Ecolabelling and Sustainable Public Procurement to Promote Sustainable Consumption and Production in Thailand

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Thailand has developed the 20-year masterplan to be rooted in the sufficiency economy philosophy and adopting Sustainable Consumption and Production (SCP) as the pathway towards green growth. Following the masterplan, the 12th national economic and social development plan has been established to focus on sustainable development goals including SCP. To move towards SCP, the national roadmap on SCP was developed to provide the framework on SCP actions. Ecolabelling and sustainable procurement have been implemented to promote SCP. Thailand has developed various national ecolabelling schemes marketing tools to indicate the environmental information of products. At the beginning, manufacturers faced the issue of no market requirements while consumers did not particularly choose the eco-labelled products due to higher prices. The government then launched the national policy of sustainable procurement to increase the market demand for eco-labelled products. In the first phase, it was mainly applied by the Ministry of Natural Resources and Environment with 14 products and 3 services. In the second phase, it was expanded to the other governmental organisations as well as the private sector with 17 products and 5 services. Now, it is in the third phase extending to local administrative organisations including universities and more private enterprises with 19 products and 5 services. Particularly for the governmental organisations, the main barrier was linked to the financial rule to purchase the product with the cheapest price after comparing among at least 3 suppliers. Now this has been solved by the new financial rule based on the price performance (i.e. eco-labelled products with higher prices are acceptable). It is also very important to provide the list of approved suppliers to facilitate the organisations/companies applying sustainable procurement. Not only the governmental organisations and the private sector, it is also highly recommended that consumers should be informed and educated about different ecolabels with key messages to support their purchasing decisions and promote SCP.

1. Introduction

Sustainable Consumption and Production (SCP) has been universally acknowledged as an essential requirement for sustainable development since the adoption of the Johannesburg Plan of Implementation (JPOI) at the World Summit on Sustainable Development in 2002. The JPOI calls for the development of a 10 Year Framework of Programmes (10YFP) to accelerate the shift towards sustainable consumption and production. In response to this, the Marrakech Process, a global and informal multi-stakeholder process, was launched in 2003, to promote the development and implementation of policies, programmes and projects on SCP. Its fundamental concept helps achieve overall development objectives, in particular, decoupling economic growth from environmental and natural resource degradation. Recently, the United Nations Sustainable Development Summit has adopted the 2030 Agenda for Sustainable Development, which

includes a set of 17 Sustainable Development Goals (SDGs). SCP, which is a stand-alone goal (SDG12), is aimed at changing the way we produce and consume goods and resources.

In Thailand, the 20-year masterplan has been developed to be rooted in the sufficiency economy philosophy and adopting Sustainable Consumption and Production (SCP) as the pathway towards green growth. Sustainable consumption and production is part of the overall sustainability concept. Following the masterplan, the 12th National Economic and Social Development Plan has been established to focus on sustainable development goals including SCP. The ultimate goal is to move the country towards Thailand 4.0 (an economic model that aims to unlock the country from several economic challenges resulting from past economic development models which place emphasis on agriculture (Thailand 1.0), light industry (Thailand 2.0), and advanced industry (Thailand 3.0)) as well as to reform the country. It emphasises the engagement of all stakeholders at the career (what is this krub?), region and country levels.

The Office of Natural Resources and Environmental Policy and Planning, Ministry of Natural Resources and Environment also developed the environmental management policy and plan for the first time for the period 1997 - 2016. At present, the policy and plan on the enhancement and conservation of national environmental quality (2014 - 2036) is being developed. Sustainable consumption and production is included in the current 5-year environmental management plan (2017 - 2021) and corresponds with the national roadmap on sustainable consumption and production (2017 - 2036). The plan includes a key strategy on resource efficiency and sustainability as well as bio-based economy.

To move towards SCP, the national roadmap on SCP was developed to provide the framework on SCP actions. The national roadmap for SCP consists of two programs: production and consumption. The production program includes the industry sector, agriculture and food sector, and the service sector (including tourism). The consumption program includes green public procurement and eco-labels, cities and local governments, and awareness raising and education.

The national roadmap has defined the vision as "Thailand is a leader of ASEAN on Sustainable Consumption and Production adopting the Sufficiency Economy concept and mobilising through integration of social innovation by 2036". The missions are: (1) Shift production patterns in all sectors and areas toward sustainable production, (2) Shift behaviour of citizens and public entities towards sustainable consumption patterns, and (3) Mobilise innovation and knowledge-based society to support SCP principles. Ecolabelling and sustainable procurement have been implemented to promote SCP.

