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Practicing Sustainable Consumption

By

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Do we Malaysians practice sustainable consumption? The answer is 'No' if we just look, for example, at our water consumption. Depending on the sources taken, a Malaysian uses an average of 203 to 280 litres per day. This is reportedly high when compared with Indonesia at 150, Philippines at 175 and Singapore at 155 litres per person per day. Water tariff is relatively low and for households in Selangor 20 cubic-metres of water are made available free every month.

What lessons can we learn from the water rationing exercise in April 2014 in order to save more water for the dams? The water rationing which affected more than one million households in the Klang Valley indicated only a seven per cent reduction in usage. According to a source from the Selangor Water Management Authority, usage had not gone down by much — consumers were probably storing water excessively and they need to change their water usage habits.

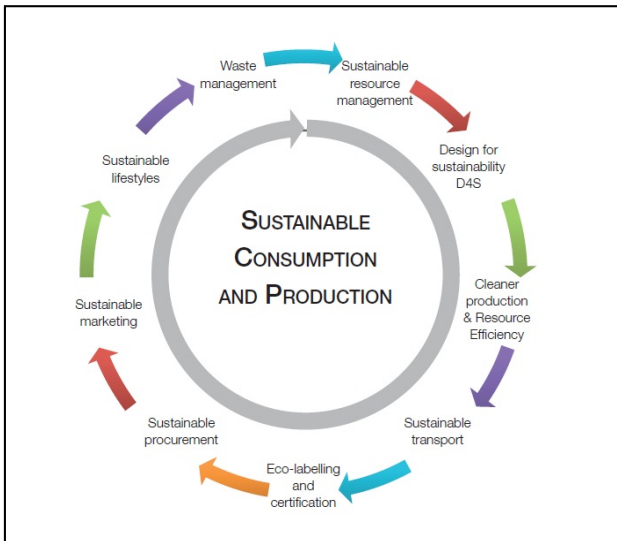
Water is vital to all forms of life. It is used for domestic consumption, transportation, agriculture and industry as well as a power source. The main source of water is rain and the availability of water is very much dependent on the amount of precipitation.

Rainfall in Malaysia is considered high at an average of 2,500mm a year but parts of Malaysia are currently experiencing drought and there is a need to manage the precious resource. The National Water Services Commission (SPAN) has taken the initiative to ensure that water supply services become more efficient and sustainable but the consumers must learn to appreciate the value of water and practice sustainable consumption.

Is the concept of sustainable consumption understood? If we trace back to the Rio Summit in 1992, the issue of sustainable consumption and production (or SCP) was in fact raised and Agenda 21 identified unsustainable patterns of consumption and production as major causes of the continued deterioration of the global environment. Then in the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002, there was a call 'to accelerate the shift towards sustainable consumption and production' and to promote social and economic development within the carrying capacity of ecosystems by delinking economic growth from environmental degradation.

The Sustainable Consumption Research Exchange Network (SCORE) was subsequently established to address the issue of SCP in the European Union (EU) and beyond. But according to SCORE,

Figure 1: Sustainable Consumption and Production Cycle.



Source: www.rona.unep.org

consumption has to be first understood and then a systemic approach must be taken. This implies that experts who understand business development, solution design, consumer behaviour and the effectiveness of policy instruments must collaborate and cooperate in shaping the concept. This should be further linked with the experiences of industry actors, consumer groups and ecolabelling organisations to understand the whole value chain in the consumption domains identified, be it energy, food, or others (see Figure 1).

The concept of SCP has been studied in promoting sustainable development. Initiatives such as targets for renewable energies as well as energy efficiency and plans for Green Public Procurement have been undertaken by the EU. SCP initiatives have also been undertaken by many other countries although these initiatives may not be labelled as 'SCP' or as addressing the need for SCP. The initiatives include both top-down and bottom-up approaches but the key word here is 'change'. Change, in general, involves rules, financial regulations, services, technologies, consumer practices, values, interests or expectations among others.

