

Chapter 13

Conclusion

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Peter King and Robert Kipp

Revisiting the hypothesis

Researching and writing for this White Paper began with a simple premise—that through policies directed at engaging and enabling consumers to change their behaviour and patterns of consumption, subsequent systemic changes would take place, not only in production systems but also with subsequent effects on the underlying structure of the economy. Consumer demand and consumption, if shifted to a sustainable pattern, in theory, should influence producers to meet that demand with appropriate and sustainable production processes, greater product choice, and expanded consumption options (including services instead of products). In turn, increased choice and expanded consumption options would drive down relative prices, make sustainable goods and services more affordable and accessible, and set up a virtuous cycle leading to sustainable consumption and production (SCP). The focus on the consumer suggests policy actions which would result in (i) reducing some forms of unsustainable consumption, such as fossil fuels; (ii) increasing demand for other forms of consumption, such as renewable energy; and (iii) transforming conspicuous consumption into less ecologically demanding alternatives which could have greater personal satisfaction than found in mass consumerism.

The intent was to explore this line of thinking across many contexts in Asia-Pacific and develop new lines of thought on SCP in the region. The result is a unique set of insights on SCP in various contexts and with different combinations of stakeholder groups, roles, and responsibilities. In this final chapter these findings are brought together and the guiding questions of the White Paper are revisited, followed by final words to conclude and, hopefully, to encourage further research and action for SCP in the Asia-Pacific region.

Since SCP entered the international picture as a part of Agenda 21 in 1992 there have been two particularly challenging aspects—transforming production and market systems to support sustainable production and consumption, and realigning social and economic institutions towards new concepts of development and growth which would sustain or improve quality of life while minimising environmental impacts. These challenges were clearly based on acknowledging the unsustainable overconsumption of most of the world's developed populations, and the trend among the emerging middle class of consumers in developing economies to follow those same consumption patterns. Inevitably these trends would take us to the limits of the Earth's carrying capacity to provide for these consumption levels and absorb the resultant emissions and waste.

In Asia, the great majority of achievements to date on SCP have come through technological innovations and production efficiencies, with inadequate attention given to social and economic changes that would impact on the consumption side of the equation. There is less literature and research on sustainable consumption and fewer tangible measures than those available for production systems or recycling processes, as SCP

has its roots in cleaner production initiatives. Improving efficiency and reducing waste in a factory, while difficult enough, is much more straightforward than changing individual desires for a new car or revealing personal preferences for less wasteful packaging. As a result there is an imbalance when all the policies on sustainable consumption are added together in that they do not yet add up to the promise of the big picture of sustainable consumption driving sustainable production.

It may not be possible to clearly define sustainable consumption patterns in a simple way so as to satisfy all contexts, in addition to the complications arising from the many reasons for consumption. Teenagers in Bangkok purchasing local fashion brands; the convenience and price-oriented continuous consumption by households; new urbanites in Beijing and Mumbai driving to work in their newly affordable car—each represent a different reason for consumption and warrant a suitably varied policy approach to support measures to consume less, to consume differently, and to live sustainably. In addition to the consumers are all the other stakeholders in the lifecycle of a product or service—those who extract the natural resources, the processor and transporter, the packager and recycler—each of whom work in a particular context with a unique and varying contribution to SCP. The previous chapters show that by and large a multistakeholder approach with a dynamic policy mix is the most appropriate course of action, but that the role of specific stakeholders can vary or even be quite limited depending on the context.

Another set of challenges relates to poverty alleviation, not only with the question of how to continue making progress on such important agendas as the Millennium Development Goals, but also ensuring that the outcomes—short and long term—are sustainable. Unsustainable consumption of course remains undesirable regardless of whether the consumer is poor or rich. In the first chapter, the term “aspiration treadmill” was used, which describes efforts to constantly strive for greater income and greater consumption, while one’s lot in life remains relatively unchanged. Without the element of sustainability, of taking a perspective which accounts for economic, social, and environmental considerations for current and future generations, poverty reduction efforts may result in the position of the poor remaining relatively unchanged due to changing climatic conditions and stiffer competition for resources. In other words, an alleviation treadmill occurs across populations as ecological degradation undermines efforts to improve quality of life and well-being.