2. National plans related to sustainable consumption and production

The implementation of SCP to move towards the SDGs is embedded in various national plans, as described in this section. The government has formulated six master plans and associated sub-strategies spanning the 20-year period: nature conservation, water resource management, renewable and green energies, eco factories and eco towns, climate change adaptation and mitigation, and economic tools and fiscal policies for environment. The masterplan's vision is to develop the country under the concept of stability, prosperity and sustainability by adopting the sufficiency economy philosophy. SCP is inextricably linked to the sustainability concept.

The Office of the National Economic and Social Development Board has developed the 12th National Economic and Social Development Plan that is based on the government's 20-year masterplan and SDGs. The ultimate goal is to move towards Thailand 4.0 as well as the country's transformation. It emphasises the engagement of all stakeholders (covering all careers), region and country levels to develop the action plans to drive the country under the concept of stability, prosperity and sustainability by adopting the sufficiency economy philosophy. An environmental management plan over the 20-year period has been developed for the first time (1997 - 2016). At present, the policy and plan on the enhancement and conservation of national environmental quality (2014 - 2036) is being developed. SCP is included in the current environmental management plan (2017 - 2021) and corresponds with the national roadmap on sustainable consumption and production (2017 - 2036).

There is a key strategy on resource efficiency and sustainability as well as bio-based economy in the plan. Under this strategy, sustainable consumption and production will be promoted in agriculture, energy, industry, and tourism including green public procurement and eco labels.

Thailand has developed various national ecolabelling schemes as the communication and marketing tools for producers to indicate the environmental profile of products (Figure 1). The Thailand Environment Institute (TEI) has developed several ecolabels: (1) green label (using life cycle consideration to define the criteria), (2) carbon reduction label (promoting the use of renewable energy and identifying greenhouse gas reduction strategies), and (3) carbon-reducing buildings (operating buildings with low-carbon emissions) (Thailand Environment Institute, 2017).

Figure 1: Examples of some prominent labels in Thailand

Carbon footprint labels have been developed by the Thailand Greenhouse Gas Management Organisation (2017) (Public Organisation) (TGO): carbon footprint (assessing the life cycle GHG emissions expressed as carbon score), carbon footprint reduction (assessing the carbon footprint reduction within 2 years by 2 % of the total carbon footprint), carbon neutral (offsetting the carbon footprint totally to become zero emissions), and CoolMode (using fiber technology to provide the textile structure to be cool, comfortable and easy to clean) (The Thailand Greenhouse Gas Management Organisation, 2017).

The Department of Environmental Quality Promotion (DEQP) has the certification and labelling systems on green production called G(reen) mark by applying the concepts of Environmental Management System (EMS) & Cleaner Technology (CT) to manufacturing sectors with the focus on community enterprises as well as hotels (The Department of Environmental Quality Promotion, 2017). Together with her partners (TGO, National Science and Technology Development Agency, NSTDA and Kasetsart University, KU), DEQP has also developed the upcycle carbon footprint label to award to the products made from wastes with extensive processes while also reducing the environmental impacts and GHG emissions (The Department of Environmental Quality Promotion, 2017).

All of these above-mentioned labels are based on third-party verification. Particularly for hotels, the Green Leaf Foundation has developed the certification called Green Leaf as the standard of environmental management systems for hotels (Green Leaf Foundation, 2017). Private companies have produced self-claimed ecolabels especially in the building material sector, such as SCG eco value (Siam City Cement Public Company Limited, 2017) and green heart (The Siam Cement Pcl, 2017). The criteria are multiple aspects with life cycle consideration and there is a need to conduct internal auditing.

3. Green Product Procurement (GPP)

The plan of GPP promotion has already been implemented over 2 phases during the periods (2008 - 2011 and 2013 - 2016). The first two phases were focused on the GPP policy and implementation, particularly to Ministry of Natural Resource and Environment and other governmental organisations. The development of phase 3 (2017 - 2021) is underway with the aim to expand the GPP policy and implementation to local administrative organisations, state enterprises, universities, national and public organisations (Figure 2).

