM), and established the Village Education Trust Fund, which provides one-year Divemaster internships with potential full-time employment after completion to school graduates of Fijian villages. The company demonstrates a business model that delivers environmental conservation and sustainability outcomes as part of their core services, while also remaining financially viable.

### 3.2.5 Kagazy Recycling LLP [Manufacturing sector]

Established in 2001, this subsidiary of Kazakhstan Kagazy JSC<sup>64</sup> is the largest manufacturer of paper, cardboard and packaging in Kazakhstan and Central Asia, holding over 50 per cent of the market share in Kazakhstan. Established as an environmentally friendly and socially responsible business that respects people and the environment, the company strives "to increase the volumes of waste paper collection up to a hundred thousand tons a year (and) become a leading green company in Kazakhstan and Central Asia".<sup>65</sup> The company collects 50,000 tons of waste paper annually, saving about 500,000 trees, through its wastepaper collection points in 21 cities in Kazakhstan. Waste paper processing also uses less water and energy, and emits less greenhouse gases. Kagazyg Recycling LLP has successfully turned waste into financially viable resources by using recycled waste paper as the main raw material to produce packaging products and cardboards, and implementing a closed loop production cycle, from collecting wastepaper to producing an end product.



## 4.0. Conclusion

While the Asia-Pacific region has been at the forefront of much of the world's recent growth in economic activity, future gains are at risk due to the region's over-burdened ecological carrying capacity, resource scarcity and growing populations. If economic growth is to be sustainable and remain competitive, then resource management and production methods need to be transformed. If the region is to lead the way in achieving the internationally agreed development goals, then governments and the private sector must work together to effectuate a shift from brown development models to green economic sustainability.

The private sector has a key role to play and, without its commitment and involvement, broad sustainable development will not be achieved. Business can take actions to improve environmental sustainability in areas such as waste reduction and recycling, energy efficiency and energy conservation, water conservation, resource efficiency, pollution control and green supply chain management. Indeed, many companies in the Asia-Pacific region are already doing so, as illustrated by the case studies in previous chapters. By integrating sustainability throughout their business operations, companies will reap the financial benefits associated with resource efficiencies and green markets, in addition to helping society and the environment.

Governments on the other hand have the responsibility to create an enabling environment, by initiating policies, facilitating access to funding sources and ensuring a stable and predictable policy regime. This will support enterprises to design and produce new green products and services. Whether through new legislation, green taxes, green investments, subsidies or infrastructure development, government can help business to harness sustainability as a driver of economic growth, thus helping to grow the economy while protecting the environment. The implementation of environment-related policies may drive different economic sectors at different times and with different speed. As each sector is structured differently and responds to a unique set of regulations and markets, flexible policies and measures will be required.

Important in this regard is the setting of clear environmental goals and targets at the highest level of operations, whether at the national policy level, or at senior levels of private sector management. High-level commitment needs to be backed by appropriate investments in R&D and human resources to drive innovations, and often, collaboration between the public and private spheres is a useful model to reduce risks and harness strengths from each partner. This entails identifying new forms of partnership that put forward innovative business models that respond to commercial priorities while also delivering on the development front. Transforming to a green business model and to an ecologically sustainable economy necessitates that traditional patterns of resource intensive production and consumption are abandoned, which may impact key stakeholders during transition phases. Policy interventions and strategies that are developed inclusively, through broad stakeholder consultation and based on thorough scientific assessment benefit from a strong evidence-based foundation and higher buy-in for implementation. Key is a transparent and ongoing follow-up and review process, to ensure that impacts are being achieved as desired, and to address any unanticipated negative impacts that may arise.

For each of the proposed goals under the new international development frameworks, there exists a clear business case for engagement. This overview has presented a number of government policies that encourage long-term value creation over short-term profit motivations, and that have opened up the space for new forms of collaboration to reduce investor risk and foster ecological innovations and transformations.<sup>66</sup> Conversely, it has also showcased examples where businesses have taken the lead to demonstrate that green business can be a financially viable and successful model, creating long-term value and reducing production costs through increased resource efficiencies. Governments and businesses must continue to work together to create clear policy frameworks and incentives to ensure that profits are translated into sustained economic growth, social inclusion and environmental protection.

