Chapter 3

Pathways for Promoting Sustainable Consumption: How governments can initiate effective Education for Sustainable Consumption
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Mee Young Choi and Robert J. Didham

1. Introduction

The main objective of this chapter is to provide a clear pathway for governments to implement effective Education for Sustainable Consumption (ESC) programmes that enable and encourage consumers’ proactive participation in sustainable consumption.

This chapter’s look at ESC is developed by seeking answers to the primary research question: How can governments effectively influence consumer decision making through education for sustainable consumption? The result of this analysis is a holistic and strategic approach for advancing ESC knowledge, practice, and policy in the Asia-Pacific region.

The development of ESC strategies links closely with the United Nations Marrakech Process on Sustainable Consumption and Production (SCP) led by the United Nations Environment Programme (UNEP) and the United Nations Department of Economic and Social Affairs (UN-DESA). One of the four main policy themes that have been highlighted as areas of focus for the Commission on Sustainable Development (CSD) to address is “changing consumer behaviour” through the application of policy instruments on consumer education and information provision. In 2010-11, the 18th and 19th sessions of the Commission on Sustainable Development (CSD-18/19) will review the findings of the Marrakech Process and develop a Ten-Year Framework of Programmes (10YFP) on SCP. In the current draft of the 10YFP on SCP, education on SCP and sustainable lifestyles is identified as one of the priority programmes to be elaborated (UN-DESA/UNEP 2009).

Chapter Highlights

This chapter investigates government mechanisms for implementing strategic Education for Sustainable Consumption (ESC). ESC is vital to increase individual participation in sustainable consumption, and also to provide the means for an individual to begin to incorporate the principles of sustainable development into everyday life. Specifically, this chapter will look at the following areas:

- Consumer education for sustainable consumption should address ways to influence the individual consumer at the level of personal decision-making on consumption and how to develop a supportive social infrastructure that fosters sustainable consumption.
- The identification of the five primary mechanisms to promote sustainable consumption provides the basic outline of how ESC is understood and investigated in this chapter.
- Policy implications for the general structure and specific content of effective ESC policies are highlighted.
- A Five-Point Strategy to plan ESC provides a step-by-step process for planning and implementing an effective campaign on consumer education for sustainable consumption.
During a regional workshop on ESC hosted by IGES in Beijing in July 2009, government officers from Japan, China and the Republic of Korea agreed that current governmental capacity in Northeast Asia for addressing ESC is insufficient due to a critical lack of evidence on what constitutes effective ESC policies and how to prepare cost-effective ESC strategies. It was further highlighted at this workshop that advancing ESC leadership and strengthening governmental capacity for executing ESC are priority concerns for achieving sustainable consumption and the transition to a low-carbon society (IGES 2009).

The governments of Japan, China and the Republic of Korea have all provided mandates to their governmental agencies to begin the promotion of responsible consumer behaviour for a low-carbon society and to initiate educational campaigns on sustainable consumption. For example, the Japanese Cabinet Office established a group on Consumer Citizenship for Sustainable Consumption in its Economic and Social Research Institute to provide support for the Consumer Affairs Agency to promote sustainable consumption.\(^1\) At the Eleventh Conference of the National Party of China in 2008, a new mandate was agreed for “the promotion of green consuming” to correlate with the Circular Economy Promotion Law (effective 1 January 2009). The Centre for Environmental Education and Communication, an agency of the Ministry of Environmental Protection, was given the mandate to promote green consuming and initiate ESC.\(^2\) The Korean Presidential Committee on Green Growth established a Green Lifestyle for Sustainable Development Team and coordinates national activities on Education for Green Growth, including consumption practices.\(^3\) However, although the political mandate and will-power exists to enact ESC programmes in these three countries, they remain essentially unformulated because of the current lack of capacity and leadership for ESC within these governments.

### 1.1 Key concepts of investigation

**Education**

Education is often thought of in the narrow sense of formal education that occurs in schools and universities. However, in a broader sense, education includes formal, non-formal and informal education. Formal education is what is usually recognised as the “education system” and is usually hierarchically structured around curriculum-based learning. Non-formal education in general is structured educational activities that occur outside of formal education. These non-formal educational activities include professional training, community-based education and consumer education campaigns. Furthermore, non-formal educational activities are usually short-term, practical-based and learner-centred but with identifiable learning objectives. Informal education describes the life-long learning process that occurs through daily living and experience. Informal education can be bolstered with appropriate knowledge/information provision and with effective learning tools (Infed 2009). In relation to this chapter, non-formal education is given slightly greater emphasis for increasing consumer practice in sustainable consumption, although all forms of education are needed.

The concept of education considered in this chapter, and in ESC in general, is viewed from a non-traditional understanding that advances a new pedagogical theory for the focus and processes of education and learning as a whole. This incorporates a broad scope for education that includes both the teaching and learning of knowledge, skills, morals and behaviour patterns that advance an individual’s development and socialisation. The UNESCO Task Force on Education for the Twenty-first Century identified four main pillars of learning in *Learning: The treasure within* (1996): learning to know, learning to do, learning to live together, and learning to be.
Learning to know is the process of mastering learning tools and building the capacity to be a life-long learner. Learning to do focuses on occupational training and educating people to be valuable assets in their employment while also acknowledging the adaptive labour needs of the modern market. Learning to live together entails the incorporation of education into citizenship and social life, thus providing individuals with the abilities to participate in cooperative communities. Finally, learning to be entails supporting the full development of each individual and their self-expression (Delors et al. 1996).

Education for Sustainable Development

Education for Sustainable Development (ESD) is promoted as a process to engender a culture that is respectful to the core principles of sustainable development, and ESC is often identified as an important ESD component rather than a separate, stand-alone process. United Nations Educational, Scientific and Cultural Organization (UNESCO) define "education for sustainable development" in three parts:

- Education that enables people to foresee, face up to and solve the problems that threaten life on our planet.
- Education that disseminates the values and principles that are the basis of sustainable development (intergenerational equity, gender parity, social tolerance, poverty reduction, environmental protection and restoration, natural resource conservation, and just and peaceful societies).
- Education that highlights the complexity and interdependence of three spheres, the environment, society—broadly defined to include culture—and the economy (UNESCO 2005, 5).