However, as the cases in this White Paper have shown, there are significant changes taking place in policies and in people’s minds which are encouraging developments, although there is still a long way to go. In summary, there is limited support for the starting hypothesis but an increasing recognition that such relationships between consumers and producers are not only essential but also feasible in the context of the development challenges facing the Asia-Pacific region.

Stakeholders at the centre of SCP

As has been extensively discussed in the previous chapters, it is difficult for any single stakeholder group to act alone, in particular end consumers, to effectively change the complex system of production and supply chains. In addition, focusing on one stakeholder group to the exclusion of others will not result in the broader systemic changes in society that are essential for SCP to take root. In Table 13.1, each of the major stakeholder groups are listed together with a description of their primary roles and responsibilities in SCP and the corresponding chapter in which they are the primary focus. Each group of course has many roles to play and actions to take, highlighting the

key message of this White Paper of the urgent need for multistakeholder cooperation, coordination, and communication.

Table 13.1 Stakeholder roles

Stakeholder	Primary role and responsibilities	Chapters and topic
Local governments	Foster conditions for sustainable consumption and production practices in their communities to engage and coordinate with other stakeholder groups; implement if necessary or support implementation by other stakeholders.	Chapter 2 – Packaging: waste management Chapter 3 – Education: non-formal and informal Chapter 5 – Local initiatives: support of mayors and other local government agencies Chapter 6 – Community engagement
National governments	National legislation and regulation to redirect consumption to sustainable goods and services; leading through green procurement and choice editing.	Chapter 2 – Packaging Chapter 3 – Education Chapter 4 – Business and the environment Chapter 5 – Local initiatives Chapter 6 – Community engagement Chapter 7 – Water consumption Chapter 8 – Forests Chapter 9 – Renewable energy Chapter 10 – Agriculture Chapter 11 – Climate imperatives Chapter 12 – Transboundary issues
International organisations	Negotiate global agreements; transfer of technologies and harmonised standards.	Chapter 5 – Local initiatives Chapter 11 – Climate imperatives
Nongovernment organisations	Operate in areas governments may not have the will or capacity to work in, by utilising access to local networks and international know-how and resources.	Chapter 3 – Education Chapter 5 – Local initiatives Chapter 6 – Community engagement
Businesses and retailers	Environmental information disclosure; influence consumers to consume and use products sustainably, innovate ecologically sound practices throughout the value chain, and eliminate unsustainable products and practices.	Chapter 2 – Packaging :eco-labelling, embedded carbon Chapter 4 – Business and the environment: influence through global supply chains
End consumers	Access information and discriminate against ecologically unsound producer choices, thereby making informed, ecologically sound purchasing decisions; at the end of use, ensure proper disposal.	Chapter 2 – Packaging Chapter 3 – Education Chapter 4 – Business and the environment Chapter 5 – Local initiative Chapter 7 – Freshwater Chapter 9 – Sustainable energy Chapter 10 – Food safety Chapter 11 – Climate imperatives
Brand owners	Environmental and health information on labels.	Chapter 2 – Packaging: standardised containers suitable for recycling
Investors	Socially responsible investment that precludes investment in unsustainable production.	Chapter 4 – Business and the environment

Each stakeholder group has defined roles which they may typically play, while collaboration, cooperation, and agreement among the stakeholder groups are necessary to achieve the desired policy outcomes. No stakeholder group alone could or should be responsible or held accountable for the success or failure of SCP regardless of context.

Policy mixes

As this White Paper has shown, some sectors and contexts have more potential for government policies to make a difference by emphasising either production or consumption—despite the inherent duality of SCP. In addition, analysis across the broad contexts detailed in this White Paper has shown there are no silver bullets or simple one-shot policy solutions for SCP. Each chapter and the case studies within have outlined numerous policy types and recommendations which are dependent on their respective context. Table 13.2 summarises these policy types and shows examples of some of the options that could be undertaken. For this summary, these policies are taken out of their original context, but a reference is given to chapters where fuller detail of the context and situations where these options were or can be engaged.

