INTRODUCTION TO EDUCATION FOR SUSTAINABLE CONSUMPTION (ESC) IN INDONESIA

National Recommendations and Guidelines for Policymakers and Educators

YPB

UNEP
United Nations Environment Programme

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

UNESCO
United Nations Educational, Scientific and Cultural Organization

UN Decade of Education for Sustainable Development

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This publication is part of the UNEP pilot project on the "Institutional Strengthening of Education for Sustainable Consumption, Advancing Education for Sustainable Consumption Policy and Implementation Strategies," implemented in Indonesia.

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INTRODUCTION TO EDUCATION FOR SUSTAINABLE CONSUMPTION IN INDONESIA

National Recommendations and Guidelines for Policymakers and Educators

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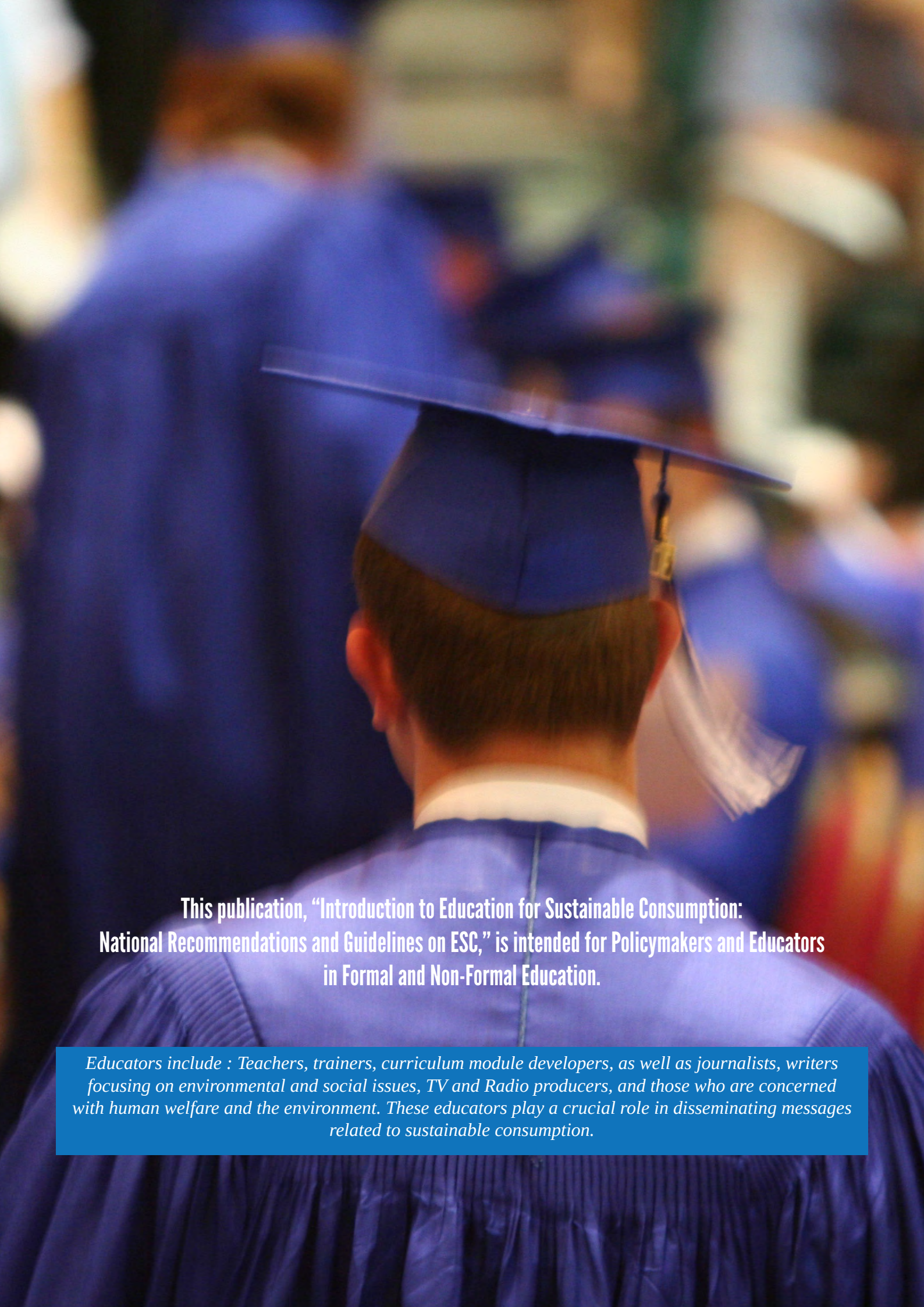

This publication, "Introduction to Education for Sustainable Consumption: National Recommendations and Guidelines on ESC," is intended for Policymakers and Educators in Formal and Non-Formal Education.

Educators include : Teachers, trainers, curriculum module developers, as well as journalists, writers focusing on environmental and social issues, TV and Radio producers, and those who are concerned with human welfare and the environment. These educators play a crucial role in disseminating messages related to sustainable consumption.

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Jakarta, January 2014

Darwina Widjajanti
Yayasan Pembangunan Berkelanjutan

FOREWORD

Indonesia is one of the most populated countries in the world, with 237.6 million people in 2010, and projections for 300 million people by 2032. Indonesia in the 21st century is certainly very different from Indonesia in the 20th century, with a much greater population density and level of urbanization. But an increase in population, coupled with a rising middle class, could trigger a drastic increase in unsustainable consumption.

For, while consumption is central to Indonesia's economy, and often seen as the engine of growth and development, it can also have detrimental consequences. Unsustainable consumption and production patterns are already contributing to some of the environmental, economic and social challenges we are facing, such as climate change and loss of biological diversity. Consumers must be made aware that the choices they make when they buy a product or service are crucial, indicating not only likes and dislikes, but also sending important messages to governments and the private sector about the kind of world they want to live in.

When young people understand this link between consumption and impacts, they can develop into socially and environmentally responsible individuals, determined to create a sustainable world for generations to come. Education is one of the most powerful and important tools, supporting and empowering individuals to make responsible choices and lead sustainable lifestyles. More specifically, education for sustainable consumption (ESC), which is a core component of education for sustainable development (ESD), helps to provide knowledge, shape attitudes and promote skills necessary for functioning in today's society. Provided with appropriate information on the consequences of their daily choices and workable solutions, individuals can understand and manage their social and environmental impacts and participate in and stimulate the public debate about values, quality of life, responsibility and accountability.

This publication, Introduction to Education for Sustainable Consumption in Indonesia: National Recommendations and Guidelines on ESC for Policymakers and Educators, aims to guide Indonesian policymakers and educators in implementing ESC nationally and locally in both the formal and informal education sectors. These national recommendations and guidelines are part of a pilot project implemented by the United Nations Environment Programme (UNEP) in collaboration with key partners including the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Task Force on ESC led by Italy. This publication, which is produced by Yayasan Pembangunan Berkelanjutan (Foundation for Sustainable Development), the national implementing partner of this project, is a valuable contribution to the United Nations Decade on Education for Sustainable Development (2005-2014).

These guidelines consist of five sections: the first two provide general information about Indonesia and some of its challenges and on ESC; the next two sections guide readers on how to develop ESC materials and how to advance ESC in Indonesia; and the final section provides a broader picture by looking at sustainable development policy and sustainable consumption in Indonesia, as well as the challenges of sustainable consumption in the Asia-Pacific region while identifying opportunities for integrating ESC regionally.

It is hoped that by contributing to a greater understanding of ESC and its importance, participants will be equipped with the tools to help them take a leadership role in developing a sustainable, just and prosperous Indonesia; an Indonesia that is able to face the challenges of its development.

January 2014

Emil Salim

Founder
Yayasan Pembangunan Berkelanjutan

Sylvie Lemmet

Director, UNEP Division of Technology,
Industry and Economics

INTRODUCTION

As a nation, we are becoming increasingly aware of our impact on the environment, particularly since Indonesia is the second richest country in the world in regards to biodiversity. Our lifestyle and consumption choices are putting pressure on the environment and natural resources, and it is crucial for our education system to address this reality. Internationally, sustainable consumption is still not central topics in educational systems today. In fact, mainstreaming education for sustainable consumption in formal education curricula and in informal education remains a challenge, as ESC is generally not considered a priority either in developing or in developed countries.Introduction to Education for Sustainable Consumption (ESC) in Indonesia provides national recommendations and guidelines organized into five main chapters:

Chapter 1: Addressing the Challenges - Life in Indonesia

This chapter provides information about Indonesia's population, environment, the growing middle class and consumption patterns, the poverty challenge and development issues facing Indonesia, all of which indicate the crucial need for sustainable consumption.

Chapter 2: An Introduction to Education for Sustainable Consumption

The conceptual framework of sustainable development, education for sustainable development, and education for sustainable consumption, and the impacts of consumption decision making process are explained in this chapter.

Chapter 3: Developing ESC materials in Indonesia - The Way Forward

To develop ESC materials the educators need to take into account the diversity of population (age, gender, social economic class, role in society, ethnicity and culture) and geographical area (rural or urban area, deep in forest or in coastal area, etc). This chapter also provides the methodology of adapting ESC in formal education with mixed approaches, and to be creative in developing ESC in non formal education, inspired by the existing initiatives conducted by various actors (NGO, mass media, interest group, etc.). It also reveals the benefits of using social media to disseminate ESC.

Chapter 4: Optimizing the Opportunities - Advancing ESC in Indonesia

This chapter shows the Government of Indonesian policies and planning related to ESC, and various ESC initiatives from public and mass media. These are the entry points to develop ESC further creatively. The chapter also indicates the area where government role is needed to help reassure sustainable consumption in Indonesia.

Chapter 5: Sustainable Development and ESC in Indonesia and Asia Pacific -The Present and The Future

In Indonesia and In the Asia Pacific region, the rapid population and high economic growth with rising middle class toward affluent consumption pattern, and the large population of the poor which deprived of a basic quality of well-being , put further strains on resource availability and equity. Education for Sustainable Development (ESD) and ESC serve as a valuable tool in linking these two challenges. ESC can be an important means for encouraging responsible consumption decision and action with actual means.

The Aims of the publication

1. To provide a general understanding to policymakers and educators on the importance of ESC which is expected to lead into responsible behavior in time of environmental degradation, the rising middle class which tend to have over consumption behavior, and the efforts to bring quality of life for the poor.
2. To bring the recommendations to policymakers to support ESC through formal education and encourage further development of current initiatives in non formal education; conduct more ESC public campaign; regulate sustainable production within business community, ethical marketing, and eco label; and to mainstreaming and integrate ESC into the existing curricula in formal education, and encourage further the efforts of ESC within non formal education.
3. To increase the understanding and knowledge of ESC as conceptual framework to educators and guide the educators in the following elements: integrate ESC into the existing formal education curricula with mixed approaches, develop further various ESC initiatives in non formal education, and reach more audience and strategic agent of change, while adjusted ESC material to specific local condition (to indicate challenges and opportunities) and the profile of the target group; and take the benefits of using social media as dissemination tools of ESC.

Education for sustainable consumption is an important part of the UN Decade of Education for Sustainable Development (DESD). This publication is an adaptation *Here and Now! ESC Recommendations and Guidelines*, which was jointly developed by UNEP and the Ma rrakech Task Force on ESC led by Italy in collaboration with the United Nations Decade on Education for Sustainable Development and Hedmark University College in Norway. YPB is fortunate to have the opportunity to adapt *Here and Now!* ESC Recommendations and Guidelines to Indonesia's contexts, needs and priorities, with the assistance of UNEP and other key partners, such as PERL and IGES.

Darwina Widjajanti, Lead Author

SUMMARY

Background

Environmental services support human life such as air, water, food, various products from forest, marine resources and mining, which enable human being survive and grow. To ensure sustainable lives for human beings, environmental services are needed in qualified and adequate amount. There is only one planet earth. No other planet produces the right environmental services for human beings. That is why human beings have to ensure sufficient natural resources are available.

In 1930, Indonesia's population was 60 million people. In 2010 the population was around 237 million, and it is predicted that in 2025, the population will be around 270 million. Increasing population growth has direct consequences on natural resources, which continue to be used unsustainably. These consequences are not only felt by those whose livelihoods are directly related to natural resources but also those whose economic activities are based on natural resources. The way that people consume and the conditions of natural resources will ultimately determine the fate of Indonesia's natural resources use.

Research shows that the quantity and quality of Indonesia's natural resources are degrading. Some water springs have dried and watersheds are contaminated, all of which decrease the water supply and endanger both the population and economic activities. The data also indicates that there is ongoing farm land conversion, the loss of high yield paddy seeds, forest encroachment, and forest conversion into plantation, mining and pulp industries, the destruction of coral reefs, which reduce the fish stock, and the threats to biodiversity, which have not been studied for its benefits.

In January 2013, the Minister of Agriculture stated that 100,000 hectares are converted into non-agriculture land per year. The World Bank Report, State of the World's Forest, stated that Indonesia's loss of forest from 2000 to 2010 reached 498.000 hectare per year or around 0.5% /year. According to the World Wildlife Fund's (WWF) The Living Planet Report 2012, the forest cover of Kalimantan will be reduced to less than a third by 2020 compared to what it was in 1950 if the existing deforestation continues. The Indonesian Institute of Science's Oceanography Research Center reported that only around 30% of Indonesia's oceans are in good (26.95%) and very good condition (5.58%). This is frightening particularly since oceans are the home for various fish and marine biota. Modern life and unsustainable consumption practices produces waste, which is often abandoned, particularly in urban area. If the amount of abandoned waste increases, it will cause air, water and land pollution. As a result, the diminishing quantity and decreasing quality of Indonesia's natural resources are threatened and cannot serve the needs of the increasing demand of a growing population.

Indonesia's middle class consumption has the tendency to be excessive in consumption, which implies extracting more natural resources that are already in a critical condition. The number of the middle class in Indonesia, who spends USD 2-20 per person per day, grew from 45.4 million people in 1999 to 95.31 million people in 2009. This middle class consumes beyond the survival needs such as electronics, imported cosmetics, cars and motorcycle. As Indonesia's GDP has been growing by around 6% since 2007, the middle class has been increasing. The growing middle class is accompanied by excessive consumption, which can increase the extraction of limited natural resources that need to be used to produce the required products. Besides, this excessive consumption brings more waste in short period of time, such as plastic, packaging, electronics waste, air pollution from the increasing amount of vehicles that are used, etc.

On the other hand, the consumption patterns of Indonesia's poor, consisting of 30 million people who make less than IDR. 10.000,- (USD 1) per day, is a challenge. Their consumption patterns are different from those of the middle class, who consume excessively. The poor are not consuming enough to meet their basic needs such as nutritious and safe food, access to clean water, education and health services, decent shelter, and adequate income to survive and fully grow as human beings.

Those who work in the beginning of the trade supply chain such as farmers, fishermen and small enterprises, usually have the least income although they put in the highest working efforts. From a social dimension, this unfair trade has made it very challenging for this marginal group to develop.

Limited knowledge on safety and nutritious food has made poor people more vulnerable to numerous health problems. Even if they aware of and are educated about healthy food choices, they are likely not able to afford the price of the food because of their limited financial capacity. In addition, limited education may not lead them to prioritize the use of their available funds. They are prone to aggressive advertising and marketing, which may offer false promises. They may also not consider long-term investment benefits (such as education) as a priority or they can find themselves trapped in debt for products that actually are not that important.

Education for Sustainable Consumption (ESC) aims at providing knowledge, values and skills to enable individuals and social groups to become actors of change towards more sustainable consumption behaviors."
(*Here and Now! ESC Recommendations and Guidelines*, UNEP, 2010)

Goal

This publication introduces ESC and explains how ESC can be applied in Indonesia, a country that is faced with numerous challenges. ESC, which incorporates the approach for sustainability inherited in Education for Sustainable Development (ESD), consists of the acquisition of knowledge, attitudes and skills necessary for functioning in today's society. It is responsibility learning which aims to contribute to the individual's ability to manage his own life while also participating in the stewardship of the global society's collective life (*Here and Now!* ESC Recommendations and Guidelines, UNEP, 2010).

This publication aims to encourage policymakers and educators to implement ESC and develop ESC teaching materials with creativity, considering the various different target groups and the specific local and national contexts. This is one of the tools that can be useful in changing the behaviors of consumers to be more environmentally and socially responsible.

Target groups

The prime target for these recommendations and guidelines are policymakers and educators. These guidelines serve as an introduction on the importance of sustainable consumption and ESC. The policymakers are expected to create an enabling environment for ESC and develop supporting policies to ensure that ESC reaches a wide audience from those in formal, non-formal and informal education systems. This publication is also intended for educators who are encouraged to develop teaching and outreach materials for ESC. These educators include those working in formal education such as teachers, curriculum developers and trainers as well as those in the informal education sectors such as civil society and those engaged in media (program producers, journalists or writers) who have interests in developing and promoting sustainable consumption through the media, among others.

Key institutions, includes Ministry of National Education and Culture and the Ministry of Environment, that these guidelines are aimed at, are those which practice formal education (such as schools) as well as those that implement non-formal and informal education (such as nonprofit organizations) that promote environmental awareness and sustainability, health, poverty and education, in addition to interest groups such as environmental organizations, consumer organizations, social cultural groups, youth groups, the mass media and the business sector; etc.

The expected outcomes

It is hoped that through these recommendations and guidelines, policymakers and educators can implement ESC into curricula, extra curricula activities, teacher training, various training and actions, as well as informal education such as articles in magazines and newspaper, developing relevant content for TV and radio and encouraging public discourse on sustainable consumption, among others. Hopefully, this will lead to consumers who are rational, responsible and wise in their respective decision-making processes.

Education for Sustainable Consumption (ESC): The Indonesian Context

Although economic growth in Indonesia, which is home to a growing middle class, has been stable since 2009, poverty is still a challenge. The middle class and the poor are facing their own challenges and all these need to be taken into account when developing ESC. While the middle class tends to consume in high amounts or over consume, the poor families, on the contrary, consume less than the normal standards or under consume.

These two worlds, the middle class and the poor population, have different consumption challenges. The over consumption middle class needs to be more responsible in its consumption as the natural resources are reducing in quantity and degrading in quality. The poor families, many of which are under consuming, need to consume more to meet their basic needs, such as nutritious and safe food, as well as a decent quality of life with adequate housing, access to clean water, education and health services. It is hoped that those with more resources have social solidarity and find the will to help the needy.

Indonesia is a diverse country in terms of its geographical area, demography, and cultural diversity, all of which provide unique contexts, varying from place to place. All these different characteristics need to be taken into account in formulating ESC, both in formal and non-formal education. These characteristics include the realities of mountainous highlands, coastal areas in the low lands, the inner forest with indigenous people, the urban areas with rising population and limited land, and the rural areas with limited population with more natural resources available. In addition, various ethnic groups with different social cultural practices, the rich biodiversity areas and the savannah areas, among others, need to be considered. Each context provides different challenges and opportunities, which must be reflected in shaping and developing ESC.

Individuals are constantly encouraged to consume more through the enormous flow of information that expose lifestyles that are driven by excessive consumption. These kinds of lifestyles surround everyone nowadays, thanks to mass media and aggressive advertising in various forms (billboards, exhibitions, messages through cell phones, advertisements through the Internet, door-to-door marketing, etc). Consumers need to have the capacity to be informed through seeking information that provides them with data; this is the foundation needed for responsible decision-making. On the other side, various tools such as online and social media (websites, blogs, Facebook, Google etc) can act as channels to disseminate messages about sustainable consumption.

In conclusion, ESC will lead into responsible lifestyles, ensuring sustainable livelihoods, integrity to the environment, and encourage stronger social cohesion for quality of life, for now but also for the future. This publication explains how ESC can be applied in formal education from elementary to high school and similar level schools, and non-formal education. In formal education, ESC materials can be applied with the whole school system approach. This approach emphasizes on the knowledge, skills, attitude, and values, where the teachers apply comprehensive approach in the implementation of ESC at the school level. The strategy is to implement ESC through thematic education with examples of learning plans and evaluations also presented in this publication.

In the non-formal education, ESC can be creatively developed for various groups beyond students with a variety of approaches outside formal schools. The target groups can vary to include profiles based on age (for example: urban youth), role or profession (for example: mother, farmers, fishermen, etc), ethnic groups, the place of living or geographic location (for example: coastal line, high land area, in deep forest) and others. The approach of ESC in non-formal education varies beyond classroom activities, including observation, research, action, art and culture performances, campaigns, public discourses, etc. ESC can reach a large audience in a very short period of time through mass media and social media. The growing netizen (internet users) can also be considered as the target group of effective ESC.

Indonesia's challenges

High population and the poverty

To promote and mainstream ESC, stakeholders including the government, policymakers and educators, must take into account Indonesia's population profile. Indonesia is the fourth most populated country in the world, with a population of 237 million people in 2010, of which 30 million people are considered poor. About 40% of the total population is prone to shocks or threats, where they can be pushed under the poverty line. In 2007, more than 63% of the poor depended on self-subsistence agriculture for their livelihoods, while 80% of the labour force consisted of micro and small enterprises. Looking at health, the maternal mortality rate per 100,000 live births is still high with 228 maternal deaths, according to data from 2007.

The rising middle class

The profile of Indonesia's population shows that the middle class, who spends an average of between USD 2 - 20 per person per day, has increased from 45.4 million people in 1999 to 95.31 million in 2009 (The rise of Asia's middle class, 2010). The data shows that within a 10-year period, the middle class has more than doubled. It is estimated that the middle class will increase if the economic growth of around 6% per year remains stable. This research shows that the middle class is consuming beyond their basic needs. They are the consumers of secondary products such as electronics devices, motorcycle and cars, and imported cosmetics, well known international brands.

The rich biodiversity

Indonesia is well-positioned to use the potential of its rich biodiversity, which is underutilized. As the second highest biodiversity country in the world, there are opportunities to develop food security, bio-medicine, ecotourism, and other benefits. Among others, Indonesia has 31,000 species of wood plants, 60% of the world's coral reefs, 6000 species of fauna and flora, which produce food, medicine, handicraft, fuel and construction materials. About 40 million people living in rural areas rely on biodiversity for their livelihood. Unfortunately, the threats to biodiversity are imminent such as illegal logging from protected forest, destructive fishing practices, and fertile land conversion, to name a few. Therefore, it is critical to apply effective law enforcement to save the asset of biodiversity for the welfare of the people of Indonesia.

Consumer safety and awareness

Nowadays, various products are available in the market, and as the result, consumers need to have assurance of products safety. Assurance can consist of information on safety products, eco labels for environmentally friendly products, use of the fair trade logo as a respect to labour rights, the need to be ethical and fair in marketing, and the importance of effective law enforcement. These are just some of the challenges that need to be addressed in ESC.

The challenges facing Asia-Pacific

Over the past several decades, the Asia-Pacific region has experienced both rapid population and economic growth. These trends are also expected to continue over the next few decades. These rises in population and economy have led to the emergence of a consumer class in the region, which is already more than a quarter and in the near future will grow to be over half of the world's total consumer class. In turn, this is leading to a change in lifestyles and consumption patterns in the region with many people moving away from consumption solely to meet their basic needs and moving towards affluent patterns of consumption, which emulate the unsustainable patterns of consumption that we are now increasing trying to address.

The Asia-Pacific region is not homogenous in these changes though, and the region is also home to over half of the world's poorest. Huge numbers of people in the region still lack basic access to food, clean water and sanitation facilities. The region is also facing increasing pressures for climate change and natural disasters. These two challenges - the large number of people deprived of a basic quality of well-being and the growing consumer class driving a rapid growth in high consumption lifestyles that puts further strains on resource availability and equity – place counter-opposing strains on the reason that must be equally dealt.

Two important areas being prioritised in countries across the region are Education for Sustainable Development (ESD) and Sustainable Consumption and Production (SCP). ESC serves as a valuable tool in linking the respective goals of these two areas and thus can find valuable opportunities for its advancement by integrating with these existing mandates. Both ESD and SCP are often hindered by initiating their discussions regarding sustainability from very complex, technical and/or idealistic perspectives. ESC serves as a powerful learning tool by directly engaging students in practical actions for sustainable consumption and through a process of experiential learning and cooperative inquiry building up to the principles that ground both sustainable consumption and sustainable development. ESC can thus be an important means for responding to the challenges in the region by enabling people with the actual means for realising responsible consumption and sustainable lifestyles.

ACRONYMS

ACDP	*Analysis Capacity Development Program*
BSNP	*Badan Standar Nasional Pendidikan / National Education Standard Agency*
CSL	*Climate Smart Leaders*
CSRO	*The Commonwealth Scientific and Industrial Research Organization*
DSB	*Developing Sustainable Business*
DTIE (of UNEP)	*Division of Technology, Industry and Economics*
ESC	*Education for Sustainable Consumption*
ESD	*Education for Sustainable Development*
EU	*European Union*
GBIM	*Garis-garis Besar Isi Materi*
GDP	*Gross Domestic Product*
GEO	*Global Environmental Outlook*
IDR	*Indonesian Rupiah*
IGES	*Institute for Global Environmental Studies*
IPA	*Ilmu Pengetahuan Alam / Science*
IPS	*Ilmu Pengetahuan Sosial / Social Science*
INOTEK	*Inovasi Teknologi / Technology Innovation*
IUCN	*International Union for Conservation Nature*
JPL	*Jaringan Pendidikan Lingkungan / Environmental Education*
KD	*Kompetensi Dasar / Basic Competency*
KI	*Kompetensi Inti / Core Competency*
KPB / SCP	*Konsumsi Produksi Berkelanjutan / Sustainable Consumption and Production*
KTSP	*Kurikulum Tingkat Satu Pendidikan / First Grade Education Curricula*
LAT	*LEAD Associate Training*
LEAD	*Leadership for Environment and Development*
MoC	*Ministry of Commerce*
MoE	*Ministry of Environment*
MoEC	*Ministry of Education and Culture*
MoEMR	*Ministry of Energy and Mineral Resources*
MoI	*Ministry of Industry*
NGO	*Non-Governmental Organization*
PERL	*Partnership for Education and Research about Responsible Living*
PKB/ESC	*Pendidikan Konsumsi Berkelanjutan (PKB)/Education for Sustainable Consumption*
PKN	*Pendidikan Kewarganegaraan / Civic Education*
PP	*Peraturan Pemerintah / Government Regulation*
PLH	*Pusat Studi Lingkungan Hidup / Center of Environmental Study*
PPB	*Pendidikan Pembangunan Berkelanjutan /Education for Sustainable Consumption*
PMPTK	*Peningkatan Mutu Pendidikan Tenaga Kependidikan / Increasing Education Quality of the Educators*
P4TK	*Pusat Pengembangan, Pemberdayaan Pendidik dan Tenaga Kependidikan/Center for Educator and Education Personnel Development and Empowerment*
PUP3B	*Pendidikan untuk Perkembangan, Pengembangan dan Pembangunan Berkelanjutan*

RAMP	*Recognition and Mentoring Program*
RCE	*Regional Center of Expertise*
SCP	*Sustainable Consumption and Production*
SD	*Sustainable Development*
TK	*Tenaga Kependidikan / Education Personnel*
UNCSD	*United Nations Commission on Sustainable Development*
UNDESD	*United Nations Decade of Education for Sustainable Development*
UNESCO	*United Nations Educational, Scientific and Cultural Organization*
UNEP	*United Nations Environment Programme*
UNIDO	*United Nations Industrial Development Organization*
UU	*Undang Undang*
USD	*United States Dollar*
WWF	*World Wild Life Fund for Nature*
YLKI	*Yayasan Lembaga Konsumen Indonesia*
YPB	*Yayasan Pembangunan Berkelanjutan / Foundation for Sustainable Development*

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CHAPTER I:
ADDRESSING THE CHALLENGES: HOW DO WE LIVE?

- Our Life Depends on Environmental Services
- Existing and Future Challenges
- Sustainable Consumption-Safeguarding The Environment for Human Well-Being
- Social Solidarity: The Two Worlds

Our life depends on environmental services

Human beings use environmental services from natural resources to live (air, water, sun light, land, food from flora and fauna, timber, mining etc.).

Earth is the only planet that has to service the increasing population, while exploitation keeps continuing and pollution keeps on increasing, and therefore the supply of environmental services faces challenges. When the needs of natural resources are higher than what the natural resources can provide, there should be a solution on how to consume the available resources more efficiently.

The solution is key as the survival of human beings depends on the availability of adequate and qualified natural resources, especially for those whose livelihood directly depends on natural resources, and for the economic development activities. Without natural resources, the lives of human beings and economic development are both in threat.

Existing and future challenges

The increasing population

Indonesia's population has been increasing at a fast rate. In 1930, the population was about 60 million, and it reached around 237 million in 2010 (Statistics Indonesia, 2011b, p. 11). It is projected to reach around 270.5 million in 2025, or 4.5 times the population of 1930 (BPS, Bappenas & UNFPA Indonesia, 2008, p. 25).

Worldwide, Indonesia was the fourth country with highest population in 2010 after China (1.341 billion), India (1.225 billion), and the United States of America (310 million). The world population, which was 6.1 billion in year 2000, is predicted to be 8.9 billion in year 2050 (Department of Economic and Social Affairs of the United Nations Secretariat, 2004, p. 3).