For ESD, a fifth pillar is added to the pillars of learning identified in Learning: The treasure within (Delors et al. 1996), discussed in the previous section. The fifth learning pillar is referred to as “learning to transform society and change the world.” The objective of this fifth pillar is for individuals to gain the skills and knowledge to achieve social goals such as social equality, non-discrimination, social solidarity, transition to a low-carbon society and to live sustainably (Shaeffer 2006).

ESD is an important component of sustainable development, with 2005-2014 dedicated as the UN Decade of Education for Sustainable Development (DESD), with UNESCO as the lead organisation. The main priorities of the DESD have their roots in the objectives detailed for education in chapter 36 of Agenda 21 (1992). UNESCO also draws links between efforts on DESD, the Millennium Development Goals (MDG), Education for All (EFA), and the United Nations Literacy Decade (UNLD) (2003-12). The overarching goals of DESD are outlined by UNESCO as:

- **Promote and improve the quality of education:** The aim is to refocus lifelong education on the acquisition of knowledge, skills and values needed by citizens to improve their quality of life.
- **Reorient the curricula:** From pre-school to university, education must be rethought and reformed to be a vehicle of knowledge, thought patterns and values needed to build a sustainable world.
- **Raise public awareness of the concept of sustainable development:** This will make it possible to develop enlightened, active and responsible citizenship locally, nationally and internationally.
- **Train the workforce:** Continuing technical and vocational education of directors and workers, particularly those in trade and industry, will be enriched to enable them to adopt sustainable modes of production and consumption (UNESCO 2009a, 7).
One of the major challenges facing ESD is the fact that it is a very diverse and complex subject. Some of the topics it incorporates are practical, while others can be highly theoretical or even disconnected from daily life – which includes broad sweeping criteria that shift between democratic participation and ecological restoration, to poverty eradication and universal health care. Of course, all of these issues are important if we want to achieve a shift to a sustainable society, but it also creates a challenge for providing a clear pathway for sustainability learning and practice. In light of this challenge, sustainable consumption provides a narrower, practical topic of focus that allows for deeper exploration of many of the thematic issues surrounding sustainable development.

**Education for Sustainable Consumption**

Sustainable consumption is a topic that most individuals can understand directly within the context of their daily lives, and thus as a sub-set of sustainable development, sustainable consumption is a practical activity through which people can practice the elements of sustainable development. ESC has a two-fold objective: first, to advance participation in sustainable consumption practices; and second, to provide a tangible entry into the wider “philosophy” of sustainable development. Although ESC provides a specific topical focus, it also allows for and necessitates a broad investigation of social, environmental and economic aspects to truly understand what makes specific consumption practices sustainable or not.

ESC is thus considered a part of ESD, and it is recognised as a very valuable arena for displaying feasible applications of the underpinning principles of ESD. The mid-term report for DESD expands on this idea:

Education for Sustainable Consumption (ESC), a core theme of Education for Sustainable Development, is essential to train responsible citizens and consumers in this context: individuals need to be aware of their fundamental rights and freedoms, appropriately informed to participate actively in the public debate, oriented towards a conscientious participation in the markets. Hence, ESC has become a core component of ESD and global citizenship and generates awareness of the interrelatedness of central ESD issue (UNESCO 2009b, 50).

Sustainable consumption provides an educational topic for the wider theories of sustainable development from which the individual can apply direct practice to their daily life through sustainable consumption choices, and in so doing, gain a greater understanding of and contribute to the broader goals of a transition to a sustainable society. As Thoresen (2008, 9) states, the main challenge in relation to education for sustainable consumption is how to support initiatives which stimulate the individual’s awareness of the central role they play in forming society and empower them to choose responsible, sustainable lifestyles.

ESC is investigated in this chapter as a primary means for advancing the proactive participation of individual consumers in sustainable consumption. Education is not viewed as the only means for promoting sustainable consumption, however, and in many cases regulatory or economic instruments may produce more immediate, if not more effective results. However, educational instruments, coupled with information provision, address the consumer as a free-willed individual with the right to choose to participate (or not) in sustainable consumption. Regulatory and economic instruments act upon the consumer directly or indirectly through command and control policies and incentives or disincentives, for example, while education encourages a reflective self-transformation by the individual in his consumption practices. Similarly, there are many stakeholders who influence the consumption chain, depending on context, and although consumers may have little influence...
across many aspects of the consumption chain they remain an important stakeholder in the
process since ultimately they are the ones making the final decision to purchase.

1.2 International consensus on Education for Sustainable Consumption

Building on the structure of SCP, a strong impetus for ESC has developed—especially
since the World Summit on Sustainable Development in 2002. Following this, the
Marrakech Process began in April 2003 as an international fact-finding collaboration with
the primary goal of producing a 10-Year Framework of Programmes (10YFP) on SCP in
2010-11. These two years remain crucial for producing strategic evidence based on ESC
research as a build up to the implementation of a 10YFP on SCP as the result of the
Marrakech Process. UNESCO/UNEP have provided guidelines for future advancement
of ESC:

• Introduce sustainable consumption issues into school curricula, materials, and
teacher kits.
• Include indigenous knowledge on sustainable development and sustainable
consumption, as well as media literacy into curricula and teaching materials.
• Promote among education experts and governments the potential for developing
curricula, which combine media education with environmental education.
• Explore the possibility of developing more workplace learning activities on
sustainable consumption for the young and the elderly.
• Identify ways to involve young people in decision-making such as giving them seats
on an advisory council of an institution.
• Develop and implement an awareness raising campaign on sustainable consumption
and shopping behaviour in collaboration with the advertising industry (UNESCO/
UNEP 2001, 195-6).

There remains significant scope to examine how international policy can effectively
promote the implementation of ESC initiatives at national and local levels (See Box 3.1
for an outline of key international agreements on SCP and ESC.)