Table 13.2 Policy recommendations for Sustainable Consumption and Production

Type of Policy	Examples	Source Chapter
Command and control	Food safety standards Choice editing Extended Producer Responsibility Building regulations Norms and standards Forest product trade regulation Mandatory corporate environmental information disclosure	Chapter 10 – Agriculture Chapter 2 – Packaging Chapter 2 – Packaging Chapter 11 – Climate imperatives Chapter 9 – Sustainable energy Chapter 8 – Forest Chapter 4 – Business
Market-based	Pollution charges Water pricing Economic incentives/disincentives	Chapter 7 – Water Chapter 7 – Water Chapter 11 – Climate imperatives
Voluntary	Voluntary corporate environmental information disclosure Voluntary forest certification	Chapter 4 – Business Chapter 8 – Forest
Information-based	Eco-labelling Carbon content labelling Nutritional labelling Social marketing Formal/informal/non-formal education Consumer education Communication and information sharing Capacity development Outreach – workshops, movies, posters	Chapter 1 – Introduction Chapter 3 – Education for sustainable consumption Chapter 4 – Business Chapter 5 – Local initiatives Chapter 6 – Community engagement Chapter 8 – Forests Chapter 10 – Agriculture

Some policies in Table 13.2 can be either voluntary or involuntary, depending on the extent of government involvement. For example, corporate environmental information disclosure can be done voluntarily or through regulation, as can forest certification and choice editing. Additionally, some information-based policies can be voluntary or mandatory, such as eco-labelling, carbon content labelling, and nutritional labelling. Relating to stakeholder groups and the importance of context, there is also variation within types of policy as to which group's actions are voluntary or mandatory. For example, it may be required for a certain type of imported good to be derived from sustainable sources and given an "eco-label," but the end consumers are not required to purchase goods with the eco-label. However if the end consumer is the government, it is not uncommon for procurement policies to include requirements for eco-labelling of all goods procured. So there can be diversity within regulations which allow for voluntary and requisite consumption, as well as voluntary or requisite measures.

Enabling factors for effective policy responses

The purpose of this section is to briefly outline the rationale behind the policy recommendations from each chapter and the enabling factors of the context in which they were made (Table 13.3). Enabling factors include supporting conditions and measures such as other policies, programmes aligned to the objectives and goals of a policy, tools, and initiatives that contribute to achieving the aims of SCP and the recommendations and insights developed in this White Paper. This illustrates that the right mix of stakeholders and policies alone may not be sufficient to achieve SCP unless the appropriate enabling environment is also present or can be created.

Table 13.3 Enabling factors to ensure successful SCP policies

Chapter	Context	Enabling Factors
2. Packaging	Minimising unsustainable packaging in the global value chain.	Policies must target the lead actors (brand owners and retail chains), who have the greatest influence over packaging choices, while empowering other stakeholders through multistakeholder processes.
3. Education for Sustainable Consumption	Consumer education and provision of information.	Make consumers aware of their central role in SCP and empower them to choose responsible, sustainable lifestyles through reflective self-transformation.
4. Business	Corporate environmental information disclosure.	Provision of accurate information for stakeholders; empower stakeholders to generate sufficient pressures/incentives; and combine disclosure with command and control and market-based policies.
5. Local Initiatives	Promoting local initiatives for sustainable consumption.	Proactive actions by coordinators and facilitators to consult with and engage local stakeholders; responsiveness to local issues and concerns; support by local government leaders; and gaining external support.
6. Community Engagement	Empowering communities to undertake sustainable consumption practices.	Analyse and build on the strengths of community characteristics; choose communities open to external influences; motivate and mobilise people; and use multi-stakeholder partnerships to amplify project impacts and safeguard communities from risks.
7. Water	Sustainable water consumption through economic instruments.	Establish clear water use rights through integrated water resources management; create user willingness to pay by providing good and trustworthy services, including accurate measurement of water use.
8. Forests	Realigning tropical forest product trade towards SCP through voluntary and regulatory actions in consumer economies.	Coordinate actions in consumer economies with support to tropical forest managers to improve forest management practices and the security of supply chains to increase supplies of verified legal and certified sustainable timber.
9. Sustainable Energy	Promoting renewable energy for electricity, heating and transport.	Putting a price on carbon, coordinated renewable energy share targets, subsidy-switching from fossil fuel sources to renewable energy, and recognising the co-benefits of renewable energy; capacity building and training, technology transfer, research and development, and good governance; empower the choices of individuals, industries, and communities preferring non-fossil fuel sources for electricity, heating and transport uses.
10. Agriculture	Promoting food security and food safety.	Harmonisation of food safety standards, policy coordination through a lifecycle assessment approach, producer and consumer capacity building and information provision, and better storage infrastructure.

