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Chapter 10

Sustainable Consumption and Production in the Philippines

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10.1 The Philippines and the Path to Sustainable Development

In the years from 2010 to 2015, the Philippines economy has been recovering from its unenviable reputation as the “laggard of East Asia.” It is now exhibiting rapid rates of economic growth — 7.1% in 2013 and 6.1% in 2014 [National Statistical Coordination Board, 2015b] — and improving its ranking in global competitiveness reports. The Philippines ranks as a promising newly-industrialised country, with its export economy moving away from agriculture to electronics and labour-intensive manufactured goods (like garments, footwear, processed foods, and furniture). Its credit rating has also been upgraded by international rating agencies to the level of sovereign investment grade.

While that has been a worthwhile achievement in itself, some thoughtful observers have raised the question about the apparent stubbornly-high incidence of poverty that has remained, despite the evident economic expansion. Another question about the economic growth is the continued deterioration of the environment, felt especially in Metro Manila and the country’s other big cities.

In this chapter, environmental issues will be considered as well as — partially — poverty alleviation. Firstly, various concepts will be clarified, despite being further elaborated elsewhere in the book, as they form the context of the discussion.

Sustainable development refers to the development of a country that meets the needs of the present without compromising the ability of future generations to meet their own needs [UNEP, 2010]. In this specific sense of having a regard for the needs of future generations, sustainable development is, in part, equivalent to an environmentally-sustainable development. The concept of sustainable development consists, however, of two other aspects, namely, the well-known (though still elusive to some) notion of economic progress, and that of socially inclusive growth and poverty eradication (as opposed to the traditional “grow first, redistribute later” policy mind-set). This leads to the concept of “green growth,” which is an environmentally-sustainable economic progress that fosters low-carbon, socially inclusive development [OECD, 2014; GGBP, 2014]. Green growth is the opposite of the prevailing “grow first, clean up later” type of economic growth [UNESCAP-ADB-UNEP, 2012]. The concept of sustainable consumption and production (SCP), with its various approaches, is a major element of green growth and an important means to achieving it [UNEP, 2012a, 2012b].

10.2 Are the Consumption and Production Patterns of the Philippines Sustainable?

This section starts with a brief look at some of the main policies in the country relating to SCP, then an introduction to the promotion of SCP in the country by the SWITCH-Asia Programme. This is followed by a review of a number of indicators of the overall state of the environment in the Philippines.

10.2.1 Policies for SCP in the Philippines

The Philippines is known as a leader in the region regarding laws that provide the legal and policy framework for protecting the environment, for example, the Clean Air Act 1999, the Ecological Solid Waste Management Act 2000, the Clean Water Act 2004, the Biofuels Act 2006, and the Renewable Energy Act 2008 (see Table 10.1).

Table 10.1: Selected Philippine laws on the environment

Designation of the Law	Purpose of the Law
Philippine Environmental Impact Statement System (PEIS) of 1978 (Presidential Decree 1586)	A Decree providing the legal and procedural framework for conducting Environmental Impact Assessments (EIA) for projects likely to have significant environmental impact. This has been updated by several DENR administrative orders.
Clean Air Act of 1999	An Act providing for a comprehensive air pollution control policy and a national programme to prevent, manage, control, and reverse air pollution through both regulatory and market based instruments.
Ecological Solid Waste Management Act of 2000	An Act setting up a national programme for managing the transfer, transport, processing, and disposal of solid waste. It calls for a phasing out of open dump sites and converting them into sanitary landfills.
Clean Water Act of 2004	An Act providing for a comprehensive water quality management, with the aim of protecting the country's water bodies from pollution from land-based sources.
Biofuels Act of 2006	An Act establishing the framework for the promotion of the use of biofuels in road transport (biodiesel and gasoline blended with bioethanol).
Renewable Energy Act of 2008	An Act establishing the framework for the accelerated development of renewable energy resources.
Climate Change Act of 2009	An Act establishing the Climate Change Commission, tasked to coordinate, monitor and evaluate programmes, and action plans.

Sources: DENR website (denr.gov.ph); NEDA [2014]; and Philippine Senate [2011, 2014].

Regarding SCP, the Philippines has not yet enacted a single policy or plan specifically for SCP. The country has stated its vision of a green economy in the Philippine Development Plan 2011–2016, which emphasises the need for inclusive growth as well as “sustainable use of resources to benefit the present and future generations.” A specific sector outcome

goal is defined as improving environmental quality for a cleaner and healthier environment with reduction targets for air pollution, water pollution and waste generation [NEDA, 2014].