Box 3.1 The historical impetus for ESC in international policy

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992, June</td>
<td>Rio Earth Summit: SCP is outlined in “Chapter 4: Changing Consumption Patterns” of Agenda 21.</td>
</tr>
<tr>
<td>2002, September</td>
<td>World Summit on Sustainable Development (WSSD): SCP is identified as one of the three overarching priorities for the realisation of sustainable development in Plan of Implementation of the World Summit on Sustainable Development.</td>
</tr>
<tr>
<td>2002, September</td>
<td>WSSD also provides call for the development of a 10-Year Framework of Programmes on SCP and identifies the need for education initiatives to be part of policy.</td>
</tr>
<tr>
<td>2003, April-May</td>
<td>Meeting of UN Commission on Sustainable Development (CSD-11) initiates the Marrakech Process to produce a 10YFP, and includes the goals to: assist countries in their efforts to green their economies, help corporations develop greener business models, encourage consumers to adopt more sustainable lifestyles.</td>
</tr>
<tr>
<td>2003, June</td>
<td>First International Meeting of Experts on Sustainable Consumption and Production at which the formation of seven task forces are initiated to further the Marrakech Process through policy initiatives, research activities and pilot projects. Connected to ESC are: “Education for Sustainable Consumption” (led by Italy) and “Sustainable Lifestyles” (led by Sweden).</td>
</tr>
</tbody>
</table>
2. Analytical approach

This chapter promotes the idea that governments are key stakeholders who can strongly influence consumer choice through ESC by using policy tools which:

- provide an understanding of the environmental imperatives;
- empower individuals to be actors in protecting the environment;
- explain the importance of sustainable consumption within this imperative; and
- develop a supportive social infrastructure for sustainable consumption practices.

The goals of this chapter are to identify good practices and outline a strategy for the effective implementation of ESC initiatives. These goals aim at supporting government plans for initiatives for ESC, but also recognise the consumer as one of the key actors in sustainable consumption. To identify mechanisms to influence consumer decision making, it is necessary to investigate issues concerning both individual/personal choice and social/political infrastructures.

There are three main parts of this chapter. First, the primary mechanisms for promoting sustainable consumption are examined and a framework of assessment is detailed. Second, practice cases on ESC from Japan, the Republic of Korea and China are presented and assessed. The implementation of specific ESC programmes are investigated in these case studies to identify good practices and gain further understanding of the important mechanisms in promoting sustainable consumption and encouraging the proactive participation of consumers. Third, policy implications from the case analyses are elaborated and an implementation strategy for consumer ESC initiatives is developed.

The analytical framework in this chapter is based on an interdisciplinary review of theories related to sustainable consumption and education prepared in the IGES policy report *Education for Sustainable Consumption in Northeast Asia* (Choi and Didham 2010). This approach includes a holistic view of the diverse factors that influence consumer behaviour, including social and cultural patterns, political instruments, and personal behavioural change strategies. The assessment of the case studies is done by an empirical-analytical methodology. This methodology develops from a post-positivist paradigm in order to delineate, compare and contrast these discrete variables (Connell 1997, 122). The research process was also supported by a snowball process, "a process of reference from one person to the next" (Denscombe 2003, 16), with a series of expert reviews of the analytical framework, the identification of assessment factors, and the selection of cases included in the original research schedule.
3. Identifying mechanisms for promoting sustainable consumption

An interdisciplinary investigation of the mechanisms that influence consumption practices and consumer behaviour was conducted in the above mentioned IGES policy report (Choi and Didham 2010) and provides the framework utilised in this chapter. Recognising the diverse factors that influence consumption practices, it was necessary to conduct a whole systems analysis that considers personal and individual practice in conjunction with social and political systems.

The broad understanding of education that is employed in this work considers formal, non-formal, and informal educational processes from a perspective of experiential education. As such, it considers direct information and knowledge that is provided to the individual, but it also addresses changes to social and political systems that encourage sustainable consumption. The development of a social infrastructure that presents better and easier possibilities for sustainable consumption can achieve important action learning outcomes. Consumer education for sustainable consumption that is being considered in this work attempts to address how to affect the individual consumer at the level of their decision-making on consumption and also how to develop a supportive social infrastructure that not only fosters sustainable consumption but eventually makes this the norm. ESC should promote responsible behaviour and engender environmental citizenship in respect to the practice of individual consumers. Regarding social and political systems, ESC should link with efforts to influence society’s patterns of consumption and work towards a supportive infrastructure for SCP. Finally, there is a need to consider the overall strategic procedure that connects these mechanisms and systems in order to catalyse practice of sustainable consumption.

This chapter identifies five primary mechanisms for promoting sustainable consumption, as seen in Figure 3.1.

Figure 3.1 Primary mechanisms to promote sustainable consumption

Source: Authors
3.1 Framework of assessment

The basic outline of how ESC is understood and investigated in this chapter is shown through the identification of these five mechanisms to promote sustainable consumption. In order to evaluate the components of ESC initiatives, key factors were added to each primary mechanism based on a critical review of ESC literature and other assessment tools (See Table 3.1 for details.)

Table 3.1 Assessment framework of ESC mechanisms

A note on Table 3.1 can be found at the end of the chapter
Of the five mechanisms, the first mechanism, Catalyzing Practice of Sustainable Consumption, is intended to employ **strategic procedures** to provide an overarching plan that can integrate the other four mechanisms. This mechanism needs to be both holistic and systematic in its approach to promoting sustainable consumption. In the work *Securing the Future* (2005) outlining the U.K. government’s sustainable development strategy, a similar approach is presented for the government to affect consumer behaviour towards sustainable consumption. The U.K. government’s approach is based on a five point strategy, which is adapted here for the first mechanism, Strategic Procedure, and can be seen in Table 3.1 (adapted from HM Government 2005, 24-41).

The second and third mechanisms target **personal and individual practices** by promoting responsible behaviour and developing environmental citizenship. The aim of the former, *promote responsible behaviour*, is to address how ESC can directly affect consumers’ decision-making and behaviour. Although studying behavioural change and identification of driving factors are difficult, social marketing theory gives a perspective of the stages of behavioural change that a decision-maker experiences. The stages of change are borrowed from Andreasen (2002), and are the second mechanism seen in Table 3.1.

The other mechanism at the personal and individual level is *developing environmental citizenship*, an idealistic objective to strive for. Environmental citizenship, as a formative process, aims not only to educate an individual through transfer of knowledge, but to structure their values and practices to support sustainable development. In order for environmental citizenship to lead to responsible behaviour, it is important that the individual is informed, empowered and able to participate in decision-making processes. From the literature on responsible environmental behaviour and environmental citizenship, it is possible to identify five values that are central to the ideal of an environmental citizen.

By targeting **social and political systems**, governments can stimulate sustainable consumption through the fourth and fifth mechanisms. In the fourth mechanism, five **policy tools for SCP** are given which can be used to *influence patterns of consumption* (adapted from Tyson, ed. 2006).

