Report on Ecolabelling and Sustainable Public Procurement in the ASEAN+3 Region: Development of a Feasibility Study for Regional Ecolabelling Cooperation

Asia Pacific Roundtable on Sustainable Consumption & Production (APRSCP)

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This Report is in Four Sections:

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SECTION A

EXECUTIVE SUMMARY

1. OBJECTIVE:

The project objective is to investigate the possibility of scaling up regional cooperation on ecolabelling (including voluntary standards) amongst the ASEAN+3 countries, the "+3" being China, Japan and South Korea, for better alignment and interoperability towards the promotion of Green Public Procurement (GPP)/ Sustainable Public Procurement (GPP) at national levels.

Thus, an attempt was made to examine the status of Ecolabelling schemes in the concerned countries and simultaneously investigate national legislation and policy on SPP/ GPP. Continuing from these, the project conducted an analysis of a) whether and to what extent a common or harmonized or interoperable ASEAN + 3 Ecolabel is feasible; b) whether it would assist national governments in implementation of existing SPP/GPP policies; and c) whether it serves as a facilitator to intra-regional trade.

For the purpose of this report, the terms SPP and GPP are used interchangeably.

2. BACKGROUND:

The study is part of the project 'Sustainable Public Procurement and Ecolabelling" (GPPEL) managed by UNEP, which has the objective of combining GPP and GPP to achieve maximum synergies and better deliver the common goal of stimulating the demand and supply of sustainable products.

3. METHODOLOGY:

This Report is largely based on desk research of existing literature conducted by four expert Board members of the Asia-Pacific Roundtable on Sustainable Consumption & Production (APRSCP): Dr Anthony SF Chiu, Dr Chaiyod Bunyagidj, Ms Jenny Tan, Mr Rajan Gandhi – Lead Coordinator

The Board members have been assisted by other colleagues of the Board. Where doubts existed or where there literature was inadequate, telephonic or electronic interviews of key officials of the respective countries were conducted.

All the ASEAN + 3 countries were covered with the exception of Brunei Darussalam in view of the small size of the country (population 0.42 million). In the case of Myanmar, literature on GPP and/or Ecolabelling was non-existent and repeated attempts at contacting concerned Government officials were infructuous.

4. EXISTING SCENARIO:

As expected, legislation, policies and practices of both ecolabelling as well as GPP vary widely within the Region. Countries such as Japan and South Korea are considerably advanced in both respects and China has made huge strides, whereas Laos, Cambodia and Vietnam have only recently begun to examine both ecolabelling schemes and possibilities of greening public procurement. There is no evidence that Myanmar has started work in these areas. Table 1 provides the laws or policies that support Ecolabelling/ GPP in the country, year when ecolabelling scheme started, and the number of certified product categories.

Table 1. Current (2014) status of Type 1 Ecolabelling Schemes and GPP Laws/Policies

Country	No. of Certified Product Categories	Ecolabel Since	Legal Basis for Ecolabelling/ GPP
Cambodia	N.A.	-	Draft law in 2012, not implemented
Indonesia	12	2004	No laws yet
Laos	N.A.	-	No laws yet
Malaysia	37	2004	Green Directory, but not mandatory
Myanmar	N.A.	-	No laws yet
Philippines	38	2002	Executive Order 301 since 2005
Singapore	16	1992	No specific laws
Thailand	23	1994	Cabinet Resolution of 2008
Vietnam	14	2009	None specific, but with related laws
China	96	1993	Several, including Government Procurement Law 2003
Japan	56	1989	Several, including Law on Promoting Green Purchasing
S. Korea	150	1992	Act on Promotion of the Purchase of Eco-Products

In addition to the abovementioned Type 1 labels, many countries in the Region have other types of environmental labelling particularly for energy-saving devices and organic food. Type II labels are also observed in several countries, but are generally not used for Public Procurement.

5. INTERNATIONALLY VOLUNTARY SUSTAINABILITY STANDARD (VSS):

“ISEAL” labels - Forest Stewardship Council, Marine Stewardship Council and Fairtrade being amongst the most prominent in the Region - are used particularly for exports of products such as timber and marine goods and some consumer goods such as garments and footwear. For instance, Vietnamese exporters use some 18 international environmental labels (not all from members of the ISEAL alliance) but solely for export products since there is no GPP policy in force. Thailand recognises (in addition to its Type 1 Thai Green Label) five other environmental labels relating to specific sectors such as hotels

as well as products and services for their Energy Efficiency, Carbon Footprint or Carbon Reduction. Japan has five national environmental labels in addition to its Type 1 Ecomark.

The plethora of environmental labels could actually be counter-productive when viewed from the individual consumer's viewpoint, serving more to confound the individual than to assist him/her to make an educated choice. Even for institutional procurement care has to be taken to eliminate any potential conflict between the requirements of different labels.

6. ECOLABEL NOMENCLATURE AND ADMINISTRATION:

A summary of the names of the principal Type 1 ecolabels per country and the managers of the ecolabelling scheme is presented in Table 2 (Myanmar and Cambodia have no Type 1 ecolabels).

Table 2: Ecolabelling (EL) type 1 schemes and their managers

Country	Name of EL Scheme	Administered By
Indonesia	Ramah Lingkungan	Ministry of Environment
Laos	N.A.	In the future, by Ministries of Environment & Natural Resources, Industry & Commerce, and Science & Technology
Malaysia	SIRIM E-L Scheme	SIRIM Bhd
Philippines	Green Choice	National Ecolabelling Board
Singapore	Green Label	Singapore Environment Council
Thailand	Green Label	Thailand Green Label Board
Vietnam	Vietnam Green Label	Vietnam GL Board, National Environment Association, Ministry of Natural Resources and Environment
China	China Environmental Label	State Environmental Protection Agency (now Ministry of Environmental Protection)
Japan	Eco Mark	Japan Environment Association
S. Korea	Korea Ecolabel	Korea Environmental Industry & Technical Institute

It should be noted that in cases where the ecolabelling scheme is administered by independent Boards, Associations and Institutes, the Ministry of Environment has a significant role to play in each country's ecolabelling scheme, particularly in deciding the products for inclusion and product-specific criteria for assessment.

7. USE OF ECOLABELS IN PUBLIC PROCUREMENT:

Several of the countries studied have a large number of ecolabelled products, many of them purely consumer items which are not generally procured by the public sector. To make decision-making simpler for procurement officials, countries such as Malaysia and the Philippines also publish a Directory of green goods/manufacturers whose purpose is to

augment published lists of ecolabelled products and services such that when a particular product is not listed on the national ecolabelling scheme, buyers may refer to the Directory.

8. REGIONAL COOPERATION:

Regional co-operation in the area of ecolabelling is already in existence. Thailand, for example, has Mutual Recognition Agreements (MRAs) with several countries with in the Asia-Pacific area, not necessarily the ASEAN bloc. The "+3" countries have MRA's on a bilateral basis with several of the ASEAN countries.

Vietnam has made a first step in regional cooperation on GPP by inviting South Korea to assist in drafting a Public Procurement policy. Other countries in ASEAN which do not have an GPP/GPP policy or laws in place (see Table 1 above) might well look to those which do as guidance. The Japanese and South Korean examples although highly advanced, could be ideal models although they will need to be adapted judiciously.

9. FINDINGS - REGIONAL COOPERATION ON ECOLABELLING:

This report identifies three possibilities for the ASEAN + 3 Region to consider:

- Mutual Recognition Agreements (MRAs): where the countries in the Region recognise the legitimacy of an ecolabel issued by another country covered by an agreement.

- Harmonized Ecolabels: where common standards and test procedures are agreed, leading to one standard ecolabel in the Region.

- Inter-operable Ecolabels: where the entire ASEAN + 3 region recognises ecolabels issued by others in the region even in the absence of inter-country MRAs.

Relative advantages and disadvantages are discussed in the Part C of this Report. The overall conclusion is that i) MRAs require separate agreements between countries ii) harmonization of ecolabels may be contentious and place the less developed countries at a disadvantage, iii) *thus inter-operable ecolabels appear to be optimum provided common core criteria and test methods can be agreed*.

10. COMMON CRITERIA FOR ECOLABELLING:

Whichever methodology – MRAs, Harmonization or Inter-operability – is ultimately adopted, there has to be agreement between participating countries for common core criteria to be included for ecolabelling. The Global Ecolabelling Network (GEN) has commenced the GENECIS system (GEN's Internationally Coordinated Ecolabelling System) which can be of immense assistance to countries, in particular those which have yet not started national ecolabelling schemes, although the methodology can help all participants that strive to develop harmonized criteria. A pre-condition is to become members of the GEN.

(See: http://www.globalecolabelling.net/docs/genices/genices.pdf (accessed May 2014).

In May 2013, the New Zealand Ecolabelling Trust released a review of GEN Methods to develop Common Core Criteria which could also be very useful for nations embarking on an ecolabelling scheme. The Green Procurement Network of India produced a research paper "Harmonization of Criteria for Eco Labels" which is equally useful. These documents and others not listed here would be useful references in implementing the scope of work of the ASEAN GPPEL.

11. REGIONAL COOPERATION ON GPP LAWS AND RELATED POLICIES:

As seen from Table, many of the countries surveyed do not have laws or policies pertaining to Public Procurement *per se*, leave alone Green or Sustainable Procurement. Other countries, such as China, are facing difficulties in implementation and monitoring. Admittedly each country is independent and has its own priorities but the sharing of methodologies, best practices and ways to remove barriers to GPP would be extremely useful particularly for countries trying to devise their own GPP programmes. This is further discussed in Parts C and D.

12. CHALLENGES AND BARRIERS TO ECOLABELLING AND GPP:

Even countries with relatively advanced ecolabelling and GPP programmes such as Thailand face serious challenges and barriers, such as:

a. Inadequate promotional efforts for ecolabelled products;

b. Absence of fiscal or other incentives for producing ecolabelled products;

c. Many non-food products are imported from "+3" countries; domestically produced goods often cannot compete and consumers – both institutional and individual – must necessarily accept what is offered by the +3 countries.

d. Indigenously manufactured products are often manufactured by subsidiaries of multi-national corporations whose attitudes towards ecolabelling are dictated by overseas principals. For example, most cars in Thailand are produced or assembled locally by subsidiaries of giant Japanese or South Korean companies which formulate and prescribe their own manufacturing standards or practices for implementation in their factories in Thailand.

e. Ecolabelled products do not strictly include products purchased by governments, such as shampoo, shower gel (Malaysia) and rice cooker (Thailand);

f. Multiplicity of sustainability labels;

g. Green Procurement by all government agencies is not mandatory or even incentivised;

h. Legal requirements to buy at the lowest price by government procurements bodies.

Countries such as Cambodia, Lao PDR and Vietnam and to a lesser extent, even Indonesia and the Philippines share the following challenges:

a. Technical skills to develop national ecolabelling schemes need to be reinforced;

b. Governments see ecolabels mainly as a means to strengthen export products, unable to totally penetrate the local market owing to the prevailing socioeconomic condition in these countries.

c. The overall legislative framework is still being developed;

d. National testing facilities are still at formative stages;

e. The LDCs are still highly dependent on imports of non-food items, mainly from the "+3" countries led by China whose manufacturing, usage and disposal are determined by the exporters.

These are only the major and common impediments. In addition to the listed challenges, each country has its own issues and has approached them in different ways – for example, by offering tax breaks and fiscal incentives as in Vietnam, by means of recognition and awards as in Thailand.

13. SHORT-LISTED PRODUCTS:

This study has identified and short-listed 5 product categories which could form the initial basis for regional cooperation in ecolabelling and GPP. These are:

a) Office equipment with energy efficiency, as well as furniture
b) Construction and building materials
c) Paper products
d) Automotive
e) Office supplies.

The short-listing has been done on the basis of 3 factors: i) existence of the product categories in national ecolabelling schemes, ii) inclusion in GPP laws or policies, contribution to intra-Regional trade.

14. GOING FORWARD:

The absence of national ecolabelling schemes in some ASEAN countries combined with a lack of policies, directives or other legislation on GPP should be seen as an opportunity for collaboration, not as a weakness.

We conclude that regional cooperation in ecolabelling is feasible. The +3 countries are the major trading partners of the ASEAN bloc and the impact on intra-regional trade facilitation would be enormous. Thus, the initial work of the ASEAN+3 Green Public Procurement and Ecolabelling (GPPEL) Working Group as a platform for knowledge and experience sharing on the establishment and implementation of GPP and Ecolabelling schemes and projects could be expanded to further focus on actively engaging the member countries towards the harmonization of ecolabels and similar efforts in the region.

15. A ROADMAP

A roadmap for collaboration at the regional level is presented in detail in Section D. In summary, it suggests the expansion of the scope of work of the ASEAN+3 GPPEL, ideally hosted within the ASEAN Secretariat, to include conducting economic assessments of possible ways to harmonize ecolabels, and of means of implementing GPP in individual countries and collectively in the region. A list of 9 major activities has been advocated with typical timeframes for each activity and allocation of responsibilities is presented in Section D. The additional objectives of the ASEAN+3 GPPEL would include:

1. Improve the competitiveness of the region exports of ecolabelled products;
2. Facilitate sharing of knowledge and experience amongst participating countries;
3. Provide technical support for creation/expansion/modification of ecolabelling schemes;
4. Increase awareness of national and regional ecolabels;
5. Assist inter-country comparisons on laws, policies and practices relating to both Ecolabelling and GPP.

SECTION B

COUNTRY REPORTS

The Country Reports that follow examine the status of ecolabelling schemes and GPP Programmes in the ASEAN + 3 countries. The intent was to evaluate the possibility of regional cooperation amongst the ASEAN + 3 nations on ecolabels which could foster GPP programmes in each country.

In the process, it was discovered that there is a lack of relevant data in several of the countries.

The country reports are presented in the following order:

China }
Japan } The "+3" countries
S. Korea }

Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Singapore
Thailand
Vietnam

Each country report starts with an examination of its socio-economic status – GDP, economic growth, demographics, trade statistics – which can serve to place that country's Ecolabelling or GPP policies and practices in perspective. Examination of the country's existing Ecolabelling schemes, GPP policies and laws follow the section on socio-economic considerations. Possible areas for regional cooperation conclude the country report.

COUNTRY REPORT

China

1. Basic Socio-economic Information of China

1.1 General Information (Central Intelligence Agency)

Population: 1.35 billion

Table 1. Demographics and some social data of China

Age-wise distribution of population	0-14 years: 17.2% 15-24 years: 15.4% 25-54 years: 46.7% 55-64 years: 11.3% 65 years and over: 9.4% (2013 est.)
Split of Urban-Rural population	50.6% of total population (2011) 2.85% annual rate of change (2010-15 est.)
Extent of Urbanization – number of major cities	Shanghai 16.575 million; Beijing (capital) 15.594 million; Chongqing 9.401 million; Shenzhen 9.005 million; Guangzhou 8.884 million (2011)
Gini Index	42.1 (2009)

2. Economic situation (Central Intelligence Agency, n.d.)

Table 2. Economic indicators of China

GDP	Agriculture	9.7%
	Manufacturing	45.3%
	Services	45%
Imports	Total Imports	$1.772 trillion (2013 est.)
	Names/categories of major import products and values	electrical and other machinery, oil and mineral fuels, optical and medical equipment, metal ores, motor vehicles (2012)
	Major imports from	Japan 9.8%, South Korea 9.2%, US 7.1%, Germany 5.1%, Australia 4.3% (2012)
Exports	Total Exports	$2.21 trillion (2013 est.)
	Names/categories of major export products and values	electrical and other machinery, including data processing equipment, apparel, radio telephone handsets, textiles, integrated circuits (2012)
	Major export destinations	US 17.2%, Hong Kong 15.8%, Japan 7.4%, South Korea 4.3% (2012)

3. Review on ecolabelling schemes in China

The China Environmental Labelling program is a public, voluntary eco-labelling scheme initiated by State Environmental Protection Administration (Now Ministry of Environmental Protection of China-MEP) in 1994. The Ministry of Environmental Protection of China (MEP) owns the China Environmental Labelling and China Environmental United Certification Centre (CEC) undertakes assumes the function of Product certification.

China environmental labelling consists of two types, based on criteria of ISO 14020 and ISO14024. Type I labelling applies to products with existing technical standards issued by MEP. For products without existing standards, applicants can apply for type II labelling, where self-declaration is verified by CEC.

3.1 China Environmental Labelling (CEL): Type I

The China Environmental Label (Type I) is the most prominent amongst all Chinese environmental labels, notwithstanding the presence of Type II labels.

Logo of the China Environmental Label (Type I)

3.1.2 Management of the CEL: Three agencies are involved in the administration of the China Environmental Label:

The State Environmental Protection Agency (SEPA): Policy support, guidelines for accrediting products, research on technologies and policies, supervise management and certification.

China Certification Committee for Environmental Labelling (CCEL): Tracks evolving environmental labelling situation internationally and within China, publicise the Chinese Ecolabel, promote ecolabelled products, bestow recognition and awards, international communication.

China Environmental United Certification Centre Co Ltd (CEC): Enforcement and oversight, improvements in certification methods, assistance to CCEL for awards, promotion and publicity.

3.1.3 CEL Criteria Development

Any interested parties, whether organizations or individuals, can propose a new product category for Ecolabelling by submitting a proposal form for the proposed category. The Secretariat will study the proposed category and submit a report to CCEL to suggest whether to accept or to reject the proposal. CCEL makes the decision on the proposed product group, and submits it to NEPA and CSBTS for approval. The selection of product categories currently covered by the program is based on the following considerations:

- Products that have significant environmental impact and need to reduce their environmental impact;
- Products that are closely related to people's daily life, thus Ecolabelling will have a direct effect of reducing environmental impact;
- Products that contribute to global environmental protection, such as products that reduce the production and consumption of CFC;
- Products that stimulate the development of new technology and new products, such as low-toxic, low-emission, and energy-saving products;
- Products that are covered by other national Ecolabelling schemes.

4. Procedure to develop criteria

When a product category is approved, the Secretariat of CCEL entrusts a competent standard setting organization with the task of developing the criteria for the product category. After the draft is ready, the Secretariat consults relevant experts and manufacturers, and makes changes in accordance with their comments. The draft is then submitted to NEPA which approves and releases the final specifications/criteria.

Criteria product categories currently covered by the program were based on the following four considerations:

I. The labelled products must meet State's standards of quality, safety and hygiene;

II. Emphasis should be placed on the significance of environmental impact that a particular product will create (For example, the criteria for refrigerators focuses on the use of CFC which is the major issue for cooling appliances.)

III. Consideration should be given to criteria established by other national Ecolabelling schemes for similar products, as well to the actual situation of China; and

IV. Criteria should be easy for average consumers to understand.

The rationale which China's Ecolabelling is based on is mainly a single-factor or a few factors approach. For example, criteria for toilet paper, low CFCs refrigerator, unleaded gasoline, water-based paint, and mercury-free battery are based on this approach. However, criteria for silk are based on the life-cycle of product.

5. Current Status:

The China Environmental Labelling Program has developed over 18 years. More than 40,000 models of products have been certified (

Figure 1) and more than 2,000 companies have participated (

Figure 2). Certification standards for 85 categories of products have been set by now.

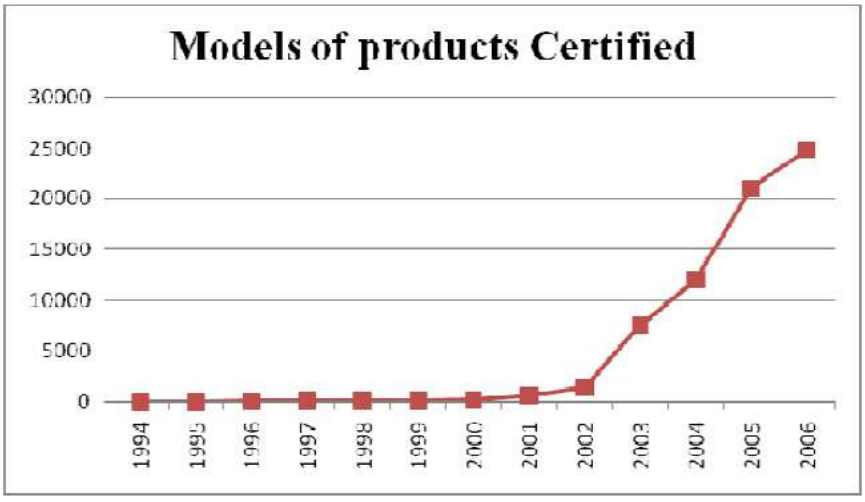

Figure 1.The number of products certified started to gain momentum in the 2000s

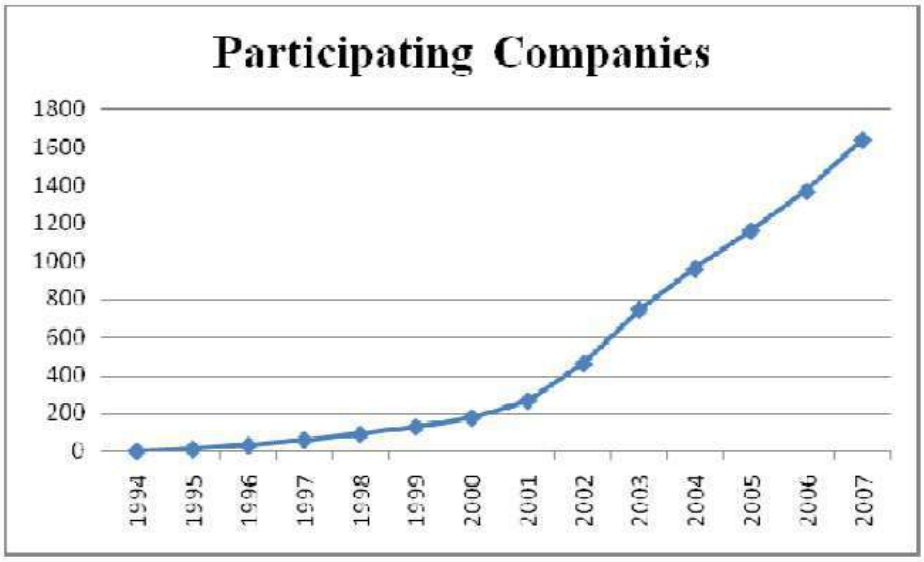

Figure 2. Increasing number of companies participate in the China Environmental Labelling Program

6. Type II China Environmental Labelling:

Fig 3 Logo of Type II China Environmental Label

If standards do not exist, enterprises can ask for the Environmental Labelling Type II or Environmental Self-declaration (ISO14021, 1999) which is based on self-declaration by manufacturers and retailers. As the general reputation of Chinese enterprises is not high, consumers do not trust the self-declared environmental claims and the statement by an independent third party certification can confirm the claims. It is the CEC which is responsible of the verification.

The declaration has to follow this statement directory:

Saving energy
Improving the recycling levels
Using Recycled materials
Conservation of resources
Less using toxic materials
Improving the biodegradable levels
Improving Design to be easily disassembled
Extension of the product's life

7. Review on Ecolabelling scheme at regional level

China Environmental Labelling certification authorities actively communicate and cooperate with international ecolabelling organizations like GEN and GED.

China Environmental Labelling has regulated and upgraded its program according to the principles of ISO14024, such as voluntariness, transparency, accessibility, selectiveness and effectiveness, etc. CEL joined GEN since 2008, was awarded GENICES 2012, and signed MOUs with ecolabelling organizations of eight countries and regions such as Germany, Nordic 5 countries, Japan, Korea, Australia, New Zealand, Thailand and Hong Kong.