Chapter	Context	Enabling Factors
11. Climate	Minimising the consumption of energy services in the building and transport sectors.	Subsidies and information campaigns to accelerate deployment and drive economies of scale for energy efficient technologies and practices in the buildings sector; investment in bus rapid transit, railways and district heating and cooling; and avoiding the lock-in of unsustainable development driven by carbon-intensive technologies.
12. Transboundary Issues	Promoting regional cooperation in SCP in the Asia-Pacific region.	Avoid policies with negative spillover on neighbouring countries; use existing platforms for regional cooperation; address environmental "hot spots" in the global value chain through bilateral, regional and international cooperation.

Noteworthy from this summary of the enabling factors is the commonality of the importance of multi-stakeholder engagement, alignment of goals and policies, the importance of accurate, timely information to consumers, and the need for leadership roles at different levels.

Revisiting the questions from chapter one

The purpose of this section is to determine if the White Paper has provided answers to the questions posed to various stakeholder groups in chapter 1 by bringing together the key messages of each chapter.

The Overarching Questions

- (i) *Can Asian economies continue to grow at 6-10% per annum without increasing its already unsustainable consumption of energy and raw materials;*
- (ii) *Can Asia decarbonise, dematerialise, and decouple energy consumption, and consume sustainably in the face of widespread Western-style lifestyle aspirations; and*
- (iii) *Can Asian governments be expected to strive for an economic model of prosperity without unsustainable growth, any time soon, given the overwhelming emphasis on tackling the region's enormous incidence of poverty?*

There are no definitive answers to these questions, although this White Paper holds out some tantalising possibilities for making such changes in a timely manner. For example, as Asia urbanises there is no need to follow outdated urban forms, inefficient building designs, or personalised mobility—and Asia is just at the start of a long-term trend towards a predominantly urban society. The need for a low carbon society has been recognised by several governments in the region, and through appropriate policies, the future urban form of Asia could be quite different from the car-oriented, suburban sprawl of countries such as the U.S. Similarly, Asia's profligate use and likely future shortages of water due to climate change can be averted by placing an appropriate price on water, recognising not only its direct uses but also the ecosystem services that it supports, and through integrated water resources management. Ironically, climate change has driven home to decision makers the diverse functions and values of tropical forests, such as biodiversity protection, carbon sequestration, and the provision of ecosystem services. Putting in place a global system that joins the forces of consumer societies and tropical forest managers, however, remains a complex undertaking. A particularly valuable finding of the White Paper is that SCP policies in one country may have negative spillover

effects on trading partners and globally all nations will be better able to move towards a sustainable society if they collaborate and cooperate.