The fifth mechanism, *develop infrastructure for sustainable consumption and production*, aims at normalising and making it easier to practice sustainable consumption by also targeting social and political systems. A UN-DESA (2009) report outlines six primary drivers (or, preconditioning factors) of consumption and how they can be reformed to achieve sustainable consumption (Table 3.1).

The five identified mechanisms and the aggregate criteria in Table 3.1 provide a core understanding of what an effective ESC campaign will address. However, it must be understood that ESC expands well beyond the traditional understanding of consumer education as mere information provision. This framework is being put forth both as a means of assessment on the effectiveness of a given ESC initiative and as an outline of what should be considered when preparing a new campaign for consumer ESC.

**4. Assessment of policy and implementation: A study of cases in Northeast Asia**

The three countries selected for case studies are the three highest consuming nations in Asia and the Pacific. Japan is the second highest world contributor to GDP (in nominal terms), China is third, and the Republic of Korea is fifteenth; together, these three
countries contribute 16.9% of global GDP (IMF 2009). These three countries have a significant opportunity to provide leadership in the Asia-Pacific region towards sustainable consumption. As the primary consuming nations in this region, they set the trends that will be followed throughout the region. If action is taken in these countries to secure sustainable consumption then it is likely these same patterns will be emulated throughout the region. Furthermore, as the primary producers of value-added items, these countries can encourage good practices in other Asian countries where raw materials are processed through corporate social responsibility from the parent companies in these three countries.

Japan, China and the Republic of Korea are all making considerable efforts to advance sustainable consumption and to educate consumers about the imperative for sustainable consumption and development. These efforts are relatively new in each of the three countries, and little analysis has been made on the influence these policies and actions have had. Green procurement is the most advanced activity by all three governments towards sustainable consumption, and has resulted in the growth of the green market in each of these countries. Work on education for sustainable consumption is increasing in these countries, and more campaigns are being aimed directly at consumers. However, difficulties still occur due to the lack of capacity and leadership for ESC in these countries.

4.1 Overview of case studies on ESC in Northeast Asia

This section looks at 11 cases on ESC in Northeast Asia: five cases from China, three from Japan, and three from the Republic of Korea (ROK). General details of these cases can be seen in Table 3.2, while more information on each of the cases may be found in Choi and Didham (2010). Five criteria were established for case selection as follows:

1. Source: Independent empirical ESC practice cases (reported not only in English but also in the selected countries’ languages, i.e., Chinese, Japanese and Korean)
2. Geographical scope: Three selected countries in the Northeast Asia region (i.e., China, Japan and Republic of Korea)
3. Aims: To promote sustainable consumption by government cooperation/involvement
4. Target group: Consumers with purchasing power (over 18 years old)
5. Case running years: Ongoing project in 2009

These criteria were reviewed by experts in ESD from the three countries. The experts suggested a total of 23 cases for potential investigation. Cases that did not meet the selection criteria were eliminated, including cases that lacked existing primary evidence to satisfy the selection criteria.
### Table 3.2 An outline of selected ESC practice cases

<table>
<thead>
<tr>
<th>Case</th>
<th>Title</th>
<th>Aims</th>
<th>Target Group</th>
<th>Geographic Scope</th>
<th>Running Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Green Campus Project</td>
<td>To save energy and resources through environmental management</td>
<td>College and university students (18-25 years)</td>
<td>Nationwide</td>
<td>2003 to present</td>
</tr>
<tr>
<td>C2</td>
<td>Cool China</td>
<td>To encourage the nation to save energy and resources</td>
<td>Household, government and private sector</td>
<td>Nationwide</td>
<td>2006 to present</td>
</tr>
<tr>
<td>C3</td>
<td>Tackling White Pollution</td>
<td>To reduce use of plastic bags to save resources</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>2008 to present</td>
</tr>
<tr>
<td>C4</td>
<td>Energy-Saving Project</td>
<td>To promote purchase of energy-saving products</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>June 2009 to present</td>
</tr>
<tr>
<td>C5</td>
<td>Reduction from Beginning</td>
<td>To reduce food waste for sustainable consumption</td>
<td>General public</td>
<td>Shanghai only</td>
<td>Spring 2009 to present</td>
</tr>
<tr>
<td>J1</td>
<td>Eco-Action Points</td>
<td>To reduce household greenhouse gas emissions</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>2008 to present</td>
</tr>
<tr>
<td>J2</td>
<td>Team Minus 6%</td>
<td>To encourage team or individuals to cut green emissions by 6%</td>
<td>Team leaders and individuals</td>
<td>Nationwide and international network-linked</td>
<td>2005 to present</td>
</tr>
<tr>
<td>J3</td>
<td>Green Purchasing Network</td>
<td>To provide information for consumer choice</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>1996 to present</td>
</tr>
<tr>
<td>K1</td>
<td>Half Waste Double Recycling</td>
<td>To reduce waste for efficient resource management</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>2005 to present</td>
</tr>
<tr>
<td>K2</td>
<td>Sustainable Consumption</td>
<td>To strengthen consumer choice and safety</td>
<td>Young people (13-19 years) and consumers</td>
<td>Nationwide</td>
<td>1997 to present</td>
</tr>
<tr>
<td>K3</td>
<td>Green Shop Movement</td>
<td>To support recycling campaign</td>
<td>Consumers</td>
<td>Nationwide</td>
<td>1992 to present</td>
</tr>
</tbody>
</table>

Note: C1: Chinese Case 1; J1: Japanese Case 1; K1: Korean Case 1

"Cool China" was reinstituted in 2009 based on the "Temperature Setting Action" programme implemented across the country since 2006.

Source: Authors

These case studies are some of the first attempts to document the efforts being made on consumer ESC in Northeast Asia. The cases are examined in consideration of the five identified mechanisms and the aggregate criteria for assessment. From this study, it is possible to elaborate on the importance of these mechanisms in ESC practice and to highlight several examples of good practice. However, it is important to note two of the main limitations faced in this study. First, due to the limited number of available cases, it is not possible to declare sufficient statistical validity, thus it is difficult to provide generalised commentary for each individual country. Second, in studying ESC policy and
practice, there is difficulty in providing detailed assessment of the long-term effectiveness of such initiatives due to the length of time required for studying consumer behavioural change, which is beyond the scope of this chapter but certainly worth following up on as a stream of future research.