What is important therefore is how policy can effectively support the change to enable sustainable consumption and production practices and hence stimulate sustainable markets, sustainable innovation systems or sustainable

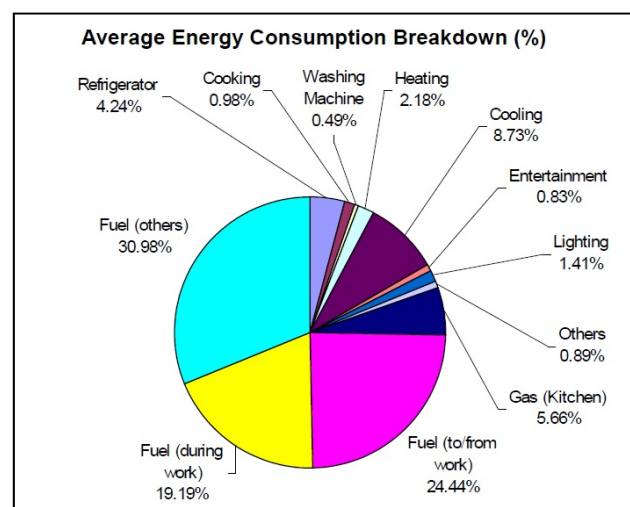
behaviour of businesses and consumers. An equally important key word is 'governance'.

Businesses are in the position to respond to sustainability challenges such as making production and products more resource efficient or adopting a new business model to be competitive. Consumers, on the other hand, can exercise sustainable choices provided there is sensitisation as consumer behaviour can only change if there is the ability, opportunity and motivation.

There are of course challenges since the SCP concept aims to do 'more and better with less' as well as to address the economy, environment and social dimensions in a holistic manner. However, it must be noted that SCP is crosscutting involving, for example, various government entities in terms of agenda-setting and implementation. And while the primary objective is to ensure that basic needs are met, there is a need to build from there and provide a better quality of life. There is an ongoing study that will provide Malaysia with a clearer picture to address the SCP concept and we the consumers must be ready to accommodate the changes for a sustainable future and to be competitive.

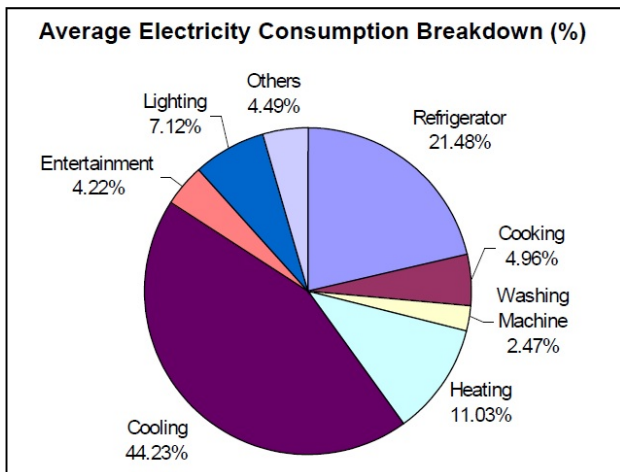
Malaysian consumers can be more proactive. Let us take a look, for example, at the patterns and trends in energy consumption by households (see Figure 2). Malaysians households consume energy in various forms, such as

Figure 2: Average energy consumption breakdown in Petaling Jaya



Source: www.cetdem.org.my

Figure 3: Average Electricity Consumption Breakdown in Petaling Jaya



Source: www.cetdem.org.my

electricity for air conditioning, lighting and appliances. However, cooling devices such as air conditioners, refrigerators and chillers consume more energy compared with all other electrical appliances. A joint research conducted by the Centre for Environment, Technology and Development Malaysia (CETDEM)ⁱ and the Petaling Jaya City Council in 2006 found that 66 per cent of the average household electricity consumption is for these cooling appliances (see Figure 3). It is therefore important for consumers to understand their electricity consumption trends because of the increasing electricity demand.

According to another research sourceⁱⁱ, the share of electricity consumption to total energy consumption has increased from 17.4 per cent in 2007 to 21.7 per cent in 2012. The total electricity production was reported at 122.12TWh in 2012 with gas as the major fuel source contributing 52.7 per cent of the total generation fuel mix followed by coal at 38.9 per cent, hydro at 3.7 per cent, with the remaining percentage taken up by oil and others. That there is an increasing dependency on coal in electricity generation — which is expected to grow from 27 per cent in 2005 to 37 per cent in 2030ⁱⁱⁱ — must be managed judiciously since coal is largely imported and there are concerns about global warming and the implicit penalties on their use.