Table 1.1:
Indonesia's Population Growth And The World Population In 2010

Year	Population (millions)	
1930	60,700	
1960	95,259	
1990	178,379	
2010	237,641	
2025	2780,538	
Countries	**Population 2010 (in billions)**	**Percentage**
China	1,36	20%
India	1,21	17%
USA	0,31	5%
Indonesia	0,24	3%
Brazil	0,20	3%
World	**6,92**	**100%**

Note: The two figures showing the Indonesian population in 2010 are slightly different as they are from different sources. Since the difference is relatively small, it can be accepted. The population in 2010 was around 240 million.

Sources :
- Statistics Indonesia. (2011). Trends of the selected socio economic indicators of Indonesia. Retrieved from http://www.bps.go.id/booklet/Booklet_Agustus_2012.pdf.
- Department of Economic and Social Affairs of United Nations. (2011). World population prospects, the 2010 revision. Retrieved from http://esa.un.org/wpp/Analytical-Figures/htm/fig_11.htm.

The rising middle class and the tendency of excessive consumption

The findings from research indicate that Indonesia has been categorized as a middle-income country. Indonesia had a gross national income per capita (or Gross Domestic Product – GDP) of USD 3,700 in 2009, and a GDP of USD 2,200 in year 2000 (World Bank, 2013c). The population with the expenditure of USD 2-20 per person per day, considered as middle class, was 93.31 million in 2009, which is an increase from 45.4 million in 1999. These statistics show that the middle class has more than doubled in the last 10 years, as shown below.

Table 1.2:
Middle Class Category Of Indonesia (In Millions) Expenditure Of Usd 2-20 Per Person Per Day

Expenditure		1999	2009
Low Middle	(USD 2-4)	3.75	68.80
Mid Middle	(USD 4-10)	7.5	22.28
High Middle	(USD 10-20)	0.4	2.23

Source:
Asian Development Bank. (2010). The rise of Asia's middle class. Key indicators for Asia and the Pacific 2010 (41st ed.). Retrieved from http://www.adb.org/publications/key-indicators-asia-and-pacific-2010.

This middle class is growing at the national level. In 1999, only 25% of the population was considered middle class and this grew to 42.7% in 2009. In the rural areas, the increasing middle class has more than doubled within 10 years as shown by Table 1.3.

Table 1.3: Indonesia's Middle Class (Percentage) By Area

	Expenditure of USD 2-20 per person per day	
	1999	2009
Low Middle	25%	42.7%
Mid Middle	44%	62.0%
High Middle	13.6%	28.7%

Source:
Asian Development Bank. (2010). The rise of Asia's middle class. Key indicators for Asia and the Pacific 2010 (41st ed.). Retrieved from http://www.adb.org/publications/key-indicators-asia-and-pacific-2010.

With a GDP growth rate of around 6% per year since 2007 (GDP growth rates: 6% in 2008, 6.2% in 2010, 6.5% in 2011) (The World Bank, 2013b), it is estimated that the middle class is still a large portion of the population.

The consumption patterns of this middle class indicate that there are changes towards consuming beyond the basic needs of adequate food, clothing and housing.[1] The data below describes the new consumption of cars and motorcycles, electronic devices, personal computers and imported cosmetics:

- The car sales jumped by 17% from 2010 to 2011, to nearly 900,000 new vehicles, and by 11% year-on-year in the first quarter of 2012. Eight million motorcycles were sold in 2011 with a prediction of nine million sold in 2012 (The Economist, 2012).
- Electronic sales was projected to be USD 10.7 billion in 2012, and USD 17.8 billion in 2016, showing a sales projection increase of more than 60% in four years. Personal computer sales performance in 2010 was USD 3.1 billion. By 2011, it became USD 3.8 billion and sales projected to be USD 4.3 billion in 2012 or a sales increase of almost 40% from 2010 (MarketResearch.com, 2012).
- In cosmetic sales, the data shows an increase of imported cosmetics of 30% in 2012, with a value of IDR. 2.44 trillion or approximately USD 253.7 million, compared to IDR. 1.87 trillion in 2011 (Saksono, 2012).

With a high population and good economic growth, where the middle class has the potential of excessive consumption, this uncontrolled consumption becomes a concern and a threat to the natural resources.

Picture 1.1: High population and good economic growth can be a threat to the natural resources

[1]Basic n eeds according to the International Labour Organization standard related to two elements. First, ensuring the provision of certain minimum requirements of a family for private consumption (adequate food, shelter, clothing), and second, ensuring essential services were provided by and for the community at large: safe drinking, sanitation, public transport, health and education (UN Intellectual History Project, Briefing Note, Number 8, 2009, page 3).

Population 2010	237 million
Ethnics Group	>1300
Number of Islands	17.000 (with 6000 inhabited islands)
Coast Line	54.716 km
Terrestrial	1.8 km^2
Water Area	5.8 km^2

Box 1.1: Indonesia, An Archipelago Country

Source:
Statistics Indonesia. (2011). Trends of the selected socio economics indicators of Indonesia. Retrieved from http://www.bps.go.id/booklet/Booklet_Agustus_2012.pdf.
Ministry of Environment. (2009). Fourth national report, the Convention on Biological Diversity. Retrieved from http://www.cbd.int/doc/world/id/id-nr-04-en.pdf.

The decreasing quality of the environment

The conditions at the global level

All humans need natural resources, which throughout time, the quantity and the quality has been degrading. One problem is caused by the rising consumption levels, which exceed the biocapacity. If natural resources cannot provide their services, the survival of human beings is at risk, economic development cannot grow, especially for those who directly rely on natural resources for their livelihoods.

Humans today extract and use around 50% more natural resources than only 30 years ago, at about 60 billion tonnes of raw materials per year. Given the current trends of growth, our extraction of natural resources could increase to 100 billion tones by 2030 worldwide. People in rich countries consume up to 10 times more natural resources than those in the poorest countries. The average natural resources consumption per person per day is 90 kilograms in North America, 45 kilograms in Europe and 10 kilograms in Africa."(SERI, GLOBAL 2000 & Friends of the Earth Europe, 2009, p. 3). If everyone lived liked an average of resident of the United States, a total of four planets would be required to regenerate humanity's survival demand on nature (WWF, Global Footprint Network & ZSL, 2012, p. 6). It is therefore important to note that 8% of the world's population uses more natural resources than are generated within their boundaries (ADB & WWF, 2012, pp. 23, 28 & 37).

The Conditions in Asia Pacific

The emerging economic growth in the Asia Pacific region indicates the same patterns of excessive consumption, which creates increasing pressure on the planet and its natural resources. In 1990, the middle class in Asia's developing countries was 21% of the population, then it became 56% of the population in 2008, or more than double within less than two decades (KPMG, 2012, pp. 3-4).

According to UNEP's Keeping Track of Our Changing Environment "the Living Planet Index (the health of the Earth's ecosystem) has been decreasing by 12% globally and 30% in tropical ecosystems between 1992 and 2007" (UNEP, 2011a, p. 45). Therefore, it is important to educate people about sustainable consumption in an effort to save the environment and pave the way for a more sustainable future.

Box 1.2 :
The Environmental Status: Global Environment Outlook 2012

As presented in the Global Environment Outlook 5 (GEO-5): Environment for the Future We Want (UNEP, 2012a) and Keeping Track of Our Changing Environment: From Rio to Rio+20 (UNEP, 2011a), below are the latest environmental conditions facing the world. These highlight why ESC is imperative:	
•	**Meat Consumption** Between 1992 and 2007, global population increased by 22%, Between 1992 and 2007, global population increased by 22%, the rate of meat consumption increased by 26% and fish and seafood consumption increased by 32%.
•	**Water Condition** Global water withdrawal in the last 50 years has tripled. About 80% of the world's population lives in areas with high threats to water security, which affects 3.4 billion people, mainly living in developing countries. Global water stocks have decreased by more than double between 1960-2000. About 92% of total global water footprints are related to agriculture activities.
•	**Forest** Since 1990, primary forest areas have decreased by 300 million hectares. Less than 10% of global forests are certified under the world's main forest management certification organizations.
•	**Marine** Less than 1.5% of marine areas are protected, while the target is for 10% protection by 2020.
•	**The Carbon Dioxide (CO2) Gas Emission Threat** The increase in industrial activities and higher living standards in many countries have caused a total increase of 66% of CO2 emissions between 1992-2008.
•	**Waste Threat** Plastic production increased from 116 million tons in 1992 to 225 million tons in 2007 and 265 million tons in 2010.
•	**Overall Environment** The natural habitat and aquatic biodiversity loss, unsustainable agriculture and infrastructure development, pollution, land conversion and loss of tropical forests all account to greater threats to food security, poverty reduction, health and well being.

According to The Living Planet Report, in 2012, over 40% of the coral reefs and mangroves of Asia region have disappeared over the last 40 years with declining fish stock and other marine resources. In East Asia, almost 75% of the population (almost 2 billion) lives in coastal area.

Humans today extract and use around 50% more natural resources than only 30 years ago, at about 60 billion tonnes of raw materials per year. Given the current trends of growth, our extraction of natural resources could increase to 100 billion tones by 2030 worldwide.

The Living Planet Index (the health of the Earth's ecosystem) has been decreasing by 12% globally and 30% in tropical ecosystems between 1992 and 2007

The conditions in Indonesia

As one of the countries with the highest biological diversity, which has not yet been fully studied and used, Indonesia has lost numerous aspects of its biodiversity, and the remaining of it is under threat of extinction. Additionally, Indonesia is experiencing the degradation of natural resources in quantity and quality, as shown below:

Abundant Biodiversity

Indonesia is the second richest country in the world in regards to biodiversity after Brazil. With over 1.8 million km^2 (Ministry of Home Affairs, 2005 as cited in Ministry of Environment, 2009, p. 2) of terrestial area and another 5.8 million km^2 of water area (Indonesian Navy Hydrological Division, 1987 as cited in Ministry of Environment, 2009, p. 2), Indonesia is endowed with rich flora and fauna and other genetic resources.

According to the Ministry of Environment's fourth national report on biodiversity, Indonesia is one of the top five countries in the world in terms of species diversity. The report also states that the Indonesian Institute of Science has recorded more than 31,000 species of vascular plants and announced that more than 12% of world's mammals live in Indonesia. Indonesia's source of biodiversity is found across a rich variety of ecosystems such as forest, wetland, karst, lake and river, and many others.

Indonesia is one of the top five countries in the world in terms of species diversity. The Indonesian Institute of Science has recorded more than 31 thousand species of vascular plants and announced that more than 12% of world's mammals live in Indonesia. Indonesia's source of biodiversity is found across a rich variety of ecosystems such as forest, wetland, karst, lake and river, and many others.

At this stage, Indonesia has not fully explored the benefits of its abundant biodiversity. The biodiversity in food can support the life of the Indonesian population if some species no longer exist. There are always other options to support food security. Biodiversity offers the exploration of biomedicine that can be important for the future and to cure many diseases, which may not yet have solutions, or to solve new diseases. Biodiversity can also be the source of cosmetics, which has a high economic value.

For industry, raw materials may be found in the untouched biodiversity, which can help human beings to take the benefits that are not yet known. Research and innovation are important to find the use of various species both fauna and flora, in the mountains or low lands, in the terrestrial or marine areas, in the river or in the savanna. They need to be studied for the welfare of human beings.

Box 1.3:
Indonesia's richness in biodiversity

- **Marine Ecosystem**
  According to Suharsono and N. Purnomohadi, Indonesia's marine ecosystem houses more than "480 species of hard coral in its eastern part that is around 60% of the world's hard coral species" (as cited in Winter, 2009, p. 35).
- **Non-timber products**
  The richness of Indonesian's biodiversity is not only important for ecosystem balances, but it also provides a significant economic value such as for medicinal and other non-timber forest products. It is estimated that "6,000 species of plants and animals are gathered and cultivated for food, handicrafts, medicines, fuel, and building materials" (World Bank, 1996, para. 2).
- **Source of livelihood**
  In addition, biodiversity also serves as source of livelihoods for people living in rural areas or forest communities. It is estimated that around 40 million people of Indonesia's rural communities are very much dependent on Indonesia's biodiversity for their subsitence livelihoods (World Bank, 1996, para. 2). Indonesian forest biodiversity plays a crucial role not only in terms of its ecosystem services, but also for its social, cultural and economic roles for many local communities.

To protect Indonesian biodiversity, we need an understanding of what the country has, how to protect it, and how take the benefits of it at maximum for sustainable use. The richness of Indonesia's biodiversity provides a high potential for sustainable consumption sources and therefore it can be a relevant theme and topic in education for sustainable consumption (ESC).

The threats to Indonesian biodiversity

To protect Indonesia's biodiversity, we need to know the quantity of Indonesia's biodiversity, how to protect it, and how to take its benefits at the optimum level for sustainable consumption, and to understand its threats. Given the richness and potential of Indonesia's biodiversity, it needs to be protected and its threats reduced.

The forest and marine resources have abundant species, which have not all been studied for their benefits. Unfortunately, some species have been extinct before they can be used, and the rest are in danger. According to a report by the Food and Agriculture Organization of the United Nations entitled The State of the World's Forest, between 2000-2010 Indonesia's deforestation was 498,000 hectare per year or about 0.5% annually (2011, p. 113). The degradation was also found in the coral reefs, the home of various marine resources, especially fish. The findings from the Indonesian Institute of Science's Research Center of Oceanography (LIPI) indicates that from 1.076 sites of coral reefs in Indonesia in 2011, 30.76% of the coral reefs were in high degradation level and 36.90% were in moderate degradation level. The remaining coral reefs were in good condition at 26.95%, and only 5.58% were in a very good condition (Kemenko Kesra, 2012).

The agriculture sector in facing some critical challenges. There is a loss of local paddy seeds and fertile rice fields as the land is being converted into non-farm activities such as industrial areas, housing complexes, roads, etc. In January 2013, the Minister of Agriculture, Suswono, announced that rice field conversion into nonfarm land is 100.000 hectare per year (Maliara, 2013). This situation shows that there is a need for a solution for securing biodiversity and natural resources for the life of Indonesia' current and future generations.

Environmental degradation

The following data shows an alarming state of the natural resources degradation:

- Decreasing water resources (water spring, river, land conversion)

  Various areas in Indonesia have been experiencing critical water shortage because of the drying of its water springs. West Nusa Tenggara is faced with this problem, where between 1985 and 2009, 75% of its water spring dried up. In 1985, there were 702 water springs; this number continues to decreasewhere in 2009, there were only 178 water springs available (Antara, 2009).

  The problem of water resources is a reflection of problems with rivers and watershed in Indonesia. From all the watersheds in the country that are under observation, out of the 485 watersheds in 1996, only 22 watersheds were in critical condition. As the conditions of rivers and watersheds have been deteriorating over time, the number of critical watersheds was 62 in 2009 or three times higher within 13 years (Kementerian Kehutanan 2009, as cited in Kementerian Lingkungan Hidup, 2010, p. 81).

- The decreasing number of natural forests and the increasing expansion of critical lands. This is a condition where the degraded lands can no longer function properly in both hydrological and biotic functions. According to a report by the Ministry of Forestry in 2009, between 2000 and 2005, seven areas of the big islands in Indonesia (Sumatera, Jawa, Bali & Nusa Tenggara, Kalimantan, Maluku dan Papua) were estimated to have experienced deforestation of 5.3 million hectares, or on average, Indonesia lost 1 million hectares per year, within this five-year period (Kementerian Kehutanan, 2010).

  Deforestation is one of the factors that have significantly caused the widening of critical land. It is recorded that in 1989, the critical land in Indonesia was 13.3 million hectares, and it reached 30 million hectares by 2006 (Statistics Indonesia, 2011a). From 1990 to 2010, the area of forest in Indonesia declined by 20% to around 24 million hectares (ADB & WWF, 2012, p. 35). In the Heart of Borneo (Kalimantan island), an average of 850,000 hectares of forest is lost every year due to palm oil plantation, mining and timber production. If this trend continues, forest cover will drop to less than a third by 2020, compared to what it was in 1950 (ADB & WWF, 2012, p. 12).

Picture 1.2: Illegal logging is in an alarming stage

- The quality of the environment has been decreasing in areas that have increasing waste that is not managed, such as certain urban areas in Indonesia, mainly in Java Island. The report from Ministry of Environment stated that: "As the cities population grows in Java island, the waste is continuously piling up. In 2007, the pile of waste reached 65.000 m^3 day and close to 70.000 m^3 /day in 2008. This volume is in contrast with other big islands that are larger in size like Sumatra island, which has one third of the waste volume compared to Java island. Generally, the waste volume in other areas of Indonesia does not reach 10000 m^3 /day. From the total waste volume reported, only 70% of it is transported to landfills. This indicates that the remaining waste is either burned, dumped into the river or on abandoned land, contributing to other environmental problems such as air pollution. In Bandung Metropolitan city (Bandung city, Bandung District, and Cimahi city), the waste that was not transported to a landfill in 2004 was around 55% or more than half of total waste" (Kementerian Lingkungan Hidup, 2010, p. 46).

Sustainable Consumption-Safeguarding The Environment for Human Well-Being

From the above data, it is clear that there is a gap between the provision of natural resources (biocapacity) and the demand to meet human needs. The increasing population, the decreasing natural resources, and the potential growth of excessive consumption by the middle class, indicate the need for ESC. The goals of introducing ESC in Indonesia includes:

a) **Addressing the Environmental Dimension**
ESC increases the understanding of the need to use natural resources efficiently and reduce negative impacts on the environment.

b) **Addressing the Social Dimension**
ESC equips citizens with the knowledge of the importance of safety products for health and food security for sovereignty. ESC also incorporates values of respecting human rights, fair trade and solidarity to the poor.

In short, the overall objective of ESC is to develop environmentally, socially and even morally responsible consumers for many generations to come.

The Environmental Dimension of Sustainable Consumption

With the high demand of environmental services from natural resources and the decreasing quality of natural resources, the consumer has to decide responsibly when consuming. Rational consideration to consumption has to be the main reason. Consumers must overcome the emotional decisions, which do not count the implications of such actions. From the dimension of the environment, the following guidelines can be used:

- **Efficient use of natural resource efficiently (low ecological footprints)**
Be efficient by choosing a product with minimum use of natural resources such as water, energy, wood etc. In other words, the ecological footprints of the products you purchase should be low. Compare the use of natural resources for the same product from various brands and consult valuable sources of information in your decision-making.

- **Low environmental impacts**
Choose products with low negative impacts on the environment, while paying attention to the pollution it brings. Take into account the scale of contamination impacts, quantity, and the area coverage of the pollution (i.e. pollution to the river has impacts to many parties).

- **Choose products with eco-labels**
  Choose products with eco-labels, which means the products were produced using inputs, and production processes that are environmentally friendly (efficient in natural resources use, minimum waste, pollution and packaging etc).

  However, eco-labelled products are not common in the market in Indonesia as the country is still in the process of implementing eco-label requirements. Some imported products have eco-labels, but buying eco-labels of imported products is not environmentally friendly.

  A number of products have eco-labels as required by the country of destination for exported products. A number of timber and furniture products have eco-labels for its export market such as Java Lestari Furniture, which has the certificate from the Rain Forest Alliance (Forest Stewardship Council eco-label). The eco-label means that the wood for the furniture comes from sustainable forest management. There are many kinds of eco-label such as for agriculture products, and the tourism industry.

  For further information on various eco-labels please visit: www.rainforest-alliance.org, www.ecolabelindex.com, www.globalecolabelling.net, www.lei.or.id.

Picture 1.3: Examples of eco-labels

- **Buy products because you need them**
  For all products, consumers are expected to buy them in adequate numbers, and not to buy in excessive quantities beyond what is needed. When consuming, consume as needed. This will help curb the exploitation of natural resources to produce the products, and reduce waste and pollution. This principle also applies to products with eco-label as well.

- **3Rs (reduce, reuse, recycle)**
  The goal of the 3Rs is to reduce the use of natural resources, minimize the negative impacts on the environment, and minimize waste through various means such as buying products that can be used often, products with minimum packaging, using one car as a group rather than each driving their own car, reading newspapers and magazines on-line rather than buying hard copies and throwing them away, etc.

  Reusing involves using the same products for other purposes and not throwing them away. This will help reduce waste. For example, using shopping bags that can be used again rather than using a one-time plastic bag, giving away clothes, shoes, bags which are in good shape to friends, colleagues or the needy such as an orphanage, and using empty jam bottles for storing sugar, coffee, and flour.

  Recycle various products that can be recycled into new forms and be used in their new function. This will help reduce of waste such as plastic waste to be plastic pellets, which can be used as ingredients for new plastic products, such as plastic packaging recycled to be bags, wallets, stationery bags and so forth. Other examples include recycling used paper and newspaper and turning organic waste into compost, natural fertilizer, etc.

- **Using and buying local products**
  As much as possible, consume local natural resources and products to meet your needs. This attitude will ensure efficient energy use for transportation, packaging and so forth and it will help develop the local economy. This will also help to strengthen the knowledge and skills of the community by using local natural resources, and increase the resilience and sovereignty of the community and even the country.

Picture 1.4: Love the local products

Picture 1.5: Junk Food, unhealthy food

The Social Dimension of Sustainable Consumption

Sustainable consumption covers the knowledge of food safety as well as attitudes that respect human rights, fair trade and social solidarity for those who are affluent and those who are not. This needs to be taken into account when discussing the social dimension of sustainable consumption.

Food safety

There are different types of food containing harmful ingredients that pose a threat to people's health in the markets. Some food contains borax to ensure the food lasts longer while others contain chemical colours, which makes the food more attractive.

Some food contains high levels of Monosodium glutamate (MSG), salt, sugar, fat/cholesterol, or other ingredients, exceeding the prescribed safety standards. Other foods are cooked in unhealthy ways such as using too much cooking oil, unsafe cooking ware and plastics. Unhygienic services also lead to unhealthy food and drink. Food that is exposed to flies and dust because it is served open without any covers to protect it can often become contaminated. Food and drink that is placed in unclean containers or with u clean utensils, or taken by bare hands, can also be unhygienic. If people are exposed to these kinds of food, they can easily get diseases, ranging from diarrhea to serious illnesses.

Fair trade

The prices of products and services do not always reflect a fair price for all actors in the supply chain, especially for those at the beginning of the supply chain. The producer or collector gains the least while the distributor and retailer get the highest profit. In many cases when looking at the products from farmers for example, the hard work of the farmers is not appreciated as they are the ones that receive the lowest price, while the retailer can receive four to five times the price, compared to the original price they bought the products.

Additionally, those making handicrafts, which require creativity and a long process to produce, receive very cheap prices in many countries, while in the art stores in the cities, they are sold for much higher prices.

ESC equips citizens with the knowledge of the importance of safety products. ESC also incorporates values of respecting human rights, fair trade and solidarity to the poor.

An informed consumer is one that researches the products and companies before purchasing goods and services. Therefore, if consumers are equipped with information that is easily available and accessible, they can consider if the products they buy are produced by companies, which respect labour rights. Although consumers expect reasonable prices with high quality products, sometimes the reasonable price is actually at the cost of cheap labour.

The batik artist who has been working persistently for months deserves a good price for their handmade batik tulis. Consumers have the opportunity not to buy products from companies that hire cheap child labour unless the companies comply with labour rights. The source of this kind of information can be found in the annual reports of companies, their websites, their compliance (accountability) ratings, as well as by simply following the news in the mass media. This will allow you to find out if a certain company has legal problems and labour conflicts with the company's management, etc. Usually, well-known companies can provide necessary information as needed.

Picture 1.6: A fair trade logo

Labour rights

To get the most profits, companies will often lower their operational costs as much as possible. Usually, the highest operational cost is the human labour cost. Therefore, companies usually minimize the labour compensation expenses. To lower the labour cost, companies may ignore the rights of labours, such as minimum wage and benefits, exploit children as labour, other rights related to long working hours, the opportunity to take leave after giving birth, having one day leave a month for women, having the mechanism to address complaints and to accommodate aspirations from labour through a democratic system and so forth. Some companies hire children since they cost less in terms of wages.

Consumers need to find information regarding the company's compliance to labour rights, either from the labour union, the annual report, the Government's statement on the company's performance or the mass media. The information will indicate whether the company respects labour rights or is engaged in any conflict on labour rights and whether the company respects human rights in general. When it comes to deciding to buy a product, labour rights issues is one of the considerations.

Overwhelming information and aggressive marketing

The modern world is marked with information that reaches people in an instant. Nowadays, information is widely accessible through various mass media channels and social networks (social media). The lifestyle of the middle class, films, television programs, and the growing malls or shopping centers have exposed and promote luxurious lifestyles that can encourage the consumer to buy endlessly and to follow that kind of lifestyle. In addition, the aggressive marketing found in all mass media channels can be misleading cosumers to buy unnecessary things. These marketing efforts often include various temptation gifts (such as motor cycles, cars, travel and tourism etc), the offer of credit cards and continuous discount prices and sales. This situation indicates that the consumer needs to have the awareness before making the decision to buy things. This will provide the consumer with peace of mind and not trap the consumer in a situation where they say "I should have not bought the products that I do not need, this consumption is too much. I should have bought important products which I really need."

Consumers need to be very careful regarding the aggressive marketing of products and services. Consumers must consider if they really need the products. Are they qualified products, which ensure safety? Are they designed for luxurious lifestyles only as a means of showing off social status? Are the consumers attracted because of interesting advertisement, discount rates and sale prices? Are the consumers trapped into the persuasion of the salesman? The benefits and quality of the products have to be investigated for their accountability and the priority in buying has to be reviewed along with the financial capacity. On the other side, to tackle the issue of aggressive marketing, governments should impose marketing ethics that should be enforced to protect consumers.

Picture 1.7: Tempting discount sales for clothing

Buy products from companies that are accountable and have a good reputation

Consumers should buy products from companies, which do not have legal problems and are transparent to the public in its production practices and quality of their products. This includes companies that comply with the government's regulations standards. Consumers can find the information on some standards and the products in the packaging itself such as safety standards, quality standards, ingredients of the product, contact address for feedback, complaints, address of the company, dates of expiry in food, medicine and cosmetic products, etc.

Engage with companies that have Annual Reports and Sustainability Reports (where practices regarding social and environmental responsibility are disclosed)

Responsible and informed consumers should consume products from companies, which are committed to addressing social and environmental issues. This means that consumers should choose products from companies that have good corporate social responsibility records. This includes companies that have the following attributes: have labour compensation that meets the government standard, do not hire children, provide room to address aspirations of the workers, provide security facilities and convenient atmospheres, provides the opportunity for personal development based on each one's potentials and interests, shows concern towards fair labour, and produces safe and qualified products.

Consumers should buy products, which are produced by environmentally responsible companies that use safe and efficient production processes, and comply with environmental standards. The two aspects of responsibilities can usually be found in the company's sustainability reports, which have to be accessible for the public, through printed materials, websites, free publications, etc.

Use of special logos or information on products reflecting the company's commitment

A logo is a symbol, which reflects information for consumers in a short version so it is easy for consumers to make a decision. For example, the fair trade logo means that the products have fair benefits sharing with the ones who are at the beginning of the supply chain. Certain logos indicate that the products have met the requirements from the Supervisory Agency on Food and Medicine or Badan Pengawasan Obat dan Makanan (BPOM). Having certain certificates can also be reflected in the use of various symbols such as the "Halal" symbol for Muslim consumers or the eco-label logo, which indicates that the products are produced from an environmentally sustainable process.

Buy local products for local prosperity

Using local products will encourage a growing local economy, increasing the local capacity to produce better quality product overtime. This enables the local community to be self-reliant, and in the end, it will increase the prosperity of the local community.

Rational decision-making

It means the consumer has to be fully aware of what to buy. The decision has to be based on real needs and priorities and not influenced by marketing. The consumer should have adequate and accurate information about the products, understand the impacts of the products on the environment and the long and short term social consequences of the products.

Social Solidarity: The Two Worlds

The earth planet will be in critical condition when we consume too much and in rapid ways, without considering the limit of the environment's carrying capacity, and not caring about the lives of others.

The high income countries have high ecological footprints which is 5 times more than the low income countries (WWF, Global Footprint Network & ZSL, 2012).

A UNDP report shows that 20% of the developed countries consume 86% of USD 21.7 billion of global consumption in 1995 (UNDP, 1998, p. 56), while the remainig world population consumed the rest. If the consumption patterns of developed countries is imitated by those in developing countries, especially those with a rising middle class, consumption will exceed the earth's carrying capacity. This will mean another planet will be needed to meet the needs of these new consumers.

Indonesia has a rising middle class, whose expenditure is USD 20 per person per day. At the same time, there are poor families of around 30 million people (Statistics Indonesia, 2011b, p. 48) with an income less than USD 1 per person per day (Ministry of National Development Planning & Ministry of Environment, 2012, p. 28). Poor families spend most of their income on food, a basic requirement for survival.

Two worlds are living in contradiction. Social solidarity is needed to bridge the gap between the upper middle income class to the poorer families.[2] The middle class, who often over consume, needs to understand that their consumption patterns have a negative impact on natural resources, thereby endangering the global environment and consequently, human survival. At the same time, this consumer class needs to have empathy towards those that are under consuming. The consumer class is therefore urged to share their resources with the less fortunate.

Social justice is the destiny of human kind, where everyone can grow and live his/her full potential. There are many ways to support those who live in poverty: empowering them with knowledge and skills, creating employment opportunities, and providing them with health services.

Through education and decent jobs, the less fortunate will be more productive. Through social solidarity, these two worlds (those that over consume and those that under consume) can be one world, where everyone has the same opportunities; everyone can be productive and can live life with enthusiasm and compassion, thereby contributing to the welfare of all human beings.