Some questions for policy makers: *To what extent do current subsidies and other perverse incentives impede SCP? Do changes in domestic policy have transboundary consequences that may lead to unsustainable consumption and production in neighbouring countries? Does current government procurement foster SCP? How can governments provide additional incentives to change consumption behaviour? Does government policy ensure adequate choice for concerned consumers (e.g., services rather than goods)?*

In several chapters, the negative influence of subsidies and perverse incentives were noted as impeding factors, especially in relation to water, forests, and energy. Chapter 12 conclusively shows that domestic policy with transboundary consequences can lead to undesirable outcomes in neighbouring countries, as well as demonstrating the global benefits of collaboration and cooperation. Green procurement and choice editing, along with government investments in sustainable infrastructure that reduces energy demand and are supported by renewable energy, along with local government support for sustainable consumption initiatives are seen as key elements in promoting SCP. Government policies such as mandatory eco-labels, corporate environmental information disclosure, embodied carbon labelling, and water pricing, among many other policies referred to above, provide additional incentives to change consumption behaviour. There is less evidence, however, that governments are prioritizing SCP or doing enough currently to ensure adequate choices for concerned consumers –and as a result are continuing to allow policies which contribute to unsustainable consumption and production to persist.

Increased policy attention to measures like choice editing, such as recent bans on incandescent lighting and car quotas in urban areas, is needed urgently so that consumers have an adequate range of sustainable products and consumption options to choose from.

Some questions for business leaders: *To what extent is consumer demand from Asia's emerging middle class for better environmental information driving changes in production systems in Asia? As Asia is the "factory for the world," how important are changing consumer attitudes in developed country markets in changing Asian producer practices? Are Asian producers anticipating the negative impacts of adverse consumer reactions and potential reputation risks and changing production practices before they are forced to? To what extent are Asian producers going beyond corporate social responsibility (CSR) and "greenwashing" and actually designing and producing innovative green products? Is mandatory environmental disclosure essential, or would voluntary approaches suffice? What is the optimal policy stance of governments from a business perspective? How important are shareholders, investors, and company staff in changing company environmental practices?*

From the evidence presented in the White Paper, there are scattered examples of responsible businesses in Asia attempting to respond to consumer demand for more sustainable products, but this is not yet a groundswell. Companies in China and India, among others, are becoming global leaders in areas like electric cars and motorcycles, wind turbines, and solar panels, but they are still addressing niche markets rather than mass consumption. Voluntary environmental information disclosure seems to work best when it is backed by the threat of command and control regulations or other government interventions. As shown in the packaging examples, while changes are needed across the entire value chain, government intervention will be most effective when it is targeted

at the lead actors, or those with the most power in a chain of relationships. In the case of packaging, this tends to be the brand owners and retailers (often the same entities), who ultimately decide which products and which forms of packaging to put on the store shelves. In other cases, ethical investors and other socially responsible shareholders can be very influential in changing corporate behaviour. Accordingly, policies that exclusively address consumers may be less effective than expected, as consumers may not carry sufficient weight in the decision making chain, in addition to being constrained by the systems of provision and opportunities presented to them—issues which are compounded by the influence of advertising and social norms for consumption and how we spend our earnings.

Some questions for educators: *Is there an adequate curriculum for formal education on sustainable consumption in Asia? What kind of environmental information should be produced to meet the information needs of concerned consumers in different age groups? What can we learn from previous successful education campaigns in changing consumer behaviour? What is the government's role in promoting education for sustainable consumption? How important is comprehensive environmental information as an input to education for sustainable consumption? Who is regarded as a competent and trusted provider of such information?*

The chapter on education for consumers points out that to achieve the aims of SCP education needs to go beyond formal education to include non-formal and informal education as well. Nevertheless, in the case examples from Northeast Asia, the governments of Japan, China and Republic of Korea have all provided mandates to their governmental agencies to begin promoting responsible consumer behaviour for a low-carbon society and to initiate educational campaigns on sustainable consumption. The eleven cases offer useful lessons for expanding education for sustainable consumption throughout Asia. The importance of accurate, meaningful, and timely information was stressed and the governments have a key role in ensuring that such information is provided to consumers. The issue of trusted information providers is critical, as “greenwashing” provides a convenient excuse for consumers not to change their consumption patterns. Sustainable consumption can never be achieved only by individual consumers simply switching over to green products—education and information play key roles in changing behaviours and developing innovations for low-carbon pathways.