3.1 GPP Phase I

The Ministry of Natural Resources and Environment (MoNRE) appointed the Pollution Control Department (PCD) to implement the GPP policy. On 22 January 2008, the GPP policy phase I (2008 - 2011) was endorsed to be implemented in MoNRE especially at the department level or equivalent. In this phase, there were 170 departments joining. At least 14 products and 3 services were listed in the GPP phase I: toner, printing paper, cover paper, file, envelope, document box, correction pen, fluorescent light bulbs, paint for buildings, photocopier machine, steel furniture, tissue paper, whiteboard pen, battery, printer for products, and

photocopier rental service, cleaning service and accommodation service (hotel). There are also online systems providing documents required for the sustainable procurement, lists of approved manufacturers and products with eco-labels, including monitoring systems to facilitate the implementation of sustainable procurement.
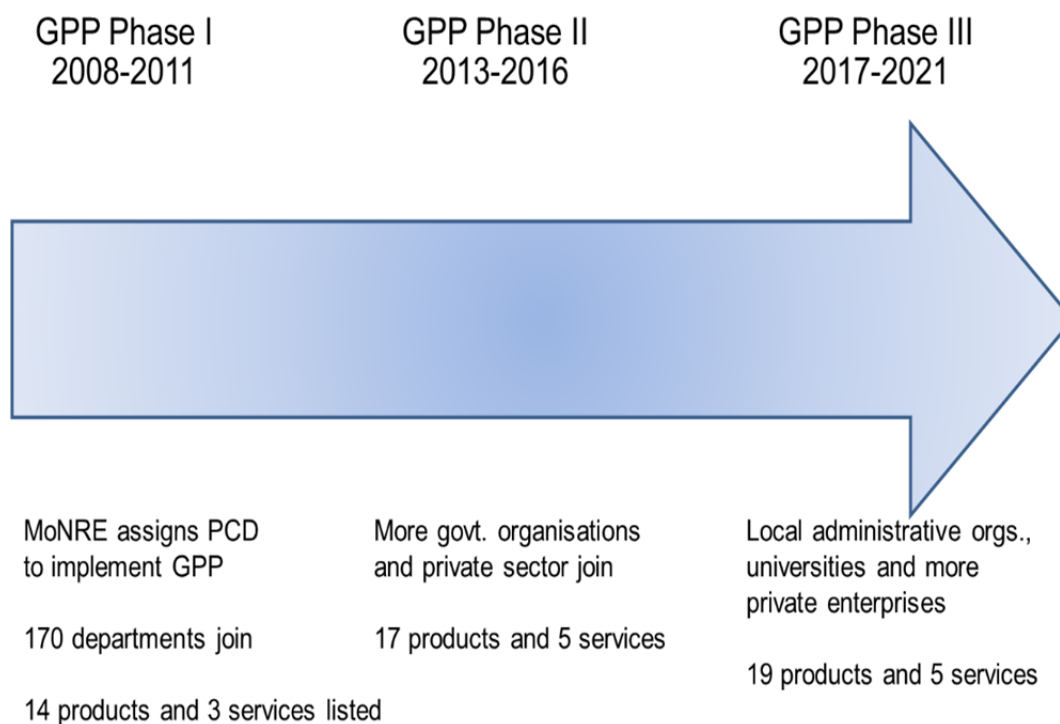

Figure 2: Development pathway of Green Product Procurement

3.2 GPP Phase II

PCD considered that there was a need to add more products and services on the list in the GPP phase II (2013 - 2016). Car, petrol, and lubricant were added on the product list whereas petrol station and car care services were supplemented on the service list.

The products produced by the manufacturers certified Green Industry Level 4 (having the environmental management systems in place, with the green culture of raising awareness of personnel to minimise the impacts associated with their work). It also expanded to the textile products certified with the CoolMode label. For hotels, it also included the green hotel label of DEQP.

The CoolMode label is rooted on the use of fibre technology to provide the textile structure to be cool, comfortable and easy to clean. It is suggested that the temperature setting of air conditioners could be lower, such as 25-degree celsius, if wearing CoolMode T-shirts to reduce the energy use and GHG emissions. For the green hotel label, the requirements are related to the green policy, green product procurement, energy management, and local participation in environmental conservation activities at the area of hotel's location.

3.3 GPP Phase III

In this phase, the GPP policy will be expanded to be implemented not only in the governmental organisations in the central system but also the governmental organisations in regions, state enterprises, public organisations, universities, local administrative as well as the private sector. At least 7 items must be included in the GPP implementation, which are: printing paper, tissue paper, photocopier, toner, printer and cleaning service.