Box 1.4:
Sustainable lifestyle

Our behaviours as consumers today will impact the way people live tomorrow. Sustainable consumption means consuming goods and services without harming the environment or society. Living a sustainable lifestyle is essential to overcoming poverty and conserving and protecting the natural resources base for all forms of life. (UNESCO, (and the year as noted in the source).

- **The high income countries have high ecological footprint with 5 times more than the ecological footprint of low income countries.**
- **In Indonesia, there is a group of middle class with expenditure of USD 20 per day per person. On the contrary, at the same time there are poor families of around 30 million people with income less than USD 1 per person per day.**
- **With social solidarity these two worlds (the over consumption group and the under consumption group) are expected to be one world, where everyone becomes productive, has the opportunity to live in the fullest potentials with enthusiasm, and has compassion to contribute to the welfare of human being.**

[2]Social Solidarity in this situation means the emphaty to the unfortunate group, understanding that the over consumption pattern can have bring impacts to the other population, and the willingness to manage consumptoin pattern in responsible ways and the willingness to share with those whol live in poverty. The definition applies only for this publication.

Education for sustainable consumption emphasizes the importance of consumption that leads to a better quality of life. It involves being responsible and efficient in natural resources consumption, respecting human rights and having solidarity with the less fortunate

CHAPTER II:

AN INTRODUCTION TO EDUCATION FOR SUSTAINABLE CONSUMPTION

The Core Theme of Education for Sustainable Development

- Education for Sustainable Development and Education for Sustainable Consumption
- Our Responsibilities: Global Solidarity and Local Action
- The Pedagogy: Education is a Transformational Process
- Adapting the Astrolabe Approach to Develop ESC

Education for Sustainable Development (ESD) and Education for Sustainable Consumption (ESC)

What is Sustainable Development?

Sustainable Development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs," as stated in the 1987 Brundtland Report" (UNESCO, 2011, p. 1). The definition implies that development should bring quality of life for all, for now and for the next generations. The principles of sustainable development are elaborated into three pillars: where it should be economically viable, socially just, and environmentally sustainable. With the integration of these pillars, the approach of development becomes holistic.

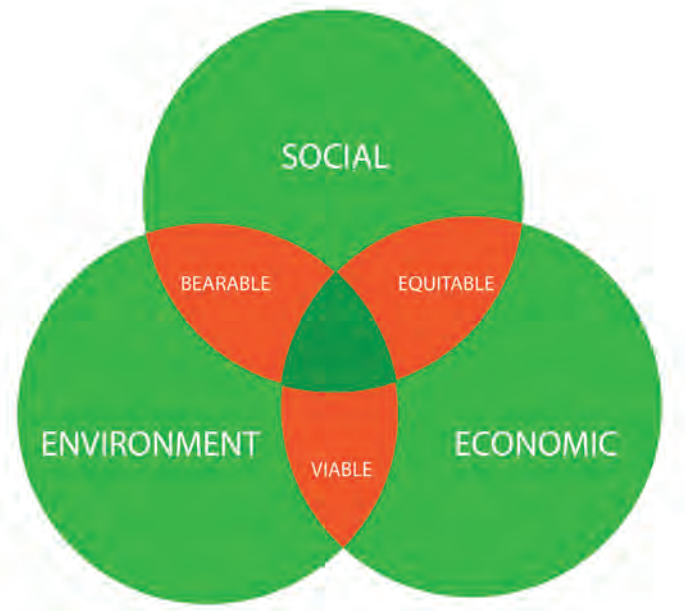


Figure 2.1: The pillars of sustainable development

What is Education for Sustainable Development (ESD)?

The UNESCO publication entitled "Astrolabe: A Guide to Education for Sustainable Development Coordination in Asia and the Pacific" summarizes the essence of ESD, as noted below.

"Education for Sustainable Development (ESD) aims to contribute to sustainable development by empowering people, through education, to assume responsibility for creating a sustainable future. It seeks to engage people from all walks of life, worldwide, in bringing about changes for a better world. Stakeholders from across sectors have a role to play in changing the way we deliver education and ensuring we make appropriate decisions for a better future." (UNESCO, 2011, pp. 1-2)

"ESD allows people to not only use their interpretation on environment, society and economics but also to equip them with ability to position themselves, evaluate their surroundings and to conduct their lives in ways that are consistent with sustainability." (UNESCO, 2011, p. 3).

What is Education for Sustainable Consumption (ESC) and how is it related to ESD?

ESC reflects the three pillars of sustainable development

ESC is education that enables people to have an understanding of the environmental, social and economic impacts of their consumption choices, which can later be translated into actions in daily life. The education itself does not necessarily change the attitude in the way people consume but it can help to accelerate this change. ESC is an excellent starting point for ESD since it deals with issues in our daily lives.

"The objective is to ensure that the basic needs of the global community are met, quality of life for all is improved, inefficient use of resources and environmental degradation are avoided. ESC is therefore about providing citizens with the appropriate information and knowledge on the environmental and social impacts of their daily choices, as well as workable solutions and alternatives." (UNEP, 2010, p. 11)

Picture 2.1: Students walk to the school

Box. 2.1:
The concept of sustainable consumption

The concept of Sustainable Consumption has the following elements:
• Satisfying human needs;
• Favoring a good quality of life through a decent standard of living;
• Sharing resources between rich and poor;
• Acting with concern for future generations;
• Looking at the cradle to grave impact when consuming; and
• Minimizing resource use, waste and pollution.

Source: *Teaching and Learning for a Sustainable Future: A Multimedia Professional Development Programme*, UNESCO & UNEP, 2008, p.11.

From the environmental aspect, human beings encounter problems related to natural resources in their daily lives such as food safety and security, water supply, problems of energy and transportation, air pollution, illegal logging, inappropriate pesticide use in agriculture, the use of explosives to collect fish, which destroy the coral reefs, and even waste produced from modern life, etc. Through ESC, these problems can be addressed by encouraging responsible consumption patterns so that human beings can have adequate natural resources to support their lives.

Looking at the social and economic aspects, ESC emphasizes the importance of decent jobs that will allow people to live in prosperity, to act fairly, and have empathy through solidarity to the poor. If the middle class has to reduce their excessive consumption, the poor will at least meet the minimum standard to live. In short, ESC aims to generate quality of life for all.

In terms of time, ESC not only considers the impacts of consumption in the present times, but it also foresees the consequences of consumption in the future, showing a concern and responsibility to future generations. Through ESC, citizens will learn to be efficient in their use of natural resources, which will help preserve other natural resources for use in the future.

Box. 2.2:
Sustainable consumption: The core theme of ESD

"Education for sustainable consumption is a core theme of Education for Sustainable Development, and it is essential to train responsible citizens and consumers towards lifestyles based on economic and social justice, food security, ecological integrity, sustainable livelihoods, respect for all life forms and strong values that foster social cohesion, democracy and collective action." (UNESCO, 2009)

Connecting ESC to the challenges of sustainable development

As elaborated in "*Here and Now!* Education for Sustainable Consumption: Recommendations and Guidelines" (UNEP, 2010, p. 14), ESC will help accelerate progress towards sustainable development as it deals with current affairs at two interconnected levels - the individual and the public.

Picture 2.2: Students do outdoor learning

Picture 2.3: Sustainable consumption cares about the health of mother and child, which is still a problem in Indonesia

Table 2.1:
The connection between ESC and sustainable development challenges

Personal	Public
ESC is about learning to consume differently and efficiently.	ESC is an excellent starting point for education for sustainable development since it deals with issues young people are concerned with in their everyday life such as identity, food, energy, water, housing, transportation, communication, work, fashion, entertainment, tourism, etc.
ESC is a way of learning how to gather, assess and use information.	ESC is a means of developing human resources and encouraging reflective, critical and active citizens who are capable of making informed choices.
ESC is a crucial part of the development of mental and physical health.	ESC is part of the on-going values debate to define the quality of life.
ESC is a means of preventing overindebtedness and financial dependency.	ESC is a moral obligation and an important dimension of social responsibility.
ESC is a tool for stimulating creative responses on the individual level to social, economic and environmental challenges.	ESC is a means of promoting a dignified standard of living for everyone.
ESC is an important part of family management and a central subject for intergenerational learning.	ESC is a vital vehicle for mitigating climate change
	ESC is a way of contributing to the preservation of biodiversity.
	ESC is an instrument for ensuring awareness of consumer rights.

Source: UNEP. (2010). *Here and Now! Education for sustainable consumption: Recommendations and Guidelines*. Paris, France.

Our Responsibilities: Global Solidarity and Local Action

Various challenges

In Indonesia, existing ESC is not well integrated in formal, informal and non-formal education and lacks creativity. Educators and students are not yet able to fully grasp the idea of consuming sustainably due to the fact that available learning materials are not supported with updated information and have no relevance in their everyday life. Accordingly, teachers find themselves in a difficult situation to come up with substance that will stimulate the learning process on sustainable consumption (UNEP, 2010, p. 10).

The challenge in ESC lies in efforts to motivate individuals to be conscious that they can take part in shaping the future by adopting a sustainable lifestyle. These include giving these individuals a chance to know what kind of mechanism need to be in place to produce goods and services and what things that consumers can do to make the process more sustainable. Furthermore, the endeavor must also provide them with the instrument to overcome obstacles and to influence policy making. In short, the challenge is how to make "education for sustainable consumption an instrument for ensuring awareness of consumer rights." (UNEP, 2010, p. 10).

Picture 2.4: Women shop for fresh vegetables at a traditional market

The challenge in ESC lies in efforts to motivate individuals to be conscious that they can take part in shaping the future by implementing a sustainable way of life.

Box 2.3:
How ESC is different from regular consumer education

The differences between ESC and regular consumer education are:
Regular consumer education
• Focused on economic and financial growth, and security;
• The consumer is a major economic agent;
• Values of market pervade society and people serve the market;
• Concerned with efficiency, scarcity and competition;
• Focused on consumer interest and rights.
Education for sustainable consumption
• Focused on human and social development, potentials, progression and security as well as economics;
• People are consumers and citizens;
• Economy and market serve the people and society;
• Concerned with effectiveness and efficacy;
• Focused on mutual interests and on citizen/human responsibilities to others and the planet while consuming.
• Focused on consumer interest and rights.

Source: McGregor (2011). United Nations Conference on Sustainable Development.

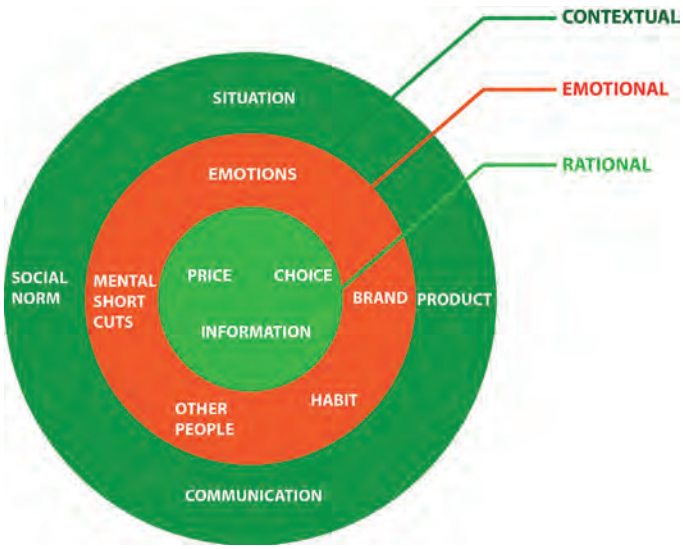
How consumers choose

Specifically at the personal level, ESC needs to find a way to influence individuals' decision making processes that, according to "The Consumption Dilemma: Leverage Points for Accelerating Sustainable Growth" (Deloitte Touche Tohmatsu & World Economic Forum, 2011, p. 13), occur at three stages: rational decision, emotional decision and contextual decision:

- **Rational**
  Conscious decisions based on information about the price, attributes and performance of products and services – some of which may relate to utility to an individual, some of which may be more social. Though price is the single greatest factor in consumer decision-making, purely rational decisions are rare. Most of the information presented to consumers is confusing.

- **Emotional**
  Beliefs, emotions, brand image, established habits, social influences and heuristics – mental short cuts – all play a role here. A large part of consumer decision-making depends on emotion, intuition or habit. Some repeat purchases, with little or no conscious consideration of alternatives. Behavior breakers tend to relate to price and promotions.

- **Contextual**
  Choice is also influenced by the environment in which a consumer makes a decision. Both the immediate physical environment and the broader social and cultural context play a role. Social norms matter, particularly when the choice of a particular product or service is visible to others. Personal recommendations can be highly influential.



Source: Deloitte Touche Tohmatsu & World Economic Forum. (2011, April). *The consumption dilemma: Leverage points for accelerating sustainable growth.* http://www3.weforum.org/docs/WEF_ConsumptionDilemma_SustainableGrowth_Report_2011.pdf

Figure 2.2: The influencers of consumers' choice

ESC needs to find a way to influence individuals' decision making processes that occur at three stages: rational decision-making, emotional decision-making and contextual decision-making.

An explanation of how consumers choose provides an understanding of the behavior of people, which can be influenced not only on the price, but also other factors both emotional and contextual. Therefore, ESC should include an approach that targets individuals' concern and responsibility for the physical environment, social and cultural context, even beliefs and emotions.

Understanding mindsets of the consumers can assist those who design ESC. Consumers mindsets can be categorized into (Akenji, et al., 2012, p. 76):

- **Compliance** – where consumers purchase on the basis of price and utility without a sense of influencing the producer actions through consumer choices.

- **Efficiency** - where consumers prefer products that have a greater efficiency or reduce resources use and emissions while retaining utility.

- **Connectivity** – where consumers take steps to influence producer through their consumption decisions and recognize that their success will depend on their access to social networks, income levels, and self-esteem.

- **Critical Shock** – where consumer decisions are focus on the need to retain a critical natural capital stock. They trading off short-term individual gains for longer-term communal values.

ESC can be a starting point of a journey towards sustainable lifestyles, to change the habit of consumers, from consumers who do not have the awareness of sustainable consumption to responsible consumers that are living sustainable lifestyle. In this case, consumers will have critical awareness, understand social responsibility as consumers, and has the global solidarity as world citizens.

What are the outcomes of ESC?

UNEP's "*Here and Now! Education for Sustainable Consumption: Recommendations and Guidelines*" (2010, pp. 24-25) provides useful guidance on the learning outcomes and competences of ESC, as organized and presented in the table below:

Table 2.2: The outcomes of ESC

The Basic Learning Outcomes of ESC				
Critical Awareness	Ecological Responsibility	Social Responsibility	Action and Involvement	Global Solidarity
General Competencies				
Self-awareness	Appreciation of nature	Appreciation of human diversity and multiculturalism	Ability to apply knowledge in practice	Concern for justice, peace and cooperation
Concern for quality	Appreciation of inter-relatedness of humans and nature	Appreciation of interre-latedness of individuals and society	Ability to cope with one's emotions	Ability to recognize global perspectives
Ability to make critical, reflective decisions		Willingness and abil-ity to be of service to others	Capacity for generating new ideas	Capacity for empathy/ compassion
Information manage-ment skills			Capacity to adapt to new situations	
ESC subject specific competencies include the development of the following attitudes, knowledge and skills				
Ability to define what one considers to be a good quality of life and to be able to identify the values upon which this is based	Ability to acquire, assess and use infor-mation on the conse-quences of consump-tion especially on the environment	Knowledge of consumer rights and central consumer protection laws	Basic knowledge of interaction of pricing mechanisms with the consumer's attitudes and behavior	Knowledge of social networks responsible for shaping consump-tion patterns (peer pres-sure, status, etc.)
Basic knowledge of the market system and the role of business	Ability to manage phys-ical resources (effective control, maintenance, reuse and replacement)	Individual and collective understanding of con-sumer social respon-sibility in relation to the corporate social responsibility	Knowledge of how production processes are linked to the consumption system	
Awareness of a com-modity's intangible and symbolic characteristics		Insight into the prac-ticalities of both the supply and demand sides of production and consumption and their outside-of-the-market relationships to com-munity development	Consciousness of civil society's power to initiate alternative ways of thinking and acting	
Ability to recognize, decode and reflect criti-cally upon messages from the media and the market			Ability not only to envision alternative fu-tures but also to create reasonable paths of action leading to these	
Ability to manage per-sonal finances (budget-ing, saving, investing, taxes and fees)			Knowledge of conflict resolution in general and in particular in relations to consumer related situations such as product safety, liability, compensation, redress and restitution	
Cross-Cutting Competencies				
Realization of the complexity and often controversial nature of sustainable consumption issues				
Insight into how individual lifestyle choices influence social, economic and environmental development				

Source: UNEP. (2010). *Here and now! Education for sustainable consumption: Recommendations and guidelines.* Paris, France.

The Pedagogy: Education is a Transformational Process

The Ministry of National Education and Culture of Indonesia of the Republic of Indonesia perceives ESC as not only a pedagogy or new knowledge, but also as a transformation of understanding that will lead to responsible action (as individuals and as citizens) when it develops the empathy and sympathy to the issues as a starting point towards realizing a new habit of becoming a responsible and accountable person (Indriyanto, 2012).

Therefore, ESC can only be truly effective when the learners gain:

- Appreciation and support for the environment: Human beings need to acknowledge the environment as an irreplaceable supporting ecosystem to human life and that each natural creature has its own system that needs to be sustained i.e. carrying capacity, life cycle. The environment needs to be taken care and nurtured by human beings.
- Appreciation and support for social justice: This requires the ability to be in tune with the life of the unfortunate community, the life of the future generations, labours, and local knowledge and capacity.
- Appreciation and support for economic welfare: This involves support for those in the supply chain to have fair trade, equal opportunities towards better life and respect for labour rights.

ESC as not only a pedagogy or new knowledge, but also as a transformation of understanding that will lead to responsible action (as individuals and as citizens) when it develops the empathy and sympathy to the issues as a starting point towards realizing a new habit of becoming a responsible and accountable person (Indriyanto, 2012).

Essential in making decision to buy or use products and services

At the national roundtable discussion on ESC in Indonesia, held in March 2012, it was noted that it is imperative that ESC highlights the fact that production and consumption of various goods, products and services will have implications on the following aspects (Widjajanti, 2012, p. 17):

- Environmental aspect that includes resource efficiency, reduced pollution, waste, carbon dioxide (CO2) and other negative impacts.
- Social aspect that includes equality/fair trade, labour rights, human rights.
- Localities aspect that includes respect local knowledge/culture, capacity, availability (asset).

Note: in reality, people buy things usually based on price, quality, and availability.

An approach that can be taken into account

The national roundtable discussion on ESC also suggested several approaches that incorporate values as follows (Widjajanti, 2012, p. 17):

- Illustrative value that demonstrates a complex problem into simple and easy to understand dimensions.
- Emotional value that provides an intimate and personal link to the issue at hand through real people and experience.
- Witness value that includes seeing what have been done and witnessing best practices.

ESC methodologies and means for disseminating ESC

Through "*Here and Now! Education for sustainable consumption: Recommendations and Guidelines*", UNEP has identified various relevant and interesting learning processes for ESC. Some of the methodologies presented as examples are as follows, with additional information that is relevant to the Indonesian context (2010, pp. 26-28):

- **ESC as public discourse and general dialogue**
  ESC develops awareness on the importance of sustainable consumption through schools, universities, community groups, and the mass media such as television and radio, etc. as well as other various means such as seminars, talk shows, campaigns and basic coaching.

- **ESC in scientific messages**
  Through scientific means, ESC develops indicators to measure sustainable consumption such as using the Human Development Index, ecological footprints and so forth.

- **ESC as action activities**
  Through project activities, ESC is applied in action as a process of learning.

- **ESC in art and cultural activities**
  ESC messages addressed through art activities such as music, literature, drama, and games with a fund learning process.

- **ESC as active learning process in the field**
  This involves learning sustainable consumption through observation and involvement within community groups or solving consumption problems related to a certain group, including learningthe values and culture related to consumption, etc. The process will bring insight of sustainable consumption in a community or group.

- **ESC in mass media, social media and the Internet**

  - Mass media such as television and radio stations (including community radio), magazines and newspaper can be an effective tool for ESC. The right mass media will depend on the profile of the specific target groups.

  - Considering the benefits of the Internet and social media, including Facebook, Twitter and other forms of online communications such as Skype, ESC can reach out to a wider audience efficiently. Using email and websites, electronic materials such as soft files related to ESC can be widely disseminated. Webinar and Moodle training, and e-learning or courses through internet, are the options that ESC can use to disseminate the message.

Various methodologies can be combined for certain target groups so that the results will be more effective since it starts with knowledge, understanding, experience from the field, which is then disseminated through different kinds of communication media.

Adapting the Astrolabe Approach to Develop ESC

ESC is designed participatively

Another approach to develop ESC is by adapting the framework developed by UNESCO. In "Astrolabe: A Guide to Education for Sustainable Development in Asia and the Pacific", UNESCO positions sustainable consumption as one of the thematic education programs of ESD. An astrolabe is "an ancient instrument used to measure the position of the sun and stars" (UNESCO, 2011, p. iii), like a compass it will inform the position of the journey and the direction to the destination. It is a compass for your journey. The ESD Astrolabe strives to bring together multi-stakeholders as partners in education and sustainability, especially including ministries of education and environment, the local authorities, schools, higher education and research institutions, the private sector, communities and youth in order to promote discussion on improving the quality of learning from the perspective of sustainable development. Thus, this provides a basis for guiding discussion towards a set of concrete objectives (see Appendix B for Exercise for the Objective of Education).

The ESD Astrolabe tool developed by UNESCO's Asia and Pacific Regional Bureau for Education, which is also helpful to develop national guidelines and recommendations for ESC, is "Who is doing what and where exercise that aims to align current policies and initiatives with ESD (or ESC) thrusts associated with education and training" (UNESCO, 2011, p. 44):

- Reorient existing education programme to ensure curricula content and pedagogy (from preschool to university) encourages the knowledge, skills, values and perspectives associated with change, for a sustainable future. Emphasis lies on reorienting curricula, as opposed to developing new curricula, and on improving the quality of the programs;
- Build public understanding and awareness of sustainable development (and ESC) through widespread community education, including non-formal education through responsible media committed to encouraging, an informed and active citizenry; and

- Provide practical training to and within businesses, institutions and civil society to build the capacity necessary to make decisions and perform work in a sustainable manner and to implement sustainable practices at the local, provincial, national levels.

See Appendix B for an ESC mapping exercise.

Picture 2.5: Teacher: central character of education reorientation teaching

Creativity in using the Educational Methodology

The three approaches mentioned above could be integrated in effective ESC delivery in Indonesia: reorienting formal education, developing public awareness on ESC in non-formal education,and providing practical guidelines. In other words, ESC can equip the whole community with knowledge, understanding, and encourage behavioural change towards more sustainable consumption patterns. Creativity in delivering ESC varies to convince the target audience on the importance of sustainable consumption, with practical examples that encourage action. The most important part of Astrolabe is the participatory process of all stakeholders and combining the formal and non-formal education sectors.

An example of ESC for middle class urban youth, the methodology to deliver ESC can be as follows: Reorient the existing curricula at formal school, a rigorous campaign to build the awareness (including the use of social media), and followed by actions as examples that show what sustainable lifestyles are, and how they are easy to replicate.

"Careless exploitation of natural resources will lead, eventually, to destruction of humanities itself. Only through responsible consumption that the continuity of life of humanity can be assured. Only by consuming prudently that mankind on the planet earth can share their lives in justice, even for those who are in need and those who are still unborn."
(Emil Salim)

CHAPTER III:
DEVELOPING ESC MATERIALS IN INDONESIA: THE WAY FORWARD

- Adapting ESC into the Indonesian Context
- Curriculum Framework for ESC in Formal Education
- ESC Initiatives in Non-Formal Education
- Recommendations to Develop ESC

Adapting ESC into the Indonesian Context

The Profile of ESC Audience

A multi-stakeholder workshop on education for sustainable consumption (ESC), held in March 2012 in Jakarta, Indonesia, highlighted several elements, which need to be taken into account when developing topics of locally-relevant ESC materials, be it for formal education or non-formal or informal education, as noted below:

- Target groups individual profile (age group, mother community, interest club, volunteer groups);
- Social and economic class (high, middle, or low income families);\
- Geographical areas and where the target audience lives (urban/rural, coastal area or terrestrial, agriculture community or deep forest community, etc.);
- Local culture (by ethnic group) and knowledge; and
- Indonesia's abundant biodiversity.

This section provides detailed information regarding the elements noted above, in particular, highlighting the need for specific messages to be integrated into ESC for each of the points noted.

The individual profile

- **Age** - more complex knowledge of ESC can be delivered the older the target group is. Age also determines how ESC will be delivered. Where the young can have basic concepts and tend to require more action-orientation as the learning process, the adult can appreciate a deeper complexity of knowledge on sustainable consumption, followed by change in behavior.

- **Youth** - aged between 19 and 35 years are considered a special group. Youth have a tendency to consume more because there is social interest behind their consumption. According to youth, their consumption patterns often determine if they can be accepted by their peers.

Many youth also experience the pressure of their peers – they feel the need to have similar lifestyles. This age group also includes young professionals who have buying power, which often leads to them showing off their success through excessive consumption (beyond normal consumption).

As a result, this group is easily influenced and manipulated by advertisements and aggressive marketing through mass media and social media, especially because youth tend to follow the new trend without thinking much about the long-term impacts. Peer pressure can make members who would like to be accepted decide to consume without rational justification and simply follow "the rules" of the peer group. Those with jobs can often be tempted to consume as a means of getting accepted into a higher social class. This provides an opportunity for targeted ESC that can raise awareness on the importance of sustainable consumption, and encourage this group to adopt sustainable lifestyles.

This youth group also consists of fast learners who are full of energy and creativity and are open to accept new ideas. They can be a target group of ESC as they can be the innovators and agents of change through their schools or professions as researchers, technicians, pharmacists, educators, politicians, community leaders, financial analysts, environmentalists, etc . Once they are equipped with adequate education on sustainable consumption and their open minds, it is only a matter of how to encourage them to be agents of change in their professions and lives.

Picture 3.1: Indonesian youth clean up the environment

- **The Mother** - as the educator. A further strategic target group can be mothers who make the main decisions on many things at the household level. She often decides what to buy for daily meals, products used for cleaning the house and washing the clothes and dishes, as well as how much will be spent for transportation, education, health, and so on. If she is aware and well-informed about sustainable consumption, and willing to take action, many things at the household level can change. Not only will she change, but most likely the family members will change too as she is the educator at home, where learning can be directly linked to actions. The sooner the mother teaches her children the right attitude can start at very young age.

- **The interest and volunteer groups**
  There are a number of interest groups that can be strategic for ESC. Among these are groups that show their concern for the environment (such as hiking clubs, diving clubs, bird watching clubs) and volunteers who usually work for non-profit organizations, for example to help the needy, work on providing free education, provide support to farmers or women, interfaith groups, etc.). With a social mission of ESC to help protect the environment, to bring justice, to care about others, and to promote tolerance, these kinds of group can be strategic partners in advancing ESC. They can be easily connected with the ESC mission as their work has similar values. First though, they need to learn about ESC, and then they can disseminate ESC to others.

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The Indonesia Diversity

Indonesia is diverse country from its geography, biodiversity, culture of numerous ethnic groups, and social status. Each area and group has its own challenges and opportunities to practice sustainable consumption. Those who live deep in the forest have very different problems and needs compared to those who live in urban areas. The Balinese people have a different culture compared to the Papua people in respect to nature, while the Bajau coastal communities have a very different way of life from the Dieng Plateau communities.

Picture 3.2: There are more than 3000 ethnic groups in Indonesia, with around 50-70 millions of indigenous people, each with its own culture

- Indonesia's coastline is 54,716 km, with terrestrial area of 1.8 million km^2 and water area of 5.8 million km^2 . Indonesia consists of 17,000 islands, of which 6000 islands are inhabited.
- Indonesia is home to more than 3000 ethnic groups. Some ethnic groups have a population of less than 10,000 people. In urban areas, the population can be almost 10 million people.
- It is predicted that there are 50 to 70 million indigenous people in Indonesia whose lives depend on the forest as the source of their food and medicine.

The following condition influence how people behave, therefore, ESC materials need to take into account those condition and make ESC substance relevant and attract the interest from public to join.

Social and economic class

Those who have different levels of income, from high, medium to low, have very different challenges in regards to sustainable consumption. Quite often, people that live more affluent lifestyles, which include living well beyond their survival needs, can afford a life that provides good education, spacious houses, vehicles, entertainment equipment, fine dining and holidays during the year, among others.

The major issue for high and middle-income groups regarding sustainable consumption is their pattern of over-consumption. The call of ESC is how to make consumption more responsible, particularly given the scarcity of natural resources, the impacts on the environment, and the solidarity to others. This group of consumers creates high ecological footprints that pose a threat to the stock of natural resources and contribute to solve social inequalities. The low-income group has different concerns since they often struggle to meet their basic needs for survival. For this group, sustainable consumption relates to whether they can have adequate nutritious meals daily.

From the point of view of poverty reduction, they need healthy nutritious food that meets a basic standard of nutrition so that their children can grow adequately, mothers can be healthy especially in times of pregnancy and breastfeeding, and fathers can be productive at their jobs. They also have little ability to allocate adequate funds for their children's education. For many in this income group, their livelihoods are based heavily on self-subsistence activities, and thus both production processes and consumption are relevant in their daily work.