Some questions for consumers: *Dominant cultural patterns that view increasing consumption as normal and natural are unsustainable. If (or when) this becomes the dominant cultural paradigm in Asia, the world's ecosystems will collapse, probably irretrievably, and it is uncertain how many people the planet will be able to accommodate. Of course, we must all continue to consume to stay alive, and no one would deny the right of the world's poor to achieve a basic level of comfort and well-being through increased consumption. Can consumers in the developing and developed worlds find a level and form of consumption that not only meets human needs but is also sustainable?*

There is some debate over whether consumers in Asia will automatically follow a similar consumption path to their cohorts in the U.S. and Europe. There is a rather romantic notion that Asian consumers will readily identify with traditional consumption behaviour, such as the “*mottainai*”¹ movement in Japan or Mahatma Ghandi's “homespun” traditional clothing. There is no doubt that very large parts of Asia continue to practice traditional forms of consumption, as poverty allows for no other options. However, once lifted out of poverty, mass consumption appears to be sufficiently seductive to become a global phenomenon. This White Paper confirms the findings of many other authors that resource constraints or the ability of the Earth to absorb wastes will eventually stretch

one or more of the planetary boundaries to the breaking point, with the usual response to simply shift to another constrained resource and continue the cycle. The challenge remains to find forms of consumption and production that meet human needs for current and future generations, without crossing the thresholds of the planet's ecosystem services, and working to replicate or develop these practices to suit the local context while avoiding free riders and transboundary negative externalities. Progress towards a low carbon society, as illustrated in several of the chapters, is evidence that consumption patterns are beginning to change, but much more needs to be done.

Priority research areas

The purpose of this section is to outline the priority research areas for the region by drawing on the previous twelve chapters.

All of the stakeholder chapters emphasise the need for additional research on effective incentives for participation, standards and labelling information to guide consumers and producers, regulatory and economic frameworks that enable or constrain consumer choice, and appropriate infrastructure for sustainable consumption. For sustainable packaging in the Asia-Pacific region more cases and insights are needed on harmonizing packaging standards and on the creation of multi-stakeholder review panels for advancing sustainable packaging. More effective corporate environmental information disclosure, as a multistakeholder approach that links companies, the governments, the community and the market is another aspect of SCP that has to be examined through additional case studies in the Asia-Pacific region. Additional research is needed in the case of local government and community-based initiatives on how successful pilot projects can be scaled up and replicated.

The education for sustainable consumption (ESC) chapter presented a framework for initiating and implementing ESC initiatives, with case analysis provided in support of this framework. In order to develop substantive conclusions on the long-term effectiveness of ESC, additional studies should be carried out on changes in consumer practice following implementation of specific policy measures since the overall goal of ESC is to affect changes in consumer behaviour. Further research should be done on the ways and means of influencing social and cultural patterns of behaviour and creating impacts for paradigm changes aiming for sustainable lifestyles and practice in the Asia-Pacific region. Strong synergies exist between the future research needs on stakeholder groups, in particular for modifying attitudes and the systems that facilitate or constrain behaviour, and the infrastructure that provide the goods, services, and lifestyles of contemporary consumption.

To achieve sustainable consumption in the forest sector, forest management plans must reflect the broad array of principles required to achieve sustainable production over the long-term, such as secure and equitable tenure arrangements, and respect for the rights and needs of forest dwelling and forest fringe communities. Additional research is needed on how sustainable consumption policies in developed countries will affect these broader aspects of forest management and not just the legal source and sustainable logging issues.

In the water sector, issues surrounding privatisation of water and economic instruments such as water trading require additional research to ensure that market-based instruments do not end up as another way to disadvantage the poor. There is no question that effective water pricing can influence sustainable consumption of water,

but subsidies to low income families or minimum water rights as a basic human need may be necessary to balance the equity issues that arise. The effect of water pricing on users that have no way to participate in the market, such as aquatic species, also needs additional research. In agriculture, continuing research is needed on the extent to which organic agriculture can feed the growing world population and the impacts of chemical agriculture on human health and ecosystems.