8. Barriers for Implementing Ecolabelling in China

As far back as 2002, a joint paper by IISD Canada and the Information Institute, National Environmental Protection Agency of China iterated the twofold objectives of ecolabelling in China:

- **To further develop and implement China's ecolabelling program**

"In order for ecolabelling to be an effective means for environmental protection and to increase the market share of ecolabelled products, there is a need to strengthen China's environmental labelling program. "

China accepts *that "the success of an ecolabelling program largely depends on the awareness of the public on ecolabelling and ecolabelled goods. The better the public understand ecolabelling, the more likely that they will support it by using their purchasing power.*" Nevertheless, there is at the moment no hard evidence to show that the Ecolabelling programme has had a significant impact on individuals and households within China.

- **To link its program to international development**

With the increasing number of ecolabelling schemes worldwide, China's exports had in some cases been adversely affected. In order to avoid possible negative trade effects from other existing ecolabelling programs such as the Blue Angel scheme and the Nordic Swan, China should first actively participate in international standards setting process.

9. China's interest in Regional Cooperation on Ecolabelling:

As the "factory to the world" China is very interested in some form of mutually recognized or harmonized ecolabel. The multiplicity of ecolabels world-wide has had an adverse impact on Chinese exports – hence the Memoranda of Understanding with a number of client countries. (see para 2.3) China is the major trading partner of most of the ASEAN countries and thus a more formal mutual recognition or harmonization agreement within the ASEAN bloc and between ASEAN and the "+3" countries, which includes China, would be a trade facilitating measure.

10. Review on Green Public Procurement (GPP)

China has a relatively short history of public procurement system, starting in the 1990s. There are three stages in the development of China's Green Public Procurement according to Qiao & Wang (2010):

1993 – 2003 – Embryonic stage: "In 1993, the first procurement legislation - Bidding Law and Government Procurement Law was drafted. Pilot programs of using tendering and bidding were conducted in Shanghai in 1996 and Shenzhen in 1997. This led to a nationwide public procurement reform and system construction. The most important achievements in this stage was the establishment of a bidding system for public procurement, the creation of local government procurement organizations, and enactments of Government Procurement Law and the Clean Production Promotion Law of the People's Republic of China in 2002. The concept of green procurement also emerged in this stage. Both Government Procurement Law and the Clean Production Law of the People's Republic of China are the centre-pieces in designing green procurement".

2004 – 2007 – Second stage: "The second stage saw the enactment of a few legislations promoting green public procurement to respond to the emergence of the scientific development concept that emphasizes "people-oriented" and "a comprehensive, coordinated and sustainable development"" (Qiao & Wang, 2010).

2007 – Present – The comprehensive development stage: "It is marked with China's effort to meet the requirement of the World Trade Organization (WTO)'s Agreement on Government Procurement. In this stage China passed various laws to promote further green public procurement, including National Environment Protection in 11th Five Year Planning, Energy Saving and Expulsion Reducing Scheme and Energy Saving Law, Circular Economy Promotion Law and Public Organs' Energy Saving Regulations (2008) and the State Council Office Gave Notice on Forcefully Establishing Government Procurement System for Energy Saving Products and Notification on Public Purchasing List of Adjusting Environmental Labelling Products" (Qiao & Wang, 2010)

10.1 Review on the implementation

10.1.1 Policy and law

China's Bidding Law (BL) of 1999, the Government Procurement Law (GPL) promulgated in 2003 and the Promotion Law on Cleaner Production (2002) are the legal basis of the Chinese public procurement system and for the implementation of GPP. The GPL is the central piece of legislation when it comes to government procurement. The BL, on the other hand, regulates procurement by state owned enterprises and for stand-alone infrastructure projects.

The GPL does not offer any binding guidance on how to prioritize conflicting secondary objectives and how to relate them to the primary objectives. Two lists with environmental friendly and energy efficient products serve as the main components of the GPP policy strategy. They specify exactly, which products should be preferentially purchased.
In 2005, the Ministry of Finance and the National Development and Reform Commission formally released the Public Procurement List of Energy-Saving Products. In 2006, the Ministry of Finance and the State Environmental Protection Administration (now the

Ministry of Environmental Protection) released the Public Procurement List of Environmental Labelling Products. Products on these lists are selected according to criteria described by the Environmental Labelling Certification and the China Energy Label. The central government adjusts both lists bi-annually in order to update the products included on the lists and to provide technical support for GPP implementation.
Governmental agencies at all levels, institutions and organizations, which use public funds for procurement are required to give priority to purchasing products on the two public procurement lists. The departments, which disobey the regulation, may be punished according to the relevant laws and regulations. Sanctions may include the retention of procurement funds by the Financial Department or the forced reorganization of the tendering process of the relevant PPCs (Qiao & Wang, 2010).

11. Barriers of Green Public Procurement in China

China's green public procurement program is facing some unfavourable context, as explained by and referenced in detail from Qiao & Wang (2010):

- **Unfavourable environment**

Lack of publicity and media promotion: Little effort has been made to promote the importance of green procurement and to inform the public. Government procurement personnel have little knowledge about the environment protection.

Lack of legal environment: The laws only outline the general requirements and do not lay out the rules and regulations. For instance, the ninth provision of Government Procurement Method states that government should give priority to high tech products and eco-friendly products, but it does not define eco-friendly products and does not specify the importance of green products.

Poor market environment: China just started its green production. Compared with developed countries, the market for green products is not well developed with only a few products currently available and low technological investment. China has not set up any program to subsidize green production, and no administrative departments or environmental protection agencies have any strategic plans to promote green industry

- **Faulty Green Public Procurement Program Management**

Multiple designated agencies are in-charge of managing green procurement, including the Environment Protection Ministry, the Finance Ministry, the National Development and the Reform Committee as well as the various procurement centres at provincial and local levels. They issue regulations either jointly or on their own, causing policy overlaps, management duplication, and even conflicts among agencies.

Absence of a single designated green procurement agency: the green procurement is performed by the procurement centres. These centres do not always apply their own regulations to guide green procurement, and their authority does not align with responsibility. There is also a lack of communication and coordination among public

procurement agencies. Little attention is paid to information about green procurement, and little understanding is present among procurement personnel.

- **Lack of uniformity in green production definition and evaluation**

Definitions of green products are not consistent: Different names are given to green products, including Environmental Labelling products, energy-saving products, and energy-efficient products. Environmental Labelling products that are certified by the Chinese Environmental Certification Committee are defined as those that cause no or little harm to environment in its production, use, reuse and that are easy for resource recycling.

Green product evaluation criteria are confusing. The Finance Ministry proposes to adopt a universal standard mandated by the national government. But the Environment Protection Ministry feels this standard is lower than the standard set for the Environment Labelling products and cannot achieve the environment protection. In addition, there is no national environmental protection standard for such products as Xerox machine, printers, computers or detergents. In summary, China does not have a uniform standard or criteria for green products.

The green product list violates open and fair competition principle: The first list contains only 856 products of 14 categories. This covers only one to two percent of government procurement. Even though the second and third lists expanded the coverage, the list is still too limited compared with the huge scale of public procurement and it cannot push the public green procurement process. Moreover, the selection process did not follow fair open competition principle. The products are selected by an inner circle, not on a competitive market basis. Lack of fair and open competition can cause bribery and corruption.

12. Future plans

"A basic national procurement framework in China is already well established. However, given China's dynamic development, the framework needs further enhancement and refinement, in order to better support sustainable public procurement in the future." (Philipps, Espert, & Eichhorst, 2011).

In order to ensure high environmental performance of publicly procured products, Philipps, Espert, & Eichhorst (2011) provide the following recommendations:

- "*In the short term the quality and performance standard of environmental products in the lists needs to be improved. … At the same time, the product range included in the purchasing lists needs to be widened and more manufacturers should be included to improve competition*."
- *"In the mid to long term, in order to widen the scope of environmentally friendly products, the government may assess ways for moving beyond predefined product lists. A potential new design could include specifying only obligatory environmental characteristics or benchmarks, but not concrete manufacturers. This could at the*

same time improve the economic performance of environmental products in the longer run due to increased competition."

- *"By making life cycle costing mandatory for all PPCs in China the cost efficiency barrier less environmentally friendly products could be revealed and put into perspective."*
- *"Environmental criteria could be weighted stronger in the selection criteria of PPCs to further expand the procurement of environmentally friendly products."*
- *"The incorporation of social criteria into GPP requirements could further advance GPP in China."*

References

Central Intelligence Agency. (n.d.). *The World Fact Book*. Retrieved March 1, 2014, from Central Intelligence Agency: https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html

China Environmental United Certification Center Co., Ltd. (n.d.). *China Environmental Labelling System*. Retrieved March 30, 2014, from China Environmental United Certification Center Co., Ltd Web site: http://www.sepacec.com/cecen/labelling/

International Institute for Sustainable Development, Canada; and Information Institute, National Environmental Protection Agency, China. (2002). *Ecolabelling: Its Implications For China.* International Institute for Sustainable Development.

International Trade Centre. (n.d.). *China Environmental Labelling - CEL*. Retrieved March 30, 2014, from www.standardsmap.org: http://search.standardsmap.org/assets/media/ChinaEnvironmentalLabeling/English/AtAGlance_EN.pdf

Jing, W. (2014, April 10). Questionnaire on Ecolabelling and Sustainable Public Procurement in the ASEAN+3 countries. (M. B. de Beauchesne, & D. C. Navarro, Interviewers)

Philipps, S., Espert, V., & Eichhorst, U. (2011). *Advancing Sustainable Public Procurement in Urban China. Policy Recommendations - SuPP-Urb-China Paper No. 14 .* Wuppertal: Wuppertal Institute.

Qiao, Y., & Wang, C. (2010). China Green Public Procurement Program: Issues and Challenges in its Implementation. *4th INTERNATIONAL PUBLIC PROCUREMENT CONFERENCE* (pp. 8-9). Seoul, South Korea: 1-30.

COUNTRY REPORT

Japan

Socio-economic situation in Japan

1. General information

Population 127, 561, 489

2. Economic situation

Table 1 GDP – Composition by Sector (6 December 2013)

Sector	GDP (%)
Agriculture	1.1
Industry	26.3
Services	72.5

Table 2 GDP – Composition by End Use (6 December 2013)

End Use	GDP (%)
Household consumption	60.9%
Government consumption	20.5%
Investment in fixed capital	21.2%
investment in inventories	-0.6%
exports of goods and services	14.7%
imports of goods and services	-16.6%

Table 3 Top Exports of Japan

Commodities	(%)
Motor Vehicles	13.6
Semiconductors	6.2
Iron and Steel Products	5.5
Auto Parts	4.6
Plastic Materials	3.5
Power Generating Machinery	3.5

Table 4 Top Imports of Japan

Commodities	(%)
Petroleum	15.5
Liquid Natural Gas	5.7
Clothing	3.9
Semiconductors	3.5
Coal	3.5
Audio and Visual Apparatus	2.7

3. Review on ecolabelling schemes in Japan

There are several ecolabelling schemes in Japan. The well-known is Eco Mark Project which was started by the Japan Environment Association from February, 1989. There are 5 other important ecolabelling schemes which are: Marine Eco-Label Japan, CASBEE, Eco-Rail Mark, Energy Saving Labeling Program of Japan and Japanese Agricultural Organic Standard (JAS).

3.1 Background of each eco-label scheme

3.1.1 Eco Mark

The Japanese Eco Mark Program a Type 1 Ecolabel, is operated by Japan Environment Association (JEA), founded in 1989.

Figure 1 Symbol of Eco Mark

The JEA Eco Mark Office manages the scheme in accordance with ISO 14020 and ISO 14024. Parties seeking the Eco Mark are required to conclude an Eco Mark Basic Utilization Contract with Japan Environment Association (JEA). The total process time of an application is slightly in excess of 4 months.

Other forms of environmental labels are also in widespread prevalence. These include:

3.1.2 Marine Eco Label Japan (MEL Japan)

The Marine Eco-Label Japan was established to support fisheries which practice responsible and sustainable fishing as stipulated in the FAO guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries.

Figure 2 Symbol of MEL Japan

3.1.3 CASBEE

Comprehensive Assessment System for Built Environment Efficiency (CASBEE) is a tool for assessing and rating the environmental performance of buildings and the built environment, covering energy efficiency, resource efficiency, local environment, and indoor environment.

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Figure 3 Symbol of CASBEE

CASBEE was developed according to the following policies:

- The system should be structured to award high assessments to superior buildings, thereby enhancing incentives to designers and others.
- The assessment system should be as simple as possible.
- The system should be applicable to buildings in a wide range of building types.
- The system should take into consideration issues and problems peculiar to Japan and Asia.

3.1.4 Eco Rail Mark

Launched by the Japanese Ministry of Land, Infrastructure and Transport in 2005, this ecolabel indicates certified products and companies that actively make an effort to protect the environment through a modal shift to rail transportation**.**

Figure 4 Symbol of Eco Rail Mark

The “Eco Rail Mark” system aims to contribute to the ecology movement by encouraging more consumers to support businesses who actively use railway freight transportation.

3.1.5 Energy Saving Labeling Program: Japan

The voluntary Energy Saving Labeling Program was launched on August 21, 2000 to enable consumers to compare energy efficiencies of different products. It typically consists of the energy conservation logo in combination with information on target year, achievement rate of energy efficiency standards, and energy consumption efficiency.

The logo is orange for a product which does not achieve the target standards of energy efficiency and green for a product achieves over 100% of the target standards (see figure 3.9 below). The Ministry of Economy, Trade and Industry (METI) designates and promulgates the criteria for each product.

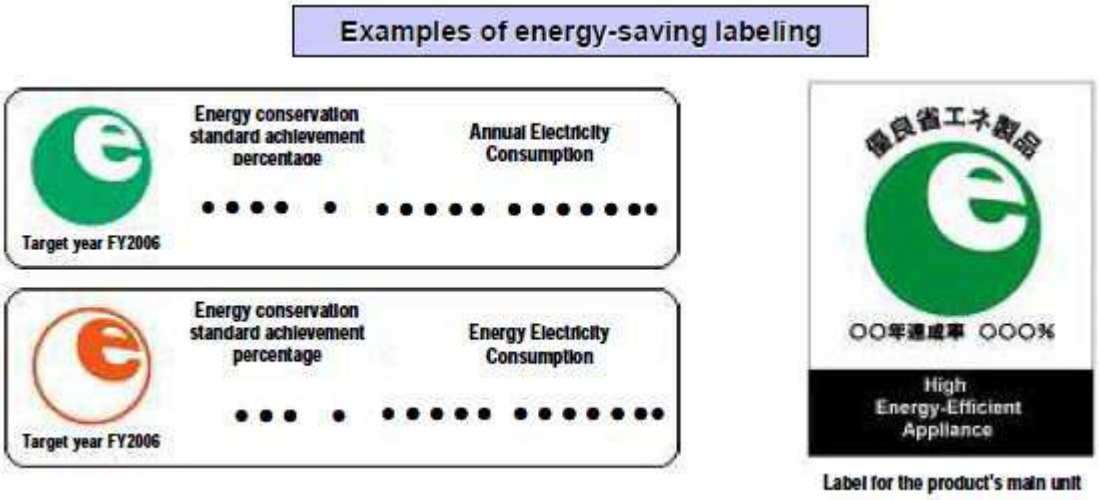


Figure 5 Symbol of Energy Saving Labeling Program

Further, in order to provide easy-to-understand information to consumers, the uniform energy-saving label system for retailers was introduced in October 2006. The Revised Law Concerning the Rational Use of Energy enforced in April 2006 requires retailers to provide information on energy-saving. An example of energy saving labeling for retailers is shown at Figure 3.10

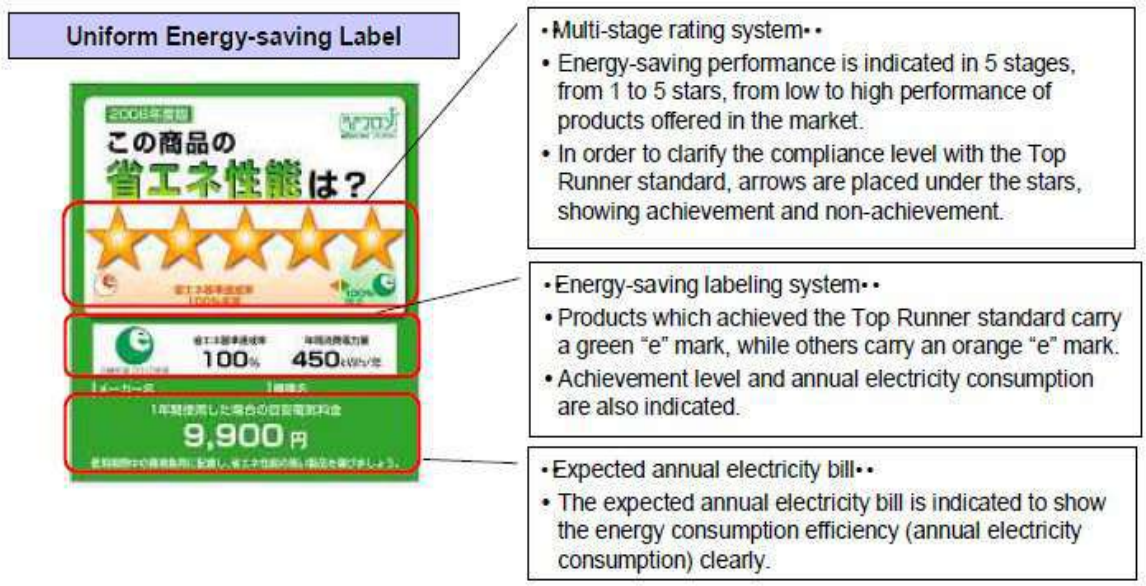


Figure 6 Example of energy saving labelling for retailers

3.1.6 Japanese Agricultural Standard (JAS)

The JAS Standards for organic plants and organic processed foods of plant origin were established in 2000 based on the Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods which were adopted by the Codex Alimentarius Commission.

Figure 7 Symbol of JAS

The organic JAS system has been further developed with the addition of the JAS Standards for organic livestock products, organic processed foods of animal origin and organic feeds which took effect in November 2005.

4 Current Status

The current status of each eco-label is given in Table 4 below:

Table 5 Number of criteria and certified product groups of each eco-label

Eco-label	Number of criteria	Number of certified product groups
Eco Mark	18 criteria (2014)	56 product groups (2014)
MEL Japan	2 criteria	67 product groups (2014)
CASBEE	13 criteria	193 buildings (2011)
Eco Rail Mark	1 criteria	100 companies 79 products (Sept. 2013)
Energy Saving Labeling Program : Japan	1 criteria	16 products (July 2008)
Japanese Agricultural Organic Standard (JAS)	5 criteria	112 product groups (1 April 2013)

5 Review on Green Public Procurement (GPP) in Japan

5.1 The Japanese Legislative Framework for Green Procurement:

Japan is probably the pioneer country in Asia-Pacific to use green purchasing to reduce environmental impact and accelerate a shift in demand toward eco-friendly goods. Japan's Type 1 Ecomark programme, which commenced in 1989 provided the earliest impetus. In 1996 the International Green Procurement Network (IGPN) was initiated and being Japan-based, worked extensively within the country.

May 2000 saw the enactment of the Law on Promoting Green Purchasing which was implemented from April of the succeeding year. This law obliges all government ministries and agencies to implement green purchasing policies. Each government organisation must draw up and release its "procurement policy" including procurement targets every fiscal year and report the procurement achievements to the Environmental Ministry. In addition, all local authorities across the country were required to demonstrate "efforts" to implement green purchasing. They are asked to make an effort to draw up green procurement policies every year and practicing the green purchasing activities based on the national regulation. When enforced the law in 2001, 101 items from 14 categories were specified as "designated" eco-friendly goods, largely based on the Japanese Ecomark. Within a year, the number of items had increased to 152.

5.1.1 Basic Guidelines

The Japanese policy requires that:

a. Environmental attributes must be considered in addition to price and quality considerations
b. Environmentally and socially diverse viewpoints must be incorporated.
c. Reduction in environmental impact should be based on a life-cycle approach.
d. There should be a commitment to long-term use, correct utilization, and appropriate disposal of procured goods and services.

Criteria for selection:

- As a general rule, clear numeric data must be used for selecting designated procurement items.
- If clear numeric criteria cannot be established, attributes that contribute to reducing environmental impact shall be defined as "factors for consideration."
- As needed, these standards can be revised in response to product improvement, market development of our scientific knowledge of the products.
- When items, included in the designated procurement items list become readily available in the marketplace, the item shall be omitted from the listing.

5.1.2 Impact of the Legislation:

The passage of the Law made a tremendous impact since all central Government bodies commenced GPP simultaneously, with State Government and local bodies following suit in quick succession. Faced with a sudden and very large demand for Eco-marked or otherwise more eco-friendly goods and services, suppliers quickly adapted both products and processes to cater to the large demand.

MoE data on procurement policies in local government show that all 47 prefecture governments had developed procurement policies by 2005. At the district/city and the town/village levels, however, after successive years of increasing implementation in 2005 a negative trend in following green purchasing guidelines was recorded. Only 45.4% (47% in 2004) of districts/cities and 10% (11.1% in 2004) of towns/villages followed the green purchasing guidelines. This was attributed to lack of access to eco-friendly products in smaller communities and rural areas, as well as lack of legal enforcement mechanisms.

The MoE thus decided to create special guidelines for small local Government bodies from 2007.

Eco-marked products became commonplace and supplanted non-labelled products in the market place, with the result that individual and household consumers found eco-marked products readily available.

There is an increase in the number of Corporations that have already established purchasing policies or are currently in the process of developing policies. By 2004 29.4% of Japanese public companies made efforts to purchase eco-friendly goods and 38.4% were in the process of considering or developing policies. Private companies were slightly less motivated to adopt green purchasing, 21.7% were purchasing eco-friendly products in 2004 and 33.1% were in the process of considering or developing policies to this end. The goal for the year 2010 as specified by the MoE is to systematically implement green purchasing in 50% of all public businesses and in 30% of all private businesses.

6. Sustainable Product Range for Public Procurement, 2007:

Table 6: Products Covered (Machiba, Herndorf, & Kuhndt, 2007)

Product	Number of Items	Examples
Paper	8	Copier Paper, Printer Paper, Toilet Paper, etc.
Stationary	79	Ballpoint Pens, Scissors, Glue, etc.
Office Furniture	10	Chairs, Desks, Shelves, etc.
Office Automation Machines	13	Copiers, Printers, Fax Machines, etc.
Home Electronic Appliances	4	Electric Refrigerators, etc.
Air Conditioners	3	Air Conditioners, Gas Heat Pump Air Conditioners, Space Heaters
Water Heaters	4	Electric Hot Water Supply System, Gas Cooking Appliances, etc.
Lighting	3	Fluorescent Lighting Equipment, Fluorescent Light Bulbs, etc.
Vehicles	5	Vehicles, ETC Adaptable Car Accessories, VICS Adaptable Car Accessories, Tire, Engine oil
Fire Extinguisher	1	Fire Extinguishers
Uniforms and Work Clothes	2	Uniforms, Work Clothes
Interior Fixture and Bedding	9	Curtains, Carpets, Blankets, Comforters, etc.
Work Gloves	1	Work Gloves
Other Fibre Products	3	Tents, Tarps, Safety Nets
Facilities	4	Solar Power Generation Systems, Garbage Disposals, etc.
Public Works Projects	58	Portland Blast Furnace Cement, Pavement Material, Flushable Toilets, Greening of Rooftops, etc.