## End notes

1. ESCAP, 2012
2. A/RES/66/288
3. A/69/L.85
4. A/69/L.85
5. ESCAP, 2015
6. Ibid.
7. UNEP, 2012
8. UNGC, 2014
9. UNGC, 2013b
10. Ibid.
11. Ibid.
12. ESCAP, 2015
13. UNGC, 2014
14. Ibid.
15. E/ESCAP/MCED(05)/Rep.
16. The London School of Economics and Political Science, 2014
17. Asian Development Bank, 2015
18. Kingdom of Cambodia, Ministry of Environment, 2009
19. ESCAP, 2015
20. Organisation for Economic Co-operation and Development, 2010
21. Crawford, 2009
22. United States of America Energy Information Administration, 2014
23. Australia Council of Australia Government Meeting, 2008
24. International Renewable Energy Agency, 2012
25. International Energy Agency, n.d.
26. Korea Energy Management Corporation, n.d.
27. Pyrkalo, 2013
28. Ten Brink and others, 2009
29. Organisation for Economic Co-operation and Development, 2008
30. International Emissions Trading Association, and Environmental Defence Fund, 2013a
31. International Emissions Trading Association, and Environmental Defence Fund, 2013b
32. UNEP, 2012a
33. ESCAP, 2012
34. United Nations Department of Economic and Social Affairs, August 2008
35. Ptaschunder, 2012
36. ESCAP, 2012
37. Reichelt, H., 2010
38. Della Croce, Kaminker and Stewart, 2011
39. World Bank Treasury, n.d.
40. Korea Eximbank, 2013
41. IISd, 1996
42. ESCAP, 2009

43. ESCAP, UN-Habitat, Asian Institute of Technology, 2015
44. The Climate Group, n.d.
45. Fong, 2009
46. UNDP, 2010
47. UNEP, 2012b
48. ESCAP, ECLAC, UN-Habitat, 2011
49. UNGC, 2013a.
50. Ibid.
51. International Council of Chemical Association, n.d.
52. Responsible Care and American Chemistry Council, 2015
53. Wayne Visser, 2014
54. International Council on Mining & Metals, 2015
55. Global Balance and the Biodiversity Consultancy, 2014, pp. 4-6
56. Ibid.
57. Electronic Industry Citizenship Coalition, 2015
58. Business for Social Responsibility, 2014
59. Electronic Industry Citizenship Coalition, n.d.
60. ISA TanTec, 2015
61. Crystal Group, 2010
62. WIPRO, n.d.
63. Beqa Adventure Divers, 2015
64. Kagazy Recycling, 2014
65. European Bank for Reconstruction and Development, n.d.
66. UNIDO and the UNGC, 2014