To advance SCP, the Philippines is also using an enhanced national Agenda 21 plan as part of the national development strategy, which includes six key actions:

1. Need to increase economic ecological activities and opportunities for green markets.
2. Need to increase awareness of consumer options for sustainable consumption.
3. Businesses must be able to receive assistance to change to better production practice.
4. Life cycle assessment (LCA) must be brought down to a level the consumer understands.
5. Accelerate the establishment of a government green public procurement system.
6. Need to assess policy options for promoting SCP, especially an incentive structure for green production [IGES, 2010].

This environmental policy framework, including those policies relating to SCP, is an important starting point, yet policy implementation is less clear. The Department of Environment and Natural Resources (DENR) is the agency tasked with implementing the country's environmental policy, however, it performs this task through regional offices in the country's 13 administrative regions. The enforcement of environmental laws has been devolved to local government units (LGUs), but despite this devolution of power, LGU enforcement remains subject to the supervision of the DENR.

For example, the local heads of the country's smallest administrative units, called the *Punong Barangay*, are tasked to enforce laws relating to pollution control and environmental protection, while municipal mayors are mandated to safeguard and conserve land, mineral, marine, forest, and other resources of the municipalities [Lerma and Batan, 2015]. As a result, multiple issues including political interference, corruption, lack of coordination, lack of support from the community, and lack of logistical and

financial resources have hindered the enforcement of environmental policies.

The actual environmental situation (or “outcomes”) experienced by the ordinary citizens is covered in the following sections below.

10.2.2 Promoting SCP in the Philippines through the SWITCH-Asia Programme

The SWITCH-Asia Programme has been implementing projects in the Philippines since 2009, all of which are aimed at facilitating and supporting the shift to SCP.

The programme is implemented on two levels: firstly, policy support at the national government level; secondly, pilot projects at the enterprise level. The preceding section covered the national environmental policy framework; this following section covers the SWITCH-Asia *National Policy Support Component* (NPSC) (see Box 10.1).

Box 10.1 The SWITCH-Asia NPSC

The SWITCH-Asia Programme’s involvement in the Philippines includes technical assistance to support the national government’s implementation of policy instruments related to the “switch” towards SCP.

The Philippines is one of the five countries receiving this technical assistance, namely SWITCH-Asia National Policy Support Component (NPSC). The NPSC in the Philippines was implemented by a consortium consisting of GFA Consulting Group (Germany) as the leading organisation, Ecorys (Netherlands), Milieu (Belgium), and ASSIST (Philippines).

The technical assistance project started in July 2012 and continues until December 2016, thus the present discussion involves a project that has not yet finished.

With the objective of supporting the government in implementing SCP policies, the project focuses its efforts in three areas: (1) clean energy and energy efficiency; (2) green procurement and eco-labelling; and (3) capacity-building at the DENR in order to be able to address cross-cutting SCP issues, including the Clean Air Act. The other government agencies that receive

(Continued)

Box 10.1 (Continued)

technical assistance from the project are the Department of Energy (DOE), the Department of Trade and Industry (DTI), the Climate Change Commission, and the Philippine Council for Sustainable Development.

One recent project achievement was the approval in July 2014 by the DOE secretary of the Energy Efficiency and Conservation Roadmap 2014–2030, whose development was supported by the technical assistance team [Lister, 2013]. Several consultation meetings were held earlier to obtain inputs from relevant government agencies and stakeholders, including professional organisations, and development partners. After extensive discussions, the roadmap was revised incorporating pertinent inputs and recommendations from these stakeholders.

When technical assistance from a foreign donor to a government is involved, a major concern is the issue of “buy-in” by the respective government agency of the policy support. This is often referred to as the degree of “ownership” manifested by the recipient agency regarding the technical support being provided. This has been addressed successfully by the project, as the most recent half-yearly progress report states “the project is well integrated in the partner institutions [...] There is a high level of ownership among the main partners, especially at the DOE, DTI, and DENR” [Bischoff and Balamiento, 2015].

At the enterprise level, in 2015 there are nine SWITCH-Asia grant projects either completed or operational in the country (see Table 10.2). We used two criteria to “triangulate” on which projects to select as case studies. One criterion was that the project focused solely on the Philippines, since some involve a number of other countries in the region. This criterion reduced the number of projects to four. A second criterion was that the projects should already be completed, rather than on-going. At the time of writing, three projects had already been completed. The *Zero Carbon Resorts* is already discussed in this book’s chapter on sustainable tourism (see Chapter 14). We therefore focus on the two other completed projects as case studies, namely, the projects *GPIoS* and *SMART Cebu*. Both projects are presented below in text boxes, but they do not involve a detailed *ex post* evaluation (i.e., performance evaluation and/or impact evaluation).