Services	7	Energy conservation diagnosis, printing, cafeterias, tyre servicing and automobile repair, transport and delivery, office building management and retail.

7. Scope for Regional Cooperation:

Being the trend-setter in GPP in the ASEAN + 3 Region, Japan is in a unique position to assist in the establishment of possibly institutionalised cooperative measures. Japanese enterprises are responsible for manufacture of a wide range of goods, particularly electrical, electronic and automotive and can insist that overseas plants and subsidiaries follow the same high environmental standards as in the parent country. The Japanese Government and organisations such as the Japanese Environment Association and the International Green Procurement Network have great experience of criteria development and change, implementation hurdles, monitoring and evaluation of GPP schemes – in short not just products but the administrative and managerial and processes involved in successful Ecolabelling and GPP Programmes. Sharing of this knowledge with other countries in the Region would be immensely useful and would allow the least developed amongst the ASEAN+3 nations to leap-frog the processes.

Japan has Mutual Recognition Agreements for ecolabels with Thailand, China and S. Korea and has joined the UNEP-led ASEAN+3 Green Public Procurement & Ecolabelling Network. This could be a good starting point for a more comprehensive Regional arrangement.

COUNTRY REPORT

South Korea

1. Socio-economic Situation in South Korea

General Information

Population Size: 48,955,203

(July 2013 est.)

GDP by PPP: USD1.598 trillion (2012 est)

1.1 Economic Situation

Table 1.1 Structure of economic system in 2012 (Ref. CIA Economic fact Book)

Economic Sector	GDP%
Agriculture*	2.7
Industry**	39.8
Services	57.5
** Main agriculture products include: rice, root crops, barley, vegetables, fruit; cattle, pigs, chicken, milk, eggs; fish.* ***Main industries include: electronics, telecommunications, automobile production, chemicals, shipbuilding, steel*	

1.2 Exports: Exports amounted to 552.7 USD Billion (2012 est.)

Table 1.2 Top ten exported goods (Ref. www.worldsrichestcountries.com/top_korea_exports)

	Commodities	Percentage of Value
1	Electronic Equipments	21.7
2	Vehicles	12.8
3	Machinery	10.8
4	Mineral fuels including oil	10.5
5	Ships, boats, and floating structures	6.9
6	Optical, technical, and medical apparatus	6.9
7	Plastics	5.2
8	Iron and Steel	4.6
9	Organic Chemicals	4.3
10	Iron and steel products	2.3

Major export partners were: China (24.4%), USA (10.1%), Japan (7.1%) (2011 est.)

1.3 Imports: Imports amounted to 514.2 USD Billion (2012 est.)

Table 1.3 Top ten imported goods (Ref. www.worldsrichestcountries.com/top_korea_imports)

	Commodities	Percentage of Value
1	Oil	35.8
2	Electronic Equipment	12.9
3	Machines, engines, and pumps	8.9
4	Iron and Steel	4.6
5	Ores, slag, and ash	3.6
6	Medical and technical Equipment	3.6
7	Organic chemicals	2.8
8	Plastics	2.1
9	Vehicles	1.8
10	Iron or steel products	1.5

Major export partners were: China (16.5%), Japan (13%), USA (8.5%), Saudi Arabia (7.1%), Australia (5%) (2011 est.)

2. Review of eco-labelling schemes in South Korea

There are several eco-labeling schemes in South Korea. The most well known is the Korean Eco-label Program which was started by the Korean Environmental Labelling Association (KELA). There are 5 other important eco-labeling schemes: Green Certification, New Excellent Technology, Energy Consumption Efficiency Grade, Healthy Building Material, Clean Air, Good Recycled, and High Efficiency Energy Equipment.

2.1 Korean Eco-Label

South Korea has a Type 1 eco-label scheme called “Korean Eco-label”. This eco-label is awarded for improvement in eco-products and product environmental friendliness. The scheme sets up eco-product standards, builds an evaluation system, offers eco-products & environmental trend information to the public, and facilitates production of eco-products. The Figure 2.1 shows the logo of Korean Eco-label.

Figure 1 Logo of Korean Eco-label

2.2 Evolution of the Ecolabelling Scheme:

The Korean Eco-labelling System commenced in 1992 and was notified by the Ministry of Environment. After 2 years, it had established a legal base with the support of the "Act on Environmental Technology Development and Support." Korea joined the Global Eco-labelling Network (GEN) and by 2005, it already established a mandatory purchase system, which promotes the purchase of environment friendly products. In 2011, it had achieved the GENICES Certification, which ratifies the conformity to International Standards and by 2012, it had already produced 151 criteria and 8,166 ecolabeled certified products.

The Korea Environmental Labelling Association (KELA) was founded in 1994 for the purpose of promoting environmental awareness of the public and encouraging the sustainability of production and consumption patterns by implementing the Korea Eco-label Program.

KELA is in charge of overall operations such as the selection of product category, establishment of product-specific criteria, certification and surveillance and the promotion of the program.

2.2.1 Operating Agency

Korea Environmental Industry and Technology Institute (KEITI) which is under the Ministry of Environment of Korea, is the most significant organization in developing green technologies and industries. Their mission is to contribute to national sustainable development through green life and advancement in environmental technology/industry. One of their stated goals is to strengthen competitiveness of the eco-labelling programme and technology verification. The Ecolabelling Program is operated by the Ecolabel certification office of KEITI.

2.2.2 Certification Criteria:

KEITI's management of the Korean Ecolabelling programme includes development and revision of Ecolabel criteria, research, surveillance and monitoring.

Korean law requires certain products to compulsorily carry the Ecolabel while some others are incentivised. The process of acquiring an Ecolabel is standardized and fee-based. Products carrying the Korean Ecolabel include appliances, building products, cleaning products, cosmetics/personal care, electronics, forest products/ paper, packaging, textiles, transportation, fishing lures, car tyres, jewellery, and shoes.

3.0 Other Environmental Labels:

Korea also has other Environmental Labelling Schemes as follows:

3.1 Green Certification

Green Certification is a new certification system designed to promote “Low Carbon, Green Growth”, the Korean Government’s pathway to development of a new national economy based on the 2010 "Framework Act on Low Carbon, Green Growth"

Figure 3 Logo of Green Certification

"Green Certification" is awarded after ascertaining whether newly developed technologies are in accordance with the objective of the Low Carbon, Green Growth strategy which calls for technologies minimising the emission of greenhouse gases, energy efficiency technology, clean product technology, and resource recycling and environmentally friendly technology.

3.2 New Excellent Technology (NET) & Environmental Technology Verification (ETV) Project

New Excellent Technology scheme, introduced in 1997, certifies the excellence of new technologies developed by domestic enterprises, research institutions and universities, in order to facilitate commercialization and technology transactions and lay the foundation for early market entries with products that offer improved reliability, developed with new technologies. The NET mark is shown below.

Figure 4 NET mark

This scheme is valid for:

- Wastewater / water treatment technology
- Solid waste treatment technology
- Air pollution protection technology
- Wastewater / piping technology
- Ecosystem-restoration technology
- Technology related with Environment

3.3 Energy Efficiency Grade Label

This label enables consumers to preferentially purchase energy saving products. Applicable to both domestic manufacturers and importers, devices are rated on a 5-point scale for energy efficiency, with 1 being the most energy-efficient. The Korea Energy Management Corporation (KEMCO) applies the Energy Efficiency Grade Label to 24 items and the minimum efficiency label to 11 items such as Fluorescent Lamps ballasts, Three-Phase Induction Motors, Adapter & Chargers, Transformer, Electric fan heater, Electric stove, Electric pad, Electrically heated water mat, Electrical heating board, Electrical bed and Electrical radiator.

Figure 5 Energy Efficiency Grade Label

3.4 High-efficiency Appliances Certification Program

The High-efficiency Appliances Certification Program applies to products which perform above set efficiency standards. There are 44 target products including pumps, boilers, and lighting appliances. The figure below is the mark for high efficiency appliance.

Figure 6 Mark for High Efficiency Appliances

3.5 E-Standby Program

E-Standby Program is to promote products, pre-identified by the Government, which use minimal standby power. There are 20 target products in home electronics and office equipment, etc.

Figure 7 Mark for Voluntary Products satisfying standby standard

A Mandatory Standby Power Warning Label program has been introduced for the first time in the world by amending 'The Rational Energy Utilization Act'. Specified products must limit standby power below 1W or face a fine and carry a distinctive label (below):

Figure 8 Mark for Mandatory Products Failing Standby Standard

3.6 Healthy Building Material

The Korean Air Cleaning Association awards this label to building material which emits low TVOC and HCHO.

Figure 9 Logo of Healthy Building Material

3.7. Clean Air (CA)

This label is issued by the Korea Air Cleaning Association for indoor air purifiers which pass strict performance tests based on the notified standards.

Figure 10 Logo of Clean Air

3.8 Good Recycled

This government certification of recycled goods aims to guarantee the quality and eco-friendliness of the product.

Figure 11 Logo for Good Recycled

4. Current Status of each eco-label

The table below indicates the number of categories and certified products under each type of label.

Table 2 Number of Certified Product Groups of each eco-label

Eco-label	Number of Certified Product Groups
Korean Eco-label	150 product groups 1672 companies 9799 products (June 2013)
Green Certification	85 product groups
New Excellent Technology (NET)	310 technologies (October 2009)
Energy Efficiency Grade Label	35 products
High-efficiency Appliances Certification Program	44 products
e-Standby Program	20 products
Healthy Building Material	281 companies 603 products (May 2012)
Clean Air	77 models 16 companies (29 February 2012)
Good Recycled	16 product groups 206 companies 247 products (June 2013)

Initiatives under consideration to improve the Korean Ecolabelling Programme include special schemes for SMEs, bolstering consumer education programmes and tax exemption for consumers purchasing green products.

5. Promoting Ecolabelled Products to Individuals and Household Consumers:

In 2010, the Korean Environmental Industry & Technology Institute (KEITI) and the Ministry of Environment announced the launching of a website which provides information on green products. The website seeks to demonstrate the advantages of green living in an attempt to integrate green values into the popular culture. On the website consumers can access information about green products, statistics and performance standards of public institutions as well as share opinions about various green products.

6. Regional Cooperation Possibilities:

Korea has Mutual Recognition Agreements for its Ecolabel with Taiwan, Thailand, Japan, China as well as with Australia, New Zealand and the 5 Nordic countries which use the Nordic Swan label. MRAs reduce costs by mutualising audits, remove trade barriers and improve the supply of eco-friendly products. Korea, China and Japan

have also agreed to accelerate the development of common criteria and lead the development of MRA amongst Global Ecolabelling Network members.

7. Overview of Sustainable Public Procurement in S. Korea

Upon the enactment of the "Act on the Promotion of the Purchase of Eco-Products", Korea became only the second country in the world to mandate the procurement of eco-products by public agencies. Legislation on the promotion of the purchase of environmentally preferable products was enacted in December 2004, and enforced in July 2005. The purpose of the law is to expand the eco-product market through a mandatory public green purchasing scheme and to prevent wasteful use of resources and environmental pollution, and to contribute to sustainable development in the domestic economy.

The Law authorizes the Ministry of the Environment (MoE) to set up "Purchasing Guidelines for Environmentally-friendly Products", and directs public agencies to prepare and announce purchasing strategies, plans and initiatives and report on these annually. Government agencies are obliged to purchase designated green products from the list of products qualifying for and labelled with the Korean Eco-label, Energy Saving Mark or Good Recycled Mark.

7.1 Impact of Mandatory GPP:

Since 2005, the implementation of the Green Purchasing Law has resulted in a tremendous increase in the amount of green purchasing in the Korean public sector from USD 255 million in 2004 to USD 850 million in 2006 (Yu 2009, Adjei 2010). The Korea Eco-Product Institute officials predicted that the level of green purchasing will reach USD 1400 million in 2010, representing 80% of all government purchasing (Moon 2006).

Going beyond Green Purchasing, in 2009 the Ministry of Strategy and Finance announced that Korea will spend US $36 billion from 2009 to 2012 and will create 960,000 jobs by financing a Green New Deal Plan accounting for nearly Korea's entire fiscal stimulus package.

7.2 Future Plans:

- Expand the products groups covered by GPP among the items that are in high demand by public institutions
- Ensure public institutions are to use green construction materials when building new facilities or construct according to green building certification program
- Strengthen green procurement policies in the private sector and encourage green consumption among ordinary consumers

Expand partnerships with UNEP: Green Purchasing training programmes.

COUNTRY REPORT

Cambodia

1. Socio-economic situation in Cambodia

1.1. Population:

14.86 million (2012)

1.2. Age wise population distribution

Age	*% of total population*	*Gender split*
0-14 years	31.7%	male 2,428,507/female 2,397,327
15-24 years	21.2%	male 1,597,990/female 1,627,161
25-54 years	38.2%	male 2,828,752/female 2,985,226
55-64 years	4.9%	male 287,073/female 464,991
65 years and over	3.9%	male 221,356/female 367,156

About 53% of the population is under 24 years of age – significantly young, so that consumption can be expected to grow significantly in the future.

1.3. Rural Urban population split

	% of total population
Urban	20
Rural	80

Cambodia is still largely rural. However, considering the experience of other countries in S-E Asia, urbanization is probably inevitable, further adding to issues of consumption/ over-consumption as incomes rise, as well as problems related to waste management, construction etc. Only Phnom Penh has a population exceeding 1.0 million

1.4. GINI Index

The latest available GINI index figure is 43 (2007). As this rises, it will have an impact on consumption but it is also hoped that higher disposable incomes will lead to greater concerns about environmental impacts of consumption.

1.5. GDP

14.06 billion USD (2012)

1.6. GDP composition

Agriculture	36.0 %
Industry	24.3 %
Services	39.7 %

1.7 Imports

$8.840 billion (2012)

1.8. Major Imports by product (in million $) (2010)

Products	*Value*	*% of total*
Gold	1463.40	22.34%
Knit or crochet fabric, width <30 cm >5% elastomer	1093.41	16.69%
Petroleum oils, refined	321.04	4.90%
Floating or submersible drilling platforms	233.29	3.56%
Other woven fabrics of synthetic staple fibers	224.88	3.43%

Much of the imports given above are actually intended for conversion of textiles into finished garments and apparel.

1.9. Exports

$8.433 billion (2012)

Major Exports by product (in million $) 2010

Products	*Value*	*% of total*
Unused postage, revenue or similar stamps	1776.97	20.87%
Sweaters, pullovers, sweatshirts, etc	1160.11	13.63%
Women's suits	666.95	7.83%
Men's suits	437.86	5.14%
Women's suits, not knit	436.20	5.12%
Footwear, with leather body	433.83	5.10%

1.10. Principal import sources (2012 est)

Country	*share as a % of total imports*
Thailand	27.2
Vietnam	20
China	19.5
Singapore	7.1
Hong Kong	5.9
South Korea	4.3

It will be seen that as much as 84% of Cambodia's total imports are from the ASEAN+3 countries.

1.11. Principal export destinations (2012 est)

County	*share as a % of total exports*
United States	32.7
United Kingdom	8.4
Germany	7.7
Canada	7.7
Singapore	6.6
Vietnam	5.8
Japan	4.7

In contrast to imports, exports are mainly to the West; the ASEAN+3 Region barely accounts for 17% of total exports.

2. Ecolabelling in Cambodia: Overview

The Institute of Standards of Cambodia (ISC) is the national standards body responsible for preparing and publishing standards and guidelines for products, commodities, materials, services, practices and operations in the country. The national standardization program itself is developed through consensus among key stakeholders in the country so as to enhance its business competitiveness.

The main objectives of the ISC are (1) to develop Cambodian standards that meet the needs of industries and consumers so as to promote the quality and safety of products and services; (2) to fulfil the generally recognized requirements of both producers and consumers, and to reduce the waste of resources and eliminate unnecessary steps in order to obtain economic benefits for the country; (3) to ensure the optimum quality level desired by the market; (4) to formulate standards that are aligned with international standards to the maximum extent possible, by using the principle of consensus; and (5) to conform to WTO technical barriers to trade (TBT) rules.

As far as ecolabelling is concerned, some cooperation has taken place between the country and international ecolabelling issuers, including the EU, the International Centre for Trade and Sustainable Development, and so on. (2010). However, Cambodia does not yet have an ecolabelling programme

To encourage the quality assurance of products and services in tourism industry, the Ministry of Tourism plans to establish a special “Ecolabel” to be awarded to those tourism operators who strictly comply with environmental standards of the Ministry of Environment. Tourism operators who are awarded with the eco-label may then use the label on their products and services. (2009). This, again, is a measure aimed at attracting overseas clients, not domestic customers.

2.1 Ecolabels in Cambodia (for exports markets)

A large number of exporters have registered ecolabels from all over the world to access new markets and boost their sales. The ecolabels present in Cambodia are:

- Audubon International
- Certified Wildlife Friendly

- EarthCheck
- Green Globe Certification
- Programme for the Endorsement of Forest Certification (PEFC) schemes
- TCO Certified

These are for export products. The existence of products bearing such ISEAL type labels within the country does not mean that domestic consumers are demanding such certification.

3. Sustainable Public Procurement in Cambodia

Cambodia, in March 2013, approved a national policy and strategic plan for Green Growth in the 2013-2030 period, aiming at developing the economy with consideration for environment and natural resources sustainability.

The National Green Growth Roadmap will focus on addressing seven "A"'s: Access to clean water and sanitation; Access to renewable energy; Access to information and knowledge; Access to means for better mobility; Access to finance and investments; Access to food security (agriculture) and non-chemical products; and Access to sustainable land-use.

Earlier, Cambodia had already adopted several legal instruments to promote the green growth, including the roadmap for Green Growth, the memorandum of understanding on Green Growth cooperation between Cambodia and the Republic of Korea's Global Green Growth Institute (GGGI) and the establishment of the National Council of Green Growth.

The National Green Growth Roadmap of 2009 states *"Overall, Green Growth Initiatives can foster sustainability of economic growth by enhancing sustainable consumption and production, by greening markets and businesses, by creating favourable climate for the establishment of sustainable infrastructure that in turn can enable the population to enjoy increased access to crucial goods and services and to ensure equal access for both women and men*." Having expressed a clear intent, the Roadmap does not specifically mention the launch of an Ecolabelling Programme or a policy for the Public Sector to preferentially procure ecolabelled/green goods and services.

Public procurement represents up to 30% of GDP in developing countries. For Cambodia the exact value of public procurement is not known as public procurement is practiced through a plethora of disparate and uncoordinated prakhas (Government issued instructions), sub-decrees and internal guidelines. The estimated value of public procurement is pegged in the range of 20 to 30% of GDP. Recently a draft law on public procurement was enacted (2012). A Central Procurement Authority (CPA) under the Ministry of Economy and Finance exists but its roles and responsibilities are ambiguous. The CPA is understood to be primarily involved only in major public procurement and public works projects and not in the other procurements the RGC makes.

4. Prospects for Regional Cooperation:

Before Cambodia can participate in any international cooperative ecolabelling scheme , it

must first take a decision to create a national Ecolabelling scheme and second, draft a policy for the purchase of ecolabelled products, whether domestically produced or imported, by the Public Sector. Unless and until such decisions - which are largely political - are taken and suitable laws and policies framed, Cambodia will not be able to derive all the advantages of participating in an ASEAN+3 initiative.

It would be in Cambodia's interests to do so. Many goods, both consumer items as well as goods used in infrastructure building, are imported – largely from the ASEAN+3 region. These have a direct impact on Cambodia's environment in the usage and disposal phases of their life cycle. As the country starts to make its own textiles to feed its growing garment manufacturing industry it will face increasing environmental hazards due to air and water pollution unless it adopts cleaner production methods and produces greener goods.

To start with, perhaps Cambodia would do well to use UNEP's initiative on Ecolabelling and GPP in the ASEAN+3 region to learn from others in the Region who are exemplars.

References

References (part 1):
http://www.indexmundi.com/cambodia/#Economy
www.worldbank.org
http://en.wikipedia.org/wiki/Economy_of_Cambodia
http://atlas.media.mit.edu/country/khm/

References (part 2):
http://www.tourismcambodia.org/camtourismlaw/index.php
http://www.iisd.org/tkn/pdf/trade_ecolabelling_mekong.pdf

References (part 3)
http://gggi.org/cambodia-adopts-2013-2030-green-growth-plan/
National Green growth Roadmap (2009), Minsitry of Environement, Kingdom of Cambodia.
http://www.greengrowth.org/sites/default/files/pictures/Final%20Draft%20Roadmap,%20Feb26-2010.pd f
Sustainable Product Innovation (SPIN), Policy Review and Assessment, UNEP report (Feb 2013)

COUNTRY REPORT

Indonesia

1. Socio-economic Situation in Indonesia

1.1 General Information

Population Size: 251,160,124

The Republic of Indonesia, is a vast archipelago comprising about 17,508 islands, forming a land mass of about 1,904,569 square kilometres.

Indonesia has a diverse range of ethnic groups. The main ethnic groups are Javanese and Sundanese, which together comprise about 56% of the population. In addition Indonesia is also the world's most populous Muslim-majority country with about 86% of Indonesians declared Muslim (Year 2000 census)

Indonesia has 11 cities (2010 data) with populations over 1 million each. 6 of them are on the island of Java and hold more than 21 million. Jakarta, the capital of Indonesia, carries a population of more than 10 million, making it the most populous in Southeast Asia. The combined metropolitan area and its suburbs hold a combined population of more than 28 million, making it one of the largest conurbations on earth.

1.2 Demographics:

56% of Indonesia's population live in rural areas. The age spread is as follows:

Age 0 – 14	27.3%
Age 15 – 64	66.5%
Age > 65	6.1%

As with its neighbour, Malaysia, the bulk of the population is in the working age group where consumption levels are relatively high.

Being a populous country, Indonesia has 11 cities with a population of over 1 million.

2. Economic Situation

2.1 GDP Break-up

Table 1. Structure of economic system in 2012 (Ref. CIA Economic fact Book)

Economic Sector	GDP%
Agriculture	14.4
*Industry	47.0
Services	38.6
**Main industries include*: *petroleum and natural gas, textiles, apparel, footwear, mining, cement, chemical fertilizers, machinery, electronics, hardware, software, telecommunications, plywood, rubber, food, tourism* GDP by PPP USD1.212.trillion (2012 est)	

2.2 Major Exports:

Table 2. Top seven exported goods (Ref. www.tradingeconomics.com/ Statistics Indonesia)

	Goods	Percentage of Value
1	Oil and Gas	20%
2	Mineral fuels and oils	14%
3	Fats, oils and waxes	11%
4	Electrical equipment and machinery	9%
5	Rubber and rubber articles	5.5%
6	Clothes and footwear	6%
7	Wood and paper	5%

Exports for December 2013 amounted to 16983.60 USD Million.

Major export partners were: China (14%), Japan (12%), USA (9.5%), India (8%), and others including Singapore, Malaysia and South Korea.

2.3 Major Imports:

Table 3 Top five imported goods Ref. www.tradingeconomics.com/ Statistics Indonesia)

	Goods	Percentage of Value
1	Oil and Gas	22%
2	Machinery	15%
3	Electrical equipment	10%
4	Iron and steel	5%
5	Vehicles	5%

Imports for December 2013 amounted to 15458.50 USD Million.