4.2 Main findings: Assessment of the mechanisms of ESC

The five primary mechanisms of ESC from our framework (see section 3.1) provide a core understanding of what an effective ESC strategy and policy should address. The selected cases of ESC practice were assessed on the level and depth to which they relate to each of the criteria of the primary mechanisms (Table 3.1). As a result, the five primary mechanisms of strategic ESC initiatives were reviewed and critical elements of procedure were identified, as follows.

Catalysing practice of sustainable consumption

Five procedural steps for systematic development towards sustainable consumption were assessed: Enable, Encourage, Engage, Exemplify and Catalyse. All of the procedural steps, with the exception of “catalyse,” are identified across ten of the eleven ESC cases. In all of the cases, the first four steps, enable, encourage, engage and exemplify, are identified with no significant deviation, with the exception of C3 (Tackling White Pollution) which strongly incorporates these procedural steps into practice, and C1 (Green Campus Project) which only weakly addresses two procedural steps. There is one Chinese case (C5: Reduction from Beginning) that reaches the procedural step “catalyse” in order to achieve social and cultural habit changes.

Promote responsible behaviour

Five stages of change in a decision-makers practice are considered: pre-contemplation, contemplation, decision/determination, action, and maintenance. Assessment of this mechanism resulted in three significant indications.

• All cases reached the third stage of decision/determination and encouraged individual’s conscious choice.
• Eight of the cases incorporated the fourth stage (action) and engaged individual’s proactive participation.
• Only five cases reached the final stage (maintenance). In general, it was difficult to clearly identify proven methods for maintaining the new beliefs achieved in the fourth stage. In particular, all three Japanese cases reached the final stage of maintenance, while this was indicated in none of Chinese cases. One case (K3: Green Shop Movement) has proven how the decision-makers incorporated their new belief into new action in the wider community and reached the final stage of maintenance.

Develop environmental citizenship

The literature review on ESC revealed that certain values play key roles in effective consumer education initiatives: pro-environmental values, individual empowerment, responsibility, simple actions, and future vision. The eleven cases were assessed for their promotion of these values and indicated the following:

• Pro-environmental values: This is a fundamental value underpinning development of individual empowerment in sustainable consumption and was identified in all eleven cases.
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- Individual empowerment: This was identified in all eleven cases as a means to enable individuals to actualise their belief to contribute to sustainable consumption through diverse action.
- Responsibility: This was emphasised in five out of the eleven ESC practice cases with regard to citizenship participation in achieving a sustainable society together. Noticeably, only one case in China (C2) and one in ROK (K3) stressed the significance of this focal point in actual implementation, whilst it was applied in all three Japanese cases.
- Simple action: This was identified in five out of the eleven cases. In particular, Chinese cases strongly took simple actions to encourage people to take action in their daily life as shown in C2 (encouraging temperature limits for air conditioning/heating), C3 (reducing use of plastic bags) and C5 (packing unfinished food in restaurants). None of the Japanese cases incorporated this value.
- Future vision: This was notable in only four of the cases. All three Japanese cases developed and promoted a vision of a more sustainable society, as did K3. None of the Chinese cases clearly demonstrated a future vision, and thus missed an opportunity to orient engaged individuals towards a sustainable society and connect achievement in energy saving or resource management to this larger vision.

Influence patterns of consumption

Drawing on policy literature, five types of instruments were highlighted as a means for governments to influence patterns of consumption: regulatory, economic, educational, cooperative, and informational. Only one case K1 (Half Waste Double Recycling) utilised all five instruments in its practice, while another four cases applied four instruments. Six cases depended on a single instrument as the primary means employed, and three cases strongly employed two instruments.

Overall, informational policies are the most applied instrument (employed in ten cases and as a primary instrument in three). Regulatory instruments were used with the second greatest frequency. It is interesting to note that when regulatory instruments are used often, educational instruments are not used. Although educational instruments were employed in only six of the cases, they were used the most as primary instruments (a total of four times).

Develop infrastructure for SCP

Six factors serve as preconditioning drivers to consumption practices: economic development, technological progress, political settings and policy actions, cultural and historical contexts, social factors and conditioning, and psychological motives.

Four of the eleven cases (C3, C4, J3, and K1) demonstrated strong achievements in promoting transition across the social infrastructure factors. However, even these four cases missed the opportunity to work across all six factors. These four cases dealt strongly with economic, social and psychological factors. Overall, social factors were dealt with most frequently and in the most depth. On average between the eleven cases, each case dealt with 3.5 factors, however if the top four highlighted cases are removed then the average among the remaining seven drops significantly to 2.7 factors.

4.3 Results from the analysis of ESC practice cases

The empirical analysis completed in the previous section provides the opportunity to complete a quantified assessment of the practice cases in regards to their commitment
to each secondary category of the identified primary mechanisms. Table 3.3 summarises the performance rankings for each practice case in regards to the five mechanisms of strategic ESC. The top five cases in ranking are in order C3: Tackling White Pollution, tied for second K1: Half Waste Double Recycling and K3: Green Shop Movement, followed by J3: Green Purchasing Network, and C2: Cool China. The top three cases each achieved the highest score in two different mechanisms.