Picture 3.3: Indonesian family

Geographical areas

The following information explains how different geographical areas face different challenges that are critical in their attitude to develop actions leading towards sustainable consumption. In general, the different geographical areas include communities in urban and rural areas, as well as communities in highland areas, in the deep forest and coastal areas.

Urban and rural areas

The urban areas are mainly home to high and middle class families, compared to the the same class in rural areas. In urban areas, consumption of natural resources and secondary products are high and the availability of abundant products and services are enormous. Many products come from different parts of the country as well as from other countries (imported). The population that lives in urban areas has different lifestyles than those living in rural areas. It is mostly affluent people that live in the cities; this is crucial to noted because ESC can play an important role as the consumption patterns of these middle and high income groups often have high ecological footprints (the amount of natural resources use) and these two groups produce a lot of waste.

The urban population consume more processed food (high ecological footprints) than fresh ones, use vehicles for transportation, use electricity for many activities (computer, home appliances, air conditioning, TV/VCD, gadgets, and other entertainment equipment), tend to spend more for money on luxurious products and services, indulge in fine dining and spend money in expensive restaurants. The spending is beyond just meeting their survival basic needs; it has the tendency to be excessive consumption. In addition, these groups usually adapt the habit of consuming fast food, in an attempt to follow a modern lifestyle, and some do not pay attention to healthy foods. These characteristics provide an opportunity for integrating ESC, which also incorporates education of safety and healthy food.

For the middle and high-income class in urban areas, ESC materials should incorporate the following messages:

- Shopping only when there is a need to do so (individuals need to be encouraged not to go shopping if there is no need to do so as this will help avoid temptation and impulsive buying). The decision to consume should be a rational one, rather than buying products because of new trends, attractive sales and discounts, or driven by advertisements.

- Buying products with less packaging, reusing products whenever possible, and selecting packaging that can be recycled. Individuals need to be encouraged to bring their own reusable bags from home instead of having too many plastic bags.

- Choosing public transportation whenever possible, as well as shared vehicles, car-pooling, or choosing to use a bike or taking a walk for short distances instead of using cars.

- Turning off any appliances when they are not in use, leaving the room with electricity off, choose products with the least electricity consumption (low energy consumption).

- Bringing meals and drinks from home, rather than buying junk food, bottled water and canned soft drinks when you are out, on a trip, at school or at the office.

- Finding and buying products with eco-labels: this includes wood from certified sustainable forest management, products that use less water and those that create less carbon dioxide in its lifecycle, products that respect labour rights such as those that carry the trade label, and any message of socially and environmentally responsible practices by the producers.

- Choosing healthier foods: this calls for reading the nutritional information on food packages, paying attention to expiry dates as well as content of additives such as sodium, sugar, MSG, cholesterol and so forth, the ingredients which should not be beyond the health standard limit such as its sodium, sugar, MSG, cholesterol/fat level content (which is stated in various products by Badan Pengawasan Obat dan Makanan or Food and Medicines Monitoring Organization).

- Prioritizing local products that use local resources as much as possible, rather than using products from other areas and imported products, particularly the following items: fashion and apparel, food, furniture, medicine, cosmetics, etc.

- Become more aware of endangered species particularly when you want to buy plants and animals and products made from plants and animals. You can do this by reading through relevant guidelines from the government or the International Union for Conservation of Nature (IUCN). You will learn that certain seafood is on red list because of its scarcity (WWF Indonesia has Tips for Seafood Consumption).

- Remembering the importance of showing solidarity with many parts of the world that are less fortunate and live in poverty.

It is also important to note that there are many slum areas in the urban cities where poor people live. In slum areas, the issues of sustainable consumption are also related to healthy food, and non-agriculture or fishing activities, but more in trading or providing certain services. The people who live in the poor communities in cities usually work in the informal sector such as small traders, daily informal labour, such as in building construction. Some are scavengers and beggars. Often, these poor communities in slums do not have access to clean water, safe and decent housing and sanitation facilities, and they are prone to flood.

As these slums areas are inhabited by the city's poor people, often living illegally usually abandoned land, they are prone to being reallocated or forced to move away from their informal settlements.

In rural areas, many live in modest ways and depend directly on their local natural resources for their livelihoods. In some villages, there are families who face hardships to meet basic needs, especially to have healthy food for the young ones and for pregnant mothers. These food sources come directly from self-subsistence activities such as agriculture and fishing.

Rural areas are also home to some individuals that fall under the middle-class income group, albeit smaller in numbers compared to the urban areas. With the flow of information on modern lifestyles, matched with corresponding advertisements and other aggressive marketing strategies in the villages, this population of middle-class income earners with their increasing buying power, start purchasing products that are not needed for their daily survival, such as new gadgets, televisions, electronics, motorcycles, etc. They can find themselves trapped into consumerism and in debt if they are not financially careful of their spending, as they consume luxurious products instead of making important investments in healthy nutritious food and education for their children.

Picture 3.4: Tempting discount sales at glittery malls becomes routine

For the less fortunate and poor people living in urban and rural areas, ESC carries different messages with knowledge targeted to them specifically as noted below:

- Consumers must be very careful to buy food that will not endanger their health. One option is to choose the right products by looking at the appearance of the food and the way in which the food is served and presented and whether it meets specific health standards. For example, the following food products may harm the health of the consumer:
  - Food that is exposed to air can be harmful because it attracts flies, dust and pollution, which can contaminate the food.
  - Food that has bright colors can be harmful since it can use artificial coloring, which can sometimes be non-food coloring such as chemical colors used for fabrics.
  - Fruit, vegetables, meat, fish and chicken that do not look fresh, have bad smell, and are not firm.
  - Tofu – one of the most popular food – should be soft and not firm, otherwise it contains formalin, an ingredient that makes the tofu long-lasting (formalin is one of the many illegal preservatives that are used).
  - Fried food that looks too dark, indicating it has been fried for far too long, or has been refried numerous times or has been fried in dark cooking oil, which shows that the oil has been used too many times.
  - Food that is served using utensils, which are not clean or utensils that are washed using the same water for many times.
  - Food that is served by peddlers using bare hands to serve the food, without using spoons or forks. The same bare hands are used to take the money from the buyers, and the hands are often not washed.

- Posyandu, which are small local health centers for mothers and children at the village level, Kelompok Pengajian Ibu, which is a women Islamic organization or Pendidikan Kesejahteraan Keluarga, the Family Welfare Program from the local government, are some of the key organizations that can implement ESC. These organizations can provide the knowledge of basic healthy food especially for children and pregnant women. They can also share information regarding healthy cooking standards to help retain the nutritious ingredients and knowledge of healthy food combinations, such as combining vegetables and fruits in one's daily diet.

- Local diverse plants can be the sources of food for healthy diets. This is a way to optimize local food sources, which have not been utilized in an optimum way.

- Using clean water for drinking, cooking and cleaning of food and cooking utensils.

- Encouraging individuals to prioritize the allocation of funds for long terms benefits and not for consumerism. Individuals are urged to be alert of being influenced by advertisements and the temptation to use credit cards that may lead into consumption that is beyond financial capacity.

Picture 3.5: Food sales in an open space prone to contamination

The coastal community

One problem that coastal communities often encounter is the destructive fishing practices, such as those that destroy marine habitats, as exemplified by the use of explosive, cyanide and trawl. Such practices not only make fishing activities easier and faster, they also increase the number of collected fish. Unfortunately, unsustainable fishing practices eliminate untargeted species, destroy coral reefs and other members of marine ecosystem as well. These destructive practices threaten sustainable consumption, which may threaten the life of coastal community who depends their livelihood on marine resources. Destructive fishing practices can also contribute to the decreasing marine tourism in snorkeling and diving activities since the beauty of coral reefs and ornamental fish have been diminishing.

In addition, there are various activities that pose a threat to the lives of coastal communities and marine biota such as:

- Coral trade in large-scale business contributes to abrasion, which can put the coastal community and marine biota at risk.
- Taking seashells for souvenir businesses on a massive scale may damage the ecosystem and the production of marine biota.
- Some tourists' activities, such as jet skiing and intensive diving throughout the year without limit, are detrimental to marine habitat.
- Converting mangrove areas into resorts, hotels or restaurants and developing shrimp hatcheries in some parts of the beach bring problems to the health of marine ecosystem. An unhealthy marine ecosystem can disrupt marine resources supply.

To raise awareness about and promote sustainable consumption, people need to learn about sustainable fishing practices, total allowable catch (to provide time for regeneration) and the seasons of breeding of various marine species and excessive consumption. The knowledge of sustainable fishery can guide people on when to consume marine species, where to catch marine species, and the consumption level of marine species.

ESC based on the knowledge of marine resources and the ecological system can contribute to efforts to ensure sustainable production of marine species for sustainable consumption. Handy educational tools such as the *Seafood Guides* published by the World Wildlife Fund (WWF) (2011) will help individuals familiarize themselves with sea food. With more than 70% of the world's commercial marine fish stocks either fully exploited or overfished, the *Seafood Guides* (produced for various countries, including Indonesia) provide some solutions, which will help ensure that tomorrow's generation will continue to enjoy the ocean's riches. Barramundi (Kakap Putih), Coconut Crab, (Ketam Kelapa), Blue fin Tuna (Tuna Sirip Biru), Napoleon Wrasse (Maming), turtle eggs, for example, are listed as seafood whose population is drastically declining, hence should not be consumed.

The preservation of the coastal community tradition also needs to be considered when developing ESC in the Indonesian context. A tradition of the fishermen community in Maluku called Sassi, for instance, has kept marine resources intact, as it regulates when and where to fish.It helps to ensure the availability of supply of fish for the community all year long.

Picture 3.6: Indonesia is rich of fish diversity

ESC related to the protection of coastal and marine lives includes guiding the public to actively take action by doing the following:

- Avoiding the consumption of endangered species (in reference to the national list of endangered species issued by the Ministry of Forestry, Ministry of Trade, the Ministry of Environment and IUCN).
- Implementing ecotourism codes of conduct while visiting pristine area such as national marine parks and protected areas.
- Purchasing marine species that were caught or farmed through hatchery in a sustainable way.
- Only selecting mature members of the species that look fresh and have no scars.
- Stop purchasing accessories made of shells.
- Staying in resorts or hotels, which have green hotel labels that meet environmentally friendly standards.
- Choosing boats with oars, if possible, to prevent noise pollution, which might have impacts on marine life.
- Respecting local knowledge when conducting water sport activities and other marine tourism activities.

The agriculture, highland and deep forest (indigenous) communities

Agriculture community

Agricultural activities, which use too much pesticides, chemical fertilizers, herbicides, various chemicals, have been a challenging issue in Indonesia. Improper use of pesticides, in terms of application and dose rates, can eliminate natural predators and make paddy fields no longer pest resistant. As a result, rice production is threatened like what happened in the country in 1977-1979 and 1985-1986 (Triwidodo & Wienarto, 2010). When the brown plant hoppers attacked rice-producing regions in Indonesia, national food security was threatened. The improper use of pesticides, in other words, generates threats to the staple food supply of Indonesia whose population eats rice every day.

The highland community

With the increasing population in the highland area, the main problem faced by the farmers is the scarcity of land to farm and land for non-farm needs (for housing, and infrastructure such as roads, markets, schools, etc.). Slowly, the forests are being converted into land for farming and other interests. In the long run, this kind of practice will bring impacts such as landslides, floods, the loss of water springs and fertile land. As a result, the population living along the river on the lower land, experience a short water supply for daily activities and economic activities.

Picture 3.7: Agriculture is still a main activity

Deep forest community (indigenous community)

There are indigenous people or masyarakat adat who live by or in the deep forest. Some of them live in the protected areas and depend on the forest resources for their living. It is estimated that around “50 to 70 million masyarakat adat” live throughout the islands of Indonesia (AMAN, 2010, p. 7). Their life depends on the forest, as the forest provides food and medicines that they need. Masyarakat adat survives by hunting and taking food supply from the forest. The threats to their livelihoods are illegal logging, mining and plantations conducted by companies who take over their land many times through force or illegal practices. Therefore, their consumption activities, which depend largely on the forest resources, are severely threatened.

ESC targeted to communities living in the different areas noted above may cover the following topics:

- Safe use of chemical ingredients in farming that is aimed at protecting the soil, water and the people who consume the agricultural products.
- Safe treatment of rivers and water springs that is aimed at ensuring the supply of clean and healthy water for the community and beyond.
- Use of organic farming and agricultural diversification techniques that support the existence of biological control agents and food security.
- Use of land conversion methods that are aimed at preserving water springs, maintaining land fertility and preventing flood and landslide hazard.
- Efficient and innovative use of water and land that aimed at finding a way to produce more with less use.
- Illegal logging prevention and forest conservation that involve the official authority for effective law enforcement, and at the same time respect masyarakat adat norms.

Different socio-cultural groups

There are more than 1300 ethnic groups in Indonesia, with the majority being the Java ethnic, with 95.2 million people, or about 40% of total population. Each ethnic group varies in population, it can be millions, but for certain ethnic groups, the population can be less than 10,000 people, such as the Halmahera and the Wamok ethnic groups. The ethnic groups are then classified into 31 groups based on a number of similarities (Na'im & Syaputra, 2010, p. 5).

Every ethnic group has its own norms and values regarding spiritual values, livelihoods, how to build social relationships, and how to respect nature, their local traditions including main food production and cuisine, and how they cope with natural resources challenges. A number of ethnic groups in Indonesia still hold strongly to their tradition, while some have already adapted "modern life" and blended into urban lifestyles and middle class consumption patterns.

The Balinese with Hindu beliefs have Tri Hitakarana values as a way of life, where they have to respect Sang Hyang Widhi (vertical relation) and live in harmony with human beings and nature (horizontal relations). They pray for every important cycle in life from birth to death, commemorate nature (to address their thankfulness and appreciation of what they receive from nature and their expectations of natural resources to bring welfare), and build close relationships through intensive ceremonies and gatherings in their "banjar" (Balinese village community). They still hold these traditions to this present day. For them, forests, rivers, trees, flowers and fruits are all precious.

The Javanese respect Dewi Sri as the Goddess of Paddy Rice, where they have certain traditions to pay respect for the blessing of the harvest. The Sundanese also have a similar tradition. Through the understanding of values and norms that are part of ethnic groups, ESC can integrate specific messages on sustainable consumption that can be considered legitimate and closely connected to the various groups. ESC can be used as a tool to easily strengthen and further disseminate the ethnic groups' values and norms that support sustainable consumption.

In each area, we can find local cuisine that uses local ingredients, based on nature and culture, which offers various tastes depending on the local natural resources. There is a very close relation between food from local natural resources and local cultural traditions in making the food. Therefore, sustainable consumption is related to nature (as the source of the food), local cultural traditions (to grow or to produce), and food security (ensuring the security of the natural resources where the food comes from). As examples, ethnic group from Sumatra and Sulawesi have cuisines with strong flavor of spices, chili and coconut; the Javanese ethnic group generally have sweet and tasty flavors and the Sundanese ethnic group relies on more fresh ingredients, with a lot of vegetables and accompanied with "sambal" or chili (blended with other ingredients). Those are just examples of a few local cultures.

It is crucial to develop ESC materials that are socially and culturally relevant to specific areas. One needs to first learn the culture and social values of the area in terms of production and consumption, to ensure that the solutions are relevant and has the right form to relate with practical actions.

Every ethnic group has its own norms and values regarding spiritual values, livelihoods, how to build social relationships, and how to respect nature, their local traditions including main food production and cuisine, and how they cope with natural resources challenges. A number of ethnic groups in Indonesia still hold strongly to their tradition, while some have already adapted "modern life" and blended into urban lifestyles and middle class consumption patterns.

Box 3.1:
Sustainable consumption: More responsible behaviour

Sustainable Consumption is about finding workable solutions to imbalances- social and environmental – through more responsible behavior from everyone. In particular, sustainable consumption is linked to production and distribution, use and disposal of products and services and provides the means to rethink their lifestyle. The aim is to ensure that the basic needs of the entire global community are met, exces s is reduced and environmental damage is avoided. (UNESCO & UNEP, 2008, p. 7)

Curriculum Framework for ESC in Formal Education

The Goal of ESC Guidelines for Formal Education Whether you have already implemented ESC or you are thinking about developing an ESC program, this guide will help you ensure that everyone gets the most out of it and you achieve the desired goals.
This section aims to:

- Explore some of the ways in which schools can contribute to the global movement on ESC;
- Create an interdisciplinary curriculum that is engaging, relevant, challenging and significant for learners;
- Explain some of the pitfalls and how to avoid them;
- Identify the essential elements of successful ESC implementation;
- Provide some methods and practical examples for ESC implementation; and
- Provide signposts to more detailed sources of information and guidance to help you on your way.

These guidelines and recommendations are specifically designed for Indonesian schools.

The Indonesian curriculum: A brief overview

In principle, Indonesia's education curriculum provides numerous opportunities for integrating ESC. At first, let us identify some basic laws and regulations that support the infusion and development of ESC in formal education.

The Act of the Republic of Indonesia Number 20, Year 2003 on National Education System (2003, para.3) states that:

A national education system should ensure equal opportunity, improvement of quality and relevance and efficiency in management to meet various challenges in the wake of changes of local, national and global lives; therefore it requires a well-planned, well-directed, and sustainable education reform.

Furthermore, as noted in Article 3 of the same Act of the Republic of Indonesia Number 20, Year 2003, the Government of Indonesia has set the standard that:

The National Education functions to develop the capability, character, and civilization of the nation for enhancing its intellectual capacity, and is aimed at developing learners' potentials so that they become persons imbued with human values who are faithful and pious to one and only God; who possess morals and noble character; who are healthy, knowledgeable, competent, creative, independent; and as citizens, are democratic and responsible.

Therefore, every citizen has equal rights to receive a good quality education and to be empowered to be able to face the world and its ever-changing challenges. Act No 20/2003 is further explained in more detail in Government Regulation No. 19 concerning the National Standard of Education. This regulation provides a general framework for formal education implementation in Indonesia. In other words, the national education system provides opportunities for schools in collaboration with their committees to develop curriculum based on content standards and graduate competence standards. The standards are established by Badan Nasional Standar Pendidikan (BSNP) or the National Standardization Agency for Education). Education is conducted based on Pancasila and Indonesian Basic Law, and rooted on religious values, national pluralism, and proactiveness to be able to stand strong and face the ever changing challenges of the era.

According to the Ministry of National Education's Regulation No 22/2006, the National Education functions to….*develop the capability, character, and civilization of the nation for enhancing its intellectual capacity, and is aimed at developing learners' potentials so that they become persons imbued with human values who are faithful and pious to one and only God; who possess morals and noble character; who are healthy, knowledgeable, competent, creative, independent; and as citizens, are democratic and responsible.*

Box 3.2:
Principles of curriculum implementation

Regulation of the Minister of National Education No. 22 (2006) elaborates principles of curriculum implementation as follows:	
•	To focus on learners' potential, development, need, concern and their environment;
•	Various and comprehensive learning strategies. Perceptive to the development of knowledge, technology and art;
•	Relevant to life needs;
•	Holistic and sustainable Lifelong learning;
•	Sufficiently balanced between national and local concern;
Core competence and basic competence stated by national education curriculum encompasses all educators towards the development of curriculum materials in all subjects.	

The competency, in reference to Regulation of Minister of National Education No. 22 (2006, appx., ch.2. sub ch. A.1) is clustered into several subjects as follow:

1. Religion and noble character
This subject is intended to develop learners to become religiously devoted individuals who posses noble character. The noble characters consist of ethics, good conduct in life, or morality as the realization of religious education.

2. Citizenship and personality
This subject is intended to develop learners' awareness and knowledge with regards to their status, rights, and obligations in community, state, and nation; as well as to improve their quality as human being. The awareness and knowledge include nationality, spirit and patriotism in defending their nation, appreciation of human rights, nation diversity, environment conservation, gender equality, democracy, social responsibility, as well as the promotion of behaviors against corruption, collusion, and nepotism.

3. Science and technology
Science and technology at elementary school is intended to introduce, react, and appreciate science and technology, as well as to instill habits of critical, creative, and independent scientific thinking and behavior. Science and technology at junior high school is intended to develop basic competency in knowledge and science as well as to enhance the learners' habit of scientific thinking critically, creatively, and independently.

4. Aesthetics
This subject cluster is intended to develop learners' sensitivity as well as ability to express and appreciate beauty and harmony. The ability to appreciate and express beauty and harmony consists of appreciation and expression, both in individual life that enables learners to enjoy and be grateful of life, and in community that enables them to create togetherness and harmony.

5. Physical, sport, and health
This subject cluster at elementary school is intended to develop learners' physical potential as well as to implant the spirit of sportsmanship and awareness of healthy life. At junior high school, this subject cluster is intended to enhance the learners' physical potential as well as to strengthen the habits of sportive and healthy life.

In 2013, the Ministry of Education and Culture (MoEC) introduced the new curriculum 2013. This publication tries to adopt the core competence and basic competence as outlined in curriculum 2013.

Background of Indonesian Curriculum

The Regulation of the Ministry of National Education No.22 (2006) indicates that the Indonesian curriculum is structured between the acquisition of essential knowledge and skills, the development of conceptual understanding, the demonstration of attitudes and taking responsible action. In terms of achieving this balance, the five essential elements of the written curriculum are emphasized below:

Table 3.1:
The essential elements of the written curriculum

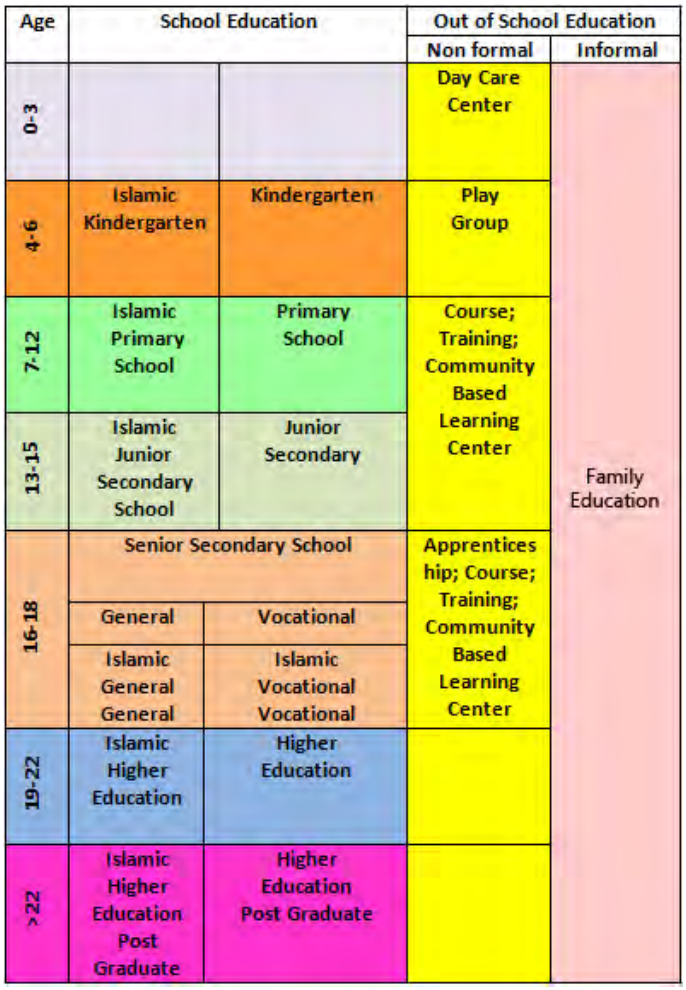
Knowledge	Significant, relevant content that we wish the students to explore and know about, taking into consideration their prior experience and understanding.
Concepts	Powerful ideas that have relevance within the subject areas but also transcend them and that students must explore and re-explore in order to develop a coherent, in-depth understanding.
Skills	Those capabilities that the students need to demonstrate to succeed in a changing, challenging world, which may be disciplinary or trans-disciplinary in nature.
Attitudes	Dispositions that are expressions of fundamental values, beliefs and feelings about learning, the environment and people.
Action	Demonstrations of deeper learning in responsible behavior through responsible action; a manifestation in practice of the other essential elements.

Source: Regulation of Ministry of National Education No. 22 on Content Standard for Elementary and Secondary Education (2006).

Regulation No. 22 also stipulates that standard competencies at the primary and secondary education level are conceived to improve knowledge, awareness, skills, attitudes (including ethic and moral behaviour), capacity to think logically-creatively-critically-innovativelly, team work, eagernerss to read and write, responsibility, and tolerance.

According to the National Education System Law of 2003, the structure of the education system is shown below:

Figure 3.1: Indonesia's education system



Principles of Curriculum Implementation Regulation of Minister of National Education No.22 (2006) elaborates principles of curriculum implementation as follows:	
•	Curriculum implementation is based on the learners' potential, development, and condition to master useful competency. Learners must have quality educational services and opportunity to freely, dynamically, and comfortably express themselves.
•	Curriculum is implemented by maintaining five learning pillars: 1. learning to be faithful and devoted to God, 2. learning to understand and fully comprehend, 3. learning to be able to perform effectively, 4. learning to live with and be useful for other people, and 5. learning to identify and develop own identity through active, creative, and contented learning process.
•	Curriculum implementation enables learners to have remedial, enriched, and/or accelerated educational program on a par with learners' potential, developmental stage, and condition by paying attention to learners' integrated personal development containing spirituality, individuality, community, and morality.
•	Curriculum is implemented in situations where there are mutually respectful, close, open, and warm relationship between learners and educators by keeping in mind the principles of good modeling, motivating, and empowering.
•	Curriculum is implemented by employing multi-strategy and multi-media approach, sufficient learning and technology sources, and by utilizing immediate environment as learning source.
•	Curriculum is implemented by utilizing natural, socio-cultural, and regional sources for successful educational programs containing useful subjects in optimal learning process.
•	Curriculum consisting of all components of subjects' competency, local content, and self-development is managed in appropriate and sufficient balance, interrelation, and continuity between grade, type, and level of education.

The Act of the Republic of Indonesia on National Education System, Government regulations and Ministry of Education Regulations explained above clearly show that there are numerous opportunities within formal education to develop curriculum based on the current world demands.

Our biggest challenge in this new century is to take an idea that seems abstract
– sustainable development –
and turn it into a reality for all the world's people.
(Kofi Annan, former Secretary General of the United Nations)

A Practical Approach To Integrate ESC In School Curriculum In Formal Education

This publication sets out to clarify the Indonesian national curriculum standards related to ESC.This section specifically aims to:

- Identify how to plan, implement and assess inquiry-based integrated curriculum unit in curriculum 2013, which focuses on ESC.
- Provide background information on the concepts, values and understanding underpinning a successful teaching and learning on ESC.
- Suggest ways in which teachers can approach ESC in their teaching.
- Make suggestions for effective resource usage and
- Identify ways schools can promote ESC.

ESC is about:

- interdisciplinary and holistic learning;
- sharing the values and principle;
- critical thinking and problem solving;
- multi-method;
- participatory decision making;
- integration of learning experience in day to day life; and
- addressing local and global issues.

Source: Framework for the UNDESD: International implementation scheme, ©UNESCO, 2006, http://unesdoc.unesco.org/images/0014/001486/148650E.pdf

Picture 3.8 : Students discussing in the classroom

Raising ESC issues in our classrooms will help teachers make sustainable consumption relevant in students' lives and at the same time, make the class more interesting and motivating by helping students see the connections between all aspects around the issues and understand their complexity.

One suggested practical approach to facilitate students to become problem solvers is thorough inquiry learning. "Inquiry learning helps students to form their own questions about a topic and allows them to have time to investigate and explore potential answers" (Wilson & Jan, 2003, p. 10). Through inquiry learning, students become question askers as well as problem solvers. "Inquiry learning encourages learners to examine the complexity of their world and independently form their own concepts and understanding" (Wilson & Jan, 2003, p. 10). Learning becomes more powerful when content, proof and skills are developed in meaningful ways, and at the same time students construct their own learning. When teachers try to infuse sustainable consumption issues in their teaching and learning, inquiry learning can be applied to help teachers ensure that the students have opportunities to examine the complexity of sustainable consumption issues, seek strategies to solve the problems and initiate some actions.

The following diagram below shows the various stages of inquiry learning, which can help in planning an inquiry based integrated curriculum. Questioning is the basis of inquiry. Good questioning helps students to clarify and extend understanding and skills (Wilson & Jan, 2003, p. 26). The following example of questions that were adapted from *Focus on inquiry: A practical approach to integrated curriculum learning* by Wilson and Jan may be of assistance when helping students to apply inquiry learning (2003, p. 27):

Figure 3.2: Stages of Inquiry Learning

Source: Wilson, J., & Jan, L. W. (2003). *Focus on inquiry: A practical approach to integrated curicullum learning.* Carlton South Vic: Curicullum Corporation.

Figure 3.3:
Possible questions from teachers

Tuning In	• What do you know about? • What are you interested in? • What would you like to learn more about?
Finding Out	• What would you like to learn more about? • What are your plans now? • What do you need help with? • What are you asked to do here? • What questions have you been answered?
Sorting Out	• What have you learnt? • How will you organize this information? • How will you record this information? • How will you present/share/ communicate this information? • What will you do first?
Going Further	• What would you like to learn more about? Why? • How is this linked to the topic/ understanding/concept? • How will you do this? • Who/what can help you? • Why do you want to investigate this aspect of the topic?
Reflection	• What is the most significant/ interesting thing you have learnt? Why? • Why do you think we studied this topic? • What helped/hindered your learning? • What would you like to learn more about? Why? How could you do this? • How would you do this differently next time? Why?
Action	• What have you learnt that you can now use in your everyday life? • What are your plans now? • How can you apply this knowledge skill in your everyday life? • What do you want to do as a result of your learning?