Table 10.2: SWITCH-Asia projects in the Philippines, 2015

Name of Project	Period	Implementing Organisations	Places of Implementation	SCP Practice	Brief Project Description
Philippines Only					
<i>Completed</i>					
(1) GPIoS	2009–2013	VSB-Tech Univ Ostrava, GrAT, AREC, ASSIST, ECCP	Metro Manila, CALABARZON	Cleaner production, resource efficiency	Green Philippines Islands of Sustainability
(2) SMART Cebu	2009–2013	SEQUA, EFA, ECCP, ADFIAP	Cebu	Cleaner production, eco-design	SMEs for environmental Accountability, Responsibility, and Transparency
(3) Zero Carbon Resorts, ZCR	2009–2014	GrAT, PCSD, PSA-CIEMAT, ASSIST	Palawan	Resource efficiency, 3R (reduce, replace, redesign)	Building Energy Autonomous Resorts, Creating Appropriate Technology Solutions
<i>On-going</i>					
(4) High-Efficiency Motors	2014–2018	IIEE, ICASEA, ASSIST, ECCP	Various areas	Energy efficiency	Increasing the Uptake of High Efficiency Motors and Drive Systems in Philippine Industries

(Continued)

Table 10.2: (Continued)

Name of Project	Period	Implementing Organisations	Places of Implementation	SCP Practice	Brief Project Description
Including Other Countries:					
Completed:					
(5) AEMAS	2010–2014	ASEAN Centre for Energy, ASD, ENPAP	7 ASEAN nations	Energy efficiency accreditation	Establishment of the ASEAN Energy Manager Accreditation Scheme
On-going:					
(6) Efficient Air Conditioners	2013–2016	Europe Copper Inst, UNEP-DTIE, IIEE	7 ASEAN nations	Energy efficiency	Promotion and Deployment of Energy Efficient Air Conditioners in ASEAN
(7) Hand-Woven Eco-Textiles	2013–2017	Hivos, NTFP-EP	Indonesia	Sustainable consumption, eco-design	SCP of Hand-Woven Textiles (Songket, Ulos, Lurik, Abaca, Ikat), Female Entrepreneurship in Indonesia and the Philippines

(8) Lead Paint Elimination Project	2011–2015	IPEN, Arnika-Toxics & Waste Programme, EcoWaste Coalition	6 Asian nations	Eco-labelling	Elimination of lead in paints through awareness raising and standard setting
(9) ZCR for Sustainable Tourism	2014–2018	GrAT, PCSD, PSA-CIEMAT,	Thailand	Resource efficiency	Zero Carbon Resorts towards Sustainable Development of the Tourism Sector in the Philippines and Thailand

Source: European Union [2014], SWITCH-Asia’s 80 Projects at a Glance: Fact Sheet (2014).

10.3 Indicators on the Impact on the Environment and Climate

In this section, selected indicators to evaluate the impact of unsustainable consumption and production patterns on the environment and society in the Philippines are discussed.

There has been growing literature regarding appropriate indicators to use to monitor green growth towards the green economy [UNEP, 2015; GGKP, 2013; UNESCAP, 2013]. While the tendency is to propose a dashboard of socio-economic and environmental indicators, there is also the need to have a single so-called “headline” indicator (parallel to the Gross Domestic Product) that will communicate easily the state of green growth to policy makers and to the educated layperson.

But problems with both concept and measurement exist, and while the search for such an elusive indicator continues, there the Environmental Performance Index (EPI) exists which offers a summary index for the “green” aspect of growth. The EPI, updated every two years, is a joint project of the Yale University Center for Environmental Law and Policy and the Columbia University Center for International Earth Science Information Network [Hsu *et al.*, 2014].

The EPI ranks how well countries perform on high-priority environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystems. Within these two policy objectives, the EPI scores country performance in nine issue areas comprised of 20 indicators. The nine areas are health impacts, air quality, water and sanitation, fisheries, water resources, agriculture, forests, biodiversity and habitat, and climate and energy.

Based on the EPI, the Philippines ranked 114th out of 178 countries in 2014, while 2012, it ranked 42nd out of 132 (see Table 10.3). Its EPI ranking thus fell from the 68th percentile in 2012 to the 36th percentile in 2014, i.e., only 36% of countries are now ranked below the Philippines.

Refinements in the methodology and underlying data perhaps make the comparison of rankings over time an exercise of limited validity, yet the 2014 ranking represents the best estimate of the country’s environmental performance, as they have been calculated using latest iteration of this measure. Since 2006, the EPI has been recalibrated, refined and updated every two years.