Table 3.3 Assessment of ESC mechanisms in practice cases

<table>
<thead>
<tr>
<th>Mechanism Component</th>
<th>Chinese Cases</th>
<th>Japanese Cases</th>
<th>Korean Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalyse Practice of Sustainable Consumption</td>
<td>Enable</td>
<td>+ + ++ + ++ + + + +</td>
<td>+ + ++ + ++ + + + +</td>
</tr>
<tr>
<td></td>
<td>Encourage</td>
<td>- ++ ++ ++ + + + + +</td>
<td>- ++ ++ ++ + + + + +</td>
</tr>
<tr>
<td></td>
<td>Engage</td>
<td>- + ++ ++ + + + + + + ++</td>
<td>- + ++ ++ + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Exemplify</td>
<td>+ + ++ + + + + + ++ + ++</td>
<td>+ + ++ + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Catalyse</td>
<td>- NC - - ++ NC NC - - -</td>
<td>- NC - - ++ NC NC - - -</td>
</tr>
<tr>
<td>Promote Responsible Behaviour</td>
<td>Pre-contemplation</td>
<td>+ + + + + + + + + + +</td>
<td>+ + + + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Contemplation</td>
<td>+ + + + + + + + + + +</td>
<td>+ + + + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Decision/ Determination</td>
<td>+ + + + + + + + + + +</td>
<td>+ + + + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Action</td>
<td>NC + + + + + + + + + + +</td>
<td>NC + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td>- - - NC NC ++ + + NC NC ++</td>
<td>- - - NC NC ++ + + NC NC ++</td>
</tr>
<tr>
<td>Develop Environmental Citizenship</td>
<td>Pro-environmental values</td>
<td>+ + + + + + + + + + +</td>
<td>+ + + + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Individual empowerment</td>
<td>+ + + + + + + + + + +</td>
<td>+ + + + + + + + + + +</td>
</tr>
<tr>
<td></td>
<td>Responsibility</td>
<td>- + - - - + + - - ++</td>
<td>- + - - - + + - - ++</td>
</tr>
<tr>
<td></td>
<td>Simple actions</td>
<td>- ++ ++ - ++ NC NC NC ++ NC +</td>
<td>- ++ ++ - ++ NC NC NC ++ NC +</td>
</tr>
<tr>
<td></td>
<td>Future vision</td>
<td>NC - - - + + + NC NC +</td>
<td>NC - - - + + + NC NC +</td>
</tr>
<tr>
<td>Influence Patterns of Consumption</td>
<td>Regulatory instruments</td>
<td>- ++ ++ - - - NA ++ ++ - -</td>
<td>- ++ ++ - - - NA ++ ++ - -</td>
</tr>
<tr>
<td></td>
<td>Economic instruments</td>
<td>- - + + ++ - NA ++ + - +</td>
<td>- - + + ++ - NA ++ + - +</td>
</tr>
<tr>
<td></td>
<td>Educational instruments</td>
<td>+ + - - - + ++ - + + ++</td>
<td>+ + - - - + ++ - + + ++</td>
</tr>
<tr>
<td></td>
<td>Cooperative instruments</td>
<td>+ + - - ++ - + + - + +</td>
<td>+ + - - ++ - + + - + +</td>
</tr>
<tr>
<td></td>
<td>Informational instruments</td>
<td>- ++ ++ + + + ++ + ++ ++ +</td>
<td>- ++ ++ + + + ++ + ++ ++ +</td>
</tr>
<tr>
<td>Develop Infrastructure for SCP</td>
<td>Economic development</td>
<td>- - + ++ + - - ++ + - +</td>
<td>- - + ++ + - - ++ + - +</td>
</tr>
<tr>
<td></td>
<td>Technological progress</td>
<td>NA - + ++ NA + NA + + NA -</td>
<td>NA - + ++ NA + NA + + NA -</td>
</tr>
<tr>
<td></td>
<td>Political settings</td>
<td>NA ++ - + - +* NA ++ ++ ++ -</td>
<td>NA ++ - + - +* NA ++ ++ ++ -</td>
</tr>
<tr>
<td></td>
<td>Cultural contexts</td>
<td>+ - + - ++ - - - + - +</td>
<td>+ - + - ++ - - - + - +</td>
</tr>
<tr>
<td></td>
<td>Social factors</td>
<td>+ + ++ + + ++ + NC ++ + +</td>
<td>+ + ++ + + ++ + NC ++ + +</td>
</tr>
<tr>
<td></td>
<td>Psychological motives</td>
<td>- - ++ ++ + + ++ NA + ++ ++</td>
<td>- - ++ ++ + + ++ NA + ++ ++</td>
</tr>
</tbody>
</table>

N.B.: ++ = Identified with proven achievements; + = Identified with a descriptive report only; - = Unidentified; NA = Not Applicable; NC = Not Clear.

Source: Authors
The aggregate criteria of the first mechanism, catalyzing practice of sustainable consumption, are generally well-incorporated into ESC implementation in all three countries. However, it was highlighted that the ability to drive the larger transition of social and cultural habits is not well understood, and the catalyse component deserves further research and elaboration of good practice. While the Chinese cases demonstrated strength in promoting simple actions, they also lacked the incorporation of responsibility and future vision. These aspects may indicate why the Chinese cases also were unable to secure the maintenance component of the second mechanism. In contrast, the Japanese cases did indicate a strong connection in incorporating both responsibility and future vision into practice and at the same time fulfilling maintenance of responsible behaviour.

Due to the limits of this empirical analysis, it is difficult to demonstrate any correlation between the various components of the five mechanisms. Future research could especially be focused on the various tools and instruments in the fourth mechanism, influence patterns of consumption, and their correlation with the components of the other mechanisms. For example, there is a slight indication that when regulatory instruments are the primary tool utilised it is difficult to engender the value of responsibility, which may be the situation in many of the Chinese cases. A closer look at this, as well as a fuller investigation into the linkage between improving educational instruments and influencing psychological motives may also be quite interesting and useful for elaborating more effective means to achieve ESC.

Looking further at the components of the fourth mechanism, informational instruments have been well developed across all of the cases. However when the cultural and social factors are unsupportive of the adoption of sustainable consumption, it is important to recognise that educational instruments play a more important role in enabling and encouraging a wider social and cultural transition than do mere informational instruments. When considering the expanded understanding of ESC as learning of advanced skills in systems thinking, critical analysis and participatory citizenship, it is very important to draw a clear distinction between the roles of these two instruments. Informational instruments have direct benefits at the point of consumption through the clear identification of sustainable consumption options. However, if we address the values being promoted in the third mechanism, develop environmental citizenship, it is important to begin to identify and model good practice on an educational framework that encourages action based on these values, supported at the point of consumption by informational instruments.

Finally, it is necessary to again draw attention to the fact that the last component—catalyse, maintenance, and future vision—in the first, second and third mechanisms, respectively, are not well addressed across the majority of the cases. This may provide an indication that there is an underlying relationship between the components catalyse, maintenance, and future vision. Establishing a long-term relationship with the consumer and the practice of sustainable consumption requires the fulfilment of these three factors. This is an area that deserves further investigation. In doing so, it may be beneficial to see how these components can be linked with the above investigation on “educational instruments” and “psychological motives.”
5. Recommendations and strategies for ESC

5.1 Implications on policy structure and context of Education for Sustainable Consumption

Key findings

Findings with significance across the eleven cases are related to the five primary mechanisms for promoting sustainable consumption. Conclusive findings on the relevance and importance of these five mechanisms can be drawn from across the case studies which provide specific implications for the general structure of ESC policies.