Source: Wilson, J., & Jan, L. W. (2003). Focus on inquiry: A practical approach to integrated curriculum learning. Carlton South Vic, Australia:Curicullum Corporation.

The three recommended methods of ESC implementation in Indonesia are:

1. Integration: taught across the subjects;
2. Monolithic approach: taught in local content subjects, and
3. Personal development programs.

ESC can motivate students because it provides interesting real life, topical contexts, which learners can relate to, and an exciting opportunity for developing.

Approach 1: Integration

The Integration approach is a point of focus in curriculum 2013. In this approach, the link between competences of some subjects is identified in certain weekly lessons for the same class level, hence the learning process in all subjects would be mutually reinforcing. In the curriculum 2013 documents, this approach is recognized as horizontal organization. According to curriculum 2013, there are four core competences (KI) that link each other and need to be considered while applying this approach. The four core competences are competences related to:

1. Religious attitude;
2. Social attitude;
3. Knowledge; and
4. Knowledge application.

These four competences should be developed in each of the learning events. Competence related to religious attitude (KI 1) and social (KI 2) are indirectly developed when students learn about knowledge (KI 3) and its applications (KI 4). Two examples below describe the implementation of integration approach in Year 10 and Year 5 . Through inquiry learning processes, students learn about the principle of sustainable consumption using "Water Conservation" theme in Year 10 and "Proud of Being Indonesia" theme in Year 5.

Example 1: "Water Conservation" theme for Students in Year 10, Majoring in Math and Science

As part of their study on biodiversity in Biology subjects, students go to a stream or water source near the school or in their neighborhood. They observe the water source and carefully identify how other living things – animals, birds, insects and plants – use the water source. Students can also test the quality of water using bio indicators and analyze factors that cause differences in water quality. Next, students can explore information related to water quality, plan and implement activities related to water conservation, and do reflections at the end of their activities.

Skills in finding information and writing the report at the same time are developed in the Indonesian language classes. Here, students learn how to express their opinion on water conditions both orally and through paper presentations. Soft skills development are also part of this exercise, which include being an inquirer, objective, honest, conscious, accurate, careful, responsible, open, criticized and care to the environment indirectly take place through this activity.

Meanwhile, in the same week in their Indonesian history class, students identify the characteristics of people, government and culture during Hindu-Buddha kingdoms that existed in Indonesia hundreds years ago. They also identify its link to nature conservation and then prove its presence in our current times. Students also get the opportunity to explore and learn the good attitude of the community leaders who lived in the past, for instance peacekeepers, responsive and proactive in solving various social and environmental problems, specifically problems on water conservation. This example shows how three subjects -Biology-Indonesian Language and Indonesian History - work together to integrate ESC into existing curricula as well as apply the inquiry process. Guiding questions are provided on each inquiry stage to guide students to do the process starting with tuning in, finding out, sorting out, going further, reflections and actions.

The Learning Process

The learning process of the integration approach is exemplified below through some potential questions to be asked to Year 10 Science students who study water resources.

Figure 3.4:
Possible questions from teachers for
Year 10 Science students

Tuning In	• What do you know about water resources? • Activity: Watching film about water resources.
Finding Out	• How do you get information about water resources in your local area and around the world? • What can and will you do to conserve water?
Sorting Out	• How can you sort out information about water conservation in Indonesia and around the world? • Activity: Plan activities that students can do to conserve water at school and at home.
Going Further	• What else can we do to conserve water as individuals and as a country? • Activity: Surveying the public to see what more can be done to conserve water.
Reflection	• What is the most significant/interesting thing you have learnt about water conservation? Why? • How would you do this differently next time? Why?
Action	• How can you apply the knowledge/skill about water conservation in your everyday life? • What do you want to do as a result of your learning?

Possible teaching methods for the Water Conservation theme.

- experimentation
- observation
- field study
- literature study
- group discussion
- role playing
- debate
- campaign and
- project work.

Picture 3.9: A student is cleaning up the river

Assessment

In assessing student work, it is important to choose assessment techniques that facilitate students to:

- share their learning and understanding with others;
- demonstrate a range of knowledge, conceptual understanding and skills;
- use a variety of learning styles, multiple intelligence and abilities to express their understanding;
- know and understand in advance the criteria for producing a quality product or performance;
- participate in reflection, self- and peer-assessment;
- base their learning on real-life experiences that can lead to further inquiries;
- express different points of view and interpretations, and
- analyze their learning and understand what needs to be improved.

The rubric for assessment needs to be prepared by teachers to help students understand the assessment targets. The rubric will also guide teachers to be objective and transparent in assessing their students' work.

Picture 3.10: Students were interviewing local informal leader

Example 2:
"Proud of Being Indonesian" theme for students in Year 5

ESC can be integrated in this theme to help facilitate students to understand the culture of Indonesian people and its relationship with geographical conditions and to understand their dynamic interactions with nature, social and culture. For instance, in groups, students interview local informal leaders about local culture and local indigenous knowledge that supports ESC. Each group focuses their work on a certain province. One example is looking at the traditional cuisine from different provinces and identifying the characteristic of each province, which can be run as part of the inquiry process, i.e. tuning in, finding out, or sorting out.

Furthermore, students are asked to make a presentation or exhibition about social, economy and culture of the province they focus on, and promote the way people in the respective province work to support sustainable consumption.At the end of this process, students write their reflections and strengthen their commitment to respect local culture. In the same week, during science class students identify the change in nature, nature conservation and the effect of human activity on nature.

Meanwhile, in art and culture class student learnabout music and traditional song. During the exhibitions students sing traditional songs that have special message related to sustainable consumption.

Identify the Theme

How can teachers identify possible themes? How can teachers easily identify the interdisciplinary links? Those two questions are always raised by teachers. By referring to the sample activities and theme in Year 10 and Year 5 above, it is hoped that there are increased insights on how inquiry learning and interdisciplinary links works in schools. To help us understand more about the process in identifying the theme and make interdisciplinary links, we will use a different year level as an example, which is Year 8.

First, in order to develop theme and make links between subjects, it is recomended to start by identifying standard competences required during one particular semester, for each specific subject using the table provided (see Table 3.2 below). Keep in mind that in curriculum 2013, there are four connected core competences; namely competences related to: religious attitude (KI1); social attitude (KI 2), knowledge (KI 3) and knowledge application (KI4). These four competences should be developed in each of the learning events. Competence related to religious attitude (KI 1) and social (KI 2) indirectly develop when students learn about knowledge (KI 3) and its applications (KI 4).

Table 3. 2:
Standard of Competencies in Year 8 based on curriculum 2013

Subjects	Standard Competence
Group A	• Understand and be able to explain the meaning of grateful for faithful people. Behave as faithful people (Standard Competence No 3.1, 4.1)
Religion	
Religion	• Understand the norms that apply in various locations in Indonesia. Apply the norms that normally use in Indonesian communities.
Indonesian Language	To be completed by the subject teacher
Math	
Natural Science	
Social Science	
English	
Group B	
Culture	
Physical Education	
Handicraft	

It is suggested that the table is completed in the beginning of new academic year or new semester. Furthermore, year level coordinator and or vice principal could lead his/her colleagues who teach the Year 8 class to find the link between standard competencies required in each subject, and identify potential ESC themes to be explored by students during one particular semester. For a reference, here are examples of ESC themes, as stated in UNEP's *Here and Now! Education for Sustainable Consumption: Recommendations and Guidelines* (UNEP, 2010, p. 21), which can be infused in the lesson plans:

Table 3.3:
ESC themes to be introduced to learners

Life Quality	Lifestyles
-Values, needs, desires -Human rights, ethical codes, and spiritual principles -Sufficiency and moderation -Sustainable development -Sustainable consumption	-History of social and economic development -History of consumption -Present social conditions -Present consumption patterns -The symbolic roles of consumption -The role of the family -Alternative lifestyles
Resources	**Economics**
-Natural -Human -Financial -Technological -Organizational -Interrelatedness of systems and processes -Balances and imbalances	-Economic models and practice -Production and trade -Multinational companies -Social responsibility -Saving loans, investments -Financial services and instruments -E-commerce
Consumption and the Environment	**Consumer rights and responsibilities**
-Product life cycles and traceability -Packaging -Recycling, reusing, repairing products -Energy -Housing -Transportation -Communication -Entertainment -Tourism -Climate, soil and water protection -Biodiversity -Waste management -Ecological impact	-Laws and norms -Agreements and contracts -Consumer protection policies -Transparency/accountability -Complaints, redress, replacement, reimbursement -Conflict resolution
Information and management	**Health and safety**
-Digital literacy -Media literacy -Advertising and persuasion -Labeling -Peer pressure -Data-based information systems -Consumer support agencies	-Food safety -Gene-modified organisms -Diet and nutrition -Ecological, organic food -Addictives -Lifestyle illnesses and epidemics -HIV/AIDS -Social services -Product safety -Labelling and quality control

Change management	Global awareness
-Creativity and innovation -Future perspectives -Active citizenship -Stakeholder involvement -Community service	-Global interdependence -Energy, trade commerce, agriculture, land use -Poverty -Human rights -Labour rights -Crime -Precautionary principle -Fair trade -Millennium Goals -World citizenship

Source: UNEP. (2010). Here and now! Education for sustainable consumption: Recommendations and guidelines. Paris, France

If we refer to the standard competencies of Year 8 written in National Curriculum 2013, there are possible themes to link some subjects in year 8. Two of them are “Human Lifestyle and It s Impact” or “Health and Safety”. The diagram below shows how standard c ESC is the key to a bright future ompetencies in some Year 8 subjects linked each other under “Human Lifestyle and Its Impact” theme.

Figure 3.5: Interdisciplinary links for Year 8 students

When the theme has been identified and chosen, furthermore teacher in each subject can identify knowledge, skills, values and attitudes which will be developed during the learning process using the table (Table 3.5) adapted from UNESCO's tool to identify objectives for ESD (2011, p. 33).

Table 3.4:
Identification of standard competence, knowledge, skills, values and attitudes in school subject that incorporate ESC

School Subject	Standard Competence Or desired change. In this column, list the changes needed to address sustainable consumption	Knowledge What knowledge is needed to achieved the desired change?	Skills		Values and Attitudes What values and attitudes are needed to achieve the desired change?
			Cognitive/ technical What cognitive and technical skills are needed to achieve the desired change? (literacy, ICT, critical thinking…)	Social/ emotional What social and emotional skills are needed to achieve the desired change (interpersonal, compassion….)	
Learning Characteristics What learning characteristics can help foster the above knowledge, skills, values and attitudes? (interdisciplinary, experiential, etc)					
Learning that is….					
Learning Environment What kind of a learning environment supports the message being delivered (e.g. healthy and traditional food provided in school canteen)					
An Environment that is….					

Source: UNESCO. (2011). *Astrolabe: A guide to education for sustainable development in Asia and the Pacific.* Bangkok, Thailand: UNESCO.

Table 3.5:
Possible knowledge, skills, values and attitudes about 'Human Lifestyle and Its Impact in Year 8 Science class, semester 1

School Subject	**Standard Competence** Or desired change. In this column, list the changes needed to address sustainable consumption	**Knowledge** What knowledge is needed to achieved the desired change?	Skills		**Values and Attitudes** What values and attitudes are needed to achieve the desired change?
			Cognitive/ Technical What cognitive and technical skills are needed to achieve the desired change? (literacy, ICT, critical thinking…)	**Social/ Emotional** What social and emotional skills are needed to achieve the desired change (interpersonal, compassion….)	
Science	Students have a lifestyle that puts health as their priority, not using various chemical substances and prioritize ESC principles	The body system (e.g. respiration, transportation, circulation, digestive) and the use of energy from food. Additive material (natural and manmade) in food and beverage (fresh and in package), and the use of addictive substance-psychotropic and its effect to human health. Human populations, factors and its impact. Present data, information and propose ideas to solve problems and to prevent the use of food additive and addictive, psychotropic substances. Lifestyles that are attuned to sustainable consumption principles.	Think critically about community lifestyles and their links to population growth. Identify lifestyles that are attuned to sustainable consumption. Present data, information and propose ideas to solve problems and to prevent the use of food additive and addictive, psychotropic substances. Design a campaign program about sustainable lifestyles. Implement a program to educate others about improving their lifestyles to ones that are sustainable and responsible.	Communications Team work Helping others Hard work Discipline	Being grateful to God for their lives and health conditions. Tolerance. Honesty in collecting and processing the data. Willingness Discipline and hard working. Creative. Showing care to the environment. Respecting each other. Peace. Social awareness. Responsibility. National spirit.

Learning Characteristics
What learning characteristics can help foster the above knowledge, skills, values and attitudes? (interdisciplinary, experiential, etc)
Learning that is offering opportunities to students to distinguish between factual knowledge and value-based opinions and to investigate the beliefs and interest behind them, through a range of teaching and learning activities, like problem based learning, experiential learning, role play, and discussion forum.
Learning Environment
What kind of a learning environment supports the message being delivered (e.g. healthy and traditional food provided in school canteen)
An Environment that is clean, such as a school canteen that serves healthy local cuisine, one with a waste management program as well as an energy-saving program.

Picture 3.11: Working with the community to save the local environment

Picture 3.13: Students working with the community to paint public washrooms

Picture 3.12: Children learning about nature

Picture 3.14: A student presents his work

Knowledge, skills, values and attitudes can be also be identified on the lesson plan. Table 3.6 below shows a sample lesson plan format, which include inquiry learning steps in in its teaching and learning column.

Table 3.6: Sample of Lesson Plan Format

<table>
<tr><th colspan="4">Lesson Plan</th></tr>
<tr><td colspan="4">Subject :
Class/Semester :
Topic :
Time Allotted :
Theme :</td></tr>
<tr><td colspan="4">Guiding Questions for the Unit Lesson (What do I want students to know and be able to do?)</td></tr>
<tr><td colspan="4">Method:</td></tr>
<tr><td>Objectives</td><td>Indicators</td><td>Assessment</td><td>Teaching and Learning Activities</td></tr>
<tr><td rowspan="6"></td><td rowspan="6"></td><td rowspan="6"></td><td>Tunning In</td></tr>
<tr><td>Finding Out</td></tr>
<tr><td>Sorting Out</td></tr>
<tr><td>Going Further</td></tr>
<tr><td>Reflections</td></tr>
<tr><td>Action</td></tr>
<tr><td colspan="4">Resources /Materials</td></tr>
<tr><td colspan="4">Other</td></tr>
</table>

To assist teachers in helping students to see and understand the 'big picture' and see the link between sustainable consumption and their own lives, we can use table 3.7 below to help frame the lesson in order to align them with the vision and principles of education for sustainable development (ESD)

Table 3.7:
Framing the lesson in Year 8 in o rder to align the lesson with the vision and principles of ESD

No	Subject	Alignment of Standard Competence and ESD principles		
		Environment	Social	Economy
1	Science	Human body system and health; chemistry substance and human health.(KD No 3.8, 3.10, 3.12. 4.9)		
2	Math	Table, graph and equation about chemistry substances, environment and health. (KD No 3.12, 4.2)		
3	Economy			Human economic behaviour (KD no 4)
4	Christian religion		Understand and able to explain the meaning of grateful for faithful people. Behave as faithful people (KD No 3.1, 4.1)	
5	Civic		Understand the norms that apply in civil societies. Apply the norms that normally use in communities (KD No 3.4, 4.4)	

Approach 2: Monolithic

Some schools have the Environmental Education subject as a local curriculum and the curriculum is filled with their own local content. For example, in South East Sulawesi, the name of the subject is Marine Education while in East Java the name is Environmental Education (EE).

A Monolithic approach applies when ESC is integrated into one single subject only. In Marine Education for instance, it seeks to increase literacy in ocean sciences and help bring the excitement of ocean sciences to school. There are various topics could be covered in Marine Education like Marine habitats,rocky seashore, sandy beach, wetlands, open ocean and islands. Exploring issues and problems occur in marine habitats, and planning an actions to preserve marine habitat and or support marine conservation program.

Picture 3.15: Students show their products

Picture 3.16: Outdoor learning

Approach 3: Personal Development Program

Possible activities for this approach include: habituation, routine activities, role models, and spontaneous activities.

Examples of ESC habituation at schools are shown below:

Picture 3.17: Avoiding the 5 Ps

Picture 3.18: Kedai Kewirausahaan SMKN 2 Boyolangu

Picture 3.19: Students enjoying their food

Vocational School No 2 Boyolangu-Tulungagung, Santa Maria Elementary School -Surabaya, Junior High School No 1 in Merakurak-Tuban have school canteens and other food services as educational resources to guide students on better and sustainable food choices. Positive attitudes towards school canteens that support healthy eating is promoted and endorsed in those schools. Their school canteen policies includes:

- Offering nutrition information about foods that are offered;
- Using strategies that promote and market healthy choices;
- Evaluating, reviewing and monitoring of processes, and
- Canteen management.

The school canteen is a good place to learn about where food comes from, how it was grown or harvested, what resources were used in its production and what waste was produced as a result.

Picture 3.20: Various types of garbage cans

Picture 3.21: Students' bicycles

Picture 3.22: Kompos Toyo SMPN 1 Balikpapan

Waste minimization is a great topic that will help to attract all students to be involved in your Eco-School's work.

Whether it's working to reduce the amount of paper you're using in the classroom, looking at ways to re-use "junk" material, or implementing a recycling or composting scheme, they all provide effective, hands-on learning opportunities.

Picture 3.23: Students practice a traditional dance

Picture 3.24: Stop using formaline

Picture 3.25: Students draw nature

Picture 3.26: Plants in pots

If you aren't sure whether or not ESC could be integrated into extracurricular activities, study the pictures above and try to identify the activities that the students are doing, which are related to ESC.

Art clubs, Nature lovers clubs and Dance Clubs for examples can easily infused ESC principles into their activities. Students could learn on how to promote ESC through dancing, poster drawing and gardening.

Whole School Approach

Box 3.3:
Bandung Declaration:
The Voice of Children and Youth for Rio+20

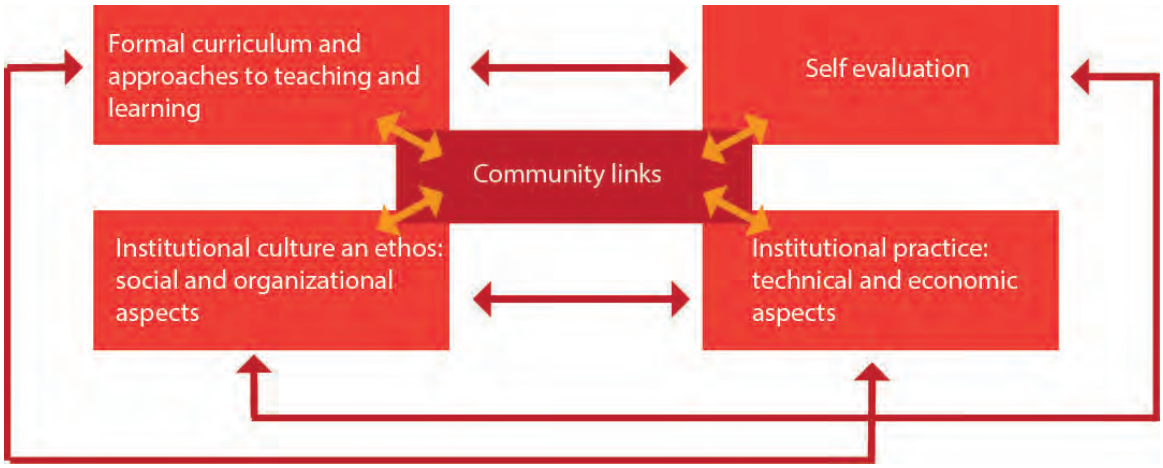
"We, the delegates to the 2011 Tunza International Children and Youth Conference representing 118 different countries, are united in calling upon world leaders to move to a sustainable development pathway that safeguards the Earth and its people for our generation and generations to come. We are the next generation of decision-makers and we stand for action and change. Adopt more sustainable lifestyles and educate our local communities, including indigenous communities, sharing knowledge at the same level. All action starts with the individual and we are committed to reducing our personal ecological footprint. We will teach and encourage each other to be responsible consumers using all available tools. Yet, many young people remain unaware of basic environmental issues because of inadequate schooling. We will demand that environmental education and awareness raising be mandatory in each of our schools' curriculum. We will demand to ensure children and youth participation in all decision-making processes at all levels". (UNEP, 2011b)

The Voice of Children and Youth for Rio+20, declared during the 2011 Tunza International Children and Youth Conference in Bandung, summarizes the need for children and youth around the world to learn about sustainable development and be part of the governmental effort towards sustainable development. There is therefore a need to reorient education and to rethink and revise education at all levels to include more principles, skills, perspectives, and values related to sustainability. Their statement also reflects the importance to focus on learning process.

To address ESC, schools need to discuss the issues from many different perspectives, planning action and working with the community to implement action. Schools need to become agents of change. The whole school approach is a strategy to facilitate school-centered learning communities to participate actively in addressing sustainable consumption issues, make decisions and act in meaningful ways.

In simple terms, a whole school approach means schools seek to integrate all aspects of school life and campus activities by making links between the topics students learn in the classroom, what happens in the community, and how students are encouraged to participate in deciding and implementing sustainable actions in their schools. This involves learning activities that support decision-making, problem-solving and planning. A whole school approach means that all of the school community is involved in this work. This means not only the teachers and students, but also the school boards, parents, school counselors, and the staff who manage the infrastructure of the school and its services, such as school canteens, building management, administration offices, and so forth. This will allow for ESC to become implemented and integrated into all aspects of school life (see Figure 3.6). The innovations will happen through the content and process of the formal curriculum, the purposes of learning, the ways in which the educational institutions and buildings are managed, and the way in which the school conducts its planning, implementing and reviewing process.

Figure 3.6: The five strands of a whole school approach to EE/ESD



Source: Shallcross, T., Robinson, J., Pace, P., & Wals, A. (Eds.). (2006). *Creating sustainable environments in our schools*. Stoke on Trent: Trentham Books.

Box 3.4:
The characteristics of the whole school approach

•	Participatory learning;
•	Integration of the sustainability message across formal curriculum;
•	Leadership that places sustainability at the heart of school practice;
•	Whole school participation;
•	Regular and continual professional development for teaching, support staff and other stakeholders;
•	Greening of the school campus and its physical surroundings;
•	Reducing the school's ecological footprint;
•	Regular monitoring, reflection and evaluation;
•	Practitioner-based research;
•	Partnerships with local community and other stakeholders; and
•	School culture and practices that reflect key messages from the formal curriculum.

Source: Shallcross, T., Robinson, J., Pace, P., & Wals, A. (Eds.). (2006). *Creating sustainable environments in our schools*. Stoke on Trent: Trentham Books.

If ESC is designed to empower the school community as well as communities around it to live more sustainably by reducing their environmental impact on the planet, students have to participate in the discussion and selection of sustainable actions. This participation will help students understand the issues, identify the main problems and strategy to solve the problems, and then take active participation in local action. The Ladder of Participation developed by Hart (1992) below is useful to encourage teachers to facilitate learners' genuine participation.

Figure 3.7: The ladder of participation

Source: Hart, R. (1992). Children's participation: From Tokenism to Citizenship. *Innocenti Essays No.4.* Retrieved July 2012, from UNICEF Office of Research, Evidence Policy Children's Research: http://www.unicef-irc.org/publications/pdf/childrens_participation.pdf

One of the best examples highlighting the importance of participation comes from a private school in Surabaya. After a field trip to Surabaya River, three junior high school students (15 years of age) initiated a mangrove-for-life program to help the local community make biscuits from mangrove flour and using mangrove as natural color for batik.

Examples highlighting student participation:

- Giving students influence over curriculum content and pedagogy;
- Conducting audits and becoming researcher;
- Mediating playground disputes;
- Evaluating their schools; and
- Deliberating and implementing institutional practices such as energy conservation.

Picture 3.27: Students do an experiment

Picture 3.28: Students studying in a classroom

Picture 3.29: Showcasing students' work

Figure 3.8:
Tangible results of the whole school approach implementation

Evidence of the whole school approach:	
•	Better attendance rate;
•	Higher test scores;
•	Greater participation in after school activities;
•	Lower truancy rates;
•	Less substance abuse and gang membership;
•	More pupils with positive attitudes to school;
•	Closer bonds between peers students and teachers;
•	More involved parents; and
•	Teachers who are more innovative.
Can lead to	
•	Reduction in vandalism;
•	Increased water separation/management
•	Energy saving;
•	Marked reductions in aggression and destruction; and
•	More fervent participation for example when students panted for the classroom and planted trees in their school grounds in their own designs.

Source: Shallcross, T., Robinson, J., Pace, P., & Wals, A. (Eds.). (2006). *Creating sustainable environments in our schools.* Stoke on Trent: Trentham Books.

The Adiwiyata Program as One of The Bridges For Accelerating Implementation of ESC

Picture 3.30: The Adiwiyata Program

The Adiwiyata Program is one example of the whole school approach implementation. The program is officially recognized as a nation-wide school award, which aims to encourage schools in Indonesia to implement environmentally friendly behavior through two principles: (1) participation, and (2) sustainability. Through participation, the school's community is actively involved in 'school-based management' (SBM) including planning, implementation and evaluation.

A sustainability approach is a continuous program, not a one-off or time bound project. The principle of sustainability means that environmentally friendly behavior becomes an integral part of school planning and curriculum.

The program was formalized by a Joint Ministerial Decree between the Ministry of Environment and the Ministry of National Education (the previous name of MoEC) No. 03/MENLH/02/2010 and No.15/II/KB/2010 on Environmental Education. The Adiwiyata Program is a voluntary holistic approach program to develop sustainable green schools by:

- developing school policies that support the development of sustainable green schools;
- encouraging schools to develop and improve environment-based curriculum;
- increasing schools' attention on environmental protection and management; and
- developing environmental activities.

Between 2006 and 2011, of the 251,415 primary and secondary schools in Indonesia, 1,351 schools have been participating in the Adiwiyata Program, and 272 schools have received the Adiwiyata Award. Schools that intend to participate in the Adiwiyata Program are increasing year by year. The Program has been well supported by the President of Indonesia who, every year during World Environmental Day celebrations held annually on June 5th, inaugurates new schools into the program. Some Adiwiyata schools have also been able to go a step further towards a whole-school approach to implement Education for Sustainable Development (ESD).

Moreover, schools that receive the Adiwiyata Award are valued as schools that have already implemented Ministry of Education and Culture (MoEC) environmental related character-building values. Furthermore, Adiwiyata schools are tangible models of engaging community participation and strong partnerships with the community around the school.

The Adiwiyata Program in action

SMKN 2 Boyolangu-Tulungagung, KabupatenTulungagung

This senior high vocational school is a very strategic place to facilitate students to learn about the principles of sustainable consumption. SMKN 2 Boyolangu believes that an environmental friendly business will reduce operational costs and build a good reputation with the community, as well as educate the public to participate in sustainable development programs. According to the school principal, "we develop environmental friendly lifestyles as a breath of our life." The school has infused environmental education into four of their primary curricular programs - fashion, culinary, hospitality and beauty salon along with extra-curricular activities and their personal development program. Here, we can find a canteen that sells food cooked by students from the culinary program. All meals are free of MSG, using natural food color and no added preservatives. Students also learn about how to manage eco-friendly businesses, such as laundry services, restaurant, orchid cultivation, and mushroom and aloe vera cultivation. The school's goal is that once the students graduate from secondary school, they will be prepared to work and develop environmentally friendly businesses for themselves and others that they work for. With 450 students, SMKN 2 has been working with another 10 partner schools to help them to obtain recognition as an Adiwiyata school.

Picture 3.31: Applying Adiwiyata program in school context

ESC Initiatives in Non-Formal Education

Different from formal education, which refers to the Government of Indonesia's education system that must be followed (mandatory), non-formal education is beyond official government curricula, with a more flexible format and substance. Non-formal education can be general, such as public education, or specific with targeted groups as participants (the target group can be children aged 5-10, women, businessman, etc.). According to the law on National Education System no 20, 2003, chapter 1 no 12 (Undang Undang no 20, 2003, Sistim Pendidikan Nasional), non-formal education has to be structured into different levels. Usually, non-formal education has goals and expected outputs delivered with certain approaches. In essence, non-formal education is a flexible form of education in terms of the educational material, participants, delivery approaches, methodologies, and length of activities. Participants do not necessarily have to do examinations as part of their instruction; however, quality standards usually set up by the implementer organization (i.e. attendance, active participation in discussion, initiatives or innovations, homework or project accomplishment, etc.).

Various training, public education (through mass media, for example), coaching, local knowledge passed on to the next generation, and action project proposals related to ESC through certain competition programs have been conducted in many ways, without having the name of ESC, and yet it is related to ESC (please see the example of Climate Smart Leaders Program below). Non-formal education can be delivered through different formats and to target groups in very creative ways.

A number of approaches that can be used in non-formal education are shown below:

- **Education based on classroom activities**
  ESC material with various approaches can be delivered to certain target groups, which have unique characteristics, conducted in interactive learning processes. This helps to encourage more dialogue, sharing experiences and ideas. Simulation and games aimed at increasing the understanding of sustainable consumption can enrich knowledge by using real case studies, which makes the sustainable consumption issues easy to understand. In addition, site visits, out of the classroom activities, also increase the understanding of the issues around sustainable consumption in a short period of time. It is important to note that this kind of approach can be integrated into formal education as extra-curricula activities for the students, using a variety of approaches.