Table 10.3: Selected sustainability indicators: Philippines

Indicator	Latest	Previous	Source
GDP growth rate	6.9 (2014 Q4)	5.3 (2014 Q3)	NSCB [2015a]
Poverty incidence (% of population)	25.8 (2014 H1)	24.6 (2013 H1)	NSCB [2015a]
Environmental Performance Index (ranking among nations)	114 out of 178 (2014)	42 out of 132 (2012)	EPI [Hsu, 2012, 2014]
Protected forest land area increase (hectares)	333,160 (2014 Q3)	221,763 (2013)	NEDA [2015]
Households with electricity (% of total)	79.1 (2013)	76.7 (2012)	NEDA [2015]
Households with access to safe water (% of total)	83.8 (2013)	N.A.	NEDA [2015]
Households final consumption expenditure (annual % growth)	5.4 (2014)	N.A.	World Bank [2015]

Source: The respective data source is indicated on the right-hand column above, with the full reference given at the end of the chapter.

This survey of selected indicators of the unsustainable patterns of consumption and production in the country would not be complete without some discussion of the threat of global warming and climate change. In terms of emissions of greenhouse gases (GHG), the country accounts for only 0.4% of global emissions, and is therefore not a major emitter of GHGs [ADB, 2011]. A recent report [World Bank, 2013a], however, identifies that the country's GHG emissions are increasing rapidly compared to other low and middle-income countries, and can be expected to increase further, as the economy continues its recent rapid growth.

Another way of looking at the same issue is through the lens of a country's Ecological Footprint. It measures the amount of biologically productive land and sea area that a country needs to produce the resources it consumes, provide room for its infrastructure, and absorb its waste [WWF and ADB, 2012].

As people consume resources from around the world, the Ecological Footprint adds these areas together regardless of where they are located on the planet. Because trade is global, a country's footprint includes land or sea from all over the world. The footprint is usually measured in "global hectares" (or gha), a unit that encompasses the average productivity of all the biologically productive land and sea area in the world in a given year.

One estimate puts the per-person Ecological Footprint of the Philippines at 1.3 gha in 2008, within the limits of the world average available biocapacity of 1.8 gha [Global Footprint Network, 2012], and one of the smallest-footprint nations in the region. For Asia-Pacific as a whole, the footprint is 1.6 gha, while Australia and Singapore are in the largest-footprint category of nations, with a range of 5–7 gha [WWF and ADB, 2012].

However, in 2008, there was only 0.6 gha of biocapacity per person available in the Philippines [Global Footprint Network, 2012], indicating that although consumption levels are relatively low, the demand exceeds the country's biocapacity. The report also shows that 61% of the ecological footprint of households comes from the food sector, which highlights the limited contribution of other sectors, like construction, transport, goods, and services. It also highlights the Philippines' dependence on "food biocapacity" imports from other countries.

To return to our point of the country's minor role as a global emitter of GHGs, the Philippines, however, is one of the most highly vulnerable countries to existing climate risks and future climate change. To be specific, four Philippine cities — San Jose, Manila, Roxas, and Cotabato — are among the top 10 cities in the East Asia/Pacific region most vulnerable to the climate-related impacts of intensified storm surges and sea-level rise [Dasgupta *et al.*, 2009].

The Philippines is ranked second country in the world most at risk from natural hazards (i.e., earthquakes, storms, floods, droughts, and sea-level rise) including the adverse effects of climate change, according to the latest World Risk Index [Welle, Birkmann, and Rhyner 2014]. And in a related study but with a focus on coastal areas, the Philippines is among the top 10 countries in the world with the highest risk from coastal hazards (i.e., storms, floods, surges, tsunamis, and sea-level rise), according to the Coasts@Risk Index [Beck, 2014].

The next sub-chapter will address the implications of a shift to a sustainable pattern of consumption and production on the issue of global warming and climate change.

10.3.1 *Indicators on air pollution, human health, and municipal waste generation*

Unsustainable patterns of consumption and production contribute to air pollution. Industries, households, and cars, trucks, and other vehicles emit various mixtures of air pollutants, many of which are harmful to human health. Among these pollutants, fine particulate matter has the most harmful effects.

Most fine particulate matter results from fuel combustion, both from “mobile” sources (i.e., vehicles), and from “stationary” sources (i.e., smoke stacks). Some major sources include exhaust fumes from vehicles, emissions from manufacturing facilities (e.g., factories) and power generation (e.g., smoke stacks of coal-fired power plants) [WHO, 2014].