1) **Five primary mechanisms of ESC**: Develop environmental citizenship, promote responsible behaviour, catalyze practice of sustainable consumption, influence patterns of consumption and develop infrastructure for SCP are significant structural components in formulating an effective ESC policy.

2) **Motivational factors of personal and individual practice**: These factors are often underrepresented in the planning process of policy frameworks at the national level, but are essential to encourage individuals' voluntary participation and empowerment as personal changes in consumption practices appear rooted in meaningful and practical experience.

3) **Supportive social and political systems**: These provide the practical facilitation for sustainable consumption becoming the preferable and normal option of practice. However, to develop a supportive infrastructure for SCP, it is necessary to consider directly the preconditioning factors that drive current consumption practices. The analysis of efficient governmental tools and instruments for promoting sustainable consumption indicates a complexity of social and political systems which this research could not fully explore due to limited data and scope.

4) **Well-balanced contents of ESC policy**: The three targets of the identified ESC mechanisms personal and individual practice, social and political systems and strategic procedure can result in a synergistic effect for effective implementation of ESC policy. This appears especially true in developing supportive infrastructure for sustainable consumption as a vital tool for enabling people to maintain their proactive participation in daily life in a sustainable manner.

5) **Social and cultural contents of ESC policy**: This reflects local contexts regarding consumption patterns which are significant when considering how ESC can have specific national and local implications, especially for effecting change over a short period of time. Regarding prevalent values towards food and material possessions, traditional consumption habits are closely linked with socio-cultural contexts and factors and thus can remain as very resistant to change. ESC policies linking socio-cultural and psychological motivations with traditional habits are essential to address personal understandings of happiness and quality of life in order to develop a new value of material possessions. This, in turn, provides the stimulus for socio-cultural shifts towards a normalised vision of sustainable consumption.

Secondary significance for specific policy contents

There are several findings from the case studies regarding specific aggregate criteria in the assessment framework. These findings demonstrate at least a secondary significance because they are not represented across all cases. Thus, it is possible to highlight these as good practice areas of effective policies; however, to provide conclusive evidence on the level of significance of each policy measure identified below requires further research.
1) **Economic incentives**: The provision of financial savings/benefits for sustainable consumption is demonstrated as an easy way to engage consumers and promote action. It is possible to divide economic incentives into two categories based on amount of savings (small or large) and on regularity of consumption (frequent or seldom). Small savings in relation to frequent consumption actions appears to have more impact on social and cultural factors, than do large savings on irregular consumption actions.

2) **Regulation coupled with information provision**: When regulations are put in place to stop specific negative consumption behaviour, the utilisation of informational instruments is an important part of the effectiveness of this policy measure to help people understand the purpose of the regulations and encourage the maintenance of practice. That is, people’s commitment to long-term practice of sustainable consumption can be catalysed when they gain more understanding through information provision as was shown in several cases.

3) **Correlation between maintenance and future vision**: Four of the five cases that achieved the maintenance criteria of the second mechanism also indicated achievements in future vision. In this context, future vision encourages individuals in that they can affect change towards an achievable positive future and sustainable society. The significance of this correlation deserves attention in future research as there may be a causal linkage between the promotion of future vision and consumer progress towards long-term maintenance of sustainable consumption.

4) **Visualising responsibility rationales for participation in sustainable consumption**: To facilitate more direct engagement of individuals, providing information about the clear consequences between their consumption choices and the wider environmental and social impacts of these practices appears to be vital. In particular, integrating a sense of responsibility with a sense of community seems to strengthen ESC projects’ long term success, as demonstrated in the Korean case “Green Shop Movement.”

5) **Missing linkage between simple actions and future vision**: Though both criteria are important factors in developing environmental citizenship, there appears to be difficulty in aligning these two values. When simple actions are promoted, it appears difficult to achieve future vision, and vice versa. Nevertheless, as shown in some Chinese cases, an ESC strategy of simple action seems to be very effective as the clear guidance facilitates people to practice with better understanding. Future research is therefore needed to address how best to reconcile this deficiency in current policy.

### 5.2 Five-point strategy to plan ESC

A strong consumer education strategy for sustainable consumption will need to be holistic and should utilise opportunities outside the scope of normal education activities. One of the main goals of this chapter is to develop a clear outline of the strategic actions required for preparing and implementing effective consumer education initiatives for sustainable consumption. The hope is that this strategy will provide the rigor to ensure effectiveness but also allow enough flexibility to apply in diverse circumstances. The purpose is to provide a step-by-step process for conceptualising and planning a campaign for consumer education on a chosen sustainable consumption topic.

This planning process is based on five primary steps: 1) establish vision, 2) check current situation, 3) build an action plan, 4) secure implementation, and 5) reflection. Each step incorporates multiple components and utilises the five sets of assessment criteria presented in Table 3.1 to provide a clear process of investigation and elaboration. Though there are five steps to the overall planning process (see Figure 3.2), the first step
serves as the initial visualisation of the project, the second and third steps are where the majority of effort and time is required for producing an action plan, and the fourth and fifth steps are part of the implementation stage. Within each step there are additional components and sub-steps.

**Figure 3.2 Five-point strategy to plan Education for Sustainable Consumption**

<table>
<thead>
<tr>
<th>Step</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish Vision</td>
</tr>
<tr>
<td>2</td>
<td>Checking Current Situation</td>
</tr>
<tr>
<td>3</td>
<td>Building Action Plan</td>
</tr>
<tr>
<td>4</td>
<td>Securing Implementation</td>
</tr>
<tr>
<td>5</td>
<td>Reflection</td>
</tr>
</tbody>
</table>

* Establish Vision: *Visualise Objectives*, *identify clear subject of focus and target audience*, *set clear goals*.
* Checking Current Situation: *consider existing social infrastructure*, *consider the individual and prevailing value systems*.
* Building Action Plan: *plan for behaviour change*, *identify appropriate tools and instruments*, *compile clear plan of action*.
* Securing Implementation: *prepare working schedule/timeline*, *detail management of each action step*, *allocate appropriate resources*.
* Reflection: *establish monitoring and evaluation*, *report on findings*, *adapt learning to future projects*.