Picture 3.32: Teachers taking part in training activities

- **Education based on Experiential Learning** (using passive observation or active participation)
  Participants learn about ESC topics and issues through experience, where they are exposed to a situation where they have to make a decision to buy a product or services (either through simulation process or really buy the products), and then they analyze the experience, relating their findings to sustainability issues. For examples:
  - Case 1: The consumers are required to visit a traditional market (for the most part, it has fresh products, with limited variety products to offer) and a supermarket (provides processed products in large numbers and varieties, and usually with marketing information on discounts and sales). Consumers are required to buy some products and share their experiences, explaining why and what they decided to buy in each market. Using the active participation approach, participants share their experience of the temptation of each market, the difficulties of making rational based decisions and impulsive buying, and through group discussion, participants will know what sustainable consumption is, what are the challenges and how to make the right decision.

- Case 2: Consumers are required to compare information of a list of home appliances products, and decide which products are more environmentally-friendly and socially responsible. Using the passive observation approach, consumers then consider each product based on the information available, among others: resources used to produce the products, energy efficiency, the life expectancy of the product, the durability of the product, to see if there is an eco-label, quality and price, and so forth. In the group discussion, participants can compare their findings and learn to analyze product information and the meaning of sustainable consumption.

A resources facilitator is needed when using the active participation and passive observation approaches to lead the discussion, analyze the findings and make conclusions about the learning experience.

Picture 3.33: Traditional market can be a learning arena

- **Public education based on awareness campaigns**
  ESC for public education aims at building awareness on the importance of sustainable consumption and this can be delivered through various means such as public discourse (seminars, workshops, talk shows, videos and documentaries on relevant topics), communication campaigns through posters, strategic public location, art and cultural exhibitions, public service announcements via television and/or radio, TV and Radio talk shows, print articles in newspapers and magazines, and using social media to disseminate the messages of sustainable consumption, encouraging further discussions on ESC topics and issues. When disseminating the messages of ESC through non-formal education, there is always room for creativity since ESC can be delivered through a mixed format. Once the profile of the audience is clear, the content for ESC can be developed so that it relevant to the specified target group and the most effective delivery mechanism or medium can be identified for the target group.
- **Education based on social, cultural and environmental contexts**
  This kind of education is specifically designed for certain contexts where the education is delivered. For example, ESC for certain ethnic groups and certain locations needs to ensure that the values and norms of the members of the ethnic groups are reflected in the education materials. For example, in certain ethnic groups, there are norms to respect nature, and there are special ceremonies in times of rice harvest, and the need to share the rice harvest. In other ethnic groups, there are rules on when to go fishing in certain areas to ensure that fish will have time for reproduction, as a means of ensuring the fish supply remains sustainable. Therefore, ESC can be developed using local wisdom, or where the local knowledge is weakening, ESC can revive this local knowledge through ESC messages to the young generation to ensure sustainable consumption in the community.

  Furthermore, the wealth of natural resources in that area will also determine the form of education that will be delivered. In the area where the water scarcity is a critical problem, ESC will focus more on how to be efficient in using water, grow more trees in the area of water spring, and avoid further forest encroachment; while in the area where diversity of plants as food resources has not been used, ESC will encourage the community to use the benefits of their rich environment.
- **Education based on action**
  This kind of education means ESC that is delivered through action. Participants are encouraged to take initiative and action. Whenever possible, incentives or special awards should be provided when students take action as a means of encouraging more action-oriented initiatives or activities that may bring out aditional impact. The learning process is through the action itself, however, it is usually strengthened by in-class training so that students can have the necessary knowledge and skills, making it even more complete.

Picture 3.34: Products made from recycled trash

Existing ESC Initiatives in Non-Formal Education

A. Education based on classroom activities

1. ESC for professionals: understanding ESD across sectors

Since 1992, LEAD Indonesia has been conducting training for mid-career professionals, from all sectors such as government, the private sector, non-profit organizations, academic institutions, and mass media through LEAD Associate Training (LAT). The mission is to inspire leadership for environment and development and to bring the understanding on the importance of sustainable development. The participants are aged between 24 and 45, and are influential leaders or on the path to being influential. LEAD Indonesia is an institution within a network of 12 LEAD Offices in the world, with its headquarters in London, the United Kingdom.

Relevant Theme of the Year

Each year, the LEAD expert team decides the theme for the year, formulates the curricula and identifies the right resource people for each session of 15 to 20 days. The curricula includes conceptual background (knowledge), leadership skills, public seminars,understanding problems through survey findings and other facts, site visits to get insights on case studies, and individual projects as well as a group project, which shows the application of a sustainable development framework. The LAT theme is usually related to sustainable consumption issues such as energy and climate change, water management, food security, sustainable cities, and the green economy. Those who join this training are provided with comprehensive knowledge of pertinent issues ranging from the economy to social and environmental aspects. Those who graduate are LEAD Fellows and they become a member of the global LEAD network.

For further information on how the curricula are developed and the training implemented, please visit www.lead.or.id and www.lead.org. The module can be adapted to shorter courses, to focus more on ESC, and to specific target groups.

2. Educating the business community to be socially and environmentally responsible

The Developing Sustainable Business (DSB) Program is a training and coaching program that assists the business sector to develop their sustainability strategies to become companies, which are not only making profit, but also becoming socially and environmentally responsible. Using specific "sustainability tools" a company can formulate its business strategy into a sustainability portfolio, with indicators and index of performance, within a particular timeframe. The process of formulating a sustainability journey of a company is a participatory process that involves top, middle and low levels of management. The process produces strategic directions, which become the company's sustainability compass. The participatory process helps to bring stronger commitments from top management and the company's staff.

Through the process, the company will include a social justice aspect into their business while addressing environmental concerns. The social and environmental responsibilities include the principle of cradle to grave and whole life cycle accounting in the production process. As the company is also a consumer of raw materials and natural resources, the inputs should meet the standard of being responsible socially and environmentally. The products and services produced should also reflect the same values of social and environmental sustainability. This also includes various other aspects such as fair trade as well as respecting the consumers' health and security and caring for the environment. The company needs to be efficient in using natural resources and when it comes to waste, the company should be responsible for its management from the production process to after sales. As for the financial sector, being sustainable means the investments made should be socially and environmentally responsible. Here, the company is a consumer of raw materials as well, so the company should practice sustainable consumption and production. For further information, please visit www.ypb.or.id (Select the web page entitled Developing Sustainable Business program).

B. Education based on experiential learning (using passive observation or active participation)

Knowing Your Local Food

Detara Foundation provides non-formal education to children, particularly those aged between 7 and 14, in the communities in Bogor in an effort to help them better understand food resources and consumption patterns. The children learn to identify food sources from their daily meals and find the food resources in their surrounding environment such as their backyard, in rice paddy fields and the river. The children are also required to identify the food resources of their breakfast, lunch and dinner through observation. From the observation findings, the children learn that some food resources are available from the surrounding areas (such as banana, cassava and cassava leaves, papaya, yellow velvetleaf, sweet leaf, water spinach, corn and guava). By visiting a traditional market and a modern market (supermarket), they are able to differentiate between the two markets in terms of the available products and their original (local or imported). They also learn that certain vegetables are available in their own backyards.

These kinds of findings often raise questions and discussions. The facilitator from Detara Foundation becomes the resource person who starts the dialogues, helps analyze the findings, inspires the children to preserve the local food resources and appreciate the local products more, inspires them to appreciate a wider variety of plants and fruits, and helps them understand the difference between exporting and importing. The experiential learning is directly linked to the location where the products are on sale as this allows the participants to learn and analyze the situation in an easier manner. For further information, please visit www.detarafoundation.org or send an email to fdetara@gmail.com. Detara Foundation has an ESC program for children.

Picture 3.35: Children learn about their local food

C. Public Education based on Awareness Campaign

1. Consumers' rights: promoting sustainable consumption.

Established in 1973, Yayasan Lembaga Konsumen Indonesia or YLKI (Indonesia Consumers Foundation) aims to raise the awareness of consumers' rights and a just society. Through its website, magazine (Warta Konsumen/Consumers Info) and public discourse, YLKI is actively educating consumers as well as doing advocacy to policy decision makers on the importance of consumers' rights.YLKI also has various campaigns with educational messages related to sustainable consumption, such as choosing healthy and safe foods, becoming a smart shopper and not being an impulsive consumer in the era of aggressive advertising and marketing, protecting the health of consumers by promoting anti-smoking, voicing concerns on safe transportation, products standards for all imported and domestic goods, domestics products protection, and promoting organic farm products among others. For further information, please visit www.ylki.or.id.

2. DAAI TV Channel: public education through TV programs

Television (TV) as a media for public education can be very effective, as it addresses the issues, problems and solutions in a short time frame, and can be delivered through various formats such as talk shows and documentary films, which can provide findings and facts from field visits. DAAI TV is popular for its programs, which focus on education on social and environmental themes. It's programs create better understanding and provide insights into various challenges, encourage learning from various perspectives and strengthen solidarity among people

with different social, economic, religious, and cultural backgrounds. Below are the television programs that are well equipped to produce and air sustainable consumption issues and themes:

- **Mata Hati (The Heart):**
  Aimed at people of all ages, this program is aired 5 times a week. It tackles various problems and provides different perspectives on the problems. This program also exposes various activities for humanity, community development, and environmental preservation.
- **Bumiku Satu (One Earth):**
  Aimed at junior and high school students, this weekly talk show is based on environmental education and conservation, problems related to the environment surrounding schools and basic science experiments.
- **Sahabat Alam (Friends of Nature):**
  Aimed at families, this daily one-hour program explores the beauty of nature, conservation and the importance of preserving the environment.

3. Green Radio 89.2 FM Jakarta

This radio station is the only radio station that has a mission to promote sustainable lifestyles in Jakarta. The main messages of this station are about the environment, including the role of the environment for human life as well as the challenges and the new attitudes needed to save the environment. The program covers policy discussions about the environment, tips for sustainable lifestyles, and how to take action in daily life. This radio station is popular among the audience aged 30 to 40, who are active listeners. There is a balance between females and males listeners. Half of the listeners have a higher education background (bachelor degree and higher). For further information on the program of Green Radio and how the radio makes public education attractive, please visit www.greenradio.fm.

4. Youth Magazine and Newspaper: strategic to promote eco-fashion

One of Indonesia's most popular youth magazines is HAI. Its target is youth in their teens and twenties. Music, film, fashion, sport and lifestyles are the most popular topics among youth. The magazine can be a strategic medium to promote sustainable consumption issues. In the 2-6 April 2012 Edition, HAI's theme was Green Entrepreneurship, which included reports on the development of green businesses by undergraduate students at the leading business school, the Prasetya Mulya Business School. The students at the school presented their initiatives for using eco-friendly raw materials such as a toy-watch made from polyethylene fiber (made from recycled pipes); soap made from organic ingredients (coconut, green tea, papaya); greenstick, which can be consumed as it is made from wheat, pepper, gelatin and salt; a compost machine, which can be appropriately located in a kitchen; fashionable shoes made of jute fibers, bicycles made from local bamboo species, and recycled paper for notebooks made from elephants' dung. All of these products are manufactured using local resources, while also reducing waste. These projects are evaluated on the points of the green-o-meter: inputs material should be eco-friendly, the production process should minimize the impacts to the environment, and the products used should not pollute the environment.

These eco-friendly products and green businesses developed by youth as highlighted in this magazine can make "eco-fashion" become the fashionable trend in an effort to shift towards more sustainable lifestyles. For further information, please visit www.artyvek.blogspot.com, or follow these twitter accounts @purezzasoap for organic soap and @bambi_original for Bamboo Bike. You can also send an email to purezzasoap@yahoo.com for the organic soap and to artyvek@yahoo.com for the toy watch. Please contact Karamina at +628965231345 for information on the organic chopstick.

Picture 3.36: Environmental magazine can promote ESC

5. Mudaers: youth volunteers of Kompas Muda newspaper

Mudaers is a youth club across Indonesia supported by Kompas Muda (Kompas Youth), a division of one of the leading newspapers in Indonesia. Mudaers has the potential to be a target group for disseminating ESC but also a pioneer of sustainable lifestyles when ESC is well delivered to this youth community. Various issues can be discussed through this youth community. This group can also initiate actions related to environmental issues, peace and healthy lifestyles. For further information, please visit: www.mudaers.com.

D. Education based on social, cultural and environmental contexts

1. The community of Bali Aga: local wisdom for sustainable livelihoods (Masyarakat Bali Aga, Kompas, 2012, July 7, p. 24)

The people of the Bali Aga Community, who live in the village of Desa Tenganan, in the sub-district of Manggis, Karangasem District, Bali Province, have been following their own cultural traditions for years. Cultural traditions are practiced throughout the village; for example, there is the awig-awig tradition that protects the forest, land, and the people of Bali Aga from capital economy and modern culture. The Bali Aga Community regulates the life of its community in regards to food security, preserving the land and forest, and through the tradition of sharing. The land is not for sale to outsiders, and it is entirely owned by the Bali Aga community. Their rice paddies are the main source of community livelihood, and they believe that selling the land, at the end, will endanger the sustainability of its people.

The community members share certain crops which grow in "kebun adat," the village garden, namely durian, teep, tingkih and turmeric. The owners of the crops follow the regulations. Awig-awig also protects the forest, where the community cannot cut the trees. They can only use the branches of the trees. As a result, the village has an efficient water supply during the year, and it does not experience floods or landslides. The Bali Aga people respect the forest as their valuable asset. During the Bali Hindu rituals, the communities ask for the Gods' blessings and all the community members work together in the preparation stages such as decorating beautiful offerings made from flowers and fruits, and creating various artistic decorations for the special event, with 'ngayah' (volunteer work). Then, they have one full nampan or plate for everyone, consisting of various local dishes. Everyone shares the same portions. This is the tradition of sharing food for everyone in the village.

Picture 3.37 : Cultural tradition to respect rice harvest (Bali)

Through local wisdom, the community is taking care of themselves. They own the land, the forest, and preserve all the traditions to nurture the nature and be thankful to the Gods, while having harmony in social relationships.

ESC can be delivered through the non-formal education process to many generations through everyday activities. People often learn the values and norms from the socio-cultural traditions within environment and the welfare of its communities, including the local wisdom that will protect the members for generations to come.

2. Lumbung Padi Pulau Solor, East Nusa Tenggara : food security for the community (Kompas, July 14, 2012, page 24, Rumah Adat, Leluhur dan Lumbung Pangan)

The seven ethnic groups in Solor Island of East Nusa Tenggara have a tradition to allocate the best rice seed and a part of the rice harvest into lumbung padi (community paddy storage) and to follow the adat berauk (the tradition to avoid hunger and a mechanism of food security in dry season). Each family of every ethnic group should set aside a portion of their harvest (such as dried paddy, sorghum, and local potatoes/umbi-umbian) and put it in the community lumbung padi, according to the amount that the Head of the Adat (ethnic group) declares. Through the local tradition, the community has never experienced problems in obtaining the best rice from the best seeds or a lack of adequate rice supply during the dry season. They still have the best seeds to replace the ones that experience pest problems, and the community members of the seven ethnic groups always have rice as their main food throughout all seasons. They pray to the Gods and their ancestors, who are always part of their lives in every activity, including the prayers when the harvest is successful and when they put part of the harvest in lumbung padi.

The example above shows ESC that is delivered through local wisdom from generation to generation, which allows people to practice sustainable consumption in their daily activities from a very young age. Through socio-cultural traditions, ESC principles and issues are kept alive, making them very central to the communities' values and norms. ESC conducted through passing the local wisdom to the next generation by practicing it in daily life, from a very young age. Over time, cultures and traditions are sustained from generation to generation as ESC is integrated into the values and norms of the communities.

E. Education based on action

1. The Climate Smart Leaders Program – Youth in Action

The Climate Smart Leaders (CSL) Program aims to encourage youth (15-24 years) to take action in this time of climate change by developing action-oriented project proposals that encourage young people to shape their own future. Launched by Yayasan Pembangunan Berkelanjutan/Foundation for Sustainable Development in 2010, this CSL program has been successful in attracting more than 150 proposals each year. Youth are creative and willing to be active in combating climate change. Each year ,there are 24 finalists who join CSL Camp for five days. During the knowledge and skills sharing event, they learn more about sustainable development, climate change, leadership, project management as well as social and eco-enterprises. The finalists also visit an innovative action project (not a laboratory project or research project) to inspire them and make them more committed to their own action project, which show real changes or new behavior in daily life.

The six winners from 24 finalists receive some funding to support their action project and the Emil Salim Award, which is a prestigious award from Emil Salim, a nationally and internationally recognized leader and advocate of the environment, and previous Minister of the Environment of Indonesia. The hope is that this kind of program will encourage creativity and innovation by youth, while building the tradition of research and development and encouraging youth to be active in finding solutions to tackle the country's problems. During the camp, participants also get the opportunity to learn from leading experts and successful leaders; they can build and expand their networks by connecting with fellow participants as well as with the resource persons during the training sessions.

Picture 3.38: CSL program shows youth initiatives

It is expected that in the future, these participants will be the leaders in their fields who will think about the nation's prosperity and environmental sustainability. For further information, please visit the website of Climate Smart Leaders program at www.climatesmartleaders.net.

2. Clean Batik Initiative – sustainable production for responsible consumers

Batik is one of Indonesia's most highly developed art forms and one of its most valued traditional handicrafts. Unfortunately, the batik industry produces the highest annual emission of carbon dioxide among other SME sub-sectors in Indonesia, mainly as a result of the industry's high dependency on fuel (kerosene) and electricity consumption, among others. The Clean Batik Initiative is a four-year programme (2010-2013) that aims to "green" both the supply and the demand side of batik products to ensure that environmental impacts are thoroughly taken into account so that a virtuous push-pull cycle of responsible production and informed consumption can pave way for the sustainable development of the batik industry.

The Government of Indonesia promotes eco-batik, which means that the production processes should have minimal negative impacts on the environment as well as respect those who work in the batik cottage industry. The regular practices of the modern batik industry, such as waste that pollutes the river, the CO^2 released to the air, the chemical ingredients, which are not properly treated and the indoor pollution, need to be properly addressed and transformed into environmentally friendly practices. There is also a great need to improve the adherence and respect for labour rights for the workers in this production process who usually have long hours of sitting in a room lacking ventilation and receiving low compensation. There is also an educational process involved in the batik industry, where consumers need to be educated to buy products that are made ethically, where the workers' rights are respected and the environment unharmed. This will help encourage the consumers' willingness to pay more for eco-batik, as a manual art product, with an appropriate price for the efforts of the artisan (fair trade).

For more information, please visit www.cleanba-tik.com. ESC can be used as a means of increasing consumer knowledge and awareness on batik across various communities around the country that make batik.

Picture 3.39: Batik tulis with natural dye

Picture 3.40: Eco-label on furniture from Java Furniture

3. Sustainable Furniture – consume wood from sustainable forest management

Java Lestari Furniture is a furniture company in Central Java, which incorporates a sustainability framework into its business model so that the consumers in the export market countries can buy sustainable produced furniture. The wood used to make the furniture is guaranteed sourced from sustainable forest management. Furthermore, the consumer can track where the wood of the furniture came from. The furniture made by Java Lestari Furniture is certified by the international accreditation bodies of TUV Rheinland and the Forest Stewardship Council. The price of the product can be higher compared to similar furniture made from uncertified timber, but it has the guarantee of proper process that preserves the environment (i.e. the wood is not sourced from illegal logging, but from sustainable forest management).

For more information, please visit www.javacertified-wood.com and www.javafurniture.com ESC needs to educate the public about goods and services that are sustainably produced. ESC can be the medium where information about sustainable practices can be disseminated, such as information about the furniture industry. ESC can also educate public to choose these kinds of products, to choose products that are produced through environmentally and socially responsible manner.

Box 3.5:
Self-Subsistence Economy:
A different scheme of sustainable consumption and production

In a self-subsistence economy, sustainable consumption and production are closely related. If there is no sustainable production, sustainable consumption is in threat. For example, the small farmer who depends on the crops on their paddy field will not have rice for his family if the rice production is in trouble. Not enough water, wrong application of pesticide, and lack of organic fertilizer may lead to decreased rice production. If this continues, the family will not have an adequate supply of rice and healthy portions to consume. Their life depends on the production of the paddy field. They will be unable to consume sustainably.

The same situation can happen to the families of fishermen, small traders, and those who work in micro and small enterprises. When production or trade encounter problems, the families immediately face the consequences. In some communities, they save some portions of rice during the harvest time for the dry season (community rice storage or lumbung padi), or allocate some earnings to be used in times of emergency within the community. Some families who have more products or earnings share with those who are in need as a solidarity mechanism within members of a community, and help each other through “arisan” community-based saving, where each member has his/her turn to have all the savings at a given time.

Recommendations to Develop ESC

This section aims to provide some key recommendations for developing ESC for Indonesia.

Picture 3.41: ESC is the key to a bright future

To develop ESC materials in Indonesia, it is necessary to make sure that ESC is related to the context where the target group lives. This will ensure that ESC is locally relevant, easy to understand, and has potential benefits to the community. Here are the key recommendations for developing ESC materials:

1. Problem formulation and priority based on the needs of communities

Identify the community's (or communities) primary problems in relation to the ESC issues and topics. These problems should be related to the many diverse topics and issues of ESC, which participants should have knowledge of, such as life quality, lifestyles, resources, economics, consumption and the environment, consumer rights and responsibilities, information management, health and safety, change management and global awareness. Some examples of problems that can be tackled in various Indonesian communities can include:

- Health and safety: hygiene habits, illnesses.
- Resources: natural resources such as fishing and agricultural practices, energy efficiency.
- Lifestyles: present consumption patterns.

Educators and education practitioners must therefore identify the priorities and challenges for the community /communities and use ESC as a means of finding sustainable and viable solutions that will bring the highest benefits to the community/ communities and the environment.

2. Expert involvement in developing curricula

Involve relevant experts to develop curricula and module of education, in terms of content and delivery methods, and to identify the immediate causes of the problems and potential solutions for the specific area or areas. The experts who will be involved in developing the curricula have to be the ones with extensive expertise in specific topic related to ESC (i.e. expert in energy, water, food, or waste management, etc.) both in formal and non-formal education. Whenever possible, the expert should also have the experience in working with particular groups, such as education for young children in formal schools, or youth groups, coastal communities, indigenous people, etc. Those who have expertise in specific topics with specific target groups can develop ESC materials better.

3. Local context of ESC materials

Develop and adapt ESC materials to reflect local contexts, such as individual profiles (such as age, gender, occupation, role/position etc), socio-cultural traditions, geographic areas, social-economic classes, biological characteristics, including available biodiversity and so forth. These are a few crucial elements that must be considered and reflected in the development and design of ESC materials. Once a topic or issue of ESC is identified, then it can be packaged into formal and/or non-formal education depending on the target group and profile of learners (age, gender, education level and contexts such as local culture, local natural resources, geographical area, etc.).

4. Inclusion of success stories and case studies in ESC materials

Include case studies and success stories that show various communities (individuals, organizations etc) that have overcome similar challenges/problems in ESC materials. In educating students about sustainable consumption, it is advisable to include site or field visits to areas where learners can see the impacts of unsustainable consumption as this will illustrate the challenges and encourage learners to seek solutions.

5. Participatory approach for stronger commitment

Engage target groups to come up with aspirations and ideas to develop ESC materials that cover specific problems. Inputs can be generated through workshops, focus group discussions, informal meetings, structured questions disseminated via mailing lists, and social media, etc. At the end of brainstorming sessions, target groups would then agree on priority problems they would like to address through ESC and therefore explore the best approaches in delivering this ESC. It is recommended that by the end of the discussion, the groups formulate follow up actions such as: to collect data related to problems i.e. how many babies of a certain age are underweight, the consumption patterns of youth according to the goods they buy and their monthly budgets, non-environmentally friendly household items that are on moms' monthly shopping lists, to enlist resource persons or experts that need to be involved in formulating the curricula (either in formal and non-formal education), to identify funding resources (from the government, from school budget, fund-raising with a donor agency, companies, special events, etc). Through a participatory approach, the commitment to do follow up actions for ESC to be materialized is higher. There is a sense of belonging built in this participatory approach so there is commitment among partners.

Box 3.6:
Sustainable Livelihoods using food issue as an example:
Some tips to develop ESC

•	Identify what the main food source is for the community and its relationship to the economic activities of the area, for example rice, corn, sweet potato, or vegetable farming, local coffee for trading and supply of spices (cinnamon, vanilla, ginger, chili, red onion, lemon grass), etc.
•	Identify the supporting systems for food provision, such as water supply, irrigation management, availability of crops, pesticide, herbicide, fertilizer, etc.
•	Identify the problems that can endanger the availability of food for the local community, e.g., pollution, the overdose of herbicides and chemical fertilizers, poor quality of water due to waste problems in the river, inefficient water management, land disputes, or low land capacity and quality to grow crops, limited resilient crops, unpredictable weather and flooding, low prices for farm products, limited market for local products, loan shark, etc.
•	Identify existing efforts that can be used to develop solutions to the problem. Ask and gather data to develop ESC materials from various resources:extension worker (penyuluh pertanian), the experts (in organic farming, water management, the academician, etc.) and active non-governmental organizations who have extensive experience in practice.
•	Learn from best practices. For similar problems, check if there are best practices that have been applied successfully to other areas. Learn from them. This will help in adapting the ESC material to local contexts.

Picture 3.42: Preserving traditional food

CHAPTER IV:
OPTIMIZING THE OPPORTUNITIES: ADVANCING ESC IN INDONESIA

- The Opportunity of Government Policy as an Entry Point for ESC Implementation
- Advancing ESC in Formal Education and Non-Formal Education
- The Critical Role of ESC for Indonesia's Future

The Opportunity of Government Policy as an Entry Point for ESC Implementation

Through policy research based on the secondary data related to the Government of Indonesia's Educational Policy, mainly issued by the Ministry of Education and Culture and the Ministry of Environment, but not limited to these agencies (it can include other Ministries as well), it is revealed that there are strong opportunities to adapt and integrate ESC into existing policy, both at the national level, and at the local government level, in formal education and non-formal education. The summary of potential opportunities to include ESC is shown in the table below.

Table 4.1:
Identifying current institutional frameworks and opportunities for integrating ESC

	National Curricula	Teacher Training	Environmental Education (EE)	Education for Sustainable Development (ESD)	Non-Formal Education (among others)	Sustainable Consumption and Production (SCP)
Existing Policies, Strategies and Plans (potentially relevant to ESC)	Law No. 20/2003 on National Education System that stipulates decentralization of authority for education system and the development of locally-based curriculums. Regulation of Minister of National Education No.22/2006 which translated into National Education Strategic Plan 2010-2014. The regulation elaborates basic framework of curriculum and competency for primary and secondary education that is clustered into several subjects as follows: religion and noble character, citizenship and personality, science and technology, aesthetics, physical- sport and health.	Law No. 14/2005 on Teachers and Lecturers. Several efforts have been made to develop competency standards for teachers in Indonesia, under the Directorate General of Quality Improvement of Teachers and Education Personnel (Direktorat Jenderal Peningkatan Mutu Pendidik dan Tenaga Kependidikan - PMPTK), which has formulated the competencies of teachers in Indonesia as follows: 1) Personality Competence 2) Pedagogic Competence 3) Professional Competence 4) Social Competence	Since the 1980s, environmental education has been considered as fundamental literacy in Indonesia. One of the educational literacy programs is functional education literacy, which has the objective to elevate local contexts such as environmental issues as part of learning subject. Joint Ministerial Decree No. 0142/U/1996 that calls for cooperation between MoEC and MoE to develop and improve EE (renewed in 2005 and 2010, with 2010 decree strongly promoting ESD). Law No. 32/2004 that encourages local formulation of EE.	MoE's "Report on Strategies for ESD" (2006) includes suggestions for more baseline data on ESD, prototype ESD development, partnership building, collecting innovative success stories, and an ESD resource center. National Education Strategic Plan 2010-2014 and PuP3B lays down a strategic plan for ESD and ESC. The Meeting of Socialization of ESD (Aug 2008) highlights ESD as the spirit of education.	Law No. 20/2003 on National Education System stipulates Non-Formal Education program development that includes: literacy education, equivalency education, life skills education, adult training, women's empowerment, and early childhood care.	MoI's Strategic Plan (2010-14) that calls for more sustainable industries, better environmental management and social responsibility. MoE's Action Plan for Sustainable Consumption & Production. Currently, MoE is developing an Action Plan for Sustainable Consumption and Production, which includes ESC.