High concentration of small and fine particulate pollution is particularly associated with high numbers of deaths from heart disease and strokes, as well as respiratory illnesses and cancers. Measurement of fine particulate matter of 10 micrometers or less (also known as microns)

in diameter (“PM10”) is one indicator of the level of health risks from air pollution. The most health-damaging particles are those with a diameter of 10 microns or less, which can penetrate and lodge deep inside the lungs.

Air quality measurements are typically reported in particles per cubic meter of air volume. Following the WHO’s Ambient (outdoor) Air Pollution Database Update 2014, the PM10 reading for the country was 50 (in 2010), which would indicate a level of pollution that is 2.5 times higher than the WHO air quality guideline value of 20 [WHO, 2014]. This value was taken from four stations in the three cities of Manila, Cebu, and Baguio. The major contributor to air pollution is the transport sector (mainly the ubiquitous jeepsneys, buses, and tricycles) [ADB, 2011].

Levels of pollution have to be seen in its context, as some advances have already been made in air quality parameters. Lead concentrations have dropped since the complete phase out of lead in petrol/gasoline in December 2000. The lead concentration in the ambient (outdoor) air in Metro Manila was monitored in 2003 to be much lower than the national air quality guideline value of 1.0 microgram per cubic metre. This compares with a value in 1992 of around 1.7 [ADB and Clean Air Asia, 2006; World Bank, 1997]. The closure of some coal and oil-fired power stations has also reduced sodium dioxide concentrations, and there is much lower consumption of ozone-depleting substances.

Another indicator of the consequences of unsustainable patterns of consumption and production is municipal solid waste generation and its disposal. The issue of appropriate solid waste management is particularly important in highly urbanised areas, where an effective waste management system will determine of the level of impacts on public health, environmental quality, and the resulting quality of life.

When the waste management works well, residents give it little thought: out of sight and quickly out of mind. Discarded materials are collected, some are recycled or composted, and most are landfilled or incinerated. However, the problem soon rears its ugly head when there is poor disposal of collected and uncollected waste. Indiscriminate dumping of solid waste onto open areas and watercourses and unsanitary methods of final disposal are major factors behind the deterioration of urban environment.

The Philippines generates about 30,000 tonnes of garbage per day, only half of which is collected. Even in Metro Manila, only 70% of the 8,000 tonnes of garbage generated each day is collected [ADB, 2011]. The rest often winds up on the streets and in local rivers. The waste that is collected is taken to open dump sites that often catch fire or contaminate local water supplies. The waste decomposes and produces methane, a GHG that is 21 times more potent than carbon dioxide and is a major cause of climate change [World Bank, 2012]. The country also remains inadequately equipped to deal with hazardous waste.

When the collection of waste material is difficult, as is the case in many cramped settlements of informal settler families, nearby water-courses such as creeks and rivers become convenient dumping grounds, ultimately hampering water discharge during the rainy season and thus contributing to flooding. The waste materials also causes damage to pumping stations, thereby affecting their function of pumping out flood-water. Hence, a city's ability to keep solid waste out of drainage ditches can influence whether a neighbourhood floods after a heavy storm.

LGUs, responsible for the collection and disposal of solid waste material, generally have little capacity to plan, develop, operate, and maintain sanitary landfills and have difficulty in complying with the Ecological Solid Waste Management Act [ADB, 2012].

City dwellers have a role to play regarding the problem of solid waste, as they consume and discard resources at an ever-increasing rate. The responsible authorities will need to develop more effective programmes to reduce, reuse, recycle, and recover waste. While recycling helps to manage solid waste, reducing consumption, and minimising waste based on principles of reduce, reuse, or recycle (3Rs) should be the ultimate goal (see also Chapter 15). By minimising waste, the demand for landfill space can be reduced, which in turn will save resources and energy, reduce pollution, and increase the production efficiency of industries.

As simple as it sounds, however, waste minimisation is difficult to achieve because it requires a change in people's mindset. Simply expecting people to reduce, reuse, or recycle simply because it is the right thing to do is an ideal, since most are caught up in the culture of consumerism.

The persistent challenge is how to remove and manage waste in a safe, environmentally sound, and cost-effective manner. If done well, municipal waste management practices can contribute to the reduction of GHG emissions of a city, also short-lived climate pollutants such as methane that is far more potent than carbon dioxide. Under the SWITCH-Asia Programme, the “*Green Philippines Islands of Sustainability*” (GPIoS) project carried out a number of activities and initiatives to address the issue of waste management and recycling (see Box 10.2).