Although carbon dioxide (CO₂) emissions per kWh (for specific fuels) can be determined, the indicator should be used with caution due to data quality problems. What is important is the

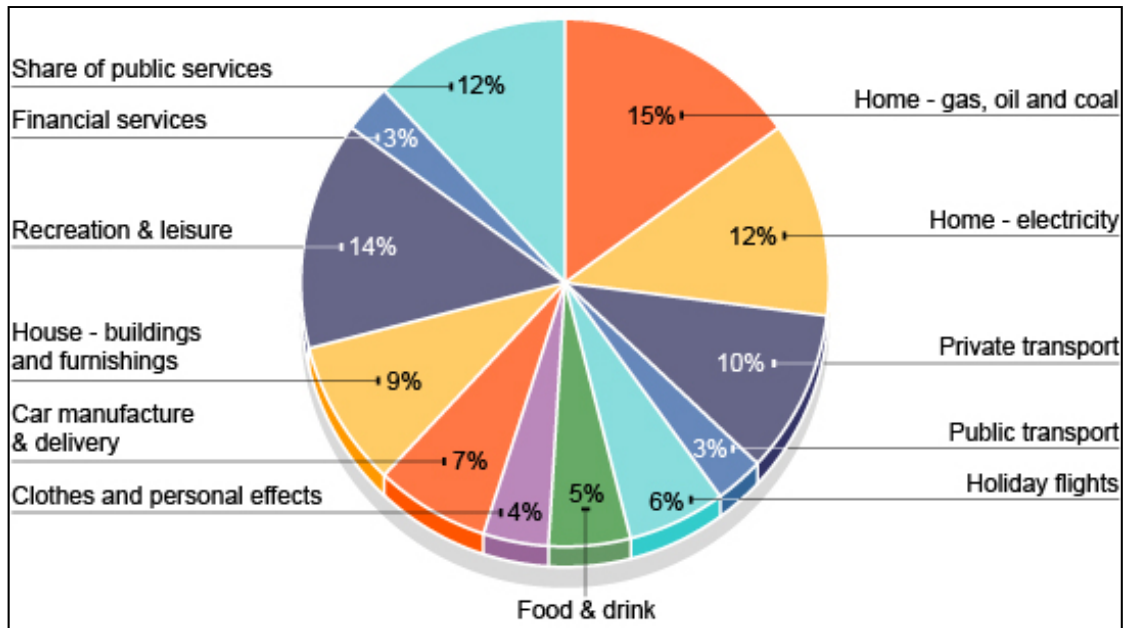
awareness and a need not to be indifferent to prudent energy consumption or production patterns. The call for a change noted earlier could be undertaken fairly quickly (such as for energy-saving lighting) while others will take longer to be effective (such as housing design or electricity generating systems). The policy question will have to focus on how much energy conservation and emission reduction can be achieved that is technologically, economically as well as politically feasible.

Following trends elsewhere, Malaysia promoted energy efficiency (EE) improvements such as SAVE or Sustainability Achieved via Energy Efficiency. In addition, the Entry-Point Project (EPP) 9 under the Economic Transformation Programme introduced rebates for EE equipment. Energy Efficiency labelling was earlier introduced to provide information to consumers on energy consumption but the approximate operating costs of different models should also be made available. This will allow consumers to identify cost savings and compare them with price differentials. Persuasive approaches taken by the government were initially aimed to bring in voluntary behavioural shift among energy users but the government is changing the strategy and a more regulatory approach is soon expected.

In addition, Malaysia may see innovative approaches such as carbon labelling, that is 'carbon footprints' (grams of CO₂ emitted during the production and distribution of products or product lifecycle) in the future. TESCO supermarket in the United Kingdom, for example, started carbon labelling for their food products to encourage food producers and distributors to reduce their carbon emissions and at the same time allow consumers to make informed decisions about their items to be consumed.