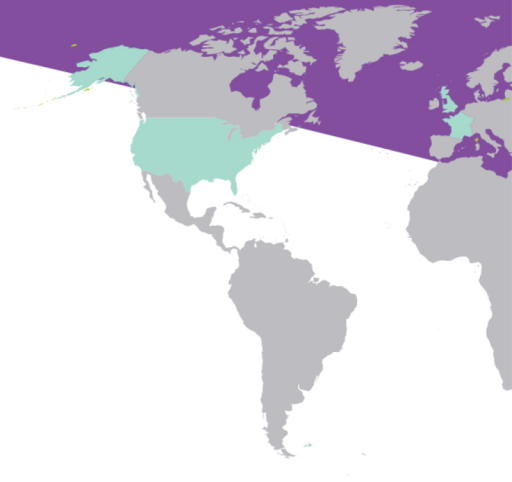
## References

- Asia LEDS Partnership (2014). Malaysia's Green Technology Financing Scheme promotes green investment by providing easier access to financing, at lower costs, 30 September 2014. Available from <http://asialeds.org/news/malaysia-gtfs-brief>
- Asian Development Bank (2015). Country Partnership Strategy: Papua New Guinea 2016-2020. Available from <http://www.adb.org/sites/default/files/institutional-document/157927/cps-png-2016-2020.pdf>
- Australia, Council of Australia Government Meeting (2008). National Principles for Feed-in Tariff Schemes. Canberra. Available from [http://www.coag.gov.au/sites/default/files/20081129\\_national\\_principles\\_fits.pdf](http://www.coag.gov.au/sites/default/files/20081129_national_principles_fits.pdf)
- Belikov, Roman (2014). V poiskah rossijskih "zeljonyh standartov", 30 September 2014. Available from <http://green-city.su/v-poiskax-rossijskix-zelyonyx-standartov/>
- Beqa Adventure Divers (2015). Available from <http://fijisharkdive.com/conservation/>
- Bolwig, Simon, and Gibbon, Peter (2009). Counting Carbon in the Marketplace: Part I – Overview paper. Global Forum on Trade: Trade and Climate Change. Organisation for Economic Co-operation and Development. 9-10 June 2009 Paris. Available from <http://www.oecd.org/trade/envtrade/42886201.pdf>
- Business for Social Responsibility (2014). Electronic Industry Citizenship Coalition: 10 Years of Impact in the Electronics Supply Chain, 4 November 2014. Available from <http://www.bsr.org/en/our-insights/case-study-view/10-years-of-impact-in-the-electronics-supply-chain>
- Carbon Market Data (n.d.). World Carbon Market Database: South Korea ETS Database. Available from <https://carbonmarketdata.com/en/products/world-ets-database/korea-co2-emissions-trading-scheme-capandtrade>
- Crawford, Jeffrey (2009). Green Tax and Budget Reform (GTBR) in Context, Presentation at the 1st Training of Trainers Seminar: Development and Application of Green Growth Policy Tools, ESCAP.
- Crystal Group (2010). Available from <http://www.crystalgroup.com/sustainability/index.aspx>
- Della Croce, Raffaele, Christopher Kaminker and Fiona Stewart (2011). The Role of Pension Funds in Financing Green Growth Initiatives. OECD Publishing. Paris
- Electronic Industry Citizenship Coalition (2015). Available from <http://www.eiccoalition.org>
- \_\_\_\_\_ (n.d.). Conflict minerals. Available from <http://www.eiccoalition.org/initiatives/conflict-free-sourcing-initiative/>
- Equator Principles (2011). About the Equator Principles. Available from <http://www.equator-principles.com/index.php/about-ep/about-ep>
- European Bank for Reconstruction and Development (n.d.). Kazakhstan Kagazy. Available from <http://www.ebrd.com/work-with-us/projects/psd/kazakhstan-kagazy.html>
- Fong, M.W. (2009). Technology Leapfrogging for Developing Countries. Available from <http://journalistsresource.org/wp-content/uploads/2013/04/Technology-Leapfrogging-for-Developing-Countries.pdf>
- Global Balance and the Biodiversity Consultancy (2014). Review of the International Council on Mining and Metals members' biodiversity performance management since 2003. Available from <http://www.icmm.com/document/8326>
- Green China Lab (2012). Available from <http://www.greenchinalab.org/#!home/mainPage>
- Green Standards Eco-Certification Center (2010). Available from [http://www.greenstand.ru/about/shto\\_takoe\\_central.html](http://www.greenstand.ru/about/shto_takoe_central.html)
- International Council of Chemical Association (n.d.). Responsible care. Available from <http://www.icca-chem.org/en/Home/Responsible-care/>
- International Council on Mining & Metals (2015). Available from <http://www.icmm.com>
- International Emissions Trading Association, and Environmental Defence Fund (2013a). The World's Carbon Markets: A Case Study Guide to Emissions Trading. Japan. Available from [http://www.ieta.org/assets/Reports/EmissionsTradingAroundTheWorld/edf\\_ieta\\_japan\\_case\\_study\\_september\\_2013.pdf](http://www.ieta.org/assets/Reports/EmissionsTradingAroundTheWorld/edf_ieta_japan_case_study_september_2013.pdf)