	National Curricula	Teacher Training	Environmental Education (EE)	Education for Sustainable Development (ESD)	Non-Formal Education (among others)	Sustainable Consumption and Production (SCP)
Primary Actors and Resource Capacities For Implementing Current Policies	Ministry of National Education whose authority on education management is transferred to local governments. Local governments implement localized curriculum and school-based management.	Agency of Human Resource Development and Quality Assurance in Education (MoEC). The Center for Development and Empowerment of Teacher and Education. Personnel (MoEC) Non-governmental organization PPLH – EE Center. Sampoerna Foundation Teacher Institute.	Deputy of Environmental Communication and Community Empowerment of MoE through the promotion of Adiwiyata Program.	MoEC Center for Policy Research (has developed several ESD guidebooks). Deputy on Environmental Communication and Community Empowerment (MoE).	- MoEC - Vocational Learning Centers - Ministry of Religious Affairs - NGOs, Members of JPL - YPB - YLKI - Private Sector through CSR programs	- Deputy for Standardization and Technology of MoE - MoI - MoEMR - MoC - YPB - YLKI
Existing Implementation Structure and Specific Projects Potentially relevant to ESC	Curriculum developed by local governments and schools, referring to national standards. Purpose of education that promotes capacity to think logically-creatively-critically-innovatively and work within a team. Character-building education initiated by MoEC in 2010, that encompasses environmental awareness, responsibility and independence.	Preparation of training materials and implementation of training on educational competencies and education methodologies by P4TKs. Three P4TKs have addressed EE/ESD issues directly: 1) P4TK in Malang incorporates EE/ESD in Natural Science 2) P4TK in Cianjur incorporates EE/ESD in vocational secondary education 3) P4TK in Bandung incorporates EE/ESD in kindergarten. In-service training and workshops organized by MoEC Note: To involve 3 million teachers is challenging.	Three teaching approaches: Three teaching approaches: 1) infusion (adding EE examples to existing syllabi) 2) integration (teaching EE as an interdisciplinary approach) 3) or as a separate subject (mainly applied in higher education). Learning subjects in line with GBIM on EE that consists of human & environment, natural resources, maintaining hygiene & environment, water, marine & coastal,air,soil and land, energy, forest, ozone depletion, atmosphere, & global warming. Green school approach.	Output of Center for Policy Research of MoEC: - National Strategy for ESD (2009) - Model of ESD through intra curricula (2010) - Model of ESD through extra curricula (2010) Executive - Summary of Model for ESD (2010) Subjects for guidelines priorities are poverty reduction, sustainable livelihoods, and human rights.	Various implementation of non-formal education. They have specific competencies. Existing Consumer Education efforts, such as those carried out by YLKI. Sustainable consumption promotion through mass media.	Green industry program (MoI). SCP Action Plan that stipulates the formation of: National SCP Forum, SCP National Single Window, & Enhancement of National. Development Plan Initiatives include green building/construction, green procurement, eco-label, food security, cleaner production and eco-offices.

	National Curricula	Teacher Training	Environmental Education (EE)	Education for Sustainable Development (ESD)	Non-Formal Education (among others)	Sustainable Consumption and Production (SCP)
ESC Entry Points	- ESC can be linked to school-based management through a whole-school sustainability approach. - ESC can be linked to existing learning subjects (religion and noble character, citizenship and personality, science and technology, aesthetics, physical- sport and health). - ESC methodologies can promote the desired capacity development mentioned above.	- Training on ESD can be strengthened through practical teaching approaches on ESC. - Research and Development Agency of MoEC (Center for Policy Research and Center of Curricula Development) can develop ESC teaching materials and modules, but only if requested by schools. - Education methodologies and materials based on experiential education.	- ESC can provide a strong basis for the Adiwiyata Program, which calls for schools to pay more attention to environmental protection and management, and in doing so it provides a basis for school-based environmental activities. - Modules can be directed to what students can do for a better environment and address human-environment relationship.	- ESC can be taught as a sub-component or thematic topic of ESD. - ESC can provide an important movement towards an action-oriented learning approach that aims at engaging students in practical actions for SC and SD. - ESC can be linked to other priority issues in education including sustainable livelihoods, health, food & energy security, and citizenship.	- ESC can be linked to life skills education and women's empowerment programs. - ESC can be linked to food security and safety, which is considered a very important consumer issue. - ESC can be linked to issues considered most important by the private sector, such as climate change, transportation, energy saving, waste management and eco-products/services.	- ESC can be linked to bio-diversity, local knowledge, food security, and organic farming. - Community engagement program that focuses on SC. - Establishment of SCP resource pool that can provide ESC materials. - SCP action plan that reinforces ESC. - ESC can also be linked to the Green Industry framework. - Consumer awareness raising that focuses on SC.
Requirements for implementing effective ESC	- Referring to Law No.20/2003 on National Education System, school-based management of curriculum can encourage schools to integrate resource saving and energy efficiency into school management and to utilize this as a strong learning opportunity Note: More guidance on a whole school-management for SD/SC is needed.	- P4TKs & Research and Development Agencies need more ESC teaching materials that can be adapted to the Indonesian context, such as existing UNEP and UNESCO YouthXchange resources. - Applying the infusion approach for certain ESC topics will help to place sustainable consumption into multiple aspects of existing curriculum, rather than setting them solely as being independent modules.	- Linking to points under National Curriculum, the green schools could become pilot models of whole-school management for SD/SC. Collecting and disseminating good practices are needed. - More teaching materials identifying various opportunities for ESC modules are also needed.	- Further inclusion of ESC within existing ESD frameworks Teaching guidelines for ESC is needed. - It is necessary not only to promote ESC as a thematic topic, but also to utilize it as an innovative pedagogy/ teaching approach.	- Non-formal Education provides a flexible channel for ESC integration, but often non-formal education is short term with little cohesive strategy. - Referring to the whole-school management approach in formal education, schools can be supported to become community-learning hubs in non-formal education.	- Better linking on educational activities, interests, strategies between MoEC, MoE and MoI. - Linked to the eco-office program, MoE could also promote similar principles of SCP as an eco-school initiative (and building on their Adiwiyata program).

Mapping Current Situation

ESC Opportunities and Requirements

Source: Hendarti, L. (2012). *Institutional strengthening of Education for Sustainable Consumption (ESC), Advancing ESC policy and implementation strategies: Mapping opportunities in Indonesia.* Jakarta: YPB and UNEP.

ESC can be implemented into formal education curricula under the mandate of the Ministry of National Education and Culture (MoEC), while for informal and non-formal education, non-profit organizations including non-governmental organizations (NGOs), training institutions and mass media can take the lead role in educating the public about sustainable consumption issues.

Picture 4.1: ESC can be integrated into teaching and activities in formal education in schools

ESC can be implemented into formal education curricula under the mandate of the Ministry of National Education and Culture (MoEC), while for informal and non-formal education, non-profit organizations including non-governmental organizations (NGOs), training institutions and mass media can take the lead role in educating the public about sustainable consumption issues. The Ministry of Environment can support non-formal education through its various programs, which can help educate the public about the importance of ESC. The National Development Planning Agency has a program to develop an information centre related to sustainable consumption and production as a means of public education for consumers. Other ministries such as the Ministry of Industry, the Ministry of Tourism and the Ministry of Trade, have the potential to inform consumers on green products and services.

Advancing ESC in Formal Education and Non-Formal Education

The recommendations noted in Table 4.1 allow for further windows of opportunities, thus making these guidelines an evolving document. New policies to scale up and strengthen ESC can be developed. The options of ESC to be implemented in formal education and non-formal education are there, including the formal education sector integrating and adapting ESC topics and themes into existing curricula. Additionally, the non-formal education sector needs to be creative in educating various target groups through the work of non-profit organization and training institutions, using the internet to channel ESC in different kinds of forms such as e-learning, websites, blogs, social media and so forth. Taking the role of mass media to promote ESC is also strategic. With simple and popular messages, the mass media can start to educate the public about sustainable consumption and lifestyles.

ESC in Formal Education

The national education system does not live in a static situation. It will change when needed, as challenges and opportunities will happen over time. It is critical for policy decision-makers to ensure that new policies are issued in a timely manner. At the provincial and district level, the education policy will refer to specific conditions and context, which allow for ESC to be integrated into local curricula.

At this stage, Indonesia's Ministry of Education, under the Analytical Capacity Development Program (ACDP) has been developing the country's Environmental Education for Elementary and Junior High Schools. This is an opportunity for the educators to integrate ESC within the ACDP framework. The Adiwiyata Program from the Ministry of Environment, which encourages elementary to senior high schools to take action on the protection of the environment through activities, is an existing channel to integrate ESC into the program. It is expected that this publication will inspire the Ministry of Education. Since ACDP is a long term program, there is enough time to introduce ESC to the Ministry of Education and encourage the integration of ESC into the Environmental Education curricula within ACDP.

ESC in Non-Formal Education

The role of the mass media

Television channels and radio stations can be very creative in developing programs that can educate the public about sustainable consumption, which will allow for sustainable consumption and lifestyles to become an issue that people pay attention to on a regular basis. At the community level, community radio can also be a source to deliver relevant information and messages about sustainable consumption. Having communication experts specifically design ESC for mass media channels and social networks (Facebook and Twitter among others) can also be very effective in delivering valuable information about sustainable consumption to a wide audience. Indonesia's DAAI TV, Kompas TV Green Radio, Kompas Muda (newspaper), and Hai Magazine are among the mass media channels at the national level that promote environmental awareness and cultural diversity, which can play a leading role in advancing ESC. Relevant local media outlets still need to be further identified.

Strategic groups for advancing ESC

The Multistakeholders Workshop on ESC revealed that there are strategic group for ESC which are crucial as agent of change. The agent of change includes: mothers who make many of the consumption decisions in the household (budget allocation, educating values to their children, disciplines, leading by example, etc.), as well as youth as they are the ones that are going to receive the consequences of the what the world does today. Youth are also usually creative and open to new ideas. Through their further involvement and encouraging them to take initiatives in shaping their future, youth can be effective in promoting sustainable consumption and even become pressure groups (through advocacy, lobbying, research findings, etc). In addition, ESC can be easily taught to this special group as its topics are well-aligned with the daily lives of young people, such as food, fashion, energy, outdoor activities, entertainment devices, etc.

The agent of change includes : mothers who make many of the consumption decisions in the household (budget allocation, educating values to their children, disciplines, leading by example, etc.), as well as youth as they are the ones that are going to receive the consequences of the what the world does today.

The Critical Role of ESC for Indonesia's Future

The following messages are examples that show how ESC plays a critical role in shaping our future. These messages promote a resourceful environment and a peaceful world that will create an atmosphere for healthy and productive lives:

Taking care of the environment – the only supporting life system

We need to find a way out of the two worlds paradox. The first world is the consumers' world that has been depleting a lot of natural resources and must start being more careful of the way they consume. The second world has an abundance of natural resources but has problems to preserve it from destructive practices and also to utilize the resources at an optimum level for the welfare of the people, many of them who are living in poverty. The two worlds need to take drastic transformations to care for the environment, turning away from over consumption and destructive practices, all of which have negative impacts on the environment, and maximizing the benefits of natural resources with less.

Having stronger solidarity

In general, the world has shown that even with its considerable economic growth, poverty still remains a pervasive problem for humanity. Stronger solidarity needs to be channeled towards poor families. If well-off families and leading corporations take action and involve themselves in poverty reduction and eradication, not only depending on the government to take action, then the world may have the opportunity to be a better place for everyone. Solidarity with the unfortunate should be the value of those who have the capacity and resources to make a positive difference. Solutions and strategies need to be developed to elevate the poor to a better quality of life.

Social solidarity is the expression of empathy to others and the willingness to assist and make a difference in someone's life. In the business community, leading companies can show its solidarity through various programs. Corporate Social Responsibility and other similar programs are crucial as this shows citizenship responsibility as members of society. As individuals and as families,

solidarity can take the form of direct assistance for immediate family members or community members who need support to have decent lives, or indirect assistance to support poverty alleviation programs that are conducted by nonprofit organizations (such as religion-based organizations, charity organizations, NGOs, volunteers, etc).

Various programs and activities designed to empower communities can be delivered by companies, individuals and families. Empowerment programs for poor families among others include: education for children and the provision of school facilities (including qualified teachers and school management), health services that meet good standards (medical staff, medical equipment, vaccines and immunizations, sanitation facilities, etc), sharing essential basic needs products (food, hygiene products, clothes, etc), capacity building on life skills and knowledge needed such as skills in financial management, entrepreneurship, marketing strategy and communication, product diversification, product design, etc, and to have access to better jobs and access to finance which is easy and less demanding.

From the perspective of government policy, it is necessary to implement a program that is pro-poor for economic development with equity for all regions, to issue affirmative policy to ensure equality especially for marginal communities and to ensure the redistribution of natural resources among districts. There is also a need for adequate budget allocation, which will ensure sustainable consumption for all.

Picture 4.2: Community Health Program supported by Company

The growing middle class should be more productive than consumptive

The middle class has been growing in the last few years, which shows an increase in the buying power in society. The downside of this growing middle class is their lifestyles, which are usually based on high rates of consumption, as they do not have problems meeting their basic needs. They tend to consume based on the social-economic class status, for pleasure, beyond rational decision-making, which is often unsustainable. This kind of lifestyle leads to the ever-increasing consumption of natural resources. This middle class group needs to have the values of being a high productive class that develops the innovation for the prosperity of humanity, for a secure environment, and for a vibrant cultural life. Research, technology development and education are key areas where investments can be crucial to solve the problems of natural resources scarcity, health, and unemployment.

The Netizen: strategic to channel ESC

The growing group of citizens using social network through the internet has created the "netizen" – people that are actively involved in online communities and users of the Internet, such as those who use Facebook, blogs, Twitter, and email as communication tools, to share information in addition to their off line activities. The Netizen in Indonesia is very active. According to survey done by MarkPlus' researcher Taufik, the netizen spends more than three hours per day on the internet, where "online" becomes a lifestyle (Taufik, 2012, p. 165). The netizen can be a target for marketing, as well as for education related to sustainable consumption as they find information from the Internet and social media. The findings from the survey indicates that the woman is the Chief Financial Officer at the household level and can decide many things in the household for daily households needs, children needs and savings, while for other things, there are joint decisions between the wife and husband (pp. 138-142). For youth, the survey found that more than half of the respondents are "bargain hunters" who make rational decisions, and almost 30% of youth are retail victims. This means they have made a decision to buy impulsively, and not based on what they really need (pp. 202-204). ESC can therefore strengthen youth to help them make the right decision as buyers, and educate the retail victim.

Picture 4.3: Gadgets and computers as media tools for ESC

The Localities – appreciate more with what you have

Each area has its own unique environment and its own diversity. In a world where efficient natural resource use is needed, the use of the local products will reduce the cost of transporting products from other areas. People need to emphasize what resources are available in their local areas and optimize the benefits of the local natural resources. The use of local assets for local communities with local capacity will increase the resilience of that community over existing problems, as the community does not depend on others for their livelihood.

Picture 4.4: Appreciating local food as part of ESC

The local culture with its knowledge, skills and values is also a precious source of learning. There are values that appreciate nature, people and knowledge of how to survive, how to tackle local challenges and embrace opportunities. Those values are important, as the environment is the human life support system. For example, the values of peace and respect for others will help avoid conflicts, create a peaceful, and productive life. Having a strong local attachment is key in a world of complex relationships among people with different cultural, social and economic backgrounds and political interests. Tolerance and compassion to others is needed in today's world.

Marketing ethics should be in place

Aggressive marketing in mass media, the Internet, billboards and door-to-door, has made the public, mainly in urban areas, and especially youth, exposed to luxurious lifestyles, which they do not actually need. They do not need the products, clothes and accessories, which are continuously changing. The new electronic gadgets become very appealing products to buy, along with the motorcycles and cars, which are more convenient and reflect a certain life-style. In addition, cosmetics offer unparalleled beauty, which seem irresistible and the idea of traveling to touristic destinations, which can be far away, becomes an attractive options. This kind of lifestyle is very attractive to the middle and upper class. But, it is also attractive to those with limited buying power, who can be seduced by this kind of aggressive marketing, in an effort to be part of the 'new modern lifestyle.'

The government needs to pay attention to this kind of aggressive marketing, which tends to encourage unsustainable consumption behavior by regulating the marketing industry. The public needs to be aware of how to deal with marketing that encourages over consumption. This is the role of ESC; it equips citizens with the knowledge and skills to know the dangers of over consumption, especially as it relates to their financial situation (many can be trapped in debt and lose the opportunity to invest in more important things), limited natural resources, and empathy to unfortunate people.

Picture 4.5: Imported goods: attractive to middle class consumers

CHAPTER V:

ADVANCING ESC IN INDONESIA AND ASIA PACIFIC: THE PRESENT AND FUTURE

- Sustainable Development Policy and Sustainable Consumption in Indonesia
- The Challenges of Sustainable Consumption in the Asia-Pacific Region

Sustainable Development Policy and Sustainable Consumption in Indonesia

The publication *Overview of Indonesia's Sustainable Development: Progress on Key Policies for Sustainable Development* states that sustainable development is in the mainstream of government policy and programs (Ministry of National Development Planning & Ministry of Environment, 2012, p. 76).

That means that all Ministries need to embed sustainable development in their activities, including the national and local governments and the development programs. The Ministry of Environment's sustainable consumption and production policy will be integrated with other ministries related to but not limited to sustainable agriculture, sustainable transportation, sustainable construction (to conserve water and energy), and waste management. This includes the wider implementation of green procurement, eco-labelling and certification that will gradually form the component in the sustainable consumption and production (Kementerian Lingkungan Hidup, 2012).

Government policy and the middle class

Indonesia's middle class increased from 45.4 million in 1999 to 95.31 million in 2009. The daily expenditure per person is between USD 2 and USD 20. The government needs to implement policies that encourage more productive investment for long term benefits, rather than only adopting excessive consumption as class status or impulsive buying (consumerism), limit imported products, support local product development and the local market. ESC materials need to expose rational decision for this middle class group, address the impacts of over consumption to the natural resources, and to generate more solidarity of the middle class group to the poor.

The first efforts of the government includes applying green public procurement for the government's regular supplies, and starting to build new buildings according to the standard of green building and green construction.

These two policies will encourage more economic activities based on environmentally-friendly standards. The government can also take the lead on public campaigns for sustainable consumption and production.

The challenge of poverty

A major challenge facing Indonesia is poverty. In 2011, 30 million people had an income of IDR 253.016 per person per month or IDR 8.443 per person per day in urban areas, and IDR 213.395 per person per month or IDR 7.113 per person per day, in rural areas. Both in urban and rural areas, the income of the poor, per person per day is less than IDR 10.000 or USD 1 (Statistics Indonesia, 2011b, pp. 48-49). According to a World Bank Report (2012, p.10 & 12), around "40% of the Indonesian population remains highly vulnerable to shocks that threaten to push into poverty line (of about USD27 per month in 2011). More than 63% of the poor are dependent on the agricultural sector for their sustenance and income.

The productivity and income of those employed in agriculture have generally not kept up to pace with the increases achieved in other sectors. Around 80% of the Indonesian workforce is classified as working in micro, small and medium enterprises. In 2010, the poverty rate was higher in the rural areas (16.5%) than in urban areas (9.87%) (Ministry of National Development Planning, 2010, pp. 30-31).

The maternal mortality rate per 100,000 live births is still high with 228 maternal deaths in 2007 with a target to lower it to 102 in 2015. About 80% of maternal deaths are caused by unassisted skilled health personnel. The majority of causes of maternal death are treatable. Lack of knowledge and lack of services may also contribute to maternal deaths (Ministry of National Development Planning, 2010, pp. 121-123).

In 2007, the number of under-weight children demonstrates disparities in nutritional status between provinces, between rural and urban areas, and among socio-economic classes. About 10.9% of all children under 5 years of age in DI Yogyakarta were underweight, while in Nusa Tenggara Timur, it was 33.6%. In rural areas, 20.4% of all children under 5 years old are underweight while in the urban areas it was 15.9%.

Data shows that in 2007, the lower the household income, the higher the prevalence of underweight children under 5 years old (Ministry of National Development Planning, 2010, pp. 57-58).

The above data indicates an urgency to tackle issues of poverty in Indonesia and for the government to develop policies related to life skills and job creation with decent compensation, provide qualified education and health services, make available clean water and sanitation facilities, and open access to financial assistance.

The government is also urged to pay attention to isolated villages with minimal transportation infrastructure and to introduce economic activities by taking the benefits from the richness of biodiversity without harming the environment. In this instance, ESC should be used as the tool to raise awareness on the importance of sustainable consumption and encourage policy decision-makers to provide opportunities to those who lack access to basic needs to lead a better life.

Eco-labelling

Indonesia is in the early stages of developing eco-labeling and certification standards. Currently, there is no detailed mechanism for their implementation. There are limited products available in the Indonesian market with eco-labels in addition to some of the imported products. Once eco-labelling is fully implemented in Indonesia, it may help consumers to make the right decision and to choose the products based on eco-label.

While Indonesians wait for products with eco-labels, the government can start by providing practical guidelines to consumers on how to choose safe and environmentally friendly products and respect fair trade. When eco-labels are implemented, it should also be required by law for producers to meet the eco-label standards; this will help in securing natural resources.

Meanwhile, on 5th June 2013, the Ministry of Environment launched Indonesia's National 10-Year Framework of Programmes on Sustainable Consumption and Production (2013-2023) or 10-YFP. The 10 YFP includes Green Procurement (mainly public procurement), Green Buildings, Green Industry and Green Tourism.

Indonesia's rich biodiversity for sustainability

Government of Indonesia emphasizes the importance of Indonesia's biodiversity by having two strategic components of the green and blue economy. The green economy includes policy related to a low-carbon economy framework hand in hand with the environmental pillar components:

(i) Environment services economy;
(ii) Green biodiversity economy; and
(iii) Blue biodiversity economy.

In other words, the future of Indonesia will be the development of an ecosystem-based economy, through terrestrial and marine biodiversity, for sustainable use, as they are under-utilized (Ministry of National Development Planning & Ministry of Environment, 2012, p. 99).

The Challenges of Sustainable Consumption in The Asia-Pacific Region

"There are now more than 1.7 billion members of the consumer class' today – nearly half of them in the 'developing' world. A lifestyle and culture that became common in Europe, North America, Japan, and a few other pockets of the world in the twentieth century is going global in the twenty-first" (Starke ed. 2004, 4).

The Asia-Pacific regional group (as recognised by the United Nations, including 53 member states but not including Australia and New Zealand) accounts for a total of almost 60% of the world's population (or roughly 4.15 billion people) and includes one-third of the Earth's land mass ("The List", n.d).

Furthermore, of the 29 megacities in the world (i.e. urban agglomerations with a population over 10 million), 17 of these are in Asia (Brinkhoff, 2013). The region though also includes a very significant diversity with both some of the most densely and least densely populated countries.

From an ecological perspective, of the 238 terrestrial ecoregions distinguished by the World Wildlife Fund (WWF), one third of these ecoregions (79 in total) are in the Asia-Pacific region ("List of Eco-regions", n.d). Socially, the region also maintains a large variety of languages and cultures along with economic and political contexts, making it difficult to accurately speak of the entire region in a unified manner beyond saying it is very large and diverse.

Table 5.1:
Development challenges in the Asia-Pacific region

SOCIAL	CULTURE	ENVIRONMENTAL	ECONOMIC
• Access to education • Access to health care • Gender equality • Good governance • Human rights • Improving the quality of education • Peace and human security • Preventing the spread of HIV and AIDS	• Safeguarding cultural and linguistic diversity • Valuing indigenous knowledge • Preserving tangible and intangible heritage • Promoting intercultural and interfaith understand-ing	• Loss of habitats and bio-diversity • Climate change • Depletion of natural resources • Deforestation • Desertification • Disaster preparedness • Water shortages • Overfishing • Pollution • Unsustainable farming practices	• Corporate responsibility and accountability • Food security • Poverty • Rural development • Urbanization • Disaster preparedness

Source:
UNESCO. (2011). Astrolabe: A guide to education for sustainable development in Asia and the Pacific. Bangkok, Thailand: UNESCO.

Some of the key challenges for strengthening educational responses to sustainable development and consumption that must be considered for the region are:

i) Cultural barriers,
ii) Wide geographic variations,
iii) Governance and national coordination,
iv) Development level and diversity of education systems,
v) Human resource capacities, and
vi) Prevalence of natural disasters (Wals, 2010).

UNESCO identifies four important dimensions that must be addressed in working towards sustainable development, each of which faces a series of challenges for the Asia-Pacific region as shown in the following table.

The above table shows both the priorities and challenges facing sustainable development in the Asia-Pacific region, including Indonesia. For the social aspect, among others, achieving peace and human security remains an important challenge. For the cultural aspect, safeguarding diversity, valuing indigenous knowledge and protecting intangible heritage are considered important, as well as tolerance among different cultures and faiths.

The environmental aspect indicates the importance of education for sustainable consumption as the problems show the loss of various natural resources as well as overfishing and unsustainable agriculture practices, which is also the concern of the economic aspect in regards to food security.

Disaster preparedness is strategic for the region, which is prone to a high prevalence of natural disasters (UNESCO, 2011, p. 12). ESC can be specifically designed for the region to address the important development challenges identified in the above table.

The regional challenges for sustainable development are significant, and trends highlight concerns about increasing population (high fertility rates across the region), economic growth (high GDP growth rates per year), enhancing migration from rural to urban area, growing consumer class ("good life" typified by mass media images of western-style consumerism) ,scaling up market pressure (advertisement stimulating consumption lifestyle) and a high number of people living in extreme poverty (living on less than $1.25 per day) as Asia remains home to almost half of the world's total poor, which accounts for a quarter of the region's population.

Around two thirds of the undernourished people in the world (or 578 million people) and two thirds of the world's population that lack access to safe drinking water are in the Asia-Pacific region (Akenji, et al., 2012, p. 103). In 2010, there were 446 million people that still lacked access to clean water, and 1.86 billion did not have access to sanitation facilities (United Nations ESCAP, 2011, pp. ix-xii)

However, there is also a great dichotomy of social existence between the poor and the consumer classes in the region. Over the past 40 years,

the Asia-Pacific region has achieved the fastest economic growth at an average GDP per capita growth rate of 3.31% (compared to a global average of 1.93%) (Choi and Kipp, 1996, p. 1-2).

Already, 28% of the world's middle class (over 525 million people) (Kharas, 2010, p. 16) lives in the Asia-Pacific region, and by 2030, it is expected to increase to 66% (UNEP, 2012, p. 103) or 3,228 million people wanting to live a consumer lifestyle (Kharas, 2010, p. 10). Currently, the Asia-Pacific region contributes 21.4% of the global total for private consumption and is already the largest regional grouping of consumers. The region's current contribution to global economic activity stands at 34%, but this is predicted to reach over 55% by 2035 (Kharas, 2010, p. 22).

Table 5.2: The predicted growth of the middle class in the Asia-Pacific region

Year	Population (in Million)	Precentage of Global Middle Class
2009	525	28%
2020	1.740	54%
2030	3.228	66%

Source:
Kharas, Homi. (2011). The emerging middle class in developing countries. Diambil dari: http://siteresources.worldbank.org/EXTABCDE/Resources/7455676-1292528456380/7626791-1303141641402/7878676-1306699356046/Parallel-Sesssion-6-Homi-Kharas.pdf.

The middle class in the emerging markets of the region is comprised of a younger population when compared to the U.S. and Europe. These young consumers are concerned with product quality, trendiness, and use experience, which are reflected by the values associated with a brand. Thus, the products should be trusted and come from a widely recognised brand (KPMG, 2012, pp. 3-4).

The implication is that an increasing number of imported brands from developed countries are being consumed which in turn require more energy use as such products are transported to these emerging markets. Such consumption is no longer about meeting basic needs, but is for luxurious products more related to identity and social status.

The Asia-Pacific region is challenged by two contradictory issues. First, the large number of people living in poverty and lacking access to basic supports continues to deprive a significant number of people from a basic quality of well-being.

Second, the increasing population and especially the growing middle class is driving a rapid growth in high consumption lifestyles that puts further strains on resource availability and equity. To address the first challenge, the second challenge must be fully considered if the region is to move towards the provision of quality well-being and sustainable lives for all.

Sustainable consumption and lifestyles plays a critical role in avoiding the social and environmental ills caused by over-consumption and rapid depletion of natural resources. However, the transition to patterns of sustainable consumption and lifestyles is one that must occur with the active participation of average citizens and is not one that can be driven by policy alone, and for this education for sustainable consumption (ESC) can play a strategic role.

International priorities for SCP and ESD

The outcomes of the Rio+20 United Nations Conference on Sustainable Development (UNCSD, held from 20-22 June 2012 in Brazil) as published in the outcome document *The Future We Want* (2012) highlight the importance and continued commitment from member states for both sustainable consumption and production (SCP) and for education to achieve sustainable development. In regards to SCP, member states recognised, "that fundamental changes in the way societies consume and produce are indispensable for achieving global sustainable development" (UN General Assembly, 2012: para. 224) and adopted the 10-Year Framework of Programmes on SCP. Support for education was one of the least contentious themes at the UNCSD and received a total of seven paragraphs of endorsements including the recognition that, "… younger generations are the custodians of the future, and the need for better quality and access to education beyond the primary level. We therefore resolve to improve the capacity of our education systems to prepare people to pursue sustainable development …" (UN General Assembly, 2012: para. 230). Support for Education for Sustainable Development (ESD) particularly received a call for its continued promotion and strengthening beyond the end of the UN Decade of ESD in 2014 (UN General Assembly, 2012: para. 233).

Regional trends in SCP

The importance and prioritisation of SCP has been growing steadily both globally and in the Asia-Pacific region specifically, especially since the original calls for "Changing Consumption Patterns" in Agenda 21 (1992: Chapter 4) were renewed at the World Summit on Sustainable Development in 2002 (held in Johannesburg, South Africa) when SCP was acknowledged as one of the three overarching priorities for realising sustainable development (UN-WSSD, 2002: III). Since this point, several important international initiatives were launched that had direct impacts in the Asia-Pacific region, including the Marrakech Process to develop the 10-Year Framework of Programmes on SCP, the EU-funded SWITCH-Asia programme, and regional efforts for green market promotion. Many countries in the region have recently made strong commitments to promoting SCP and are placing this as an important goal of their environmental policies.