Major import partners were: China (19%), Japan (15%), USA (7.5%), Singapore (7%) and others including Thailand, South Korea and Malaysia.

3. Review on eco-labelling schemes in Indonesia

Indonesia has an national Ecolabel Scheme whereby products applying for ecolabelling can be awarded a Type I Ecolabel known as ‘Ramah Lingkungan’. See logo below.

The Indonesian Eco-label Logo and Scheme of Eco-label Accreditation and certification were launched on World Environment Day June 5th 2004. The vision of the Indonesian Eco-label, also known as Ekolabel Indonesia, is to be an effective tool to protect environment and human life, increase product efficiency and competitiveness.

Indonesia's Act No 32/2009 Environmental Protection and Management provides for improving the quality of environment, utilizing instruments to mitigate environmental pollution and degradation , and change the paradigm from 'end-of-pipe' to 'preventive'. Thus Indonesia's Ecolabel Program is thus being implemented with the following objectives:

- Synergy of mitigation of negative environmental impact along the product life cycle to the environment

- Encourage demand and supply of environmentally friendly products

- To provide guidance to industry proactively to proactively improve their products

- To educate and help consumers/society in understanding and identifying environmentally friendly products.

The ecolabel program uses the following Standards: ISO 14020 General Principles of Environmental labels and declarations, ISO14024 Guideline of Ecolabel Type I, and ISO 14021 Environmental Label and Declarations – Self Declared Environmental Claims (Type II Environmental Labelling), as technical reference for implementation.

This ecolabel is to be found on retail goods in Indonesia. Criteria for the ecolabel certification are based on scientific technical studies of the products' environmental aspects throughout their lifecycles. As at October 2013 product eco-label criteria have been developed for 12 product groups, namely:

- Non-coated printing paper
- Sanitary tissue paper
- Wrapping paper
- Detergent powder for domestic laundry
- Leather
- Leather casual shoes
- Textile
- Dry call
- Coated paper
- Water-based paint
- Plastic shopping bag
- Compost from pulp and paper waste

As an example of implementation, under the product category 'non-coated printing paper, 19 brands have been certified from 4 enterprises. These were certified by 2 LSE – Mutu Agung Lestari (Maleco) and Pulp and Paper International Certification Services (PaPICS).

A voluntary catalogue of products with self-declared environmental labels has been developed by non-government parties.

In Indonesia's coffee industry eco-labelling has been suggested as a solution to indirectly increase productivity and solve environmental problems brought about by coffee cultivation through better farming techniques imposed by eco-labelling implementation. However there are many issues impeding the implementation of coffee certification, such as limited support from the government, low educational level of farmers, lack of awareness of advantages of eco-labels, differences of certification scheme by different coffee-importing countries, and financing for the certification fee.

3.1 Challenges and Barriers to Ecolabelling:

The constraints faced in promoting the national ecolabelling scheme in Indonesia are mainly

- Lack of awareness of ecolabel system

- Limited availability of information on products with environment label

Programs to address these constraints include

- Enhance partnership with the Indonesian Chamber of Commerce (KADIN) on promoting environmentally-friendly products and ecolabel system to industry, including development of criteria, establishing an 'ecolabel-desk', and support to SMES

- Provide enhanced guidance to self-declare ecolabel and 'green list' initiative by non-government parties

- Enhance information service and engagement to stakeholders on environmentally friendly products

3.2 Other Environmental Labels:

Other voluntary standards /ecolabels being used by Indonesia include

- Certificate/labelling for timber forest products (Indonesian legal wood)

- Energy Efficiency Label

4. Green Public Procurement in Indonesia

Public Procurement and ecolabelling are included in the national/federal government approach to sustainable development/SCP to a limited extent currently. There are also no

related laws or regulations for this purpose. Thus sustainability criteria are not commonly applied in the purchasing process, except for the occasional environmental criteria.

A report on public procurement sustainability in Indonesia in 2008 revealed that the practice of public procurement with social and environment consideration, in some areas, had been adopted by several government institutions, based on their responsibilities. For example, Ministry of Women Empowerment considers gender equity and women development issues in public procurement activities, while Ministry of Trade takes into account empowerment of SMEs. There is also a good example from the city of Yogyakarta, where the mayor insisted on energy-saving bulbs for street lights. However, a holistic approach to GPP is missing and far there are no monitoring or reporting systems in place yet for green public procurement except for some government internal auditing systems.

Indonesia has been moving towards sustainable procurement in implementation and in regulation over the years. There are many further opportunities to place sustainability considerations into procurement criteria.

4.1 Challenges and Barriers to GPP

Obstacles seen to hinder or impede the adoption of GPP practices in Indonesia include the following

- Sustainable products are deemed to be more expensive, while the main selection criteria for purchasing is price

- There is some supply of sustainable products/services but they are available only on the international market

- There is a lack of information and knowledge about GPP

- The overall public procurement system is inadequate for incorporating GPP

- Legislation or regulations are lacking

5. Review on eco-labelling scheme in regional level

Indonesia is interested in creating regional cooperation initiative for harmonization or interoperability. The view of the Ministry of Environment is that this can be achieved through Capacity Building, Manufacturer Support Programmes, Regional Cooperation program and Pilot Projects. The ASEAN Secretariat is based in Jakarta and is thus in a unique position to accelerate the ecolabelling and GPP process, both domestically and as an intra-Regional initiative. Indeed senior officers of the Indonesian Ministry have been deputed to the ASEAN for this very purpose.

6. References

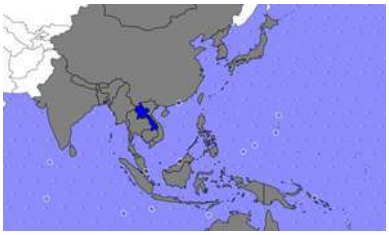
1) http://en.wikipedia.org/wiki/Demographics_of_Indonesia Demographics of Indonesia
2) http://worldpopulationreview.com/countries/Indonesia-population Indonesia Population 2013
3) www.ekobai.com/standards/details/1159/**ekolabel**-**indonesia**
4) www.ecolabelindex.com/ecolabel/lembaga-**indonesia**-**ekolabel**
5) www.**ecolabel**index.com/**ecolabels**/?st=country,id
6) www.city.sendai.jp/kankyou/kanri/icgps-e/pdf/special_2-1.pdf **Indonesian Eco-Label Program**, Mohammad Helmy, Assistant Deputy for Standardization and Technology, Ministry of Environment, 2004
7) www.tradingeconomics.com/Indonesia
8) Global Finance **Indonesia**, 2012
9) Economy Watch **Indonesia Exports, Imports and Trade**, 15 March 2010
10) The World Bank **World Development Indicators – Indonesia**, 2011
11) **Indonesia Ecolabel Program Implementation**, Noer Adi Wardojo, Asst. Deputy Minister for Standards and Technology, Ministry of Environment Indonesia, September 2013
12) Economy and Environment program for Southeast Asia. "**Impact of Eco-labelling on Indonesia's Smallholder Coffee Farmers**" by Nuva, Yusif, Nia Kurniawati and Hanna
13) Questionnaire response on the **s tatus assessment on GPP/GPP and Ecolabelling** for Seoul Meeting. Completed October 2013, by Ministry of Environment Indonesia.
14) 3rd International Public Procurement Conference Proceedings 28-30 August 2008.
"**Public Procurement Sustainability in Indonesia: Environmental, Social or Economic Tradeoffs** " by Susy Rizki Sadikin

COUNTRY REPORT

Laos PDR

1. Socio-economic situation in Lao PDR

1.0 General information



Population 6,645,827 persons

1.1 Demographics

❖ Age-wise distribution of population

Lao PDR had an estimated population of 6.5 million in 2012, with a high proportion of young people. Some 59% of the population were children and young people below the age of 25 years. The mean household size was 5.2, 10 and 88% of household heads were male.

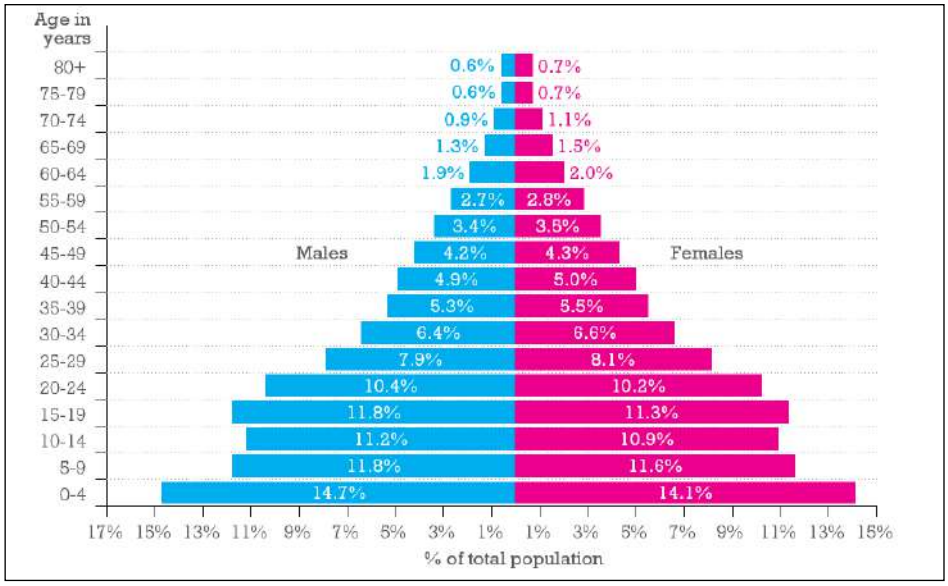


Figure 1 The distribution of Lao PDR population by age group in 2012

Clearly, Laos PDR is a very young country and consumption will be a major issue in the next decades.

❖ Split of Urban-Rural population (percentage)

Lao PDR is still sparsely populated with an annual population growth rate of around 2.1%. Urban areas have much higher growth rates; one estimate by the UN is as high as 4.7%. The country is ethnically diverse, having 49 official ethnic groups. The ethnic groups are marked by different cultures, traditions and livelihood systems.

❖ Urbanization

No city in Lao PDR has a population exceeding 1million people. Savannakhet, Vientiane, Champasak and Luang Prabang are major cities.

1.2 Economic situation

❖ Gini Index

The Gini index of Lao PDR is 0.48% which is still low compared to some other countries in ASEAN, but Lao PDR is also one of the two ASEAN countries with available data where inequality is rising. Consumption inequality in Lao PDR has increased by 5 percentage points from 1992/93 to 2007/08.

❖ Composition of GDP – by sector

Table 1 GDP composition by sector, (1Oct.2012 – 30 Sep. 2013)

Economic Sector	GDP (%)
Agriculture	26
Industry	34
Services	40

Source: http://www.indexmundi.com/laos/economy_profile.html

According to the World Bank, the GDP of Laos was U.S $ 9.42 billion in 2012, and grew at 8.2%. Within this, the agriculture sector grew at 4%, industry 12.6% and services 8.4%. The comparison between actual and targeted GDP growth rate in the Sixth Plan is presented in Table 2.

❖ Imports

Major imports of Lao PDR are presented in Table 4.

Table 4 Major imported goods in 2012 (Lao Statistics Bureau)

	Goods	Value (million USD)
1.	Minerals products	429.7
2.	Machinery and mechanical appliances, Electrical equipment, Parts thereof, Sound recorders and reproducers, Television image, and sound recorders and producers, and parts and accessories of such articles	374.0
3.	Vehicles, aircraft, vessels and associated transport equipment	260.8
4.	Base metals and articles of base metal	139.1
5.	Products of the Chemical or allied industries	75.5
6.	Miscellaneous manufactured articles	65.1

Products categories in # 2 above could include consumer goods, office equipment etc where Ecolabelling would be applicable, but full details were not available. On the whole, however, imported goods are not of the classification where an ecolabel could be meaningfully applied.

❖ Major exports

Table 5 Top ten exported goods in 2012 (Lao Statistics Bureau)

No.	Goods	Value (million USD)
1.	Base metals and articles of base metal	478.9
2.	Natural or cultured pearls, precious or semiprecious stones, precious metals, metals clad with precious metals, and articles there of, Imitation jewelry, Coin	162.1
3.	Vegetable products	140.0
4.	Minerals products	61.1
5.	Wood and articles of wood; Wood charcoal, Cork and articles of cork, Manufactures of straw, esparto or of other plaiting materials; Basketware and wickerwork	47.6
6.	Prepared foodstuffs, Beverage and spirits and vinegar; tobacco and manufactured tobacco substitutes	35.1
7.	Products of the Chemical or allied industries	17.5
8.	Miscellaneous manufactured articles	3.8
9.	Plastic and articles there of; rubber and articles there of	1.7
10.	Live animals and animal products	1.2

Most of the exports were to neighbouring countries, particularly Thailand and Vietnam as the table below indicates.

Table 6: Major Export Markets (2008)

No.	Countries	Value (million USD)	Percentage (%)
1	Thailand	650.8	59.60
2	Vietnam	146.0	13.37
3	Australia	67.6	6.19
4	China	20.2	1.85
5	Switzerland	10.1	0.92

However, the structure of export market in the last 5 years has changed significantly. The Asia market accounted for 67.54%, EU accounted for 20.40%, Oceania (Australia) 10%, and South America 2.02%. In this, ASEAN (10 countries) covered 53.55% and ASEAN+ 3 covered 63.03%.
(Source: http://www.la.undp.org/content/lao_pdr/en/home/countryinfo/)

2.0 The current status of ecolabelling in Lao PDR

As of date Lao PDR has not implemented an ecolabelling program mainly because of lack of awareness amongst both the government and private sectors. There is also an absence of legislation supporting the establishment of an ecolabelling programme.

The principle stakeholders, managers and drivers who could take action in ecolabelling implementation are the Ministry of Natural Resources and Environment, Ministry of Industry and Commerce and Ministry of Science and Technology.

2.1 Testing and Certification facilities:

Lao PDR has a national standard testing centre but this is not geared specifically for ecolabelling.

2.2 Current status of Sustainable Public Procurement (GPP) in Laos

Similarly Lao PDR does not have GPP laws and/or policies again for want of awareness and sensitization among the government and general public and as with ecolabelling, there is no legislation or policy on GPP/GPP

At a regional level, Lao PDR green hotels are being promoted in the tourism industry through an ASEAN scheme.

3.0 Summary and Prospects for Regional Cooperation

At the national level, Lao PDR has implemented neither an ecolabelling nor GPP program. The major reason is that awareness and interest in ecolabelling and GPP among government, private sectors and general public are relatively low and Government's priorities lie elsewhere. However, a form of an ecolabel exists in the tourism sector in Lao PDR through ASEAN scheme such as green hotels with STARs.

As a member of ASEAN, Lao PDR can learn and observe the ecolabelling and GPP implementation from other countries that have more than 20-year experience on these programs (China, Japan, Republic of Korea and Thailand). Moreover, those countries can support or provide technical assistance for ecolabelling and GPP programs to facilitate their development in Lao PDR.

It is necessary to create awareness amongst all levels of stakeholders, public or private sectors.

COUNTRY REPORT

Malaysia

1. Socio-economic situation in Malaysia

1.1 General Information

Population Size: 28,334,135 (2010 est.)

Malaysia: a federal constitutional monarchy in Southeast Asia it consists of thirteen states and three federal territories with a total landmass of 329,847 sq kilometres separated by the South China Sea into two similarly sized regions, Peninsular Malaysia and Malaysian Borneo. Land borders are shared with Thailand, Indonesia, and Brunei, and maritime borders exist with Singapore, Vietnam, and the Philippines. In 2010 the population was 28.33 million, with 22.5 million living on the Peninsula.

1.2 Economic Situation

GDP: USD 305.826 billion (2011 estimate)

Inflation: 2.7% (2012 est.)

Unemployment Rate: 3.1% (2012 est.)

Table 1 Composition of Economic System (2011 est. Global Finance)

Economic Sector	GDP %
*Agriculture	10.2
**Industry	42.1
Services	47.8
*Agriculture products: *Peninsular Malaysia - palm oil, rubber, cocoa, rice; Sabah - palm oil, subsistence crops; rubber, timber; Sarawak - palm oil, rubber, timber; pepper* **Industries: *Peninsular Malaysia - rubber and oil palm processing and manufacturing, petroleum and natural gas, light manufacturing, pharmaceuticals, medical technology, electronics and semi-conductors, timber processing; Sabah - logging, petroleum and natural gas production; Sarawak - agriculture processing, petroleum and natural gas production, logging*	

1.2.1 Major Exports:

Table 2. Top exported goods (Ref. www.tradingeconomics.com/ Department of Statistics Malaysia)

	Goods	Percentage of Value
1	Electrical and electronics	35%
2	Palm oil	15%
3	Petroleum products	9%
4	Liquefied natural gas	7%
5	Timber	-
6	Natural rubber	-
7	Others: chemicals, machinery , appliances and manufactured metals	-

Exports for November 2013 amounted to 62249.90 MYR Million.

Major export partners were: Singapore (15%), China (13%), Japan (12%), European Union (9%), USA (9%), and others including Thailand, Hong Kong and Indonesia.

1.2.2 Major Imports:

Table 3 Top imported goods Ref. www.tradingeconomics.com/ Department of Statistics Malaysia)

	Goods	Percentage of Value
1	Machinery and transport equipment	60%
2	Manufactured goods	12%
3	Fuel	10%
4	Chemicals	9%
5	Food	6%

Imports for November 2013 amounted to 52533.51 MYR Million.

Major import partners were: China (15%), Singapore (13%), European Union (11%), Japan (10%), USA (8%), and others including Thailand, Indonesia, Taiwan and South Korea.

2. Demographics:

2.1 Urbanization:

70% of Malaysia lives in the cities – a high percentage for the ASEAN region which tends to be largely rural. As a general rule, consumption in urban agglomerates is higher than in rural areas on a per capita basis, and problems of waste management, mobility/transportation, etc. are also higher in urban areas.

2.2 Population spread:

Age 0-14: 29.6%
Age 15-64 65.4%
Age > 65 5.0%

The bulk of Malaysia's population is in the working or productive age where consumption is relatively high

3 Review on eco-labelling schemes in Malaysia

A National Advisory Committee on Eco-labelling was formed in 1992 under the national standard infrastructure managed by SIRIM. In 1994 ISO formed the Technical Committee on Environmental Management, ISO TC 207 and the National Advisory Committee on Eco-labelling was changed to Industry Standards Committee on Environmental Standards. The Environmental Management System Certification Scheme was launched by SIRIM QAS International in 1996.

SIRIM started research in Life Cycle Assessment (LCA) in 2001. The SIRIM Eco-label was launched in November 2004. On 17th August 2011 this eco-label was upgraded to National Eco-labelling Scheme.

In creating a conducive environment in terms of Green Technology, the Ministry of Energy, Green Technology and Water (KeTTHA), under the Green Technology Sector and in collaboration with SIRIM Berhad as the program developer with Malaysian Green Technology Corporation (Green Tech Malaysia), was tasked to implement the Green Procurement Pilot Program and Eco labelling. This program started in August 2010 and was completed on April 2011.

In addition KeTTHA and Green Tech Malaysia have developed a Green Labelling System (MyHIJAU Label) that considers such voluntary labelling/standards that recognise green products and services as

Green Labelling Schemes	Sectors	Logos	Scheme Developers/ Certification Body
SIRIM Eco labelling Scheme*	Manufacturing & Services		SIRIM QAS International Sdn Bhd
Malaysia Farm Certification Scheme for Good Agriculture Practice (SALM)	Agriculture		Department of Agriculture
Malaysia Organic Scheme (SOM)	Agriculture		Department of Agriculture
Malaysia Timber Certification Scheme (MTCS)	Forestry		Malaysia Timber Certification Council (MTCC)
Energy Efficiency Rating & Labelling Scheme	Energy		Energy Commission (ST)
Water Efficient Products Labelling Scheme	Water		National Water Services Commission (SPAN)

***The SIRIM Type 1 Ecolabelling Scheme is de facto the National Ecolabelling Scheme of Malaysia.**

The MyHIJAU Programme is part of the National Sustainable Consumption and Production Blueprint, under a central agency incorporating the Economic Planning Unit, Ministry of Finance, KeTTHA and Green Tech Malaysia, to increase the level of understanding and acceptance of ecolabels to consumers and suppliers.

The GreenTAG Endorsement Programme:

Green Tech Malaysia has set up a GreenTAG endorsement programme to encourage more producers manufacturers, importers, service providers, wholesalers and retailers to move towards providing environmentally safe and sustainable products and services.

This can be seen as a first step towards achieving an eco-label certification for a company's products or services. The companies eligible for GreenTAG endorsement need to meet the following requirements

- Be legally registered Malaysian-owned
- The products/services must comply with at least one of the following criteria:
  - Minimised degradation of the environment
  - Zero or low green house gas (GHG) emission
  - Safe for use and promotes healthy and improved environment
  - Conserves the use of energy and natural resources
  - Promotes the use of renewable resources
  -

Evidence for each environmental declaration made has to provided – in the form of authorised third party test results, documents, or data sheets.

On acceptance and approval of application the company is allowed to use the Green TAG logo (see logo below) on its letterhead (not its products or services) for up to 2 years, by which time the company would have been encouraged to upgrade to eco-label certification. Training and consultation are provided to SMEs to go for Eco-label certification.

The benefits to a company in obtaining the Green TAG are:

- Leveraging on GreenTAG as an instrument for sustainable marketing for green products or services

- Build knowledge and capacity in green technology through participation in Green Tech's workshops, seminars and training programmes

- Free access to consultants for advice on business development

- Special discount to participate in exhibition organised by GreenTech Malaysia

- Opportunity to participate in Government Green Procurement Programme

- Free listing in MyHIJAU Directory.

The MyHIJAU (Green) Directory

This directory is managed by GreenTech Malaysia, and supported by the Ministry of Energy, Green Technology and Water (KeTTHA) and the Green Purchasing Network Malaysia (GPNM). It is a purchasing guide for environmentally conscious consumers to help them make informed purchasing decisions. It provides a listing of a wide range of products or services that have been endorsed or certified to be green by authorised third parties, local and foreign. Applicants have to submit copies of certificates or equivalent evidence for each product or service applied. Products or services without green labels but with GreenTAG endorsement can also qualify for listing.

The directory has 16 main categories

i. Agriculture
ii. Buildings & Maintenance
iii. Clothing & Textiles
iv. Commercial & Industrial
v. Energy
vi. Environmental Services
vii. Food & Beverages
viii. Garden & Landscape
ix. Health & Beauty
x. Home
xi. Office Supplies, Print & Paper
xii. Organic
xiii. Recycle & Waste
xiv. Transport
xv. Warehousing, Packaging & Distribution
xvi. Water

The most well populated categories currently are ‘Energy’ and ‘Buildings & Maintenance’.

The SIRIM Eco-Labelling Scheme

The SIRIM Eco-Labelling Scheme, which issues Type I Eco-label, is recognised as the National Eco-Labelling Scheme of Malaysia. Under this scheme a product is independently tested and verified against preset criteria before the organisation is allowed to use the SIRIM Eco-labelling Mark on its product, packaging and promotional materials. The Scheme currently has 37 product criteria. (available at: www.sirim-qas.com.my).