- \_\_\_\_\_ (2013b). The World's Carbon Markets: A Case Study Guide to Emissions Trading. Kazakhstan. Available from [http://www.ieta.org/assets/Reports/EmissionsTradingAroundTheWorld/edf\\_ieta\\_kazakhstan\\_case\\_study\\_september\\_2013.pdf](http://www.ieta.org/assets/Reports/EmissionsTradingAroundTheWorld/edf_ieta_kazakhstan_case_study_september_2013.pdf)
- International Energy Agency (n.d.). IEA/IRENA Joint Policies and Measures database. India statistics. Available from <http://www.iea.org/policiesandmeasures/renewableenergy/?country=India>
- International Institute for Sustainable Development (1996). Global Green Standards: ISO 14000 and Sustainable Development. Available from <https://www.iisd.org/pdf/globalgrn.pdf>
- International Renewable Energy Agency (2012). IRENA-GWEC: 30 years of Policies for Wind Energy. China. pp. 48-57. Available from [https://www.irena.org/DocumentDownloads/Publications/GWEC\\_China.pdf](https://www.irena.org/DocumentDownloads/Publications/GWEC_China.pdf)
- ISA TanTec (2015). Available from <http://liteleather.com>
- Jayathilake, T., and Fernando, S. (2013). Analysis of Factors Motivating Sri Lankan Organizations towards Green IT. Scientific Research Journal (SCIRJ), vol. 1, issue 1, August 2013. Available from <http://www.academia.edu/7970885/>
- Kagazy Recycling (2014). Available from <http://www.kagazy.kz/en/gg.html>
- Kingdom of Cambodia, Ministry of Environment (2009). The National Green Growth Roadmap. Available from [http://www.greengrowth.org/sites/default/files/pictures/Final\\_per\\_cent20Draft\\_per\\_cent20Roadmap\\_per\\_cent20Feb26-2010.pdf](http://www.greengrowth.org/sites/default/files/pictures/Final_per_cent20Draft_per_cent20Roadmap_per_cent20Feb26-2010.pdf)
- Korea Energy Management Corporation (n.d.). Programme for promoting NRE utilization. Feed-in-tariffs. Available from [http://www.kemco.or.kr/new\\_eng/pg02/pg02040700.asp](http://www.kemco.or.kr/new_eng/pg02/pg02040700.asp)
- Korea Eximbank (2013). Press Release: Korea Eximbank Secures Ammunition to Support Green Industry, 21 February 2013. Available from [http://www.koreaexim.go.kr/en/bbs/noti/view.jsp?no=11525&bbs\\_code\\_id=1316753474007&bbs\\_code\\_tp=BBS\\_2](http://www.koreaexim.go.kr/en/bbs/noti/view.jsp?no=11525&bbs_code_id=1316753474007&bbs_code_tp=BBS_2)
- Malaysian Green Technology Corporation (2012). Green Technology Financing Scheme. Available from <https://www.gtfs.my/>
- Nazarbayev, Nursultan (2012). Address by the President of the Republic of Kazakhstan, Leader of the Nation, N.A. Nazarbayev "Strategy Kazakhstan-2050: New Political Course of the Established State". Available from [http://www.akorda.kz/en/page/page\\_poslanie-prezidenta-respubliki-kazakhstan-lidera-natsii-nursultana-nazarbaeva-narodu-kazakhstana-](http://www.akorda.kz/en/page/page_poslanie-prezidenta-respubliki-kazakhstan-lidera-natsii-nursultana-nazarbaeva-narodu-kazakhstana-)
- Nelson, Jane (2008). CSR and Public Policy: New Forms of Engagement between Business and Government. Working Paper of the Corporate Social Responsibility Initiative No. 45. Available from [http://www.hks.harvard.edu/m-rcbg/CSRI/publications/workingpaper\\_45\\_nelson.pdf](http://www.hks.harvard.edu/m-rcbg/CSRI/publications/workingpaper_45_nelson.pdf)
- Organisation for Economic Co-operation and Development (2008). Environmentally Related Taxes and Tradable Permit Systems in Practice. COM/ENV/EPOC/CTPA/CFA(2007)31/FINAL. Available from [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=com/env/epoc/ctpa/cfa\(2007\)31/final](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=com/env/epoc/ctpa/cfa(2007)31/final)
- \_\_\_\_\_ (2010). Pro-active Policies for Green Growth and Market Economy. DAF/COMP(2010)34. Available from <http://www.oecd.org/regreform/sectors/48316422.pdf>
- Principles for Responsible Investment (2015). Principles for Responsible Investment: An investor initiative in partnership with UNEP Finance Initiative and the UN Global Compact. Available from [http://www.unpri.org/viewer/?file=wp-content/uploads/PRI\\_Brochure\\_2015.pdf](http://www.unpri.org/viewer/?file=wp-content/uploads/PRI_Brochure_2015.pdf)
- Puaschunder, Julia (2012). Socially Responsible Investment (SRI) as Emergent Risk Prevention and Means to Imbue Trust in the Post 2008/09 World Financial Crisis Economy. Available from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2186636](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2186636)
- Pyrkalo, Svitlana (2013). EBRD welcomes big step for renewables in Kazakhstan – new feed-in tariff law. European Bank for Reconstruction and Development. Available from <http://www.unescap.org/sites/default/files/survey2015-pt2-cs71-theme-study.pdf>
- Reichelt, Heike (2010). Green Bonds: a model to mobilise private capital to fund climate change mitigation and adaptation projects. The Euromoney: Environmental Finance Handbook. Available from [http://treasury.worldbank.org/web/Euromoney\\_2010\\_Handbook\\_Environmental\\_Finance.pdf](http://treasury.worldbank.org/web/Euromoney_2010_Handbook_Environmental_Finance.pdf)