Box 10.2 The Case Study of SWITCH-Asia project Green Philippines Islands of Sustainability (GPIoS)

The objective of the GPIoS project was to contribute to an overall improvement of the environmental situation of a strategic area of the country, namely, Metro Manila and its linked regions, the CALABARZON, Subic, and Clark areas [Labodova, 2014].

In order to attain the objective, it aimed to achieve the reduction in pollution level, as well as the reduction in: (1) waste water, (2) hazardous waste, (3) raw and auxiliary materials, and 4) energy consumption for a significant number of SMEs and other specific companies in the targeted regions.

The GPIoS project was the successor to a pilot project, the *Green Philippines* project, which ran from 2006–2009. While the pilot was focused in the Pampanga, Subic, and Clark regions, GPIoS extended its scope to Metro Manila and CALABARZON regions. The pilot project was limited to only 30 companies, several of which continued on to the *GPIoS*.

The GPIoS’s main instrument for attaining its objectives involved workshops and individual consulting by experienced consultants. The project transferred know-how through training workshops and coaching, combined with a system of quality assurance and monitoring. At the core was a 12-month capacity-building programme of workshops offered on a periodic basis to help interested companies clean up their production processes. In order to do this, it had the benefit of several European partner organisations, namely the Center for Appropriate Technology (GrAT) in Austria. GrAT provided the technical know-how with its expertise in environmental solutions as well as international experience.

(Continued)

Box 10.2 (Continued)

Using the ‘training the trainers’ approach, GrAT shared European best practice to local consultants, also through coaching in on-the-job training. Another organisation, Austrian Recycling (AREC), contributed expertise in waste management and recycling. AREC assisted in the validation of environmental recommendations implemented by SMEs involved in the project. Collaboration between VSB-Technical University of Ostrava in the Czech Republic, as the lead organisation, with GrAT and AREC had resulted from their participation in the GPIoS project.

Locally, the Asia Society for Social Improvement and Sustainable Transformation (ASSIST) mobilised local stakeholders for the implementation of the project. The Philippine Chamber of Commerce and Industry (PCCI), the European Chamber of Commerce of the Philippines (ECCP), and the Philippine Business for Environment (PBE) were partner organisations who spread the word about the project among local firms and helped recruit the target number of SMEs.

As a result, over the course of 2009–2013, the project had involved around 400 SMEs within its geographical scope, thus raising environmental awareness among the participating SMEs. To create an enabling policy environment, the project worked in close collaboration with the DNER, which increased legal compliance of the participating SMEs. The project also established a relationship with two municipalities of Pasig City and Angeles City. At the end of the project, a training and consulting centre was established as a joint activity of project partner ECCP and a local consultancy, which employs six consultants trained within the project. A detailed business plan has been created, which included a number of companies in need of a good financial base to become self-sustaining.

10.4 Micro, Small, and Medium-sized Enterprises and the SWITCH-Asia Projects

Another source of pollution and resource consumption in the Philippines is the industrial sector. Of the 944,897 business enterprises operating in the country in 2012, 99.6% are micro-, small-, and medium-sized enterprises

Table 10.4: Definition of micro-, small-, and medium-sized enterprises

	Number of Employees	Amount of Assets (PHP)
Micro	1–9	Less than or equal to 3 million
Small	10–99	More than 3 to less than 15 million
Medium	100–199	15 to less than 100 million

Source: Employment — *Magna Carta for MSMEs of 2008*; and Assets — *MSME Development Plan 2011–2016*.

(MSMEs) [Department of Trade and Industry, 2014]. In the following Table 10.4, the definition of MSME as defined by the Philippine government is described [World Bank, 2013b].

Looking at each category of the MSME sector, micro firms account for 89.4% of all enterprises, small firms for 9.7%, while medium firms for 0.4%. Given that only 0.4% of all enterprises are large firms, it is not surprising that the average employment per establishment in the country is 25 [National Statistics Office, 2015].

According to the Micro, Small, and Medium Enterprise Development Plan for 2011–2016 [MSMEDC, 2011], in terms of total employment of all enterprises, in 2008 the MSME sector contributed 64.9% of the total jobs, which can be broken down into 30.5% from micro firms, 27.2% from small firms, and 7.3% from medium firms. In terms of value-added, in 2006, the MSME sector contributed 35.7% for all enterprises, which can be further broken down to 4.9% from micro firms, 20.5% from small firms, and 10.3% from medium firms.

In terms of the location of the MSME sector, 22.4% of the enterprises are located in Metro Manila, and 15.4% are in the CALABARZON region. (CALABARZON is an acronym for the group of adjacent provinces of CAvite, LAguna, BAtagas, Rizal, and QueZON.) 11.2% are located in the rest of Central Luzon. Making up the rest of the top five geographical areas are Central Visayas with 7% of the enterprises, followed by Western Visayas with 5.7% of the firms. These top five regions accounted for 61.7% of the MSME sector.