SIRIM's laboratories are accredited to ISO/IEC 17025 by the Department of Standards Malaysia.

As an example of its many projects in developing and enhancing product criteria for standards and eco-labelling in several industry sectors, an international consortium led by SIRIM Berhad has signed up The Carbon Trust in a project to reduce the environmental impact of the construction industry, whereby guidance and piloting tools at scale will be developed to enable Malaysian companies to measure and reduce lifecycle environmental impacts of products, including carbon footprints, in the construction industry. Thus Type III eco-labels may be developed, based, e.g. on Greenhouse Gas emissions.

4. Review on Green Public Procurement in Malaysia

The Malaysia Green Directory has been developed as a database on green products and services in Malaysia including green certification and is meant to be used by the government procurement officers to buy or procure green products and services. Currently however it is not mandatory for government offices to use this directory.

However where products have attained international standards or eco-labels, e.g. for building materials from Singapore, or Europe, these have been accepted in the local industry market, where such specifications may be made, such as in buildings applying for Green Building ratings.

The green light has been given for a pilot green public procurement programme to be developed and implemented for 5 Ministries, led by the Ministry of Finance (MOF) and KeTTHA Malaysia. Currently the framework for this project is being set up with the formation of a National GPP Steering Committee, chaired by MOF and KeTTHA, with 5 sub-committees on Product, Lifecycle Costing, Legal Review, Capacity Building & Communication, and Monitoring. Most likely the pilot will programme will look at the products such as building materials, and energy categories, where there are a substantial number of certified products and vendors/suppliers.

A study on 'Awareness of Eco-label in Malaysia's Green Marketing Initiative' in 2009 raised the question whether the Malaysian consumer is ready for the eco-label. The study concluded that with more awareness and exposure to environmental related experiences, e.g. with organisations implementing Environmental Management Systems (EMS), the Malaysian consumer would indeed react positively to the eco-label. For a situation requiring the consideration of environmental aspects of a product that is to be purchased the eco-label would definitely be a crucial factor pushing the making of the right purchase.

However in the light of the current economic situation, the situation currently appears to be that the general consumer tends to be more price-conscious than eco-label conscious. Where consumers (industry and household) are more affluent, then the purchasing

decisions appear to be more consciously made for selection of green/certified products and services. Perhaps due to a lack of economy of scale, green/certified products in Malaysia tend to be more expensive than non-green/non-certified products, which inadvertently become the choice of most of the general undiscerning public.

The Green Purchasing Network Malaysia (GPNM) is focussing attention on the waste sector as they feel that waste reduction is key in sustainability and they are promoting green recycling to encourage products/services to achieve a green recycling mark. Their second focus area is towards achieving Green & Safe Building Index, through developing and using Green & Safe building indicators.

5. Impact of Ecolabels on Purchasing:

So far there has been no study conducted on the impact of eco-labels on consumer/government purchasing. However a few consumers do consider eco-labels as one of the main requirements when they buy green products and services.

6. Prospects for Regional Cooperation:

SIRIM QAS International is a member of the Global Ecolabelling Network (GEN) and thus considers its eco-labelling scheme on par with the eco-labelling schemes of other member countries.

Malaysia is moving towards future recognition of ecolabels from other countries that have mutual agreements with Malaysia. However there is no mutual agreement that has been signed with another country so far.

Barriers to mutual recognition include:

- Different technical specifications or requirements in developing product criteria documents
- Different regulations and policies between the different countries
- Level of acceptance by the users and buyers on imported/exported green products and services.

What would be considered useful for the ASEAN +3 region is a suggestion for common standard of sustainable or green procurement for the region.

References:

1. http://www.kettha.gov.my/en/content/eco-labelling. **Eco Labelling**, October 2011
2. http://www.sirim-qas.com.my/index.php/en/our-services/product-certification/eco-labelling-scheme. **Eco-labelling Scheme**
3. http://www.greentechmalaysia.my**. GreenTag for Business** brochure by Malaysian Green Technology Corporation
4. http://www.greendirectory.my. **MyHijau Directory for Business.**
5. Seminar Teknologi Hijau Matrade. **National Eco-Labelling Programme** by Dr. Chen Sau Soon, SIRIM Environmental Technology Research Centre, 21 Dec 2011
6. International Journal of Business and Management. **Awareness of Eco-Label In Malaysia's Green Marketing Initiative** by Nik Ramli Nik Abdul Rashid, Faculty of Business Management , Universiti Teknologi MARA Perlis, August 2009
7. **MyHijau programme leads Malaysian SMEs to develop green products and services** by Eleanor Chen, August 27, 2012
8. Global Finance **Malaysia**, 2012
9. Economy Watch **Malaysia Exports, Imports and Trade**, 18 March 2010
10. The World Bank **World Development Indicators – Malaysia**, 2011
11. **Carbon Trust to help develop eco-labelling scheme for Malaysian construction industry**, Press release 22 Feb 2013
12. **UNEP-APRSCP: Ecolabelling & Sustainable Public Procurement in ASEAN +3** by Abdul Malik Bin Atan, Malaysian Green Technology Corporation, 6 November 2013
13. **Interview** with Mr. Abdul Malik Bin Atan, Senior Analyst, Industrial Processes & Biodiversity, Malaysian Green Technology Corporation, 17 November 2013
14. **Interview** with Mrs. Isnazunita Ismail, General Manager, Environmental Technology Research Centre, SIRIM Berhad, 16 December 2013
15. **Interview** with Mr. Ahmad Rizal Khalit, Principal Assistant Director, Environmental Economics and Natural Resources Section, Economic Planning Unit, Prime Minister's Department, 23 December 2013
16. **Interview** with Mr. Augustine Koh, Secretary-General, and Ms. Joni Chan, Assistant Secretary-General, Green Purchasing Network Malaysia, 7 January 2014.

COUNTRY REPORT

Myanmar

1. Socio-economic situation in Myanmar

Population: 61.12 million (2012 est)

1.1. Demographics

1.1.1 Age wise population distribution (2013 est)

Age	*% of total population*	*Gender split*
0-14 years	26.7%	male 7,514,233/female 7,227,893
15-24 years	18.6%	male 5,183,653/female 5,060,385
25-54 years	42.8%	male 11,724,297/female 11,879,420
55-64 years	6.7%	male 1,754,397/female 1,963,051
65 years and over	5.2%	male 1,244,758/female 1,615,243

There is a “middle-age spread” in the population distribution but Myanmar is not a free market economy. If it were to open up, a surge in consumer demand can be expected.

1.1.2 Rural Urban population split (2011)

	% of total population
Urban	32.60
Rural	67.40

1.1.3 Extent of urbanization (Population of over 750,000) (2009)

City name	*Population*
Rangoon	4.259 million
Mandalay	1.009 million
Nay Pyi Daw	992,000

Myanmar remains a largely rural country.

1.2 GINI Index

Not available

1.3 GDP

$59.427 billion USD (2013 est)
51.92 billion USD (2011)

1.4 GDP composition (2012 est)

Agriculture	38.8 %
Industry	19.3 %
Services	41.8 %

1.5 Imports: $7.477 billion (2012 est.)

(Note: Import figures are grossly underestimated due to the value of consumer goods, diesel fuel, and other products smuggled in from Thailand, China, Malaysia, and India)

1.5.1 Major imports by product (in million $) 2010

Products	*Value*	*% of total*
Self-propelled bulldozers, excavators and road rollers	271.24	5.09%
Motorcycles	248.51	4.66%
Motor vehicles for transporting goods	135.79	2.55%
Palm oil, crude	129.30	2.43%
Structures and parts thereof (bridges, lock gates, towers, etc)	121.07	2.27%

1.6 Exports $$8.23 billion (2012 est.)

(Note: Official export figures are grossly underestimated due to the value of timber, gems, narcotics, rice, and other products smuggled to Thailand, China, and Bangladesh)

1.6.1 Major Exports by product (in million $) 2010

Products	*Value*	*% of total*
Petroleum gases	2366.22	42.06%
Dried legumes	669.95	11.91%
Wood in the rough	476.01	8.46%
Natural rubber	164.17	2.92%
Precious stones	157.85	2.81%

Garments and apparel (classified individually and hence not in the table), are beginning to show a significant rise and constituted 5.75% of total exports in 2010.

1.7 Principal import sources (2012)

County	*share as a % of total imports*
China	37%
Thailand	20.2%
Singapore	8.7%
South Korea	8.7%
Japan	8.2%,
Malaysia	4.6%

1.8 Principal export destinations (2012 est)

Country	*share as a % of total exports*
Thailand	40.5%
India	14.7%
China	14.2%
Japan	7.4%

Once again, the percentages may not be very accurate since there is a significant amount of unofficial trade at the borders. However, the general order seems to be reasonably accurate.

2 Ecolabelling in Myanmar

2.1 Ecolabels in Myanmar (for the domestic market)

Ecolabelling is non-existent in Myanmar's domestic markets. If ecolabelled products are available, it is because the overseas manufacturer-exporters produce only ecolabelled products. There is virtually no awareness of ecolabels, no demand for ecolabelled products and no production of ecolabelled goods and services, except for exports.

2.2 Ecolabels for Exports:

Some exporters have registered with ecolabels from other countries to access new markets and boost their sales. The ecolabels present in Myanmar are:

- EarthCheck
- Green Globe Certification
- Programme for the Endorsement of Forest Certification (PEFC) schemes
- TCO Certified

These exist because overseas buyers insist on them. Testing and certification appears to be done outside the country.

3 Public Procurement in Myanmar

While the Central Statistical Organisation occasionally provides some country information to donors and multinational agencies, the people of Myanmar are unable to access government documents detailing public revenue, expenditures and government procurement, as the present administration has not yet made these documents publicly available. Without a public reporting system and freedom of information laws, public procurement either goes by the lowest price principle or is directive-driven.

4 The Future and Prospects for Regional Cooperation:

As and when the Myanmar economy opens up, it will have a unique opportunity of drawing on the experiences of its neighbours and the ASEAN community so that it need not go through the pains of drafting appropriate GPP policies, nor the inevitable stop-start/trial-and-error implementation difficulties faced by most other countries.

To this extent, Myanmar should be urged to actively participate in discussions on cooperation and network creation from now, even if its participation is not immediately relevant.

References

References (part 1):
http://www.indexmundi.com/burma
http://en.wikipedia.org/wiki/Burma
http://atlas.media.mit.edu

References (part 2):
http://www.ecolabelindex.com/ecolabels/?st=country,mm

References (part 3):
http://www.eastasiaforum.org/2013/08/13/burma-must-declare-war-against-corruption/

COUNTRY REPORT

Philippines

1. Socio-economic situation in Philippines

Population: 97.704 million (2013 est)

1.1 Economic situation

Population 96,706,764 persons

Table 1 Growth Rates of Gross National Income and Gross Domestic Product 4th Quarter 2012 and 2013 and Annual 2012-2013 (at constant 2000 prices) (National Statistical Coordination Board; NBDC)

SECTOR	Annual	
	2011-12	2012-13
1. AGRI., HUNTING, FORESTRY AND FISHING	2.8	1.1
2. INDUSTRY SECTOR	6.8	9.5
3. SERVICE SECTOR	7.6	7.1
GROSS DOMESTIC PRODUCT	6.8	7.2
GROSS NATIONAL INCOME	6.5	7.5

***Note**: *Other services including financial sector, education, hotels and restaurants and etc.*

Table 2 Growth Rates of Gross National Income and Gross Domestic Product by Expenditure Shares 4th Quarter 2012 and 2013 and Annual 2012-2013 (at constant 2000 prices) (National Statistical Coordination Board; NBDC)

TYPE OF EXPENDITURE	Annual	
	2011-12	2012-13
1. Household Final Consumption Expenditure	6.6	5.6
2. Government Final Consumption Expenditure	12.2	8.6
3. Capital Formation*	-3.2	18.2
4. Exports	8.9	0.8
5. Less: Imports	5.3	4.3
GROSS DOMESTIC PRODUCT	6.8	7.2
GROSS NATIONAL INCOME	6.5	7.5

2. Review on eco-labeling schemes in Philippines

2.1 Background of the eco-label scheme

The National Ecolabelling Programme -Green Choice Philippines (NELP-GCP) - is the only Environmental Labelling program of the Philippines. The three main activities of the NELP-GCP are:

- Criteria Development for Product Categories;
- Processing of Application and Awarding of the GCP Seal;
- Promotion and Advocacy.

2.1.1 The Green Choice Philippines (GCP)

Figure 1 Symbol of Green Choice Philippines

The Green Choice Programme (GCP) is a Type 1 Environmental Labelling program which follows the guiding principles defined in ISO 14024. It is a voluntary program which awards an environmental label to products and services that meet a set of predetermined requirements or criteria for a particular product or service developed by the program. The stated objectives of the Green Choice Philippines are:

- To guide consumers in purchasing products and services which have reduced impacts on the environment;
- To encourage manufacturers to adopt processes and supply environmentally sound products;
- To use the label to empower consumers and complement the government's environmental policy.

The GCP administration

The ecolabelling programme is presided over by the National Ecolabelling Programme of the Philippines (NELP) Technical Board that acts as the main policy-making body of the program. It is a quasi-government entity with multi-sectoral representation, being composed of members from government agencies, industry associations, non-government organizations, and consumer groups

There are two functional committees namely the NELP-Technical Committee (NELP-TC) that is mainly responsible for the development of product criteria, and the NELP-Promotion and Advocacy Committee (NELP-PAC) that is tasked to campaign and promote the national ecolabelling program.

The NELP-TC is primarily tasked to develop product criteria. GCP needs to develop a significant number of product criteria for various product categories in order to acquire a critical mass of ecolabelled products or services that are available in the market. An interested company can voluntarily submit an application to the secretariat along with the administrative requirements and proof of their compliance to the NELP-GCP Criteria for a specific product category.

2.1.2 Development of criteria

Under the guidance of the NELP-TC, ad hoc committees are deliberate the details of product criteria for specific product categories. Working Groups consisting of sectoral technical experts are formed to develop criteria for a product category. The criteria are developed by considering the product environmental impacts of a product throughout its life cycle. The key consideration areas are: compliance to environmental policies and regulations, address local environmental concerns and industry capacity. These product environmental criteria must be guided by the principles of ISO 14024 for a Type 1 Environmental Labelling.

Criteria have already been developed for 38 products and 16 Companies, including several MNCs already have qualifying products.

Table 3: List of the 38 criteria which already exist for the GCP

Automotive Engine Oil	Oil Based Paint
Automotive Service Station	Paper Envelope
Bath Soap	Paperboard
Cement	Pen
Computer Monitor	Pencil
Crayons	Photocopier
Desktop Computer	Polyethylene Packaging
Electronic Ballasts	Portable Fire Extinguishers
Facsimile Machine	Printers
Food Services	Printing And Writing Paper
Flourescent	Synthetic Laundry Detergent
Hair Shampoo	Tissue Paper Products
Induction Lamp Luminaires	Toner Cartridge
Infill Material	Water Based Paint
Inkjet Cartridge	Zinc Carbon Batteries
Laptop Computer	Ceramic Tiles
Liquid Dishwashing	Organic Liquid Disinfectant
Liquid Disinfectant	Light Emitting Diode
MFPD	Fiber Cement Board

- On-going: Development of criteria for E-Vehicles
- On-negotiations: Development of Criteria for Hotels and Resorts Development of Criteria for Carbon-Intensive Products

2.2 Testing facility and standards:

Products that are sold in the Philippines, regardless of their country of manufacture, can apply for a Green Choice License for the product category whose certification criteria have already been developed or not yet developed through a panel review process. In order to be certified for an eco-label, the properties of applying products have to meet the criteria of that eco-label.

2.3 Other Environmental Certification Programmes

Although the GCP is the only Ecolabel in the Philippines, in order to recognize producers who adopt sustainable business practices, a scheme of sustainable certification has been devised.

2.3.1 Sustainable certification

- **Agriculture Sector**

The International Finance Corporation (IFC) supports smallholder farmers to adopt sustainable agricultural practices and meet International Certification Standards. They provide technical and business training to farmers in farm management, particularly waste management, water conservation water recycling, organic fertilizers, manual weeding and sorting and selling recyclable wastes. By becoming certified, they are able to demonstrate that they can actually be environmentally and socially responsible and well-trained in sustainable farming giving them a huge chance to expand their export markets and raise their incomes. Certified farms had also a better negotiating position with the banks financial aid is needed..

- **Property Sector**

The Building for Ecologically Responsive Design Excellence (BERDE) Program was created by Philippine Green Building Council (PHILGBC) as a response to the Philippine building industry's need to address the negative impacts of climate change in the property sector. This led to the BERDE Green Building Rating System which is a tool to measure, verify and monitor performance of buildings. BERDE publicly recognizes buildings performing above and beyond existing building and environmental laws, regulations and mandatory industry standards. The rating tool is consensus driven and is achieved through a multi-stakeholder consultation and collaboration process.

- **Sugarcane Sector**

Bonsucro, a member of the ISEAL Alliance, is an association of sugarcane producers and downstream processors whose aim is to ensure a sustainable future for sugarcane production through socially and environmentally responsible initiatives. Bonsucro Certification developed from Better Sugarcane Initiative Certification, an earlier industry stakeholder group concerned about the social and environmental impacts of sugarcane production (SGS, 2013).

- **Biofuel Sector**

The Roundtable on Sustainable Biofuels (RSB) Certification is an international stakeholders' initiative developed to ensure the sustainability of biofuels. This is measured across the supply chain with sustainability claims verified for raw products, intermediate products and final products, ensuring that every link in the chain from field to distribution is covered. The RSB standard takes a holistic approach to sustainability.

3. Green Public Procurement (GPP) in Philippines

Sustainable Public Procurement in the Philippines is spearheaded by the National Economic and Development Authority, the Philippine Council for Sustainable Development and the Philippine Centre for Environmental Protection and Sustainable Development, Inc.

3.1 Policy and Legislation on GPP

Sustainable Public Procurement in the Philippines involves 2 main programs, the Green Public Procurement Program and the Biodiesel Program.

- **Green Public Procurement of the Philippines (2011-2015)**

The Green Public Procurement Program involves the mainstreaming of the National Ecolabelling Programme - Green Choice Philippines through policy support. This also involves the revitalization of Executive Order No. 301 which involves Establishing a Green Procurement Program for All Departments, Businesses, Offices & Agencies of the Executive Branch of the Gov't (23 March 2005).

Other than this, the GPP Program involves the following: development of incentive mechanisms for eco-certified products and services; development of at least 300 Eco labelling standards for government common goods and supplies; capacity building on Green Public Procurement for the national and local government units; conduct of Green Public Procurement pilot project in selected national and local government units; publication of local directory of eco-friendly products and services.

The GPP has 2 legal bases- RA 9003: Ecological Solid Waste Mgt. Act of 2000, which in its Article 4, Section 27 "Requirement on Ecolabelling" states that "Department of Trade and Industry shall formulate and implement a coding system for packaging materials and products to facilitate waste recycling and reuse", and the RA 9184: Government Procurement Reform Act.

The objectives of the Green Public Procurement Program are:

a) to promote a culture of making environmentally-informed purchase decisions in government,
b) to include environmental criteria in public tenders, whenever possible and practicable;
c) to establish the specifications and requirements for products of services considered environmentally advantageous;
d) to develop incentive programs for suppliers of environmentally advantageous; promote ecolabelling as instrument to identify/measure environmental superiority of products/services; purchase products, services in compliance with government procurement policy and international std., such as the WTO Agreement.

The Green Choice Philippines Strategic Plan identified the development of green procurement policy as a strategy to complement environmental labelling programs. The National Ecolabelling Program Board drafted a proposal on Green Procurement Policy for Government Agencies and sent it to the Office of the President for approval. A year later (2004) the Executive Order was signed.

- **Biodiesel Program**

The Biodiesel Program is coined on **Memorandum Circular 55** – Directing all branches/offices of the Government, Including Government-owned and Controlled Corporations to Incorporate the Use of Coconut Methyl Ester (CME) in their Diesel Requirements (9 Feb 2004). The Biodiesel Program involves savings of Php 0.47/km/liter; reduction in diesel importation equivalent to 977,328 litres or Php 24.4 million; poverty alleviation for 20-25 million, Filipinos involved in coconut industry increased income for 3.5 million coconut farmers; and better combustion, less pollution and more engine power with long maintenance intervals..

3.2 Scope of the GPP

• Institutional Mechanism

The Governance Procurement Policy Board (GPPB) and the Office of the President – Presidential Management Staff (OP-PMS) are in charge of implementation oversight, coordination and monitoring. The National Ecolabelling Program Board (NELPB) and the Technical Committee for Green Procurement (TCGP) are the focal agencies for the program.

• Implementation Arrangements

1. Formulation & publication of annual green procurement policy of each national agency targeting at least 30% of the planned budget for green products & services
2. Submission of annual procurement policies to the NELPB for compliance review, monitoring and transmittal to the OP-PMS & GPPB
3. Legal/administrative sanction by OP-PMS & GPPB for non-compliance
4. Conduct of research/studies by NELPB on the identification of environmentally preferable products and services, establishment of ecolabelling criteria for products & services, etc.
5. Pilot-testing by the Dept. of Budget and Management of green procurement for its centralized procurement system of commonly used goods of government

• Technical Guidelines

1. When making purchasing decisions, environmental conservation shall be included in addition to price and quality considerations;
2. Reduction of negative impact shall be incorporated in a wide range of environmental factors (i.e., global warming, air pollution, water pollution, biodiversity lost, human health risk) in purchasing products and services;
3. Products and services shall be selected with respect to their characteristics to reduce their environmental l impacts throughout their life cycles. Local environmental issues shall be taken into consideration;
4. Purchasing environmental goods and services does not necessarily increase its price value in the market. However, a 10 percent difference of prices of the same products or services shall be acceptable with preference on products/services that have environmental claim.
5. Green purchasing does not pose unnecessary barrier to international trade, in compliance with the WTO Agreement on Government Procurement. Likewise, it must conform to the guidelines and procedures of RA 9184

6. Type I Ecolabelling Program (i.e., Green Choice- Philippines) or its equivalent shall be the basis of verifying the authenticity of the claims. In the absence of available Type I eco-label in a particular product or service category, a Type II self-declared eco-label could serve as the basis of verification
7. Designated procurement items and services and its criteria shall be improved and new items shall be added at a given time.

3.3 Current Status

GPP in the Philippines is at its infancy stages and is limited to National Government Agencies. It is in the stage of establishment of Institutional Mechanism & Procedures, and piloting Initiatives.

All government organizations of the Executive Branch are expected to submit their respective green procurement programs to the National Ecolabelling Board (NELPB) within 6 months from the date of its notification/adoption. Green Procurement Program was to be fully implemented within eighteen (18) months from the date of its approval (March, 2005); however, so far, there are only two government agencies which have submitted their Green Procurement Policies: Board of Investments (BOI) and Environmental Management Bureau (EMB**)** – Department Of Environment and Natural Resources.

Strenuous efforts are being made to accelerate GPP, including the conduct of training courses for key personnel. Some private companies have also begun are now practicing Green Procurement;

3.4 Opportunities and Challenges:

On the supply side, there is a limited range of domestically available environmentally advantageous products and services especially in the provinces. Some inhibiting factors include: preparedness of domestic industries, technology, financing, inadequate technical capabilities (manpower, laboratories & equipment) for testing and certification, competition and lack of mutual recognition of standards for domestic and foreign vendors.