- Republic of Kazakhstan, Ministry of Energy (2015). Informacija po proizvodstvu jelektricheskoy jenergii ob'ektami vije za 12 mesjacev 2014 goda, 29 July 2015. Available from <http://energo.gov.kz/index.php?id=2206>
- Responsible Care and American Chemistry Council (2015). Responsible care by the numbers. Available from <http://responsiblecare.americanchemistry.com/FactSheet>
- Samruk Energy (2014). Pravitel'stvo Kazahstana utverdilo fiksirovannye tarify na postavku jelektricheskoy jenergii ot vozobnovljaemyh istochnikov jenergii, 8 July 2014. Available from <http://www.samruk-energy.kz/index.php>
- Ten Brink, P. and others (2009). Guidelines on the Use of Market-based Instruments to Address the Problem of Marine Litter. United Nations Environment Programme, Institute for European Environmental Policy. Available from [http://www.unep.org/regionalseas/marinelitter/publications/docs/economic\\_instruments\\_and\\_marine\\_litter.pdf](http://www.unep.org/regionalseas/marinelitter/publications/docs/economic_instruments_and_marine_litter.pdf)
- The Climate Group (n.d.). The Business Case for Off-Grid Energy in India. Available from [http://www.theclimategroup.org/\\_assets/files/The-business-case-for-offgrid-energy-in-India.pdf](http://www.theclimategroup.org/_assets/files/The-business-case-for-offgrid-energy-in-India.pdf)
- The London School of Economics and Political Science (2014). Mongolia: Green Development Policy (GDP). Available from <http://www.lse.ac.uk/GranthamInstitute/law/green-development-policy-gdp/>
- Tiong, Tan Ching (2014). Green Technology Financing Scheme (GTFS), Presentation at UNFCCC Regional Workshop for the Asia-Pacific Regions on NAMA's, 22-25 April 2014 in Vientiane, Lao People's Democratic Republic. Available from [http://unfccc.int/files/focus/mitigation/application/pdf/malaysia\\_presentation.pdf](http://unfccc.int/files/focus/mitigation/application/pdf/malaysia_presentation.pdf)
- United Nations Department of Economic and Social Affairs (2008). Public Procurement as a tool for promoting more Sustainable Consumption and Production patterns. Sustainable Development Innovation Briefs, Issue 5, August. Available from [http://esa.un.org/marrakechprocess/pdf/InnovationBriefs\\_no5.pdf](http://esa.un.org/marrakechprocess/pdf/InnovationBriefs_no5.pdf)
- United Nations Development Programme (2010). Achieving the Millennium Development Goals with Equality in Latin America and the Caribbean: Progress and Challenges. Available from <http://www.cepal.org/publicaciones/xml/5/39995/portada-indice-intro-en.pdf>
- United Nations Economic and Social Commission for Asia and the Pacific (2005) Ministerial Declaration on Environment and Development in Asia and the Pacific 2005. E/ESCAP/MCED(05)/Rep.
- \_\_\_\_\_ (2009). Eco-efficiency Indicators: Measuring Resource-use efficiency and the Impact of Economic Activities on the Environment. Bangkok, Thailand
- \_\_\_\_\_ (2012). Low Carbon Green Growth Roadmap for Asia and the Pacific. Bangkok. Available from: <http://www.unescap.org/resources/low-carbon-green-growth-roadmap-asia-and-pacific>
- \_\_\_\_\_ (2013). Pioneering new regional platform helps track carbon footprints. Available from <http://www.unescap.org/announcement/pioneering-new-regional-platform-helps-track-carbon-footprints>
- \_\_\_\_\_ (2015). Economic and Social Survey of Asia and the Pacific 2015 – Part II. Balancing the Three Dimensions of Sustainable Development: From Integration to Implementation. Bangkok. Available from <http://www.unescap.org/sites/default/files/survey2015-pt2-cs71-theme-study.pdf>
- United Nations Economic and Social Commission for Asia and the Pacific, United Nations Human Settlements Programme, and Asian Institute of Technology (2015). Policy Guidance Manual on Wastewater Management. Bangkok, Thailand
- United Nations Economic and Social Commission for Asia and the Pacific, United Nations Economic Commission for Latin America, United Nations Human Settlements Programme (2011). Guidelines on Developing Eco-efficient and Sustainable Urban Infrastructure in Asia and Latin America. Available from [http://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Guidelines\\_per\\_cent20for\\_percent20infrastructure\\_UNESCAP.pdf](http://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Guidelines_per_cent20for_percent20infrastructure_UNESCAP.pdf)
- United Nations Environment Programme (2012). Global Environment Outlook (GEO-5). Nairobi. Available from [http://www.unep.org/geo/pdfs/geo5/GEO5\\_report\\_full\\_en.pdf](http://www.unep.org/geo/pdfs/geo5/GEO5_report_full_en.pdf)
- \_\_\_\_\_ (a). Capacity Building for Sustainable Public Procurement. Available from <http://www.unep.fr/scp/procurement/docsres/ProjectInfo/ProjectBrochureEN.pdf>
- \_\_\_\_\_ (b). Circular Economy: Introduction. Available from <http://www.unep.org/resourceefficiency/Home/Policy/SCPPoliciesandthe10YFP/NationalActionPlansPovertyAlleviation/NationalActionPlans/CircularEconomy/tabid/78389/Default.aspx>

