Paper:
Sustainable Consumption and Production (SCP) and the New Urban Agenda

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Author: Ahmad Hafiz[1]

[1] *Collaborating centre on Sustainable Consumption and Production (CSCP)*

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SUSTAIN EU ASEAN Project aims to enhance research cooperation between EU and ASEAN researchers in the areas of climate change, resource efficiency and raw materials. This short paper discusses opportunities to promote Sustainable Consumption and Production as part of sustainable urban development in the ASEAN region.

The structure of the paper is as follows:

1. Overview to HABIBAT III New Urban Agenda
2. SCP issues linked to urban development especially in South East Asia
3. How SCP can contribute to sustainability in cities?
4. Opportunities of SCP for ASEAN research cooperation

1 Habitat III New Urban Agenda

The UN Habitat strives to improve living conditions in human settlements and cities around the globe. It envisions well-planned, well-governed and efficient cities that provide adequate housing, infrastructure and universal access to basic services such as water, energy and sanitation.

These goals are derived from 1996 Habitat Agenda. In view of the demographic, environmental, economic and social changes since the first Habitat Agenda, urban planning and governance require a new definition. The UN Habitat III conference in Quito, Ecuador on October 17-20 will be an effort to decide on a new agenda for sustainable urban development.

The Habitat III Draft Urban Agenda[1] presents vision of future cities. These cities are to "protect, conserve, restore, and promote their ecosystems, water, natural habitats and biodiversity, minimize their environmental impact, and change to sustainable consumption and production patterns" (UN-Habitat, 2016).

The Draft Urban Agenda includes commitment to plan and implement sustainable consumption and production patterns". It is a "reaffirm[ation] of the 2030 Agenda for Sustainable Development and the Paris Agreement[2] on Climate Change.

In important for a New Urban Agenda become event in view of global climate change. The Intergovernmental Panel on Climate Change (IPCC) estimates average sea level to rise between 13 and 28 centimetres in a low scenario and between 26 and 59 centimeters in a high scenario in next 100 years. This has risks of rising sea levels and coastal surges for 15 of the world's 20 mega cities (World Bank, 2010).

The population in urban areas is projected to continue rising up to 2050 especially in the urban area currently in the low-and-middle-income nations. By 2050 the population of Asia is projected to approximately double the level in 2010[3]. This increasing rate of population growth will create more demand for resource use to serve the consumption needs of growing population of cities. Cutting of forests to inhabit more and more people will increase climate vulnerability of cities across the world. Negative impacts of unsustainable production and consumption thus could harm economic growth of urban centres in coming decades.

The above shows that sustainable development of urban areas is an imperative. Therefore, the key objective of Habitat III conference in Quito in October this year is to secure political commitment for sustainable urban

[1] Prepared on the basis of negotiations among UN Member States held on July 25-27 in Indonesia in preparation of the Habitat

[2] Adopted by at least 175 countries in December 2015, the Paris Agreement is an international treaty that aims to limit global warming to well below 2 degrees Celsius.

[3] from 1848 in 2010 to 3310 million in 2050 (Revi, A., Satterthwaite, D., & Corfee-Morlot, J., 2014).

development. The conference will lead to action-outcomes to drive the agenda of sustainable urban development.

2 SCP issues linked to Urban Development especially in Southeast Asia

This section discusses the SCP issues in relation to cities in general and to ASEAN megacities in particular.

SCP issues linked to cities especially to ASEAN cities

Unsustainable production and consumption in cities lead to imbalanced growth of urban spaces. Despite cities' role for increasing economic activity, unplanned city development creates externalities such as congestion, pollution, waste etc. Migration to cities for seeking employment and quality of life results in increasing demand for products and services. This leads to more use of energy in industries to supply citizen' demand for consumption.

The challenge for ASEAN megacities is mainly to ensure growth while at the same time avoid impacts of climate change. Megacities in ASESA such as Jakarta is witnessing restraints to its growth due to unplanned development. City is faced by mobility paralysis and attendant air pollution which hampers its economic success. According to Transport Agency of the city, congestion costs the city USD 5.4 billion annually. Major environmental challenge which affect Indonesia and its cities are loss of biodiversity due to large scale deforestation and booing population. These challenges also affect the business in the country such as in mining, palm oil production and tourism (Wharton University of Pennsylvania., n.d.). Increasing environmental challenges cause negative impacts for growth. ASEAN region has long coastlines with large urban and peri-urban populations. The region has seen growth of mega cities in the recent time. This growth is likely to continue in the future. (The Nielsen Company, 2015).

The major challenge to sustain ASEAN cities is how to make growth of regions' cities equitable and shared. The regions must decouple its economic growth from exploitation of nature resources. It cannot keep depending on fossil fuel to continue its growth. It cannot afford to grow on the cost of its environment due to its vulnerability to the effects of climate change. ASEAN cities also face the challenge of land use and encroachment on natural habitat. From 1990 and 2000, an approximate of 23,000 km2 of forest area has been clearly annually. This has resulted in net carbon emission of approximately 0.5 Pg C per year which accounts for approximately 29% of global net carbon relates from deforestation (Peng, C., Zhao, S., Jian, J., & Lei, X., 2006).

This makes the case for promoting SCP to drive sustainability in ASEAN region's mega cities.

SCP can reduce environmental and social impacts of production on the one hand and promote green products and services on the other.

3 How SCP can contribute to sustainability in cities?

Cities of the future face a multitude of challenges. One important challenge is to make consumption and production patterns sustainable.

SCP is a practical approach to mitigate negative environmental impacts of both consumption and production systems.