Next, public information campaigns have been ongoing to encourage Malaysian consumers to turn off appliances completely when the standby functions are not needed. It must be noted that many electric appliances do consume energy not only when they are in use but also when they are in a standby mode — to operate a clock or remote control system. It has been estimated that in the United States about 5–10 per cent of residential energy consumption is for standby power therefore costing more than USD 3 billion per year or consuming the output of 18

Figure 4: Breakdown of a Typical Person's Carbon Output



Source: www.bbc.co.uk

power stations^{iv}. The same source quoted that in Europe, studies have estimated that standby power accounts as much as 7–13 per cent of residential energy consumption. The United States and countries such as Australia have therefore introduced mandatory standards for standby power consumption by various appliances.

Also in the United States, a surcharge is added to electricity bills to fund renewable energy or energy conservation programmes. Similarly, Malaysia has imposed a levy on all electricity consumers using over 300kWh of electricity a month (as of 2014, the levy has been raised to 1.6 per cent) under the Feed-in Tariff mechanism to support renewable energy development. This approach in funding is based on the 'polluters pay' concept and is designed to encourage consumers to be more energy efficient by consuming less electricity.

The National Energy Efficiency Master Plan (NEEMP) under the Ministry of Energy, Green Technology and Water was drafted to stabilise energy consumption against economic growth in three sectors — the industrial, commercial and residential sectors — but the Peer Review by the Asia-Pacific Economic Cooperation recommended that the transport sector be included. This is so because the sector is the second largest energy

user in the economy with a share of 37 per cent in 2012. According to the Review, the large use of energy by the transport sector (the Review used a 2008 figure where the share was 36.9 per cent) was attributed to a high usage of private cars for passenger transport. Fuel consumption for car travel and the resulting CO₂ emissions depends on the type of vehicle and the number of passengers travelling together.

In terms of vehicles, Malaysia witnessed a steady growth in numbers and models of fuel-efficient vehicles particularly with the introduction of import duty exemption on all hybrid cars. Sales were reportedly negligible before the exemption with just 322 units recorded in 2010 but surged to 8,403 in 2011 and doubled to 15,355 units in 2012 when more hybrid models were launched^v. While the tax incentives for completely built units (CBU) of imported hybrid cars have been discontinued, the exemption of excise duties and import taxes for hybrids and electric vehicles will be extended for models that are completely-knocked-down (CKD) and assembled in Malaysia.

Nonetheless Malaysia may witness policies to discourage the use of cars in city centres and promote the use of mass transit when the infrastructure is fully in place. Many cities