Source: Authors

The purpose of this strategy is to provide a basic outline of the holistic process that leads to the development of a consumer education campaign that will achieve success in advancing the proactive participation of individuals in sustainable consumption. This strategy can be applied across a range of topical issues, such as energy-saving or waste reduction. It can also be adapted to projects of different size, though naturally the larger the project, the more developed the plans will be, and thus, the more in-depth the various review and reflection processes will need to be.

Step one, establish vision, is the initialising stage of the process and provides the activities to ensure that an upcoming ESC campaign is well conceptualised. Within this step there are four action components. The first action, *visualise objectives*, requires detailing a conceptual map of what primary issues should be addressed in this project. It may be that the ESC campaign is a stand-alone activity unrelated to other activities, and this action is vital to establishing a clear starting point and focus. However, the planned ESC campaign may also link to a larger programme working across many sectors, in which case the main purpose is to identify how the ESC aspect of this overall programme will support consumer awareness raising and behaviour change. The second action, *identify clear subject of focus*, follows on from identifying a general topic to detail clearly the types of changes in consumer practice that are desired. The third action, *identify target audience*, is aimed at gaining an understanding of who exactly are the primary actors with influence in project. Traditional methods of stakeholder analysis will support this action. The fourth action, *set clear goals*, is the final part of establishing vision by identifying the areas where interventions and improvements are needed and detailing the outcomes and achievements the campaign should result in.
Step two, check current situation, is the stage of the process to investigate and assess the existing contexts and factors the campaign will have to account for. There are two action components within this step. The first action, consider existing social infrastructure, aims at identifying the preconditioning factors of current consumption patterns. This can be supported by mapping the primary drivers of consumption as outlined in mechanism five of Table 3.1. The second action, consider the individual and prevailing value systems, aims at directly understanding the personal values people hold that influence their consumption choices. This can be supported by investigating how close or far away the general population is to incorporating the values of environmental citizenship as highlighted in mechanism three of Table 3.1. The two actions of this step should provide a clear understanding of what the current situation is and where there are opportunities to influence change. In the overall project cycle, this step will likely account for between 10-20% of the entire length of time spent on the project.

Step three, build action plan, is the main stage of detailing the actions that will be incorporated in the consumer education campaign. The initial efforts in this stage are to identify areas to change in the existing systems. There are three action components within this step. The first action, plan for behaviour change, incorporates the stages of change in a decision-maker from mechanism two in Table 3.1 as a tool of investigation. It is important to reflect on the current situation elaborated in step two and consider where in this situation are there opportunities to influence consumer behaviour. The second action, identify appropriate tools and instruments, can utilise the efficient tools and instruments outlined in mechanism four of Table 3.1 as a form of review. The goal of this action is to consider the available opportunities for affecting change and to identify the appropriate instruments to apply at each of these opportunities. The third action, compile clear plan of action, builds on the points highlighted in the first two actions and tries to finalise a plan that is holistic and systematic. To support this action, the steps outlined in mechanism one of Table 3.1 can provide a structured procedural framework.

Step four, secure Implementation, includes the final efforts needed to ensure the proper functioning of the campaign, and is a review process to confirm that the action plan includes appropriate details for how project activities are to be completed. There are three actions included in this step. The first action, prepare schedule of action, is a practical calendar of when the various project activities will start and finish. The second action, detail management of each action step, should identify for each activity who will take responsibility, what should be completed/achieved and how it should be managed. The third action, allocate appropriate resources, must consider what type of resources (i.e., funding, manpower, media sources, etc.) will be needed and assure that they are appropriately secured throughout the project cycle. These three actions should result in an action plan with clear details on how each activity will occur, and at this point implementation of the consumer ESC campaign is well prepared.

Step five, reflection, is the final stage and is completed after the implementation of the campaign; however, its consideration during the early steps is often helpful, and some efforts to secure monitoring and evaluation directly into the action plan can be beneficial. There are three basic actions that should be included in the reflection step. The first action, establish monitoring and evaluation (M&E) system, is a crucial but complicated action. There are three items that can support the establishment of an M&E system: the criteria in the assessment framework of ESC mechanisms, the initial goals established for the campaign in step one, and the desired changes in patterns of consumption or consumer behaviour (This could include the five values of environmental citizenship.) The second action, report on findings, stresses the importance of reporting the findings and their implications in a clear and concise manner after M&E is conducted.
Finally, the third action, **adapt learning to future projects**, helps advance the practice of ESC and the implementation of future campaigns through lessons learned from this M&E process.

### 5.3 Considerations for future research

This chapter presents a framework for understanding and assessing ESC initiatives. The case analysis provides validation of the usefulness of this framework. However, to provide substantive conclusions on the long-term effectiveness of specific actions on the individual aggregate criteria of this framework, it would be necessary to conduct prolonged studies of consumer practice in light of specific policy measures since the overall goal of ESC is to effect changes in consumer behaviour.

**For researchers:** Future research would benefit from a series of case studies on ESC practice that incorporates surveys/studies of consumer behaviour prior to, during, and after the implementation of a given case. Research on the prolonged influence of ESC on consumer behaviour aimed at identifying good practice means that securing maintenance and catalysing shifts in socio-cultural habits would be particularly helpful. Finally, special consideration should be given to the importance of influencing social and cultural patterns of behaviour and creating impacts for paradigm change aimed sustainable practice in such research.

**For policy decision-makers:** As the limited case studies presented here help to extend a framework for assessing ESC, more in-depth research applying the identified aggregate criteria could help to strengthen the promotion of the strategy for planning ESC. Future research would benefit from a study of the various tools and instruments in the fifth mechanism and their correlation with the components of the other mechanisms. There is a limited indication that when regulatory instruments are the primary tool utilised it is difficult to engender the value of responsibility as may be the relationship in many of the Chinese cases. A fuller investigation into the linkage between improving educational instruments and influencing psychological motives would also prove beneficial.

### Notes

1. Information from interviews with government officer in the Cabinet Office of Japan (Jul., Sep. and Nov. 2009).
2. Information from interviews with government officers in the Ministry of Environmental Protection, China (Jul. and Oct. 2009).

### Notes on Table 3.1

3. Values identified as key concepts in theories of responsible environmental behaviour and environmental citizenship.

Source: Authors
References


Choi, Mee Young, and Robert J. Didham. 2010. Education for Sustainable Consumption in Northeast Asia: Strategies to promote and advance sustainable consumption. Hayama: IGES.