UNEP, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and Institute for Global Environmental Strategies (IGES) (2013) produced a report as part of the SWITCH-Asia Policy Support Component reviewing the Capacity Building and Policy Needs Assessment on Sustainable Consumption and Production for the 19 Asian countries eligible for participation in the SWITCH-Asia programme. Of the 19 countries reviewed in this report, 11 countries address sustainable development in their national development strategies which usually include SCP related targets, while two additional countries address aspects of sustainable development in subsequent actions plans. Most notable are Vietnam and Indonesia who have established or are establishing National Action Plans on SCP; Maldives, Myanmar, and Sri Lanka who have specific National Sustainable Development Strategies; and Bhutan, China and Thailand who are addressing sustainable development (and SCP) under their nationally defined development approaches (Gross National Happiness, Circular Economy, and Sufficiency Economy respectively). All 19 countries have policies for specific sectors that promote cleaner production and SCP (UNEP, CSIRO and IGES, 2013: p. 196-209).

A further area that has been stimulating advancement of SCP in the region, especially in East and South-east Asia, is the movement towards green market promotion. The initiatives established by the Japanese government in regards to national eco-label (since 1989), green purchasing network (since 1996), and national law on green public procurement (since 2000) created a model for green market promotion that has been (or is in the process of being) replicated by eight other countries in the region. Japan may have been an early leader in the area of green market promotion, but the reality now is that, "as many of these [other] countries have achieved a high level of domestic good practice, they too have begun to take actions to provide leadership on promoting green markets across the region" (Didham and Hayashi, 2011: 21). In Southeast Asia, six countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam) have all established green purchasing networks. Both Thailand and Malaysia have also taken efforts to establish green public procurement laws. Green public procurement can be an especially important tool for driving green markets and stimulating movement towards cleaner production and eco-product options. Such a commitment by governments for all public bodies to only procure products meeting specific environmental standards sets a significant and secure precedent with public procurement estimated to account for up to 15% of all global output, and in some developing countries contributing to over 20% of GDP (Mulgan and Salem, 2008: 9).

Although SCP has become a prioritised driver for sustainable development in the region, it is also important to recognise that actions on sustainable consumption still lag behind those that have been taken for sustainable production. The production side of SCP has a longer history of being addressed both globally and in the region with considerable impact being achieved since the establishment of the National Cleaner Production Centre programme by UNIDO in 1994. "The domain of consumption is much harder to address by public policy because of the common understanding of the freedom of the consumer to make their own purchase decisions according to their taste and means" (UNEP, CSIRO and IGES, 2013: 212).

Table 5.3: Types of green market promotion among countries in East and Southeast Asia*

		Eco-Label (Type I environmental label)	Green Purchasing Network (GPN)**	Green Public Procurement (UU)
TIER 1 COUNTRIES Developed & Good Implementation	China	1993	2006 (CGPN)	2006
	Japan	1989	2000 (GPN-J)	1996
	Republic of Korea	1992	2004 (KGPN)	1999
	Thailand	1994	2004 (TGPN)	2008
	Malaysia	2005	2003 (GPNM)	Recent
	Singapore	1992	20?? (GPNS)	
TIER 2 COUNTRIES: Recently Develop	Indonesia	2006	2010 (IGPN)	Pilot Stage
	Philippines	2008	2009 (GPAMP)	Planning
	Vietnam	Planning/Pilot	2010 (VNGPN)	Planning
TIER 3 COUNTRIES: No Existing Practice	Brunei Darussalam	n/a	n/a	n/a
	Cambodia	n/a	n/a	n/a
	Lao PDR	n/a	n/a	n/a
	Myanmar	n/a	n/a	n/a

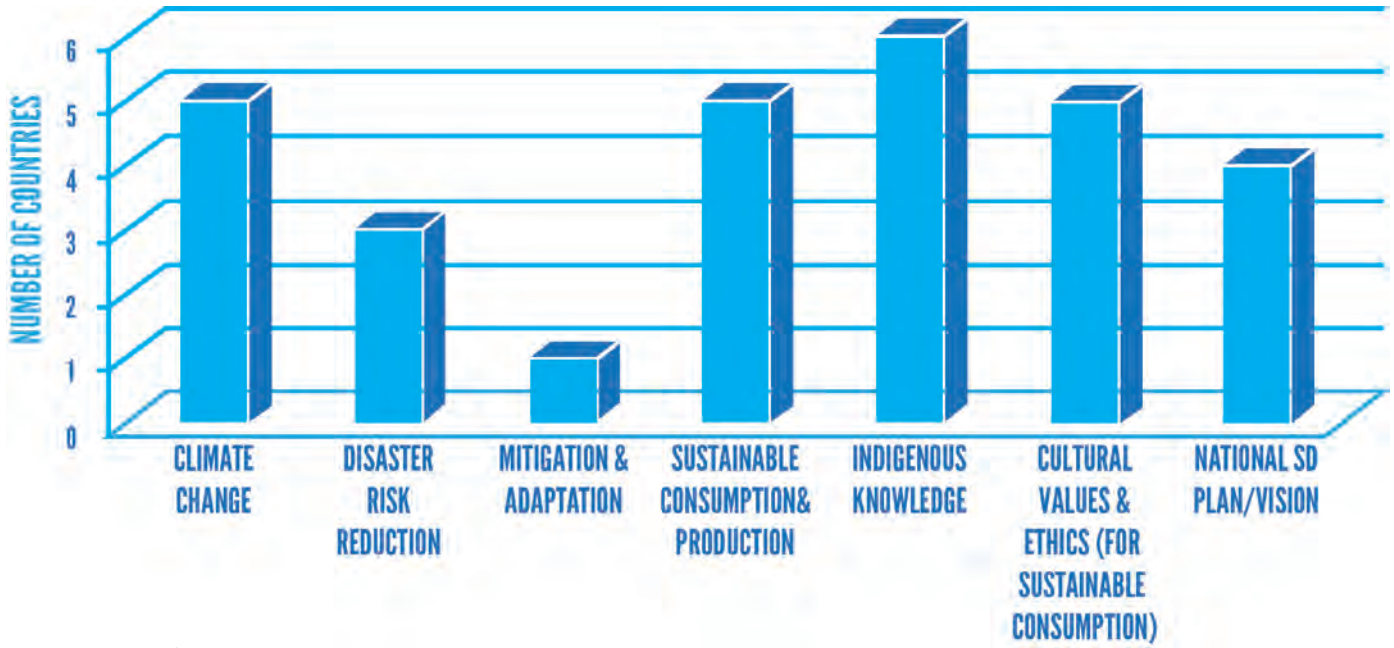
Source:
data adapted from Didham and Hayashi, 2011: tables 1, 2 & 5
* Note: data was up-to-date as of January 2011; no new GPNs are reported as of March 2013, but updates for eco-labels and public procurement laws were not accessible beyond original reporting date.
** Similar GPNs also exist in India, Hong Kong and Taiwan

Regional trends in education for sustainable development

A large number of countries in the Asia-Pacific region have placed focus on education for sustainable development (ESD) and are responding to the initiatives of the UN Decade of Education for Sustainable Development (UN DESD) in a variety of ways. Countries in the region are developing clear strategies for ESD which include, "moving ESD from theory to practice by identifying clear thematic national SD priorities, linking priorities to existing aims and objectives for education and learning in current policies, building inter-ministerial support, discussing financing and engaging with the right people at the national level" (Wals, 2010: 114). The approaches to ESD in the region are diverse with uptake occurring both in formal and non-formal education, and with integration into education systems occurring from thematic, skill-based, and value-based perspectives.

Indonesia has made progressive steps in the inclusion of ESD into the National Education Strategic Plan for 2010-2014 and also the commencement of the National Strategy for ESD in 2009. However, Indonesia is only one of several countries that have enacted such policies for ESD. In Southeast Asia alone, seven countries – Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Thailand, and Vietnam – have all established mandates for the inclusion of ESD in their education systems (UNESCO Office, Jakarta, 2011; Didham and Ofei-Manu, 2012). A review of six countries in the region found the following coverageof ESD thematic topics in formal education with priority placed on indigenous knowledge, climate change, SCP, and cultural values (for sustainable lifestyles).

Figure 5.1: Coverage of ESD Thematic Topics in Formal Education across six countries in East and South East Asia



Source: Didham and Ofei-Manu (2012: 74)

This study also made an interesting conclusion in regards to the uptake and integration of ESD into existing educational systems based on the overall flexibility of national education systems to adopt innovative approaches and encourage educational reform. By classifying existing national educational systems into three tiers of development, i.e., high-level, mid-level, and low-level, it was possible to consider the likelihood of strong integration of ESD into these systems. For those systems with a high-level of development, they have a longer history of strong performance and much of the educational focus is on preparing for university entrance exams (an area that generally lacks ESD content). These systems though are often very rigid, and most inclusion of ESD occurs with relevant ESD themes being included at the peripheries of the system or individual topics brought into traditional core disciplines. On the other hand, those systems with a low-level of development are often still struggling with meeting basic standards of education along with resource constraints, thus ESD is naturally viewed as a luxury to be relegated to future consideration. For those systems with a mid-level of development though, there appears to be both flexibility and real opportunities for integrating ESD in innovative manners. As these education systems have been able to achieve a strong coverage of basic education standards, they are now focusing more on the qualitative improvements to educational practice and learning performance. In this light, ESD is viewed as a beneficial approach for stimulating overall reform of the education system and for redirecting educational outcomes, "to better address the learning needs and challenges of the next generations" (Didham and Ofei-Manu, 2012: 89).

There are still many opportunities though to improve ESD performance in the region. Across the entire education system, there are notable limitations in current professional and leadership capacities for properly addressing ESD. Many educational professionals from the level of policy makers and curriculum developers down to school administrators and teachers still have very little familiarity with the concepts and approaches relevant to ESD. Integrating ESD into both curriculums and school management policies in a manner that embraces the holistic nature and progressive pedagogies of ESD are still limited only to a small number of pilot eco-schools and whole-school approaches. The greatest lack of professional capacity for most countries though is for teachers to fully implement ESD as there is often limited knowledge in regards to, "its procedures/approaches, its knowledge and competencies, and its skill-based and value-based propositions" and thus is often addressed only by the inclusion of single ESD topics into traditional courses (Didham and Ofei-Manu, 2012: 87). In regards to leadership, ESD implementation is still limited in many countries by the lack of a clear vision that details specific learning objectives, teaching standards, performance criteria and assessment mechanisms that are clearly linked to ESD.

Besides the inclusion of ESD into formal education, many valuable examples exist across the region where ESD has become of major component of non-formal and informal education. The Regional Centres of Expertise (RCEs) on ESD are playing an important role in strengthening local and regional networks of learning for sustainable development. Globally, there are currently 116 RCEs with the Asia-Pacific being home to 40 RCEs (not including the 4 RCEs in Australia), which makes it the region with the most RCEs. These networks are very diverse in nature, but in general they provide important opportunities as the main identifier of local best practices, success stories and data related to ESD. Having both deep local roots and simultaneously a global reach allows the RCEs not only to identify these best practices but to also bring them to international attention. Many of the RCEs in Asia-Pacific further support strong appreciation of indigenous knowledge/traditional cultures and help to promote sustainable lifestyle practices (UNU-IAS, 2011). Such innovative projects are important for creating inspiring models for promoting ESD practice and performance.

Identifying opportunities for ESC in Asia=Pacific

The ESC pilot project in Indonesia found that the country's existing priorities for both SCP and ESD already provide valuable entry points for the inclusion of ESC . Both SCP (especially the consumption side) and ESD with the objective of reforming education, "to be a vehicle of knowledge, thought patterns and values needed to build a sustainable world" (UNESCO, 2006: 5) at their cores depend on average people taking action in their daily lives. However, these two concepts are also hindered by initiating their discussions regarding sustainability from very complex, technical and/or idealistic perspectives. Education on SCP and on sustainable development usually begins from a top-down approach by explaining the overall concepts, moving on to principles, and then finally on to practice or action. This can result in learners feeling disassociated with both SCP and ESD, as they do not see how they relate to their daily lives. Fortunately, ESC can serve as a powerful learning tool to reverse this trend by beginning with directly engaging students in practical actions for sustainable consumption and through a process of experiential learning and cooperative inquiry building up to the principles that ground both sustainable consumption and sustainable development.

It is important to understand though that earlier attempts to promote environmentally responsible behaviours have often been naively guided by the belief that awareness raising onthe importance of the environment alone would be enough to drive substantial behaviour shifts.

Traditional behaviour change theories and discussions on increasing pro-environmental behaviour were generally based on a perspective of individual bounded rationality which assumed that more environmental awareness would lead to an increase in pro-environmental attitudes and subsequently on to an increase in pro-environmental behaviour. Many recent studies demonstrate the inherent inconsistencies between theory and real-world practice. This has led to the identification of the attitude-behaviour or value-action gap (Blake, 1999; Kollmuss and Agyeman, 2002; Jackson, 2005).

In light of the value-action gap and the limits of awareness raising and education alone to drive the desired types of changes in behaviours to realise sustainable lifestyles, there remains a lack of systems to strategically coordinate the application of educational and capacity-building mechanisms in line with wider infrastructure changes that are being implemented to promote sustainable consumption practices. Returning to the current policy mandates for both SCP and ESD in many countries in Asia-Pacific and especially in Southeast Asia, important opportunities are now available to address consumption and lifestyle practices from a diversity of perspectives, i.e. market mechanisms, social and culture norms, built environment and infrastructure, political structure, economic conditions, and of course individuals' awareness and attitudes. It is specifically at this point of trying to link these various perspectives that ESC can become a beneficial tool for bridging the gaps between SCP and ESD. In this way, new opportunities for practicing sustainable consumption can also be utilised for social learning on wider aspects of sustainability. Transitions promoted through policies or through external influence on existing social and political infrastructure help to create new opportunities for both practice and learning. ESC can thus be viewed as a means to actualise practical learning opportunities while also promoting citizen participation in the priority activities for SCP and sustainable development.

ESC supports active and communicative learning that aims to integrate science and values into a socially responsible worldview that uniquely places the learner at the center of a dynamic system that they are able to influence (rather than observing from an outside perspective) in order to critically reflect on and deconstruct traditional and modern patterns of behaviour. The pilot project in Indonesia found that ESC is a valuable and relevant mechanism that easily fits into existing policy mandates. The challenge though lies in both contextualising and explaining how it can support the achievement of these mandates in an effective manner, especially the existing mandates for environmental education, ESD and SCP. Furthermore, it is crucial to recognise what capacities are needed to support the effective delivery of ESC if it is to generate real meaning and to target the keys actors in implementing ESC for necessary capacity development initiatives.

The ESC pilot project in Indonesia: a strategic approach and lessons learned

The entirety of this pilot project on the institutional strengthening of ESC was structured around four phases:

1)Review and analysis of existing, relevant policy frameworks,
2)A national multi-stakeholder roundtable,
3)The actual development and testing of this document – the national guidelines and recommendations on ESC, and
4)Monitoring and evaluation.

Considering the achievement made so far from the first three phases of this project, it is very clear that phases one and two had a substantial impact on the quality of these guidelines and helped to strengthen both the scope and depth of what has been included in the document.

The review and analysis of existing policy frameworks created an overview of what areas relevant to ESC are already being addressed in the country, who are the main actors addressing these areas, and how are they doing it. As approaches towards sustainable consumption can vary significantly, this analysis helped to create common ground and understanding on these subjects. This had a very positive impact on the depth of discussions that could then occur during the national roundtable. It also established the potential for a collaborative environment where opportunities for important synergies, linkages and cross-collaboration were already identified.

The multi-stakeholder, national roundtable allowed for actual discussion around the potential for cross-collaboration. Furthermore, it brought a wide range of expertise to the table and included all aspects of ESC implementation from policymaking and curriculum development on to teacher training and actual classroom implementation. The roundtable identified a series of priority objectives and challenges in Indonesia that ESC could play a useful role in delivering on, and it also provided the chance to discuss the future modalities for best integrating ESC into the existing educational system. One of the most important opportunities identified at this round table was the potential ESC could provide as a mechanism for improving teachers' capacity and skill sets for delivering on the recently launched requirements on ESD in the curriculum. Another interesting potential identified from the roundtable was the value and benefits ESC approaches could provide in delivering on the requirements for local and decentralised curriculum (as a small portion of the overall curriculum) which aims to address practical and relevant issues of concern in students' daily lives. The efforts taken during this roundtable to assess existing capacities for delivering sustainability education in the country and then targeting ESC as a means for closing these gaps became a strong influence on the direction in which then the guidelines were developed.

As the possibilities for regional replicationare considered, this project has established an effective process for considering and identifying the means for integrating ESC into existing institutions already established to address sustainable development, SCP and education in general. Some streamlining of the overall process would be useful following a review of the results from all three pilot projects, but the likelihood of a similar programme implemented in a different country in the region also producing effective impacts is very high for as was already acknowledged, there are numerous countries in the region who have a similar background when it comes to existing mandates on SCP and ESD. These countries have set mandates but often find themselves unable to deliver appropriate impacts, and ESC can support increased practical application.

Many countries in the region though have either only recently or are still formalising their policies regarding SCP and ESD.

Although some countries have policies that mention linking with education in regards to their SCP mandates and/or that the ESD mandates recognise sustainable consumption as one thematic area for delivering sustainability learning, there is no country in the region that has one specific policy or mandate regarding ESC.

This may not be necessary though; if the cross cutting calls are strong enough in regards to educational perspectives, then it is a fully feasible for ESC to be smoothly integrated into existing policies. Once the opportunities for such integration are identified, then it becomes important to address how this can actually be delivered and for the opportunities to be capitalised on. In this step, the contextualisation of ESC in both the local context and the existing institutional frameworks must be fully considered. The needed capacities to not only implement ESC but also to improve performance on SCP and ESD are also important to reflect upon. In this manner, it becomes possible to view how ESC can serve as a catalyser across the board for existing sustainable development (and also environment and development) policies and to address these in a manner that is pertinent to the lives of average citizens.

UNEP encourages the replicability of this project on ESC and is disseminating best practices and lessons learned from the pilot project implemented in Chile, Indonesia and Tanzania in an effort to engage more countries in the integration of ESC into formal education systems, as well as informal education at national and local levels. In this regard, UNEP can:

- Disseminate a consultative model (road map) for the institutional strengthening of ESC using the pilot project as an example;

- Provide research guidelines for countries to use in reviewing and analyzing their national policy frameworks and initiatives relevant to ESC, as well as an effective monitoring and evaluation scheme;

- Provide capacity-building and technical support on ESC through UNEP's *Here and Now! ESC Recommendations and Guidelines* (2010) publication; and

- Provide support for the development of policies related to ESC and linking these policies with broader national strategies and programmes on resource efficiency, SCP and green economy, along with relevant education policies such as ESD and environmental education.

Table 5.4 (on the following page) provides a road map of actions countries can take for the institutional strengthening of ESC. This road map aims to replicate the good practices identified during the initial pilot project led by UNEP in three countries. The intention is not to provide a blue-print for the specific national ESC guidelines individual countries should develop, but rather to support a robust and effective process for countries to prepare nationally relevant guidelines that account for the policy structures, specific challenges, and unique socio-cultural contexts in their individual countries.

It is expected, although not required, that national governments would take the lead role in initiating such a project for institutional strengthening of ESC and preparation of national ESC guidelines. However, for such a process to be effective, it will require the collaboration of multiple stakeholders including government officials, teachers, educational practitioners, school administrators, teacher trainers, curriculum developers and relevant civil society organisations.

In conducting the initial review process outlined in step one, it is probably best that this research is not conducted directly by the government but rather by a partner organization either from academia or civil society. It is also important to keep in mind that for this process to create the widest impact, the focus should not just be on formal education but also consider ESC in relevance to non-formal and informal education opportunities. For this purpose, it would also be beneficial to engage partners from both business and media sectors in these activities. Furthermore, there are several international organisations that can provide support to this process, and several valuable ESC material already exist including UNEP's *Here and Now! ESC Recommendations and Guidelines* (2010) which served as a foundational document for the original design of this project.

Table 5.4:
Necessary steps for the replication of this pilot project on the institutional strengthening of ESC

Steps	Proposed activity	Detailed activities
STEP ONE	1.1) Review and collect relevant policy mandates and existing initiatives.	• Conduct interviews with relevant stakeholders (i.e., Ministries of Education and Environment, educational practitioners, civil society organisations, etc.) on existing mandates (or policies) and initiatives/projects being undertaken; • Identify relevant existing policy mandates for ESC (including national curriculum, ESD, environmental education, teacher training, sustainable development, SCP, waste management, non-formal education, etc.); • Identify what is being done on the above mandates; who is taking the lead roles and how they are doing it; • Identify existing initiatives, programmes and projects relevant to ESC.
	1.2) Map and analyze current institutional structures and mandates.	• Map mandates and policy frameworks to create an overview of existing institutional structures relevant to the application of ESC; (see Table 4.1 for example) include 1) relevant policies/strategies/ plans, 2) primary actors and resource capacities, 3) implementation structure and specific projects); • Identify entry points for ESC, i.e. where it can serve as functional tool to deliver on existing mandates and also where its specific application could be strengthened (especially where different policy areas can be linked); (continuing from above mapping, add 4) ESC Entry Points, and 5) Requirements for implementing effective ESC).
STEP TWO	2.1) Conduct a National Multi-Stakeholder roundtable discussion on ESC.	• Conduct a stakeholder analysis to identify relevant participants for a roundtable discussion (including diversified stakeholders covering full process of ESC policy making, planning, facilitating and implementing, i.e. government officials, curriculum developers, teacher trainers, teachers, researchers, relevant civil society/NGOs, etc.); • Invite participants and share materials from Step One; • Collect and share ESC materials developed by international partners, such as UNEP's *Here and Now! ESC Recommendations and Guidelines* and UNEP and UNESCO's YouthXchange Initiative; • Clarify goals and objectives of the roundtable, develop the programme, identify presenters and working group facilitators (with a balance between formal, non-formal and informal education); • Conduct the roundtable discussion; • Prepare proceedings and findings from the roundtable discussion for distribution.
	2.2) Form Partnerships for ESC development, implementation and practice.	• From the roundtable discussion, identify potential partnerships and collaborations for supporting the ESC process and clarify roles; 1. Consider relevant actors in relation to ESC policy making planning, facilitating and implementing; 2. For example, some collaborations may be between government officers from different ministries/departments, others may be between curriculum developers, researchers, & teacher trainers, as well as civil society involved in non-formal and informal education; 3. Identify potential inputs from collaborators for completing steps three and four.

Steps	Proposed activity	Detailed activities
STEP THREE	3.1) Develop National Recommendations, Guidelines and Implementation Strategy on ESC, and necessary supporting/facilitation materials.	• Outline the main areas to be addressed in developing the Recommendations and Guidelines and supporting materials 1) what are the benefits of strengthening ESC, 2) how to contextualize ESC in national context and existing Institutional structures, 3) what is needed to strengthen ESC implementation, 4) how should ESC be approached in formal education settings, 5) what topics should teachers address under ESC, 6) how should ESC be addressed in non-formal/informal education, 7) how does ESC link with wider sustainable development and SCP goals, and 8) what are the partners needed for ESC; • Identify partners that can contribute to different areas of the National Guidelines; • Prepare, draft and edit the Guidelines; • Prepare, drat and edit the implementation strategy as a road map of actions to be taken to actualise ESC in practice, including necessary training and capacity building at national and local levels; • Identify additional supporting or facilitating materials needed to deliver actual implementation of Guidelines; • Prepare/edit drafts of supporting/facilitating materials.
	3.2) Test and pilot the National Recommendations and Guidelines on ESC among a small number of partners.	• Identify specific partners for piloting ESC Guidelines in test cases, i.e. educational settings, classrooms, and potentially also policy settings; • Distribute Guidelines to partners, and provide facilitation where necessary; • Conduct trainings and capacity-building workshops with partners to support the implementation of the Guidelines. • Partners implement the Guidelines; • Partners provide review/feedback on their usage.
	3.3) Review and refine the guidelines	• Compile a review of the Guidelines piloting; • Identify existing strengths and weaknesses of the draft Guidelines; • Refine and finalize the National Guidelines on ESC (and supporting materials).
STEP FOUR	4.1) Disseminating the national Recommendations and Guidelines on ESC	• Disseminate National Guidelines on ESC to relevant stakeholders; • Utilize partners identified in Step Two for wide dissemination; • Prepare press release and contact media outlets to create awareness of the purpose and objective of the Guidelines and ESC in general; • Establish a knowledge hub/focal point for follow up on the Guidelines.
	4.2) Provide necessary capacity training and facilitation for implementation and practice of Guidelines	• Target key stakeholders and identify necessary capacities for implementing their respective roles in ESC; • Assess existing capacities of these stakeholders, and review against necessary capacities; • When capacity gaps are identified, develop training programmes and support materials to facilitate capacity improvement for these stakeholders; • Operationalize such capacity training and facilitation as a norm of ESC framework.

"The world has enough for everyone's need,
but not enough for everyone's greed."
(*Mahatma Gandhi*)

There are two things that can destroy humanity:
Greediness and Poverty.
Only through sharing there will be a room to grow human being.
(*Darwina Widjajanti*)

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Appendix A

Exercise 1: The Objectives of Education

For the interest of developing national guidelines and recommendations for ESC, the ESD Astrolabe tool developed by UNESCO's Asia and Pacific Regional Bureau for Education that relates to The Objectives of Education (2011, p. 29) is an approach that can be used. Through application of this tool, the users will identify the knowledge, skills, and values needed to support the development priorities on ESC. However, whenever needed, the whole exercise (see notes below) can be used, depending on the specific situation.

Desired Change List the changes needed to address the sustainable development priorities (note: in this case the most urgent problem to solve related to sustainable consumption)	**Knowledge** What knowledge is needed to achieve the desired change	**Skills**		**Values and Attitude** What values and attitudes are needed to achieve the desired change?
		Cognitive/ Technical What cognitive and technical skills are needed to achieve the desired change?	**Social/Emotional** What social & emotional skills are needed to achieve the desired change	

Learning characteristics What learning characteristics can help foster knowledge/skills values and attitudes? (interdisciplinary, experiential, etc)

Learning Environment What kind of learning environment supports the message being delivered (e.g. carbon neutral for climate change education)

Source:
UNESCO. (2011). Astrolabe: A guide to education for sustainable development in Asia and the Pacific. Bangkok, Thailand: UNESCO.

Appendix B

Exercise 2: Mapping exercise for ESC (Education and Training)

ESC Thrusts	**Key Actor 1** Lead Ministry, Institutions or Department	**Key Actor 2** Second responsible Ministry, Institutions or Department	**Supporting Actor 1** Key Agencies, NGOS, Institutions, business	**Supporting Actor 2** Key Agencies, NGOs, Institutions, business	**Supporting Actor 3** Key Agencies, NGOs, Institutions, business
	Ministry of Education	Ministry of Environment, Provincial/ District Level	National University	Social and Environment organizations, other NGOs	Community Village Council
Reorient existing education programmes for sustainable future					
Build public understand-ing and awareness of sustainable consumption					
Provide practical training on sustainable practices					

Source:
UNESCO. (2011). Astrolabe: A guide to education for sustainable development in Asia and the Pacific. Bangkok, Thailand: UNESCO.

Introduction to Education for Sustainable Consumption in Indonesia: National Recommendations and Guidelines for Policymakers and Educators

"This publication aims to share the general guidelines to Indonesian policymakers and educators in implementing Education for Sustainable Consumption nationally and locally in both the formal and informal education sectors." (Fanny Demassieux, UNEP Resource Efficiency Coordinator, and Head of Responsible Consumption Unit).

"The book explains the need for consumers to be sufficiently informed in making decision to purchase, having a good judgement before consuming goods or service, and be responsible for their consumption pattern." (Emil Salim, Sustainable Development defender, the Founder and Board of Trustees member of Foundation for Sustainable Development or Yayasan Pembangunan Berkelanjutan).

"The publication will support the implementation of the National 10-Year Framework Program of Sustainable Consumption and Production (2013-2023) in Indonesia, launched on 5 June 2013. This book is an enabling tools for relevant stakeholders in the area of education for sustainable consumption in Indonesia, changing people's consumption patterns into resource use efficiency and environmentally- friendly consumption." (Henri Bastaman, Deputy Minister for Technical Infracture and Capacity Building, Ministry of Environment, Focal Point Sustainable Consumption and Production Indonesia, Member of United Nation's Sustainable Consumption and Production Board).

"This Education for Sustainable Consumption publication is a very useful reference for teachers and writers of texbook, as well as enrichment publications, in the efforts to build responsible consumers and later when they become producers in the future." (Nanik Suwaryani, Head of Curricula and Publication PAUDNI, Curricula and Publication, Research and Development Agency, Ministry of Education and Culture).

"This publication, which is a contribution to the global 10-Year Framework of Programmes on Sustainable Consumption and Production, provides Indonesia's policy-makers and educators with the necessary tools to integrate education for sustainable consumption (ESC) in the formal and non-formal education systems. It is designed to help equip Indonesian students with the knowledge, attitudes and skills necessary for functioning in today's society." (Fanny Demassieux, Coordinator of the Resource efficiency Subprogramme and Head of the Responsible Consumption Unit, United Nations Environment Programme)

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