On the demand side, the program itself had a tight fiscal position, lacked experience and there have been inadequate advocacy and monitoring efforts. There were also coordination problems, mainly between the ad hoc/individual agencies.

The Biodiesel Program fares slightly better since it involves easy application, a more favourable engine performance and improved mileage, with the additional cost balanced by better fuel efficiency and Improved vehicular emission: Average black smoke reduction by 40% in test runs of vehicles. However, on the downside, there is a lack of budget, lack of awareness, and unreliability of CME supply in several provinces.

4. Opportunities for Regional Cooperation:

Both the Philippines Ecolabelling and GPP programmes are conceptually sophisticated and the inter-linkage between the two is very strong. For the less developed countries in the ASEAN bloc, there is much to learn from the Philippines example and this country could play a major role in assisting in the development of a legislative and management system to ecolabelling and GPP schemes in the Region. The Philippines would also benefit from such cooperation, since the number of ecolabelled products could increase substantially from the present by the expedient of recognising the standards/criteria of the “+3 countries”, after suitable scrutiny and adaptation.

COUNTRY REPORT

Singapore

1. Socio-economic situation in Singapore

1.1 General Information

Population Size 5.4 Million (2013 est.)

The Republic of Singapore, is a sovereign city-state and island country in Southeast Asia. It lies off the southern tip of the Malaysian Peninsula, to which it is linked by road through 2 bridges. Located 137 kilometres north of the equator it has a land area of more than 710 km^2, inclusive of reclaimed land.

The population stood at about 5.3992 million in 2013 (Department of Statistics Singapore, 2014). Being multicultural there are 4 main languages officially used, namely English, Malay, Tamil and Standard Mandarin (Chinese).

Singapore's population is largely urban, with about 80% being locals (Singapore Citizens and Permanent Residents) and the rest foreigners on short-term permits.

1.2 Economic Situation

GDP: USD 274.7 billion (2012 est.)

Inflation: 3.5% (2012 est.)

Unemployment Rate: 2.1% (2012 est.)

Table 1 Composition of Economic System (2010 est. Global Finance)

Economic Sector	GDP %
Agriculture	0
Industry	28.3
Services	71.7

1.3 International Trade:

Total Value of Exports (2010): USD 351.2 billion

Primary Exports – Commodities: machinery and equipment (including electronics), consumer goods, pharmaceuticals and other chemicals, mineral fuels

Primary Exports Partners: Hong Kong (11.6% of total exports), Malaysia (11.5%), USA (11.2%), Indonesia (9.7%), China (9.7%), Japan (4.6%)

Total Value of Imports (2010): USD310.4 billion

Primary Imports – Commodities: machinery and equipment, mineral fuels, chemicals, foodstuffs, consumer goods

Primary Import Partners: USA (14.7% of total imports), Malaysia (11.6%), China (10.5%), Japan (7.6%), Indonesia (5.8%), South Korea (5.7%)

2. Review on eco-labelling schemes in Singapore

Singapore has at least 10 different eco or green labels, namely:

i) Eco-Office Label
ii) Eco-Foodcourt Certification
iii) Eco-Hotel Certification
iv) Energy Label
v) Fuel Economy Label
vi) Green Label
vii) Green Mark
viii) Singapore Green Building Product Certification
ix) Sustainable Manufacturing Label
x) Water Efficiency Label

2.1 Existing Eco labels

i) Eco-Office Label

The Eco-Office Label is a certification managed by the Singapore Environment Council (SEC), which is based on the Eco-Office Rating System. Companies can do an online self-rating first before deciding to apply for certification.

Companies would be rated on their office activities such as: Environmental Policy and Commitment; Purchasing Practice; Paper Use; Printer, Photocopier and Fax Cartridges; Waste Reduction Measures; Recycling; Office Kitchen; Office Furniture; Energy Conservation; Water Conservation; Indoor Air Quality; Signs; and Travel.

ii) Eco-Food court Certification

The Eco-Food court Certification by SEC is for food courts that are environmentally friendly and employ sustainable practices.

The key assessment criteria include having an environmental management system, the efficient use of energy and water, waste management and recycling, communication and education to stall vendors and patrons, and the use of environmentally-preferable resources such as non-styrofoam packaging, reusable or sustainable packaging or utensils.

iii) Eco-Hotel Certification

The Eco-Hotel Certification by SEC provides guidelines and assessment of the environmental performance of hotels.

The certification looks into environmental practices such as energy, water, waste management, and guests and community outreach. Hotels can achieve different certification levels depending on how well the hotel performs, including Platinum, Gold, Silver or Bronze.

iv) Energy Label

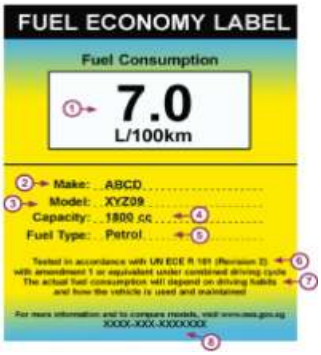
The Energy Label is issued by the National Environment Agency (NEA) and is mandatory for registered suppliers of air-conditioners, refrigerators and clothes dryers to affix the Energy Label on their appliances.

The Energy Label shows the energy efficiency rating and the energy consumption of the appliance. The energy efficiency rating is expressed in green ticks: 0 ticks (Low); 1 tick (Fair); 2 ticks (Good); 3 ticks (Very Good); and 4 ticks (Excellent). The appliance with more ticks is more energy efficient.

The public can check the green ticks for different brands and types of appliances from the database of registered goods. From Sep 2011, the Minimum Energy Performance Standards (MEPS) was implemented for air-conditioners and refrigerators. All 0-tick appliances and some 1-tick and 2-tick appliances are longer be available.

v. Fuel Economy Label

It is mandatory for registered suppliers of motor vehicles to affix a Fuel Economy Label (FEL) on their vehicles. The FEL is managed by NEA and shows the fuel consumption of the vehicle, which indicates how much fuel is needed for travelling a certain distance (L/100km, kg/100km or Wh/km).



For cars with similar engine capacity, a higher fuel consumption means that the car is less fuel efficient. The fuel consumption of all the motor vehicles can be obtained from the Database of Registered Motor Vehicles.

vi) Green Label

The Singapore Green Labelling Scheme (SGLS) is managed by the Singapore Environment Council (SEC) to certify environmentally-friendly consumer products and services. The Green Label of Singapore is a Type-I Ecolabel. To be certified, products must comply with sets of criteria and have all supporting documents and detailed test reports submitted.

Green Label Products (logo shown below) have to undergo an independent third party assessment of product environmental attributes based on a life cycle analysis approach.

The product categories include: Batteries, Building Materials, Cleansers and Detergents, Electronics, Home Appliances, Lighting, Office Machines, Office Products, Organics, Others, Packaging, Paints and Surface Coatings, Paper Products, Personal Electronics, and Personal Hygiene.

The SGLS Directory provides a listing of the certified products.

The Singapore Green Labelling Scheme (SGLS) was launched in May 1992 by the Singapore Ministry of Environment, and has been administered by the Singapore Environment Council (SEC), a non-government organisation, since June 1999. With the exception of food, beverage and pharmaceuticals all products which pass stringent standards of environmental processes and procedures earn the privilege of carrying the label.

More than 2600 products from about 600 companies in more than 12 countries, now don this well-recognised icon.

One current focus sector for the Green Label is that of Building Materials as their certification is accepted by the Green Mark Scheme of the Building and Construction Authority (BCA) of Singapore. The main consumer products that have been certified by SEC are under the paper and detergent categories.

vii) Green Mark

The BCA Green Mark Scheme was launched in January 2005 by the Building and Construction Authority (BCA) to encourage more green buildings and sustainability in the built environment.

The Green Mark is a green building rating system to evaluate a building for its environmental impact and performance based on five key criteria: Energy Efficiency, Water Efficiency, Environmental Protection, Indoor Environmental Quality, Other Green Features and Innovation.

Under the Green Mark assessment system, buildings are awarded the Platinum, Gold Plus, Gold or Certified rating depending on the points scored.

viii) Singapore Green Building Product Certification

The Singapore Green Building Product Certification Scheme was launched by the Singapore Green Building Council (SGBC) in September 2010 to support the BCA Green Mark Scheme, and help the building industry move towards sustainability.

The certification will provide consumers, building industry stakeholders, and government procurement system a listing of assessed and certified green building products in the following categories: Mechanical, Electrical, Facade and Roof System, Concrete and Structural, Interior System, Finishes, Recycled Material, and Renewable Energy.

The products are assessed on: Energy efficiency, Water efficiency, Resource efficiency, Health and Pollution Control, and other requirements such as environment quality

management system, technical performance, and innovation. The score would include: Certified (1 tick), Good (2 ticks), Excellent (3 ticks), and Leader (4 ticks).

ix) Sustainable Manufacturing Label

The Sustainable Manufacturing Label Programme was jointly developed by the Singapore Manufacturers' Federation (SMa), SPRING Singapore and the Singapore Environment Council (SEC). The programme is for manufacturers to establish a baseline on their current sustainable practices and to guide their sustainable manufacturing strategies.

The scoring criteria for the Sustainable Manufacturing Label includes: green corporate policies, product life cycle development, manufacturing processes, operations and facilities, and power and utilities usage.

x) Water Efficiency Label

There are 2 types of Water Efficiency Label for water-efficient water fittings and appliances under the Water Efficiency Labelling Scheme (WELS).

The Label under the Mandatory WELS is managed by PUB and includes shower taps and mixers, basin taps and mixers, sink/bib taps and mixers, flushing cisterns, urinals and urinal flush valve.

The Label under the Voluntary WELS is managed by PUB and the Singapore Environment Council (SEC), and includes showerheads and clothes washing machines.

The Water Efficiency Label shows the water consumption and water efficiency of the appliances and fittings. The water efficiency is expressed in terms of ticks: Zero Tick; 1 Tick (Good); 2 Ticks (Very Good); and 3 Ticks (Excellent). The more ticks shaded on the Label, the more water-efficient a product is.

2.2 New Eco Labels

New upcoming eco labels include the Eco-Retail and Eco-Community Club certifications by SEC, and the Singapore Carbon Label by the Singapore Institute of Manufacturing Technology (SIMTech) and SEC.

3. Other Environmental Labels

In addition there are other types of green labels that are found to be acceptable or used in Singapore and are related to mainly Programmes, Businesses, Operators and Activities. They

include Audubon International, Australian Certified Organic, Carbon Neutral Product Certification, CNET Asia Green Tag, EarthCheck, EPEAT, GEO Certified, Green Globe Certification, GREENGUARD (Indoor Air Quality Certified products), LowCO2 Certification, Marine Stewardship Council, NoCO2, and Programme for the Endorsement of Forest Certification (PEFC) schemes.

Currently there are still not that many products in the various product sectors enabling consumers a sufficient selection to choose the certified products over non-certified products. In this regard SEC intends to encourage more certification through the planning and organising of market surveys. SEC is thus currently putting in efforts to promote more products to be certified and at the same time create awareness among consumers and users.

Products certified by SEC fall in the categories of paper, printers, multi-functional devices and detergents. Others relate mainly to Programmes, Businesses, Operators and Activities. The Singapore Green Labelling Scheme criteria may also take into consideration other accreditation scheme such as GREENGUARD (Indoor Air Quality Certified products), Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC) schemes.

3.1 Impact of Ecolabels on Individual/Household Purchasing

Even in a well-off country, the general feedback is that consumers in Singapore are more concerned over the pricing of products when purchasing, i.e. priority for lowest or lower prices, and value for money rather than looking for an ecolabel as a priority.

With the aim of promoting more products to be certified, awareness among consumers and users is raised at the same time. While consumers are understandably concerned over price differences, Jose Raymond, Executive Director of SEC, had this to say "..... It is a myth that all ecolabelled products are more expensive. We have seen detergents, stationery and office machinery bearing the SGLS logo, but not costing any more than their counterparts."

4. Review on Green Public Procurement in Singapore

There is no current policy for government green procurement. With a wide range of certified cleaning agents, green procurement in the future can take the form of, for example, the PUB, Singapore's national water agency, collaborating with SEC in market surveys and purchases.

5. Prospect for Regional Cooperation on Eco-labelling and GPP

The SGLS is a member of the Global Ecolabelling Network (GEN) and was successfully audited in October 2011 to comply with ISO 14024 and ISO Guide 65 standards for the Global Ecolabelling Network's Internationally Coordinated Ecolabelling System (GENICES) accreditation. So far Singapore accepts certified eco labels from other GEN countries, such as Germany's Blue Angel, Hong Kong's Green Council and United States' Green Seal. This year, SEC is working to establish Mutual Recognition Agreements (MRA) with other countries.

References:

1) www.sec.org/sgls **Singapore Green Labelling Scheme**
2) www.ecolabelindex.com/ecolabels/st?=country,sg **All ecolabels in Singapore**
3) www.sec.org **Commentary on Ecolabelling** by Vaidehi Shah
4) http://en.wikipedia.org/wiki/Demographics_of_Singapore **Demographics of Singapore**
5) Media Release: **Foodcourts Get First Eco-Label In Asia From Singapore Environment Council,** January 2011
6) Press Statement **Singapore's Green Labelling Scheme Crosses Major Milestone,** December 2011
7) Eco-Business.com. **Singapore's eco-label gets a global stamp of approval** By Jenny Marusiak, 10 November 2011
8) Department of Statistics, Ministry of Trade & Industry, Republic of Singapore. **Population Trends 2013**
9) Green Business Singapore **A Guide to the Eco Labels in Singapore,** March 14 2011
10) Global Finance **Singapore**, 2012
11) Economy Watch **Singapore Exports, Imports and Trade**, 18 March 2010
12) The World Bank **World Development Indicators – Singapore**, 2011
13) **Skype interview** with Mr. Damon Yong, Director, Partnerships Development, Singapore Environment Council, 23 December 2013
14) **Feedback** from Mr. Harisuddin Yahya, Resident Environmental Engineer, Singapore Environment Council, 5 February 2014.

COUNTRY REPORT

Thailand

1. Socio-economic situation in Thailand

The data on the socio-economic status of Thailand are presented as three major topics: general information, social situation and economic situation.

Population size 66,785,001 persons

1.1 Demographics

Table 1 Population from registration recorded by age group:

Age group (years)	2010
Total	**63,878,267**
0-19	17.20
20-34	14.81
35-49	15.62
50-64	9.89
Over 64	5.07
Unknown	0.92
Not Thai	0.38

Source: Department of Provincial Administration, Ministry of Interior

As can be seen, Thailand is still a young country and can expect consumption to continue increasing for well over a decade.

Table 2: Urbanization in 2010 (%)

Age group (years)	2010	
	Urban	Rural
Total	100	100
0-19	23.45	29.19
20-34	27.08	19.78
35-49	25.73	24.57
50-64	15.93	17.04

64 +	7.79	9.43

Source: National Statistical Office, Ministry of Information and Communication Technology

The high degree of urbanization generally means a high degree of consumption, rural folk being less likely to live high-consumption lifestyles. There are as many as 21 cities with a population of over 1 million.

The Gini coefficient of Thailand in 2009 was 0.485 according to the National Statistical Office, Ministry of Information and Communication Technology. This is about medium and indicating a reasonably even spread of income

1.2 The Thai Economy

Table 3 Structure of economic system in 2013

Economic Sector	GDP (%)
Industry	39.2
Wholesale and retail	13.4
Transport and communications	9.8
Agriculture	8.4
Construction and mining	4.3
Other services*	24.9

Note: *Other services including financial sector, education, hotels and restaurants, etc.

Source: Bank of Thailand

1.2.1 International Trade:

In 2010, the total value of Imports was U.S.$ 181,321 million comprising crude oil (31,187 million) followed by machinery, gold bars and jewellery, iron and steel products, chemicals and automotive parts and accessories (Ministry of Commerce). Japan was the major source of imports, followed by China, the UAE, USA and Malaysia.

Exports in 2010 were of the order of U.S $ 191,759 million consisting almost equally of computer spares/components and automotive spare parts/accessories, followed by rubber, jewellery and refined oil. In 2013, the ASEAN + 3 region contributed almost 46% of total exports from Thailand. China, Japan and Malaysia feature as major trading partners.

2. Ecolabelling

2.1 Review of ecolabelling schemes in Thailand

There is a single National Type 1 Ecolabel, the Thai Green Label, operating in Thailand. In addition, the SCG Type II Ecolabel is used for certain products and there exist 4 environmental labelling/certification schemes. A summary is provided in the Table below:

Table 4 Well-known ecolabels in Thailand

Ecolabel	Type of Label	Admin. authority	Criteria of product groups
Thai Green Label	Type I	Thailand Environment Institute (TEI)	• Electrical product • Information technologies • Textile • Office material • Building materials • Chemicals • Services • Vehicles • Others
SCG eco value	Type II	Siam Cement Group (SCG)	• Chemicals • Paper • Cement • Building materials • Others
Thailand Energy Efficiency Label (Label No.5)	Other	Electricity Generating Authority of Thailand (EGAT)	• Electrical products • Brown rice
Green Leaf Label	Other	Green Leaf Foundation	• Hotels
Carbon Footprint Label (For product)	Other	Thailand Greenhouse Gas Management Organization (Public Organization) (TGO)	• Textile • Food • Services • Business publication • Packaging • Electrical products • Building materials • Agricultural products • others
Carbon Reduction Label	Other	Thailand Greenhouse Gas Management Organization (Public Organization) (TGO)	Not defined

5. Thai Green Label (TGL)

The Thai Green Label Scheme, effectively the national Eco label of Thailand, was initiated by the Thailand Business Council for Sustainable Development (TBCSD) in 1993. It was formally launched in 1994 by Thailand Environment Institute (TEI) in association with the Ministry of

Industry (MOI) and Ministry of Science, Technology and Environment (MOST) which is now Ministry of Natural Resources and Environment (MNRE).

TGL is defined as ecolabel Type I which operates in accordance to ISO 14024. It is a voluntary scheme, multiple-criteria based, third party program that awards a license that authorizes the use of environmental labels on products indicating overall environmental superiority of a product within a particular product category, based on life cycle considerations.

3.1 Administration of the Ecolabelling Scheme:

Overall administration of the Thai Green Label is entrusted to the Thai Green Label Board which manages the scheme through several layers of expert committees. The Board is intended to be neutral and objective. It consists of the Permanent Secretaries of the Ministry of Industry and Ministry of Science, Technology and Environment, together with representatives from Industry Associations, the Thailand Environmental (TEI), the Thailand Standards Institute (TISI), the Thai Office of Consumer Protection and uniquely, representatives from the Press Association and Public Relations Confederation.

3.1.1 TGL Criteria Development

The TGL criteria are based on the following principles:

- An environmental assessment of the product using life cycle consideration, taking into account all aspects of environmental protection, including the efficient use of raw materials and focusing on opportunities to achieve significant reductions in detrimental environmental impacts.
- Solving specific issues of high political priority, e.g. reduction of waste production and minimization of energy and water consumption.
- Industry's capability to meet proposed criteria with reasonable process modification and/or improvement.
- Availability of appropriate test methods.

Any interested party can submit proposals to the Secretariat for considering additional products/categories. After processing, the request is submitted to the Board which appoints a technical sub-committee to work on the criteria which are once again submitted to the full Board for approval and notification.

3.2 Barriers to TGL implementation

One of the major impediments to greater usage of the TGL is rapid changes in technology, particularly of electrical and electronic devices. The TGL is valid for only 3 years and the certification process takes such a long time that the product is a more or less constant state of flux.

Secondly, even when TGL criteria exist, the actual number of products available is low. Consumers cannot find ecolabelled products and manufacturers in turn say that there is inadequate consumer interest.

Other Environmental Labels

4.1 SCG Eco Value Label

The Eco Value is a label developed by Siam Cement Group (SCG) since 2009. It is the first and only Type II ecolabel in Thailand. The SCG Eco value Label, is a tool that SCG uses to communicate the environmental friendliness of SCG's products to consumers. Moreover, SCG Eco Value products are expected be increase consumer's confidence in the quality and reliability of SCG's products. The SCG eco value Label conforms to ISO 14021, environmental self-declaration claims.

4.2 Thailand Energy Efficiency Label (Label No.5)

The Thai Energy Label, developed by the Electricity Generating Authority of Thailand (EGAT) and implemented in closely association with the Ministry of Energy (MOE), is often termed "Label No.5". The Thailand Energy Efficiency Label rates electrical products on a scale of 1 to 5, with 5 indicating the highest energy efficiency. The label also presents the consumers the average energy consumption per year in the unit of kWh/year and the average electricity price per year in the unit of Baht/year

4.3 Green Leaf

The Green Leaf Program commenced in 1997 is an environmental certification aimed at the Tourism industry in Thailand, which is one of the country's major foreign exchange earners. It established criteria for the hotel sector to follow in order to raise awareness, provide for continuous efficiency improvements and create a positive image of and competitive advantage for the Thai tourism industry.

4.4 Carbon Label

The Carbon Label Scheme in Thailand was initiated by Thailand Greenhouse Gas Management Organization (Public Organization) (TGO). The Carbon Business Office plays the major coordinating and support role for the Carbon Label project.

4.5 Carbon Labels working team and responsibilities

The TGO Board of Director appointed a working team to develop and support the development of evaluating the Carbon Footprint of Products. The objective was to support collaboration between the general public as consumers and the industrial sector as producers to reduce the GHG emission. The project was extended from products to organizations and strived to build the ability of the consumers and producers to evaluate the GHG emission by themselves. Several activities are developed such as Carbon Offset for CSR, Demand on Carbon Credit from CDM project and Voluntary Carbon Reduction project. In early 2013, a working team to develop and support the Carbon Label was appointed to drive the Carbon Market

5. Carbon Labels:

Currently, the well-known Carbon Labels in Thailand are Carbon Footprint and Carbon Reduction Label.:

5.1 Carbon Footprint Label

The Carbon Footprint Label was developed in 1999 by Thailand Greenhouse Gas Management Organization (TGO).

The Carbon Footprint Label is a tool to identify the GHG emissions released in a product's whole life cycle, expressed as units of carbon dioxide equivalent (CO_2eq). This enables consumers to consider the impact on climate change of the product purchased. Moreover, the Carbon Footprint Labelis expected to encourage the ability of Thai product to compete in the global market.

5.2 Carbon Reduction Label

Under TGO, Carbon Business Office assigned Thailand Environmental Institute (TEI) to verify products applying for Carbon Reduction Label registration.

The Carbon Reduction Label is a tool to evaluate the intention of manufacturers to reduce GHG emission in production phase. It can refer to reduction of manufacturing cost through efficiency improvement of production processes. In addition, it can be a choice for the consumer to support the GHG emission reduction products.

6. Current status of each ecolabel

The current status of each ecolabel is presented in the Table below

Table 5: Number of criteria and certified product groups of each ecolabel

Ecolabel	Number of criteria	Number of certified product groups
Thai Green Label	90 (Feb, 2014)	• 581 models • 23 product groups • 69 companies (Feb, 2014)
SCG eco value	15 (2013)	82 products and services (2013)
Thailand Energy Efficiency Label	21 (Dec,2013)	• 3,670 models • 21 product groups (Dec, 2013)
Green Leaf Label	1 (Jan, 2014)	214 hotels (Feb, 2014)
Carbon Footprint Label (for product)	137 (Jan, 2014)	• 1,138 products • 262 companies (Jan, 2014)
Carbon Reduction Label	Not defined as product criteria	• 189 products • 49 companies (Jan, 2014)

7. Standards and testing facilities

In order to be certified for any ecolabel, the properties of applying products have to meet the criteria of that ecolabel.