In the energy sector, lifecycle assessment studies are needed to ensure that consumer choices are guided by comprehensive information, for example, under what conditions rail transport is a more sustainable option than motor vehicles. Are multiple storey houses more energy efficient than single storey buildings? Should a household consumer choose solar photovoltaic energy for the rooftop or a wind turbine? Such major investments are often postponed or avoided entirely due to lack of accurate, reliable information.

In the cross-cutting and transboundary issues chapters, additional research was found to be needed on embodied carbon emissions, and similar issues such as virtual water, in the context of global trading. Identifying carbon-intensive “hot-spots” and then investing in abatement and technology advancement can achieve an effective reduction of greenhouse gas emissions and improve the overall environmental performance of a product. With a consumer-driven global economy dependent on fossil fuels for energy, each consumption decision affects the amount of greenhouse gases released, but additional research is also needed on what else is emitted or discharged. A product choice that merely swaps the nature of emissions from greenhouse gases to toxic or hazardous chemicals would do little to advance the concept of sustainable consumption. Similarly, government policies and product choices that advance environmental protection in the domestic economy but shift pollution to producer countries need to be better understood, so that governments can take regional and global coordinated action.

Final words

This White Paper has focused on a relatively little studied or understood part of the SCP duality in Asia-Pacific—sustainable consumption. Consumers may feel rather powerless in changing the production behaviour of companies let alone the underlying structure of the economy through each consumption choice that they make. The power comes from the accumulated impacts of millions of consumption choices made every day, but there are few obvious avenues to channel that cumulative impact into the driving force of SCP. As illustrated in the chapter on packaging, consumers are forced to take a component of a product that is incidental or surplus to the primary product that they wish to purchase. In other cases, either a more sustainable choice is not available, is not viable, or it is priced too high to be accepted as a mass consumption item. In finding effective ways to get through to consumers and policy makers and mainstreaming SCP, there are still the political, economic, and social infrastructures to be developed to support the 21st century as the Asian century, where the road to development and happiness is not based on greater consumption and accumulation of possessions for all, but improved quality of life and Asian consumers who are proud of their environmental credential and low-carbon growth path.

Governments have a critical role in changing the asymmetry between consumers and producers. First, governments are large consumers in their own right and through green procurement they have sufficient purchasing power to change some production decisions. Second, they can change the balance between sustainable and unsustainable products through command and control regulations, market-based instruments, and

information-based policies, so that unsustainable products are banned or discouraged and sustainable products are given seed funding, subsidies or other incentives, at least until they are competing on the same level as their less sustainable competitors. Third, they can make sure that consumers are educated and informed about the consumption choices they make through mandatory (or voluntary) eco-labelling, embodied carbon labelling, improved content labelling, and information and education campaigns for sustainable consumption.

Businesses exist, of course, to make a profit. Fortunately, many businesses are beginning to realise that increased profits can be made through provision of sustainable products. In some cases, their major stockholders, owners or employees are instrumental in changing company priorities towards sustainable production. In other cases, progressive companies seek first mover advantage or try to stave off impending regulation by moving their product lines away from unsustainable practices. Larger companies, acting through supply chains, can also influence small and medium enterprises through product specification and standards that are designed to meet sustainability principles. It is still the case however that many companies, in particular those working directly with natural resources, continue with unsustainable practices—again highlighting the need for government action and transboundary cooperation, coordination, and communication.

An overwhelming message of the White Paper, however, is that the best results are achieved when all stakeholders work together to achieve a common vision of sustainable development for current and future generations. The preceding chapters illustrate how multiple stakeholders have their individual roles to play but are also encouraged to form partnerships, roundtables, agreements, harmonised standards and other forms of cooperation to achieve the common aspirations of sustainable consumption and production. Multistakeholder cooperation is challenging, but essential for the future of a planet currently imperilled by over-population and over-consumption and facing the prospects, for the first time in human history, of breaching the planetary boundaries that characterise our life support system and the habitats of the millions of species that share the planet with us.

Notes

1. *Mottainai* is a Japanese phrase which has in recent years gone global. The basic meaning is to avoid wasteful use of resources, and generally it is used for avoiding wasteful use in our everyday lives such as energy, food, and water.