- United Nations General Assembly (2012). The Future We Want. A/RES/66/288. Available from: [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/66/288&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E)
- \_\_\_\_\_ (2015). Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda. A/69/L.85. Available from: [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/69/L.85&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E)
- United Nations Global Compact (2010). Principles for Social Investment (PSI). Available from <https://www.unglobalcompact.org/library/183>
- \_\_\_\_\_ (2013a). Report to the United Nations Secretary-General. Corporate Sustainability and the United Nations Post-2015 Development Agenda: Perspectives from UN Global Compact Participants on Global Priorities and How to Engage Business Towards Sustainable Development Goals. Available from [http://www.zaragoza.es/contenidos/medioambiente/onu/1019\\_eng\\_unsg\\_report\\_corporate\\_post2015.pdf](http://www.zaragoza.es/contenidos/medioambiente/onu/1019_eng_unsg_report_corporate_post2015.pdf)
- \_\_\_\_\_ (2013b). Architects of a Better World: Building the Post-2015 Business Engagement Architecture. Available from: <https://www.unglobalcompact.org/library/441>
- \_\_\_\_\_ (2014). The Role of Business and Finance in Supporting the Post-2015 Agenda. Available From: [https://www.unglobalcompact.org/docs/news\\_events/9.6/Post2015\\_WhitePaper\\_2July14.pdf](https://www.unglobalcompact.org/docs/news_events/9.6/Post2015_WhitePaper_2July14.pdf)
- United Nations Industrial Development Organization, and United Nations Global Compact (2014). Series of Dialogues on Means of Implementation of the Post-2015 Development Agenda: Engaging the Private Sector in the Post-2015 Agenda – Consolidated Report on 2014 Consultations. Available from [http://www.unido.org/fileadmin/user\\_media\\_upgrade/Resources/Publications/Final\\_Consultation\\_Report\\_Engaging\\_with\\_the\\_Private\\_Sector.pdf](http://www.unido.org/fileadmin/user_media_upgrade/Resources/Publications/Final_Consultation_Report_Engaging_with_the_Private_Sector.pdf)
- United States of America Energy Information Administration (2013). Feed-in tariff: A policy tool encouraging deployment of renewable electricity technologies, 30 May 2013. Available from <http://www.eia.gov/todayinenergy/detail.cfm?id=11471#>
- Wayne Visser (2014). Why banning dangerous chemicals is not enough. The Guardian. Available from <http://www.theguardian.com/sustainable-business/2014/sep/16/banning-dangerous-chemicals-business>
- WIPRO (n.d.) Sustainability @ WIPRO 2013-2014. Available from <http://www.wiprosustainabilityreport.com>
- World Bank Treasury (n.d.). About World Bank Green Bonds. Available from <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>
- World Business Council for Sustainable Development (2014). The Urban Infrastructure Initiative: Final Report. Available from <http://www.wbcsd.org/uiifinalreport.aspx>



The green areas of the map represent the members and associate members of ESCAP

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