At present, there are 239 testing laboratories for products accredited to ISO 17025. These testing laboratories are classified to test for three product groups: 1) building materials; 2) electricity, automotive and engineering and 3) chemical, environment, food, petroleum and others.

8. Regional Cooperation possibilities:

Currently, TGL is the only label that has a role in a regional level. Thailand is a Member of the Global Ecolabelling Network and has Mutual Recognition Agreements (MRAs) with Taiwan (2001) S. Korea (2002), Japan and New Zealand (2004), Australia (2005) and China 2007. It has also joined the recently-formed UNEP-initiated ASEAN +3 Ecolabelling & Green Public Procurement Network.

9. Impact of Ecolabels on Individual/Household procurement:

There is a dearth of evidence to quantify the impact of Ecolabels on procurement by individuals/households. This could possibly form the scope for additional research but at present, Ecolabels are best considered as a tool to assist GPP.

10. Green Public Procurement

10.1 Preparation phase of GPP in Thailand

The Thailand Environment Institute commenced a study in 2004-05 to study and select products and services for GPP implementation as a pilot project.

Products were prioritised based on 1) Quantity of use in the central government agencies, 2) Environmental impacts and 3) Economic impacts. The criteria of green purchasing for targeted products and services were developed in according to a) international environmental criteria of products, b) Thai Green Label (TGL) criteria of products and c) the common criteria (selected from TGL criteria) which are corresponding to the capacity of the manufacturers. The selected products in the preparation phase of GPP in Thailand consisted of:

- Printing toner
- Printing paper
- Paper products: document file, document box, envelop, color cover paper
- Correction fluid
- Fluorescent lamp
- Accommodation service (hotel)
- Office cleaning service

10.2 Policy on GPP

The Green Public Procurement (GPP) in Thailand has been implemented with the approval of Cabinet Resolution since 2008 to initiate the mechanism to Greening the Supply Chain. The Minister of Natural Resources and Environment of Thailand (MNRE) has assigned the Pollution Control Department (PCD) to take a role as responsible agency on GPP implementation. At present, Thailand has developed two GPP plans. The 1st GPP plan was implemented in 2008 – 2011 and the 2nd GPP plan for 2013 – 2016.

10.2.1 The rationale of GPP implementation

Thailand has attempted to develop Green Marketing to support sustainable consumption but its growth has been slow in the past ten years because environmental concerns are not really included in purchasing considerations by Thai consumers.

The governmental agencies, central and local, are considered as the biggest consumers in the market their annual procurement budget accounting for about 15% of GDP. Moreover, governmental agencies procure a wide range of product groups such as general products, building materials and services. Recognising that Government agencies are major drivers of green product demand the Regulations of Procurement have been revised to support GPP.

10.2.2 Criteria for determining relative "green-ness" of a product

The criteria of green products and services are in accordance with the Thai Green Label. If certain products or services are not certified by the TGL, they are considered by the "Green Cart" criteria (the criteria determined for GPP which was developed with respect to TGL criteria). PCD launched the Manual of Green Public Procurement containing the criteria for GPP.

10.3 The GPP plan and implementation

10.3.1 The 1st GPP Plan and implementation (2008 – 2011)

Under the 1st GPP Plan, PCD set the targets of implementation in terms of numbers of products and services purchased by participating agencies. These comprised 17 products and the target for purchase increased from 25% in 2008 to 60% of all purchases in these categories by 2011.

Another target was the percentage of agencies participating in in GPP implementation. In 2008, the target was 25% of public procurement agencies out of a total of 170 agencies. By 2011, all 170 procurers were expected to participate.

10.3.2 The implementing measures in 1st GPP Plan

In order to achieve the GPP targets, PCD developed several measures to support the GPP implementation. They cover in some detail the measures and responsibilities for government

authorities, manufacturers, traders and service providers, certifying body and education and public relation.

10.3.3 Evaluation and results of 1st GPP implementation

Since 2008, all government agencies have reported their green purchasing to PCD every six months. The result of implementation in term of number of percentage of purchased green products compared to total purchased products The following green products that did not meet the target of GPP (60% by 2008) are:

Printing toner, document box, printers, steel furniture, whiteboard markers, building paints, photocopier rental service, office cleaning services, accommodation services (hotels).

In terms of number of agencies participating, there was 100% success by 2011. As far as itemised measures were concerned, a study conducted by NSTDA and PCD in 2001 clearly identified reasons for non-implementation of the different measures envisaged.

10.4 Targets for 2nd GPP Plan (2013-2016)

An additional 12 products and services have been added to the Phase 1 list of 17.

10.4.1 Strategies for 2nd GPP Plan

PCD has developed a 4-pronged strategic plan for 2nd GPP implementation Phase.

1) Strategy for driving the volume of GPP: increasing numbers, enhancing confidence, developing capacities, supporting GPP systems.

2) Strategy for encouraging products and services production: supporting manufacturers and traders, promoting labels other than TGL in the first 2 years to establish a green marketplace, establish a national environmental database, strengthen knowledge/understanding amongst suppliers, use fiscal measures to encourage green product production, offer awards and recognition, improve the certification system.

3) Strategy for sustainable consumption of public and other organizations by promoting green products and services in shopping centres, awareness raising of stakeholders, organising exhibitions and fairs and developing networks of green consumers in public and organizations.

4) Strategy for administration, monitoring and evaluation GPP implementation, to add more suitable products and services and to establish a green procurement network.

10.5 Ongoing implementation

The second phase is in the period of preparation of procurement criteria for 12 products and services. The procurement criteria for five products and service has been approved by technical sub-committee on GPP including 1) personal car, 2) lubricant oil, 3) gasoline station, 4) fuel and 5) automobile service station. The procurement criteria for the other 7 products and services are in process.

10.6 Barriers and suggested solutions of 1st GPP implementation

After the 1st GPP implementation, the barriers of implementation have been compiled and the recommendations to overcome those barriers are suggested as shown in the table below

Table 6 Barriers on 1st GPP implementation and suggested solutions to overcome the barriers

Barriers	Suggested solutions to overcome barriers
Production Aspects	
Lack of products in the market that meet Green Label or Green Cart criteria.	• Study and evaluate the volume, value, environmental impact, and market of products and service consumed by government authorities then add more significant lists of products and services. • Develop the good practice guidance of GPP-listed products without Green Labeling-supporting to scale up the list of products for GPP during the process of Green Label's criteria development. • Create an advisory service to for capacity-building of manufacturers to enhance capacity on environmental performance evaluation and reporting. • Provide priorities in the bidding process to green products meeting Green Label or Green Cart criteria (APEC, 2013).
Manufacturers do not apply for Green Label especially for electrical appliances because product models change rapidly.	• Set specific criteria for significant impact of products or services which address only high impact stage such as energy consumption in use phase. • Establish the periods of minimum criteria that the green products and services should meet, then revise stronger criteria and set new period that the green products and services should meet, according to the capacity of manufacturers.
Some provinces lack green hotels (17 provinces).	• Set the rating of hotels using the criteria of Green Leaf. Rental service can be considered by prioritising the level of environmental friendliness of hotels.
Lack of information or knowledge about financial benefit of GPP for the manufacturers and traders.	• Apply Life Cycle Cost Analysis (LCC) for green products and services.
Consumption Aspects	
Although numbers of government authorities who join GPP meet the target, numbers of them who report their green procurement to PCD still low. (The ratio of total public procurement to green public procurement cannot be evaluated.)	• Evaluate the reporting system and reporters' opinions to find the causes of low cooperation on reporting to PCD then develop or improve for more effective reporting. • Publicise the performance of compliance on GPP of government authorities on website or annually GPP evaluation report.
Procurers are not sure about the Regulations of Procurement in case the price of green products is higher than non-green products.	• Revise Procurement Rules such that a 7-10% premium may be allowed for green products.
The government procurers lack of knowledge and understanding about GPP criteria and cannot ensure that the products or services meet the GPP criteria.	• Organize seminars about environmental general issues and provide regular training. • Organize specific workshops, lecture, hearing, meetings and

Barriers	Suggested solutions to overcome barriers
	courses or conferences for green purchasing.
There is no collecting system for statistical data such as numbers of participating authorities, numbers of recycled products to analyze the Green GDP.	• Develop the collecting system to record the statistic data for benefit on GPP progress analysis and evaluate the Green GDP.
Price of green products higher than non-green products preventing authorities from purchasing green products or services.	• Compare the total cost including environmental cost by LCC between green and non-green products and services. Revise and simplify procurement green criteria.
There are no criteria for sub contract project such as building construction and maintenance services.	• Set the criteria for sub contract project such as building construction and maintenance services to cover green materials or products.
Lack of cross collaboration between different stakeholders.	• Promotion of collaboration and networking: seminars, workshops and trainings are aimed at sharing experiences and learning from other, stakeholders. . • Invite attendance to attend training courses or seminars via website or wide advertising • Provide incentives for the manufacturers such as priority choice in the bidding process. • Provide incentives for the government authorities and individual purchasers by Awards

Source: compiled from NSTDA, 2011; PCD, 2011; APEC, 2013 and questionnaire from Japan, Republic of Korea and China

11. Scope for Cooperation

At present, there is cooperation between the TGL and ecolabelling programs in China, Japan and Republic of Korea ("+3 countries") but no obvious cooperation of the ecolabelling programs of other countries in the Region. The Thai experiences in both Ecolabelling and Public Procurement on the basis of Ecolabels could be very useful to all other countries and in developing a regional green market.

COUNTRY REPORT
Vietnam

1 Socio-economic situation in Vietnam

Population: 88,257,000 (2009); 92,477,857 (2013 projected)

1.2 Demographics:

Table 1: Age wise population distribution

Age	*% of total population*	*Gender split*
0-14 years	24.6%	male 11,931,623/female 10,807,661
15-24 years	18.4%	male 8,796,395/female 8,215,536
25-54 years	44.4%	male 20,554,252/female 20,551,460
55-64 years	7%	male 2,936,340/female 3,517,538

Vietnam is a very young country, with the majority of its population in the working age group and a significant percentage about to enter the working age in the next decade.

Table 2: Rural-Urban population split

	% of total population
Urban	31.67
Rural	68.32

Vietnam lives mainly in its villages – over 68% of the total population. Nevertheless, four cities have a population of over 1 million with Ho Chi Minh City and Hanoi being the most populous.

1.3 GINI Index

As per the CIA Factbook, the Vietnam's GINI Index was 37.6 in 2008, indicating a wider disparity between rich and poor than in neighbouring countries such as Thailand.

1.7. GDP

$155.8 billion (2012)

1.8. GDP composition

Agriculture	21.6%
Industry	40.8%
Services	37.6%

1.9. Imports

Imports in 2012 are estimated at $114.3 billion

1.5 Major Imports (million $)

	2010	*%*
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	*17739.64*	26.67
Base Metals and Articles of Base Metal	*7520.79*	11.31
Textiles and Textile Articles	*6903.84*	10.38
Plastics and Articles Thereof; Rubber and Articles Thereof	*6473.82*	9.73
Mineral Products	*2168.19*	3.26

1.6. Principal import sources (2011, when imports were $ 105 billion)

County	Value of exports	% of total exports
China	29	27.61
South Korea	14	12.33
Singapore	10	9.52

1.7. Exports

Imports in 2012 were estimated at $114.3 billion

1.8. Major Exports by product (in million $)

	2010	*%*
Textiles and Textile Articles	*12962.95*	19.79
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	*7470.46*	11.41
Mineral Products	*7042.73*	10.75
Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair	*5392.86*	8.23
Plastics and Articles Thereof; Rubber and Articles Thereof	*4268.27*	6.52

Much of the exports are manufactured by SMEs who are sub-contractors, ancillaries or vendors to large MNCs who are attracted by low wage rates in Vietnam. Garments, apparel and small electronic items are typically such products.

1.9. Principal Export destinations (2011, when exports were $ 95 billion)

Country	Value of exports	% of total exports
United Stated	18	18.94
Japan	12	12.63
China	11	11.57

1.10. Consumption patterns

Indicator	*Level*	*Units*	*As Of*
Cell Phone Subscribers	149.41	per 1000	2012
Internet Users	39.49	per 1000	2012
Passenger Vehicles	1.3	per 100	2007
Households with a Personal Computer	n.a.	%	n.a.
Households with a Telephone	n.a.	%	n.a.
Households with a Radio	n.a.	%	n.a.
International Tourism Arrivals	6,014	1000s	2011

The table above is revealing; clearly, Vietnam has some way to go before it catches up with many others in the ASEAN bloc. It would seem apparent that steps to inculcate a sense or responsible consumption would be very effective as Vietnam's per capita disposable income increases.

1.11. Consuming class

For retailers and consumer goods companies, Vietnam is an attractive market: the economy is growing briskly and the population is increasing by a million people a year. Even more important, the county's middle class, now 7 million households (approximately 14.6 million people), is growing fast. In the ADB survey, during the period from 1990 to 2008, the average expenditure of the middle class in China had increased by USD 1,825 million annually, followed by USD 256 million in India, USD 168 million in Indonesia and USD 77 million in Vietnam.

Vietnam's literacy rate is 92.5 percent, and from 2003 to 2008 the number of college and university students nearly doubled. In Vietnam, 56 percent of the population is aged below 30, and the average age of the Vietnamese is just 25. Young middle-class consumers are particular about product quality, trendiness and user experience, which are reflected by the values associated with a brand. They will only stick to trusted and widely recognized brands. Apart from the quality of a product/service, these consumers also take into account the buying experience such as the vendor's sales service and product/service knowledge, plus the after-sale services.

2. Ecolabelling in Vietnam

2.1. Overview of Vietnam Green Label

The major eco-labeling system in Vietnam is the Vietnam Green Label. It is regulated and issued by the Vietnam National Environment Administration (NEA) under the Ministry of Natural Resources and Environment.

The "Vietnam Green Label" Programme aims to identify environmental superiorities of Vietnamese products or services over parallel products and services on the basis of life cycle assessments. This certification increases their competitive advantages and enhances the trust of consumers. The programme has been implemented nationwide since March 2009 with the purpose of continuously improving and maintaining environmental quality by minimising the use and consumption of energy and materials, as well as waste discharge from the process of manufacturing, trading and consuming products and services. Using the “Vietnam Green Label” gives businesses the opportunity to enhance their brand name and reputation among consumers. Products and services certified by the Green Label will be exempted from environmental taxes.

In order to be labelled green, a product must satisfy these three criteria: quality, attainment of environmental priorities, and reflection of corporate social responsibility of enterprises, by implementing activities that lead to environmental awareness (of both the enterprise and consumers). *In Vietnam applying for an Ecolabel is free for the time being*, to encourage local businesses to register. The certification is likely to give the products and services an advantage in both the local and global markets.

Technological products and services (including office equipment like laptops and desktops) are being studied for Green Label certification, starting 2013. In 2014, the focus will be on desktops, inks for photocopiers and standard batteries. In 2015, the focus will be on household appliances, with the first three being washing machines, refrigerators and televisions.

According to experts, the low quality of Vietnamese products poses a challenge in developing the Vietnam Green Label. In recent years, many action plans have been launched to raise awareness for social responsibility. But, in general, spending on the environment remains very low.

Last but not least, difficulties in internal resources, knowledge and technology are hurdles for products to meet the "Vietnam Green Label" standards.

Dr An, Director of Policy and Legislation and Head of Vietnam Green Label Office, said that the Vietnam National Environment Administration will sign agreements of mutual recognition on eco-labelling with some countries.

2.7 VietGAP:

In 2008, Vietnam launched the VietGAP (Vietnam Good Agricultural Practices) scheme for agricultural crops and fisheries. The VietGAP certification is not strictly speaking an Ecolabel; it certifies that the product has been grown/reared with minimal chemical use and in hygienic and safe conditions and to this extent, is in conformity with international GAP standards. It is

aimed at creating a better position for Vietnamese produce in international markets.

2.8. State incentives for green labeled products in Vietnam

Enterprises which manufacture Vietnam Green Labeled products are entitled to State incentives in relation to taxation, capital funding and land for construction of manufacturing establishments according to Article 33 of the Law No.52/2005/QH11 on Environmental Protection.

Pursuant to paragraph 7 of Article 1 of revised Law on CIT No. 32/2013/QH13 take effect from 01 Jan 2013, production of Vietnam green labeled products enjoy a preferential tax rate of 10 % in fifteen years period.

2.9 Criteria for Green Labels

Criteria for Vietnam green label products are specified in Circular 41/2013/TT-BTNMT dated 12 Feb 2013 of Ministry of Natural Resources and Environment regulating the sequence , procedures, certification of ecobiotic label for environmentally-friendly products which took effect from 15 Jan 2014.

Vietnam Green Labeling is a voluntary activity, not under the scope of the legislation on labeling of goods. General criteria for Vietnam green labeled products include the impact of the entire product life cycle from the extraction of raw materials, production, distribution, use and waste less harmful to the environment compared with the same products. Specific criteria relevant to each product group are published by the Ministry of Natural Resources and Environment in other documents.

3.0 Other Environmental in Vietnam (for exports markets)

A large number of exporters have registered with ecolabels from all over the world to access new markets and boost their sales. The ecolabels present in Vietnam are:

- 4C Association (Coffee)
- Audubon International (Golf Resort)
- Best Aquaculture Practices (Seafood)
- Bio Suisse (Organic farming)
- C.A.F.E. Practices (Coffee grown for Starbucks)
- EarthCheck (Sustainable travel & tourism operator)
- Fairtrade (Products certified by Fairtrade are also sold in the local market, but the knowledge of the ecolabel in the local market is low)
- Forest Stewardship Council (FSC) Chain of Custody Certification (Forest Management)
- Forest Stewardship Council® (FSC) Forest Management Certification
- Global Organic Textile Standard (Textile Production)
- Greenguard (reduce chemical exposure and improve indoor air quality)
- The Institute for Marketecology (international agency for inspection, certification and quality assurance of eco-friendly products)
- The LEAF Marque - food produced by farmers who are committed to improving the

environment for the benefit of wildlife and the countryside.
- Marine Stewardship Council (Fishery)
- SFC Member Seal (home furnishings industry)
- Programme for the Endorsement of Forest Certification (PEFC) schemes (Sustainable Forest Management (SFM))
- Singapore Green Label Scheme (SGLS)
- Sustainable Agricultural Network - The SAN awards the Rainforest Alliance Certified eco-label to farms (not companies or products).

3.10 Domestic Demand for Green Label Products

There is very little awareness of Ecolabelling amongst individuals and households in Vietnam. Some Fairtrade labelled products are available in the domestic market but there is no specific demand for such products. The labelling schemes listed in 2.9 above are applied by domestic producers to products whose importers specifically insist on them.

3.20 Environmental Labels for textiles in Vietnam

Textile, garment and apparel constitute a significant percentage of Vietnam's total exports and the following labels are prevalent in Vietnam – but are used almost entirely for exports.

- Fairtrade
- Global Organic Textile Standard
- IMO Certified
- Singapore Green Label Scheme

4. Sustainable Public Procurement in Vietnam

Public procurement in Vietnam represents at least 25% of GDP (2012), out of which 8-10% is infrastructure procurement.

The National Strategy on Green Growth, approved by the Prime Minister emphasizes efficient use of energy. Reduction of energy consumption in industrial activities, transport and commerce is hoped to be achieved via technology renovation, adaptation of advanced operation process and development of modern infrastructure. (Oct 2012)

In its 2004 Strategic Orientation for Sustainable Development, the Vietnamese government elaborated a growth plan around cleaner production, environmental friendliness and clear industrialization. It focuses especially on the manufacturing sector, and calls for a prioritization of technologies that facilitate modern and clean production. More practically, the strategy focuses on raising the quality of products to reduce costs, and, hence, increase the role of technical standards in industrial processes (Government of Vietnam, 2004). Vietnam has also set specific standardization targets in its National Environmental Protection Strategy.

4.1 Cleaner and more efficient production

The need for cleaner industrialization to maintain economic growth has become more prevalent in recent years. In 2009, a specific Cleaner Production in Industry Strategy was adopted to ensure that at least 50 per cent of all industrial production facilities are informed of the benefits of cleaner production methods by 2015, with at least 25 per cent already implementing such methods (Government of Vietnam, 2009). The government angle of this shift towards green industrial processes was mainly laid out in the 2005 Environment Protection Law. This strategy includes both guidance for governments to encourage cleaner industrial processes ("soft law"), and specific incentives that the government can offer to encourage sustainable production and consumption. These include, among others, land-related preferences, exemption from and reduction of taxes, loans from environmental protection funds and the prioritization of official development assistance (ODA) capital. This law was continued by a 2009 decree further deepening incentives for environmental protection activities (Government of Vietnam, 2009, Decree No. 04/2009/ND-CP).

4.2 Legislation on GPP

Vietnam's legal framework still has no procurement angle. The discrepancy between Vietnam's priorities in policy and development, and governmental priorities in spending may well harm the prospects of clean industrialization. As part of its examination of green growth, the government is currently conducting research on how green procurement could be successfully introduced in the future. As an important first step, the Korean International Cooperation Agency has provided assistance to upgrade Vietnam's public procurement system with the introduction of the electronic bidding system of the Republic of Korea (KONEPS)

In spite of the absence of direct procurement policies to catalyze green industrial growth, Vietnam has made considerable progress in formulating legislation that is aimed at "greening" procurement. However, there are still shortcomings in the content and implementation of existing, indirect green procurement policies.

For infrastructure projects, the most important tool is the environmental impact assessment (EIA), which is not procurement-specific. Sadly, the effective implementation and follow-up of EIAs are still limited. There are also fines for not complying with environmental and social protection regulations but the fines are generally too low to enforce compliance.

Environmental standards are sometimes integrated into the technical requirements of tenders. However, in those cases, the environmental weightage is still relatively low, and time frame, quality and costs remain more important than environmental or social standards. Further, bidding documents and evaluations often assess immediate costs, rather than longer-term savings and life cycle costs.

In addition to problems related to direct and indirect green procurement strategies, Vietnam's overall procurement policy contains flaws that need to be addressed if the government wants procurement to be efficiently used for innovation and green industrial growth. Primarily transparency and integrity are still underdeveloped.

When companies challenge a procurement decision, they are often excluded from future tenders. In addition, regulations are often applied in an inconsistent manner at different

governmental levels. Often, there are no specialized procurement units within procuring entities and there is no procurement code of conduct. These inefficiencies make the implementation of a standardized procurement system very difficult. The Vietnamese e-procurement system that South Korea is currently assisting with represents an important leap in this regard.

An important observation is that there is already a large number of ISEAL type labels prevalent in Vietnam and local producers are already familiar with them. Thus as a start, Government procurement could easily insist that the goods and services procured conform either to the Vietnam Green Label and/or to ISEAL type environmental labels.

5. Regional Cooperation Possibilities

Vietnam's use of Ecolabels is aimed almost entirely at the export market and the country seriously needs to steer domestic demand towards Ecolabelled goods and services. In this endeavour, Vietnam would probably find it quicker and more effective to focus on institutional demand , particularly public procurement. The South Korean assistance in creating an e-procurement system could well be expanded in scope to include a green/sustainable public procurement system either on a bilateral basis or through an ASEAN initiative.