Key benefits of SCP for cities can be summarized as:

1. Increased resource efficiency over the whole value chain of goods and services
2. Reduced use of hazardous substances throughout supply chains
3. Increased protection water resources (rivers, underground water)
4. Increased eco and social innovation

5. Increased recycling of valuable resources within waste streams

6. Strengthened competitiveness of local enterprises in resource efficient production processes

The lifecycle perspective of SCP provides a useful matrix to address resource efficiency and ecological and social impacts of production and consumption. The approach provides city governments a tool to greening consumption and production (see figure 1 below).

The life cycle approach

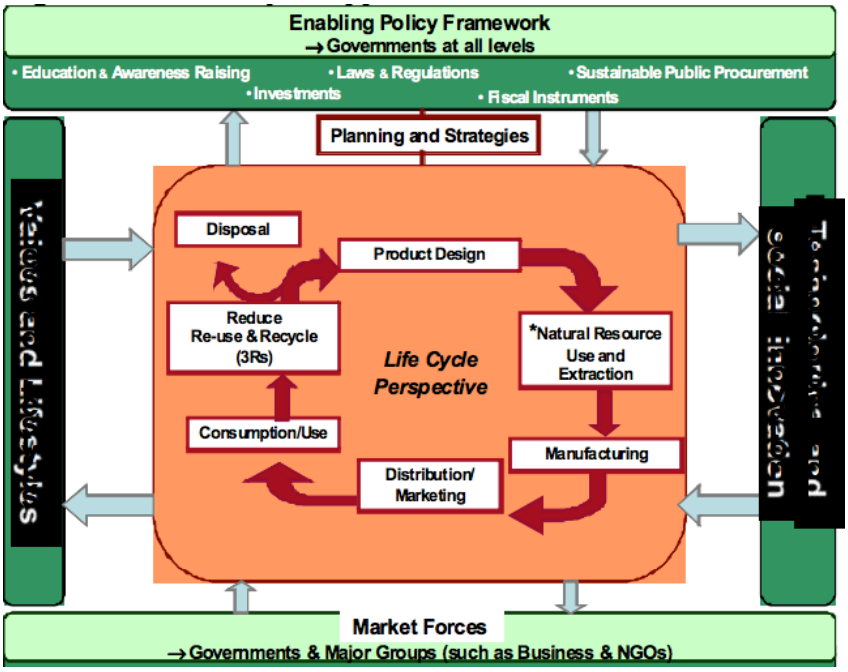

Figure 1. The life cycle approach (source: UNEP, 2010)

The lifecycle approach as outlined in figure 1 seeks to take into account environmental and social impacts along the whole life cycle of a product or service. It considers low-energy/resource intensive production processes, distribution systems and increased recycling and reuse at the end-of-life. The lifecycle approach avoids shifting problems in one stage, one geographical area or one environmental medium to another. It refers to integration of negative environmental costs or externalities into the budgets of households and enterprises via effective economic instruments including fiscal measure and other (dis) incentives. This allows making true cost visible throughout the lifecycle. As consumption patterns depend on lifestyles, lifestyles and values also need to be taken into account at different life cycle stages in order to enhance sustainability value-added of products and services (UNEP, 2010).

4 Opportunities of SCP for ASEAN research cooperation

The ecological footprint for most ASEAN countries is beyond sustainable level. Singapore's ecological footprint for example is 5.34 global hectares (gha) which beyond sustainable level of 1.8 gha per person (UNESCO, 2010).

ASEAN cities can become more sustainable and resilient by implementing SCP.

The concepts such as smart cities, low carbon urban development, sharing economy, collaborative and sharing city all are part of solutions to sustainable future cities. To enable future sustainable lifestyles, the new ways of governance are needed. Cities can enable disruptive and innovative solution to sustainable lifestyles. Habitat III conference and the resulting action-plan to sustainable urban development are the best forum for the UN Habitat to drive innovative approaches to sustainable cities further and pilot test them in collaboration with ASEAN cities.

This paper suggests following measures to drive sustainable production and consumption patterns in ASEAN cities.

Sustainable production

Sustainable production patterns can be promoted by supporting, cleantech and up-cycling business in ASEAN cities. The city administration can leverage opportunities of ICT technologies for optimising the energy and resource consumption of in manufacturing industries in future cities. The concept of Industry 4.0 is highly relevant to the debate of new urban agenda. The objective of Industry 4.0 is to move to smart factories, smart products and smart services embedded in an Internet of things and industrial Internet . Industry 4.0 offers a lots of opportunities for future cities to organize growth and innovation by employing the ICT based business models and services. In an Industry 4.0 environment, the employers and employees join in new ways of organizing work. The employer benefit from the flexibility of ICT in organizing the production systems remotely. While the employees profit from flexible working time and location. All in all, this leads to new resource efficient ways to manage manufacturing, logistics and retail (SPREAD2050, 2012, Germany Trade & Invest, 2014). All these approaches can be developed and tested in cooperation between European and ASEAN researchers.

Sustainable consumption

Promoting sustainable consumption on the one hand will influence consumers' choice of goods and services such as food, shelter, clothing, mobility and leisure in ASEAN cities. Provision of sustainable commuting options such as eco-mobile modes of transport, car sharing, public transport and bike paths will reduce air pollutant emission in cities. Success of all of these initiatives depends on consumer behavior and lifestyles. Therefore, the cities have a key role for promoting the understanding of sustainable lifestyles and consumption patterns in citizens. They can enable them in implementing behavior changes required to live not only with reduced material footprints but rather create positive impacts for environment and society (i.e. handprint).

Systematic research exchange between Europe and ASEAN on innovative approaches to advance sustainable lifestyles in urban consumers (in the area of mobility, housing, food and leisure etc.) can support the up-take of SCP in both regions.

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