10.4.1 *SMEs, inclusive growth, and poverty alleviation*

It has become an important development goal for policy makers to design and implement policy initiatives, which ensure that economic growth is broad-based and reduces the incidence of poverty. Yet, the grim reality is that poor people do not, and cannot, fully participate in and enjoy the fruits of the current economic growth in the Philippines.

As mentioned, SMEs contribute nearly 65% of the total employment of all enterprises in the country due to the less sophisticated and labour intensive production systems. SMEs tend to have lower entry requirements in terms of skills, education, and qualifications. They are also likely to employ marginalised groups who may otherwise have difficulties finding jobs in large enterprises. As such, some SMEs are “survival enterprises,” operating out of necessity, rather than with the intention to grow, providing incomes, and livelihoods to the majority of the poor who are faced with the absence of any real alternative due to a lack of sufficient wage employment [ILO, 2015].

At the same time, though, it is important to note that SMEs and large enterprises do not exist in isolation, but form part of an interacting system, where large enterprises provide SMEs with markets. SMEs require access to credit, new inputs, technology, and services that lead to improved products that large enterprises are looking to purchase [Habito, 2010; Paderanga, 2011].

This suggests the need to focus on creating openings for small enterprises to integrate into domestic value chains or in the different stages of production and trade of goods and services. This is the means for SMEs to develop linkages with large enterprises in the economy, expanding the business scope of the SME sector and enhancing competitiveness.

The substantial share of jobs that come from the SME sector would seem to provide a pointer to an alternative path leading to a more inclusive type of economic growth. An example of achieving sustainable development and more inclusive growth, by supporting SMEs, has been demonstrated by the SWITCH-Asia *SMART Cebu* project (see Box 10.3).

Box 10.3 The Case Study of SWITCH-Asia project: Small and Medium Enterprises for environmental Accountability, Responsibility, and Transparency (SMART Cebu)

The objective of the SMART Cebu project was to increase the competitiveness of SMEs in the home and lifestyle industries through cleaner production processes of eco-friendly products, thereby contributing to the cleaner environment in the Cebu province [Ritter, 2014]. Three industries of the home and lifestyle sector were engaged in the course of the project's life over three-and-a-half years (2009–2013), namely: (1) furniture and furnishings, (2) gifts, toys, and housewares, and (3) fashion accessories. These have been long-standing industries in Cebu, for which the province is renowned, and constitute an important element of the local economy.

However, the sectors were having a negative impact on the environment, since energy and raw materials were not being used in an efficient manner. Production processes released dust and fumes from sanding, cutting and paint spraying, exposing those workers with inadequate protection to unhealthy indoor pollution.

To reach the SMEs, the business membership organisations (BMOs) of the three industries became the vehicle, namely: the Association of Cebu Gifts, Toys, and Hardware (Cebu GTH), the Cebu Furniture Industries Foundation (CFIF), and the Association of Cebu Fashion Accessories Manufacturers and Exporters (Cebu FAME). The project sought to instil a *SMART Cebu* mind-set (i.e., resource efficiency and cleaner production, or RECP).

The project's lead organisation, SEQUA, a non-profit development organisation from Germany, teamed up with experts from Energy Efficiency Agency (EFA) in North Rhine-Westphalia, Germany, to train and coach local experts and staff of the BMOs. They first trained six counsellors to provide advisory services to member companies of the BMOs. Then a pool of 30 clean production experts is trained to guide the SMEs on the technical aspects of how to make the manufacturing processes cleaner and more efficient.

In total, the project conducted 150 walk-through eco-assessments and coached SMEs on the use of metrics in production operations and proper costing. RECP actions led to savings in energy and water, lower use of chemicals, less in-factory pollution, and improved operational efficiencies. Around 1,000 participants from close to 300 SMEs were involved in more than 30 training sessions on eco-design, SCP, RECP, as well as other SCP-related conferences.

(Continued)

Box 10.3 (Continued)

For the first time, Cebu's home and lifestyle sector was able to participate in international trade fairs in Europe and Asia, presenting the sector as a global partner for sourcing and designing eco-friendly products. Marketing of these products was undertaken at these trade fairs and a new line of eco-friendly products was launched on the international market.

About 12 fashion accessories companies, 12 GTH companies, and nine furniture companies promoted their newly developed eco-product lines at trade fairs in Paris, Cologne and Frankfurt. The participating companies can now claim that they are utilising natural and renewable resources more efficiently in its production process, while reducing the carbon footprint of the products as they reach the world market.