4. GPP implementation results

There are 1,032 organisations implementing the GPP policy: 170 governmental organisations, 46 state enterprises, 32 public organisations, 69 universities, 710 local administrative organisations, and 7 organisations under the government (PCD, 2016). At present, Thailand has been practising all three types of

eco labels: Ecolabel type 1 – Green label (591 products), green leaf (219 hotels); Ecolabel type 2 – for instance SCG eco value (82 products) and green heart (10 products), and Ecolabel type 3 – carbon reduction (139 products), carbon footprint (2,404 products), carbon footprint reduction (237 products), carbon neutral (16 products), CoolMode (70 products) and upcycle carbon footprint labels (34 products). Green mark (351 products) is additionally included for products from local enterprises and communities.

PCD has reported the result of GPP implementation in terms of eco-product purchasing of approximately 8.3 Million USD and GHG reduction of about 38,446 t CO_2-eq. The carbon footprint approach applied in Thailand falls in the same time of methodological framework in Greece (Aivazidou et al. 2013)(Table 1).

Table 1: Greenhouse Gas (GHG) reduction from the purchasing of eco-products under the GPP policy and implementation (PCD, 2016)

No	Item	Value (THB)			GHG reduction (kg CO_2-eq)
		Total purchasing	Eco-product purchasing	%	
1	Printing paper	91,237,647	84,240,986	92	136,863.86
2	Correction pen	2,241,759	2,044,873	91	8,355.44
3	Fluorescent light bulbs	1,419,962	381,439	27	3,273,982
4	Steel furniture	557,329	416.009	75	2,520
5	Tissue paper	8,470,436	2,856,128	34	614.77
6	Primary battery	1,055,026	602,247	57	684.69
7	Whiteboard pen	717,434	400,906	56	64.69
8	Photocopier machine	21,419,252	18,244,531	85	234,432
9	Printer	12,460,238	1,789,511	14	26,040
10	Toner	93,018,898	13,923,980	15	42,289
11	Paint (for buildings)	10,400,760	2,352,050	23	NA
12	Envelop	4,459,063	2,759,887	62	3,778
13	Document box	1,284,397	375,348	29	318.64
14	Cleaning service	149,984,310	105,575,088	71	24.58
15	Photocopier renting service	46,519,341	27,197,852	58	34,715,580
16	Hotel	35,009,092	14,714,145	42	701.96
17	Car-care service	219,252	15,664	7	NA
	Total	480,474,197	277,890,644	58	38,446,250

5. Discussion

The GPP policy and implementation has encouraged the manufacturers to produce eco-products to support the increasing demands from both private and government sectors. There are the national green label and other eco-labels which are applied to a number of products.

The sustainable procurement has increased the market demand for eco-labelled products. However, there is still a need to add on more products and services, especially products and services that are high impacts (building materials, engineering services, and van renting services). In terms of supporting financial rules, governmental organisations can use the principle of price performance to justify the selection of eco-products though it may not always be the cheapest option; this will certainly encourage more purchasing of eco-products. Nevertheless, there is a concern over the allocation of budget for purchasing eco-labelled products that could be a barrier of implementation.

Manufacturers shall be informed about the requirements and provide technical support on adopting the ecolabels. There will be a need to develop the local capacity, as requested, especially for Small and Medium Enterprises (SMEs). To facilitate the implementation of GPP, there is a need to develop online national databases of eco-products to ease product selection along with the documentation requirements (forms according to the governmental purchasing procedure).

Green buildings shall be required for new governmental buildings to enhance the demand for basic eco building materials. This will transform the consideration of embedding energy associated with raw material production and production process stages to the life cycle GHG emissions of building material products (Tan and Foo, 2009). The use of eco building materials for sustainable building and construction should be incorporated into the smart city projects to stimulate more demand for eco-labelled building materials.

Most importantly, the consumers must be educated about eco-labels to enhance the market demand and stimulate more manufacturers to apply for ecolabels. Currently, industrial operators do not think eco-labels could be useful as a marketing tool because people do not understand about the given information. Thus, it is

critical to have the requirement of environmental education course at all levels; knowledge on SCP can be integrated into the related existing courses, especially the sciences.

6. Conclusion

To stimulate more organisations implementing GPP, it must be made mandatory in all governmental organisations at all levels. At the national level, there should be a target to increase the purchase of eco-products with eco-labels. All organisations should set a target to achieve higher value of purchasing. The procurement based on the circular economy concept (i.e. focused on service instead of product, the product's design, use phase and end of life, and focus on market dialogue) should be investigated for applying in the GPP and move towards sustainable procurement standard according to ISO 20400 (2017).

The private sectors should be encouraged to buy eco-products from local enterprises and communities to support not only the GPP policy but also to enhance the relationship with the local people. In addition to sustainable public procurement, consumers should also be educated about eco-labelled products and encouraged to support such products to contribute to environmental protection.

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