As with other LDCs in the ASEAN region, Vietnam is dependent on imports for a large variety of goods procured by the public sector – such as machinery, infrastructure-building, construction products. These have the potential to have an adverse impact on the Vietnamese environment and thus insistence on importing Ecolabelled products could be of immediate benefit.

References

References (part 1):
http://www.indexmundi.com
www.imf.org
www. worldbank.org
http://en.wikipedia.org/wiki/List_of_cities_in_Vietnam
http://www.quandl.com/vietnam
http://www.ingcb.com/media/238307/vietnam.pdf
http://www.mckinsey.com/insights/marketing_sales/growing_up_fast_vietnam_discovers_the_consumer_society
http://www.kpmg.de/docs/Middle-Class-Asia-Emerging-Markets-201206-2.pdf (2012)

References (part 2):
http://vccinews.com/news_detail.asp?news_id=26142
http://en.vbcsd.vn/detail.asp?id=297
http://www.lawyervn.net/en/news/tax-law-news/tax-incentives/production-of-vietnam-green-labeled-products-shall-be-entitled-to-state-incentives.html
http://www.ecolabelindex.com/ecolabels/?st=country,vn

References (part 3)
http://www.worldcommercereview.com/publications/article_pdf/610
http://www.iisd.org/pdf/2012/procurement_innovation_green_growth.pdf
http://www.igpn.org/news/2012/10/vietnam_unveils_its_green_grow.html

SECTION C

ANALYSIS

ECOLABELLING IN THE ASEAN + 3 REGION

1. LEGISLATION, POLICIES AND PRACTICES

From a reading of the Country Reports in Section B, it is evident that the countries in the ASEAN + 3 Region are at widely different stages in terms of laws, policies and implementation of ecolabelling and GPP/GPP policies. Broadly, the evolutionary stages are as follows:

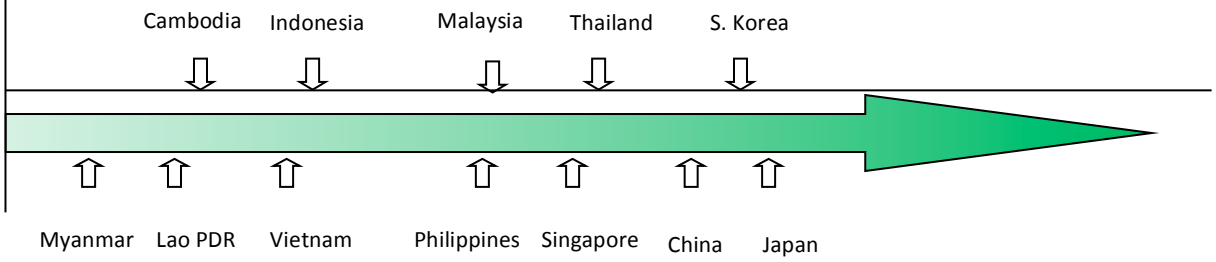


Figure 1. Stage of evolution of ecolabelling in the Region

Myanmar, Cambodia, Lao PDR and Vietnam are yet to establish the framework and infrastructure for operating an ecolabelling scheme: the laws/policies, institutions, funding, test facilities, inspection, verification and certification facilities and the linkages and chains of responsibility between them. Declarations of intent by nations such as Cambodia and Vietnam have yet to be converted to action plans.

2. CONSIDERATIONS FOR COUNTRIES DEVELOPING ECOLABELLING PROGRAMMES

Vietnam and the LDCs (Cambodia, Lao PDR and Myanmar) could learn from other countries of the region, identify what is needed for their specific needs and adapt the relevant existing principles to local requirements. These countries could also be well advised to study the templates of older ecolabelling initiatives, such as Germany's Blue Angel or the Nordic Swan. ISEAL type labels are also prevalent, being in use for export purposes, and the countries would also benefit from a study of the criteria used. In particular, ISEAL's Global Credibility Principles could serve as a very useful tool. Similarly, the Global Ecolabelling Network's GENECIS programme could provide critically needed help.

However, it should be noted that the above countries are exporters of primary goods such as timber and forestry products, minerals, fishery products and the like, whereas most manufactured goods flow from the +3 countries to the others in ASEAN. Ecolabels are best viewed from a life cycle perspective – from design to disposal. The maximum environmental impact of *manufacturing* activity thus takes place mainly in the + 3 countries plus the "Asian Tigers", whereas the environmental impact at the *use and disposal* phase takes place in the

recipient countries. Thus there could potentially be a divergence, with the ecolabels of the advanced countries stressing impacts at the manufacturing stage, while the LDCs would prefer standards which focussed on the usage and disposal stages of the life cycle. This possible divergence will have to be resolved by whichever body is placed in charge of devising a mutually acceptable ecolabelling scheme for the Region.

3. ECOLABELLING FRAMEWORKS: INSTITUTIONAL ARRANGEMENT & METHODOLOGIES

The ASEAN Secretariat, drawing from the UNEP-initiated Green Public Procurement and Ecolabelling Network, is ideally suited to serve as a single window for countries needing assistance in drafting national ecolabelling schemes and is already charged with this responsibility. The Secretariat could also draw from other sources: ISO, UNEP, GEN and the like. This would obviate the need for a country to approach multiple agencies during the drafting process. Ideally, the schematics would be as follows:

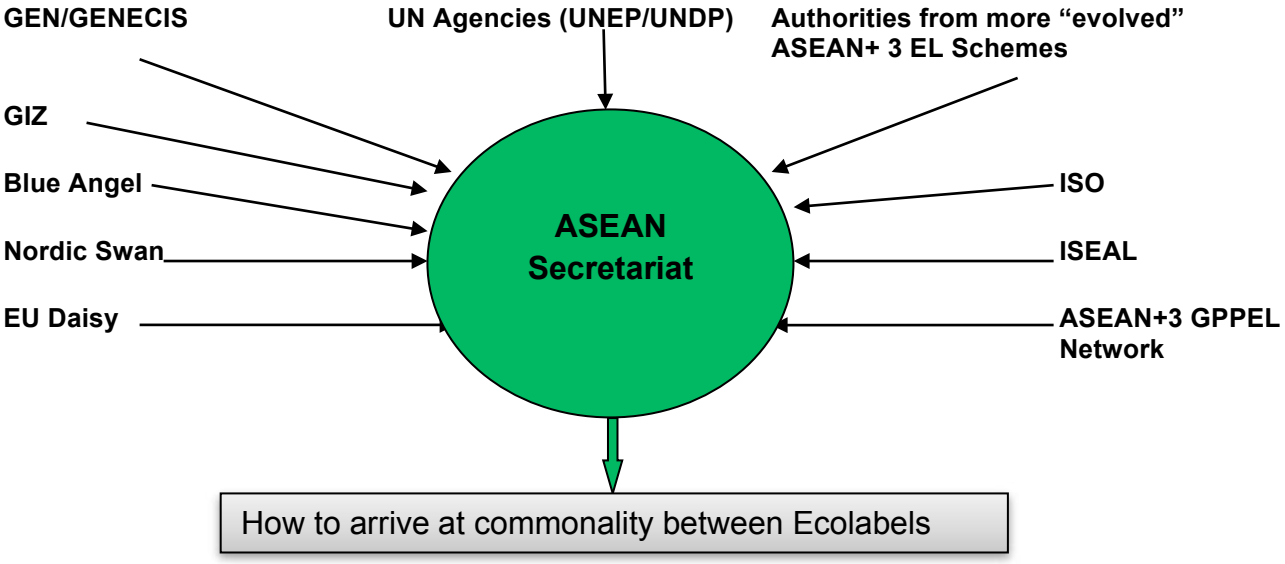


Figure 2: The ASEAN Single-window assistance model in drafting/strengthening national Ecolabelling programmes & facilitating regional collaboration among the different schemes

The question of whether a common ecolabel for all countries in ASEAN+3 can be created is debatable. Even in the European Union, the EU Flower has to co-exist and sometimes compete with other European Ecolabels such as Germany's Blue Angel and the Nordic Swan. Additionally, ISEAL type labels – Fairtrade, Bonsucro, FSC, MSC, etc. are demanded by many purchasers since they incorporate strong social criteria, missing in ecolabels. Overall, while a plethora of labels and labelling schemes is confusing to the buyer and expensive for the producer, political considerations may prevail.

4. ARRIVING AT A COMMON GROUND:

There are three possibilities of arriving at some sort of common ground:

- **Mutual Recognition Agreements (MRAs)**: Country A recognises the legitimacy of an ecolabel issued by Country B and vice versa for all purchases where ecolabelling is specified or required. These are bilateral agreements.

- **Fully Harmonised Ecolabels**: where common standards and test procedures are agreed, leading to one standard ecolabel in the Region. This is the idealistic situation referred to earlier.

- **Inter-operable Ecolabels**: a multilateral situation where the entire ASEAN + 3 region recognises ecolabels issued by others in the Region even in the absence of inter-country MRAs.

MRAs are cumbersome; every country has to enter into an MRA with every other country. Thus for example if Thailand and Japan have a bilateral MRA and Japan also has a bilateral MRA with Singapore, it does not mean that Thailand and Singapore will necessarily recognise each others' ecolabels.

A single, harmonised ecolabel in the ASEAN + 3 Region would be ideal but is difficult to implement for many reasons. First, all the countries involved are independent and concerned about their sovereignty. Additionally, priorities differ, technical abilities differ, occasional border disputes arise and there many political ramifications.

Thus the optimal solution is to have inter-operable ecolabels - a multilateral consensus within the Region that each country will recognise the national ecolabel of another country in the region, without the need for separate inter-country agreements. This can probably be implemented most easily by the ASEAN Secretariat pushing it through a vote. The product categories identified in Table 4 are not likely to be contentious and could be an acceptable starting point for regional collaboration.

Whichever of the three alternatives is chosen, there must first be a set of common core criteria which would have to be met by all national ecolabels.

5. COMMON CORE CRITERIA:

For the purposes of agreeing on the common core criteria for products and services, GEN's GENECIS (GEN's Internationally Coordinated Ecolabelling System) provides a strong foundation, as do the International Standards Organisation's ISO 14020 and 14024. The Green Procurement Network of India published a study of 143 Ecolabels worldwide and identified the following 8 common criteria *(from Summary Report: Sustainable Product Innovation in Asia, UNEP and EMC, 2013*):

- Resource conservation and efficiency;
- Exclusions and preference based on Life Cycle Assessment;
- Conservation of biodiversity and overall environmental protection;

- Reporting and responsible disclosure of product information;
- Compliance to environmental regulations and pollution control standards;
- Biodegradability and recyclability;
- Implementation of Environmental Management Systems; and
- Social inclusion.

These are broad indicators. In actual practice, to arrive at Inter-operable labels there would be a need for at least the following:

1. Countries must agree on a common list of products for inclusion
2. The product list should include measurable standards for each of the common core criteria (listed above or separately agreed)
3. The maxima and minima levels for each will have to be set – e.g. total GHG emissions per unit produced based on full life cycle analysis.
4. Test methods for assessing these levels must be agreed
5. Testing procedures, frequency, organisations must be agreed.
6. Re-evaluation of the product list and the standards must be prescribed

If at least the above actions are taken, then all that will remain is for a political decision to be taken for implementation.

6. IMPLEMENTATION OF ECOLABELLING SCHEMES

This is where even the "evolved" countries have faltered and continue to do so. The impediments appear to be any or all of the following (which is an illustrative listing, not comprehensive):

- Lack of sensitivity and training from the highest levels – bureaucratic and political – to the lowest
- General public remains unaware of the environmental consequences of products and services – poor information access and consumer education
- Multiplicity of labels
- Poor availability of ecolabelled products
- No special publicity or promotional efforts
- Few, if any, incentives for ecolabelled products
- Ecolabelled products are frequently more expensive than non-labelled products.

7. SUSTAINABLE PUBLIC PROCUREMENT IN THE ASEAN + 3 REGION

It is no coincidence that the status of Green Procurement policies and practices follows the status of ecolabelling, as illustrated in Fig. 1 above. When it is difficult to fairly adjudge which of two competing products is more environment friendly, it is unreasonable to expect buyers to preferentially buy the "greener" product.

The success of GPP programmes is also correlated with time. Countries such as Japan and S. Korea which started their GPP programmes earlier are at a higher stage of implementation.

8. REGIONAL COOPERATION IN GPP PROGRAMMES

Commencing an GPP programme is largely dependent on drafting good laws and policies. This is a responsibility of the national Government which – although it may draw from similar laws in other countries – must necessarily formulate and enact its own. Regional cooperation is thus more restricted than in the case of Ecolabelling.

In two areas, other than legal, Regional cooperation can be helpful:

The first lies in the realm of management of GPP programmes: ideally, there should be a single Ministry or body responsible for issuing guidelines, training, monitoring and evaluating. Unfortunately in many countries, responsibilities are split between the Ministries of Finance, Environment, Industry and Commerce each with different or sometimes competing priorities. Thus, the best case scenarios of the more successful countries can be showcased and serve as exemplars of good management. Sometimes failures are more instructional than successes and frank disclosures of failures plus the underlying reasons would be of great value to other countries.

The second area of possible cooperation is in training. It has been found that at lower levels of Government bureaucracy, such as in provinces, capacity building needs are very high. A pool of experts, mainly from the ASEAN +3 countries, can be identified by the ASEAN Secretariat and assist in training procurement officials at all levels of host Governments.

SECTION D

A ROADMAP FOR REGIONAL COOPERATION

ROADMAP FOR REGIONAL COOPERATION IN ECOLABELLING AND GPP

1. REGIONAL COOPERATION IN ECOLABELS – RATIONALE:

It must be remembered that the basic purpose of Regional cooperation in Ecolabelling and GPP is to facilitate and promote trade – both within the ASEAN + 3 Region and outside. As international markets continue to impose sustainability criteria on traded goods, manufacturers from the ASEAN region need to introduce several internal measures if they are to increase market share. To ensure the competitiveness of manufacturers and products of ASEAN+3 countries, technical guidance from national government and regional ecolabelling network can provide a significant advantage to such producers.

As discussed in Section C of this report, inter-operable ecolabels appear to be a fitting choice for regional cooperation in the ASEAN+3 Region given the impracticability of having multiple bilateral mutual recognition agreements among member countries with varying levels of technical capabilities and widely differing status of implementation of national ecolabels.

With an inter-operable ecolabel, the countries would recognize the national ecolabel of each other provided they agree on some basic requirements: product and service categories, common core criteria and standards, allowable levels for each measurable standard, testing methods and frequency, certifying bodies, application process, and review and update of all aforementioned requirements. To facilitate the setting up of such scheme, expanding the current objectives of the ASEAN+3 GPPEL Working Group, composed of members of the administering body of the national ecolabelling or sustainable public procurement program of each country or a duly appointed representative, to include future plans for regional cooperation in GPP and Ecolabelling is recommended. The most suited host for such an organization would be the ASEAN Secretariat.

2. MISSION AND OBJECTIVES OF THE COORDINATING BODY:

It would be the mission of the regional cooperation body on ecolabelling and sustainable public procurement in the ASEAN +3 (the ASEAN Secretariat ?) to contribute to sustainable consumption of resources and products in all sectors of the economy and society, recognizing the need to be responsive to the strengthened environmental and social safeguards which regional and global markets present. Furthermore, this regional cooperation is to pursue the following objectives:

a. Improve overall competitiveness of main export products not only among ASEAN +3 countries, but also in the international market to support sustainable growth in the region.

b. Facilitate knowledge and experience sharing, and cooperation in the development and implementation of national ecolabelling programs.

c. Partner with UNEP's SPPEL Initiative which could provide a global overview and assist in the finalising of the common core criteria for ecolabels as well as in suggesting policy frameworks on SPP.

d. Provide policy and technical support to member countries and designated entities that are starting and developing a national ecolabelling program.

e. Increase awareness and visibility of the national and regional ecolabels

3. THE SCOPE OF THE COORDINATING BODY:

To support the development of an inter-operable ecolabel in the ASEAN+3, activities enumerated in Table 5 are suggested. At the onset, an international organization could initiate communication regarding the need to create a regional ecolabelling scheme to allow for sustainable growth and market competitiveness of products in the region. The national governments or organizations managing the country's ecolabelling program can nominate their representatives, and other people as stakeholders from private industries, academe and policy sector. Critical to this phase is the commitment of the countries and its representatives to the work of the ASEAN+3 GPPEL as it will manage the overall functions and be responsible for steering the group into a clear vision of sustainable consumption and production for the region. The group would then convene to discuss the broader role of the GPPEL in affecting governments in fast tracking ecolabelling and GPP programs with a view to arrive at a harmonized label within the region. It may also be advisable to create two committees, one to handle technical studies and standards-related issues, and another to manage managerial functions and administrative operations.

Table 1. Proposed roadmap for regional cooperation on ecolabelling and GPP in ASEAN+3

No.	Activity	Responsible Authority	Time Frame
1	Inception: communication among ASEAN+3 of the intention of regional cooperation on ecolabelling	UNEP	2 months
2	Consider housing the ASEAN+3 GPPEL within the ASEAN Secretariat and define the extent of participation from private sector stakeholders	ASEAN+3 GPPEL/ relevant ministries/ representative of private sector stakeholders	4 months
3	Expand the objectives of the ASEAN+3 GPPEL Working Group to arriving at inter-operable ecolabels, and identifying and evaluating ways promote Ecolabelling and		2 months; varied time frame for studies

	GPP among member countries such as by conducting cost-benefit analyses and drafting policy papers		
4	Initial capacity building among members and awareness raising at the national level	ASEAN+3 GPPEL	6 months
5	Benchmark with existing regional /international ecolabelling schemes such as the Nordic Swan, EU Flower and African Ecolabelling Mechanism		8 months
6	Assess proposed product and service categories to be covered initially, common criteria and other basic requirements of a regionally aligned ecolabel based on examples in the Region		8 months
7	Prescribe guidelines on implementing agreed initial categories of products, ways of assessing new product categories and approval or rejection		3 months
8	Establish review and revision protocol, and frequency		6 months
9	Review the objectives and scope of work of the GPPEL, and recommend changes as necessary		1 month; annual

After agreeing on the expanded role of the GPPEL, the technical and policy needs have to be addressed considering the differing levels of ecolabelling implementation in the region, as well as the economic benefits and implications of GPP in the region. A technical committee would be very instrumental in this respect. Capacity building is expected to be done in conjunction with awareness raising among industries, academe and other stakeholders to properly introduce and endorse the idea to them. Provided with the knowledge and technical background, the network will benchmark other regional ecolabelling schemes and learn from their approach, identify issues involved in harmonizing and implementing regional ecolabels, determine key success factors to overcome these challenges, and subsequently plan and map out the work of the network that include: assessing product and service categories to be covered initially by the regional ecolabel; standards setting; finalizing protocols for adding new product categories, applying for the ecolabel and approval process; and review and revision of guidelines among others. Finally, the roadmap also suggests for an annual review of the objectives and scope of work of the GPPEL to appropriately plan and adjust according to the needs of the region.

4. POSSIBLE PRODUCT CATEGORIES

In proposing product and service categories for inclusion in the initial regional ecolabelling scheme, three factors are given particular consideration: (1) existing product categories covered by the Type I Ecolabel in the region, (2), product categories included in the Green Public Procurement policies of the countries and (3) trade flows within the region. Examining the intersection of these factors would provide a good basis for selecting initial product categories as it brings to light an inventory of ecolabelled products with a demand from GPP programs, certified product classifications of ecolabelling schemes that could fill the aforementioned demand, and value of trade within the region. Each of the three considerations are discussed below.

Since only four of the 13 ASEAN+3 countries have been awarded the GENICES certificate, it can be said that much needs to be done by the remaining countries in order for them to attain a level of success and magnitude in the implementation of their national ecolabelling programs. Hence, building on what is presently covered and certified as product categories in the national ecolabelling programs in the region would be a step forward. The certified product categories of Type 1 Ecolabels in each country with an ecolabelling scheme in the region are summarized in Table 3. As will be noticed, there are several certified Type I Ecolabel product categories common among the countries which could form the initial set of product categories for harmonization. *Paper products, construction materials, office equipment and furniture, office supplies and paints and coatings are among the product categories with a Type I Ecolabel in most countries in the region (Table 3).*

Table 2: Product categories of Ecolabel Type I in the ASEAN+3 Region as classified by GEN

Country	Product Category								
	Auto-motive	Batter-ies	Cleaning Products	Clothing / Textiles	Construction/ Building Materials	Gardening & Agriculture	Home Applian-ces	Lights	Office Equipment & Furniture
Indonesia									✓
Malaysia			✓		✓	✓		✓	
Philippines	✓	✓	✓		✓	✓		✓	✓
Singapore	✓		✓	✓	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓	✓	✓	✓	✓	✓
China	✓	✓		✓	✓		✓		✓
Japan				✓	✓		✓	✓	✓
Republic of Korea	✓	✓	✓	✓	✓		✓	✓	✓

Table 2: Product categories of Ecolabel Type I in the ASEAN+3 Region as classified by GEN (Continued)

Country	Product Category								
	Office Supplies	Paints & Coatings	Paper Products	Personal Care Products	Print-ing Inks	Services	Solar Powered	Water Conserv. Devices	Food
Indonesia			✓						
Malaysia	✓	✓	✓	✓	✓				

Philippines	✓	✓	✓	✓	✓	✓			
Singapore	✓	✓	✓	✓			✓		
Thailand	✓	✓	✓	✓	✓	✓			
China	✓	✓	✓		✓				✓
Japan	✓	✓	✓		✓	✓	✓	✓	
Republic of Korea	✓	✓	✓	✓		✓	✓	✓	

The second factor to be considered in the selection of product categories for ecolabel harmonization is the inclusion of Ecolabelled products in the GPP/GPP of countries in the Region (where a GPP Programme exists at all). An inventory of existing Type I Ecolabelled product categories that are included in the GPP in the region was reported in the report *Green Public Procurement in The Asia-Pacific Region* (APEC, 2013) and revealed that *construction materials and office products with energy efficiency are Type I Ecolabel categories included in the GPP in the five countries implementing GPP (Table 3)*.

Table 3. Product categories included in the GPP of the five countries in the region

Country	Construction, maintenance and renovation of public buildings	Office products with energy efficiency	Office supplies	Paper	Office cleaning	Office furniture	Transport	Events organization
Singapore	✓	✓						
Thailand	✓	✓	✓	✓	✓	✓		✓
China	✓	✓	✓	✓		✓	✓	
Japan	✓	✓	✓	✓	✓	✓	✓	
S. Korea	✓	✓	✓	✓		✓		

Lastly, the value of trade flows within the region was also considered. As trade facilitation can be said to be the major reason for attempting harmonization of ecolabels, trade flows within ASEAN+3 and export outside of the region is considered as one of the criteria in choosing the proposed product and service categories to be covered in the regional ecolabelling scheme. However, for the purpose of this report, only the top traded commodities and high valued within ASEAN+3 was noted (Table 4). Top imports and exports within the region would be a valuable starting point for ecolabelling as these are going to be subject to the receiving country's requirements; hence, a common criteria and standard method of evaluation would be useful. *Electric machinery, equipment and parts; and the like (shaded in red in Tables 5 and 6); followed by vehicles other than railway or tramway, rolling-stock, parts and accessories thereof (shaded in green in Tables 5 and 6) are the top two significant export and import commodities in terms of value and inclusion as product categories in GPP and eco-labeling program of each country.*