Another key aspect of the SMART Cebu project was its pair of local partners, the European Chamber of Commerce in the Philippines (ECCP) and the Association in Development Financing Institutions in Asia and the Pacific (ADFIAP), a regional organisation based in Manila. After the project was completed, its website became the responsibility of ECCP. The project also collaborated closely with the Department of Science and Technology; one result of this collaboration is the eventual accreditation of most of the local trainers coached by the project.

Given the relative success of this project, other sectors in Cebu were quite eager to be the beneficiaries of a similar SMART project (e.g., hotels, resorts, restaurants, and food companies), as well as BMOs in other regions (e.g., other provinces in the Visayas and Luzon).

10.5 Conclusions

This chapter gives an overview of the SCP patterns in the Philippines, within the framework of its sustainable development. The search for simple and understandable indicators for the environmental impacts of the prevailing patterns of consumption and production in the country initially has yielded few results. Indicators that attempt to assess the overall state of environment in the Philippines were reviewed, together with those that indicate the country's ecological footprint and emissions of GHGs, as well as indicators on air pollution and the generation of waste material. The indicators show environmental degradations in all domains assessed.

Environmental policy and the legal framework that pertains to the country's laudable endeavours to switch from its unsustainable patterns of consumption and production were addressed, but the indicators suggest a considerable gap between the rhetoric of the stated policies and laws versus the environmental outcomes. This indicates that there is room for improvement in the implementation of existing policy frameworks at various levels of environmental governance.

One explanation for such a wide gap between policy design and implementation is the persisting lack of political will and bureaucratic inertia, which results in the weak — or worse, lack of — enforcement of the laws. There is, however, some attempt to improve the state of affairs, as discussed above in the case of SWITCH-Asia NPSC, which works to promote and strengthen the adoption of SCP-related policies.

The SWITCH-Asia NPSC provides technical assistance and policy support to the Philippine national government. Its three selected priority areas are the constituent elements of the country's efforts toward SCP, namely, clean energy and energy efficiency, green procurement and eco-labelling, and capacity-building at the DENR in order to enable it to address cross-cutting SCP issues, including the Clean Air Act.

To date, the NPSC has progressed well, with the recent approval of the Energy Efficiency and Conservation Roadmap by the DOE cabinet secretary. However, challenges continue, which is common with any other foreign donor's technical assistance, regarding the degree of "ownership" of the technical support being provided by the recipient agency.

Being the backbone to the economy, MSMEs were also addressed. The MSME sector makes up 99.6% of all enterprises and contributes almost 65% of jobs. A policy direction was identified by which MSMEs can be assisted as part of the national effort towards more inclusive growth and poverty alleviation.

In the context of the Philippines' pursuit of sustainable development, case studies of two completed SWITCH-Asia projects were described, with a focus on SMEs and their industrial processes, and how they may contribute to the objectives of reducing poverty and environmental degradation. Both projects had advocated a switch from business as it is to a more resource efficiency and cleaner production. By doing so, the projects contributed to a cleaner environment in their implementation areas in the

Greater Manila/Luzon and Cebu regions. To sustain the results, the projects had embarked on an outreach programme involving a large number of SMEs to further promote the adoption of RECP techniques and practices.

As with all projects that run for a limited period of time (whether foreign or domestic), the long-term desirable effects of the SWITCH-Asia projects on the target groups, especially SMEs, may not be immediately apparent.

Two final remarks can be made of this chapter. Firstly, the search for indicators that are understandable to policy makers and educated laymen has to continue — the indicators discussed in this chapter can serve as a starting point for such a search. Only through such indicators can progress in green growth and SCP implementation be monitored, and with monitoring comes the resulting pressure from citizens for further environmental action from government and companies. Secondly, there is a relationship between the push for a shift toward SCP and the climate change. As the Philippines has minor role as a global emitter, this seems to suggest the need for a rethinking of priorities in environment-related programmes. It suggests there is a “double dividend” for the country from any action to shift consumption and production to more sustainable patterns.

One dividend will be felt in the not-so-distant future — less fossil fuel fumes, pollution, waste and garbage, environmental degradation, and perhaps even less floods in cities. The second dividend is the country’s contribution toward a reduction in the emission of GHGs and its ecological footprint, which already exceeds its national biocapacity. It would seem to be the equivalent of hitting two targets (or birds) with one policy instrument (or stone), with due apology for the metaphor to the conservationists looking after the country’s national bird, the critically endangered Philippine eagle.

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