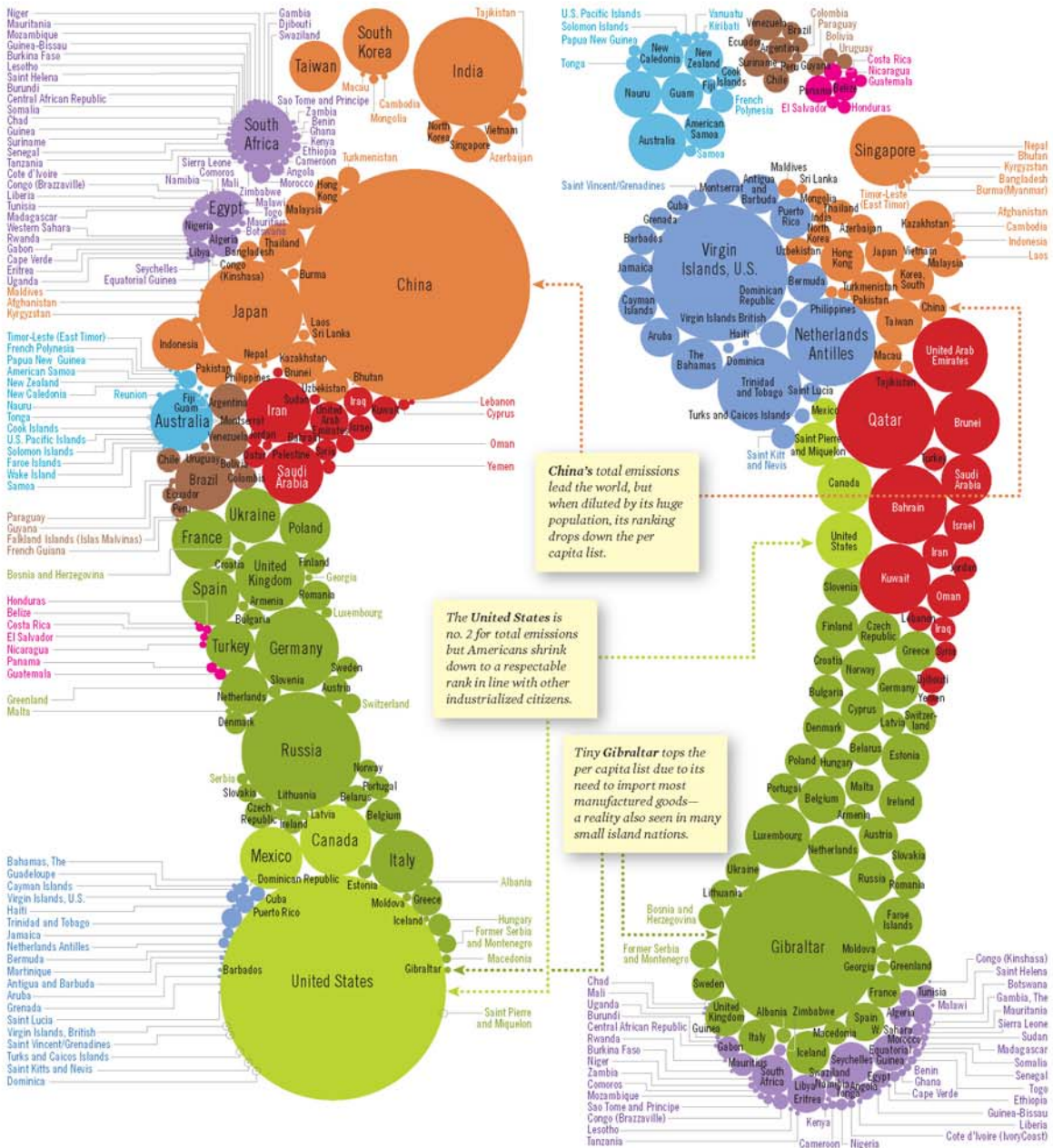
Tracking Carbon Emissions

A footprint comparison of total carbon dioxide emissions by nation and per capita shows there's plenty of room for smaller countries to reduce their carbon footprints.

By Stanford Kay

Total Carbon Emissions by Nation

Per Capita Carbon Emissions by Nation



DESIGN: STANFORD KAY STUDIO.COM

NOTE: BASED ON 2007 DATA. SOURCES: U.S. ENERGY INFORMATION ADMINISTRATION

such as London and Singapore have restricted car entry into city centres through the use of road tolls or a congestion charge primarily to limit congestion and air pollution and at the same time to reduce fuel consumption and CO2 emissions.

Energy is still being subsidised in Malaysia but the rationalisation process is an important effort not only to ease the government's burden but also to help increase energy efficiency, reduce energy consumption as well as carbon emissions among other objectives. The ambitious effort, however, is somewhat slow because of the political and social implications.

While corporations do demonstrate environmental concern and social responsibility, market demand can be influenced by consumer

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behaviour and preferences. The young consumers who are reportedly more concerned with issues relating to sustainable consumption are important actors. Education for sustainable consumption has an important role in creating responsible attitudes towards a more sustainable lifestyle. With the various initiatives taken and more in the pipeline, Malaysia will see a change in the future in terms of sustainable consumption and production.

Notes:

ⁱProject Working with the Community on Energy Efficiency at Household Level in Petaling Jaya (WCPJ), <http://cetdem.org.my>

ⁱⁱTan, C.S., Maragatham, K. and Leong, Y.P. "Electricity energy outlook in Malaysia". Paper presented at the Fourth International Conference on Energy and Environment, 2013.

ⁱⁱⁱSiti Indati Mustapa, Leong, Y.P. and Amir Hisham Hashim. "Issues and challenges of renewable energy development: A Malaysian experience." Paper presented at the International Conference on Energy and Sustainable Development: Issues and Strategies, Thailand, 2–4 June 2010.

^{iv}United Nations Department of Economic and Social Affairs, 2007. "Sustainable Consumption and Production: Promoting Climate-Friendly Household Consumption Patterns".

^v*The Star*, 24 February 2014. "All eyes on announcement today of duty exemption details regarding hybrid electric vehicles".