

# Embracing Sustainable Consumption for a Happy Life

可持續消費 知行融樂

A Tracking Study on Consumer Behaviour 消費行為追蹤研究



消費者委員會  
CONSUMER COUNCIL





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# Contents

## Abbreviations

<b>Executive Summary</b>	i
--------------------------	---

<b>報告摘要</b>	xv
-------------	----

<b>1 Introduction</b>	1
-----------------------	---

1.1 Background	3
----------------	---

1.2 Objectives of this Study	5
------------------------------	---

1.3 Study Methodology	6
-----------------------	---

1.4 Structure of the Report	8
-----------------------------	---

<b>2 Recent Developments in SC in Hong Kong and the Global Arena</b>	10
--	----

2.1 Use of Resources and Waste Production in Hong Kong	11
--	----

2.2 Government Policies and Initiatives in Hong Kong	18
--	----

2.3 Local Business Initiatives	22
--------------------------------	----

2.4 Local NGO Initiatives	24
---------------------------	----

2.5 Local Consumer Education	24
------------------------------	----

2.6 Global Trends	25
-------------------	----

2.7 Summary	30
-------------	----



## **3 Tracking on Consumers' Attitude and Behaviour Towards SC in Hong Kong** 32

3.1	Consumers' Attitude and Behaviour Towards SC in 2020	35
3.2	Sustainable Consumption Index	52
3.3	Highlight of Changes since the Baseline Survey	56
3.4	Summary	66

## **4 SC Related Policies and Initiatives in Selected Jurisdictions** 68

4.1	Scope of the Review	69
4.2	Product Information	70
4.3	Waste Reduction and Recycle	78
4.4	Product Repairability and Durability	87
4.5	Promotion of Sustainable Lifestyle	89
4.6	Summary	90

## **5 Recommendations** 94

5.1	Drivers for Behavioural Change of Consumers	95
5.2	Role and Responsibility of Businesses	98
5.3	Role and Responsibility of the Government	101
5.4	The Way Forward	103

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<b>Annex 1</b>	Examples of Major Environmental and Low-carbon Policies and Initiatives Launched by the Government in Recent Years	106
----------------	--	-----

<b>Annex 2</b>	Reference List	116
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<b>Annex 3</b>	特定消費者組別的特徵	118
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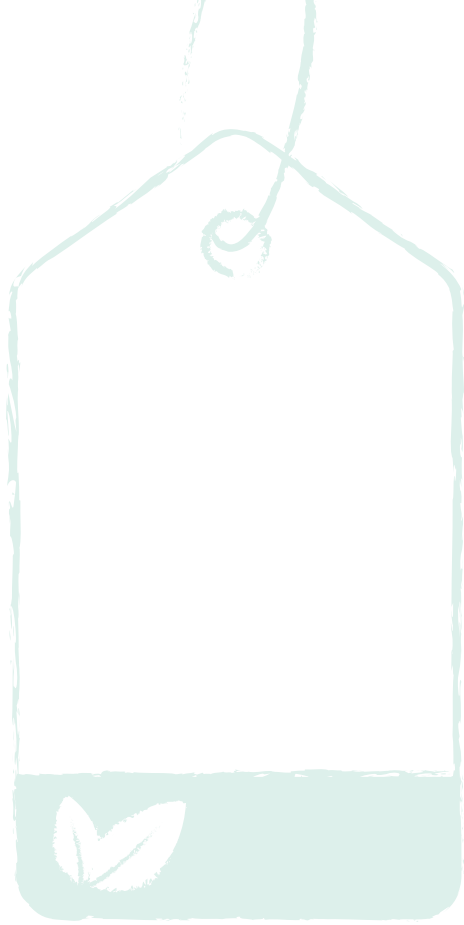
# Abbreviations

<b>10YFP</b>	10-Year Framework of Programmes on Sustainable Consumption and Production Patterns
<b>ADEME</b>	French Agency for Ecological Transition
<b>BSAP</b>	Hong Kong Biodiversity Strategy and Action Plan
<b>CCSA</b>	Consumer Culture Study Award
<b>CGS</b>	Community Green Station
<b>CIC</b>	Construction Industry Council
<b>CI</b>	Consumers International
<b>COVID-19</b>	Coronavirus Disease 2019
<b>CRRA</b>	Consumer Rights Reporting Awards
<b>CSD</b>	Census and Statistics Department
<b>DCVs</b>	Diesel Commercial Vehicles
<b>EC</b>	European Commission
<b>ECC</b>	Environmental Campaign Committee
<b>ELIS</b>	Environmental Labelling and Information Schemes
<b>EMSD</b>	Electrical and Mechanical Services Department
<b>ENB</b>	Environment Bureau
<b>EPAT</b>	Environmental Protection Administration Executive Yuan R.O.C. (Taiwan)
<b>EPD</b>	Environmental Protection Department
<b>EPI</b>	Environmental Performance Index
<b>EPR</b>	Extended Producer Responsibility
<b>ESG</b>	Environmental, Social and Governance
<b>EU</b>	European Union
<b>EVs</b>	Electric Vehicles
<b>FEHD</b>	Food and Environmental Hygiene Department
<b>FiT</b>	Feed-in Tariff
<b>FRT</b>	First Registration Tax
<b>FSC</b>	Forest Stewardship Council
<b>FWE</b>	Food Wise Eateries
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gas
<b>GJ</b>	Gigajoule
<b>HKEX</b>	Hong Kong Exchanges and Clearing Limited
<b>HKGBC</b>	Hong Kong Green Building Council
<b>HKO</b>	Hong Kong Observatory
<b>HKQAA</b>	Hong Kong Quality Assurance Agency
<b>ISO</b>	International Organization for Standardization
<b>IWA</b>	International Water Association

<b>KCA</b>	Korea Consumer Agency
<b>KEITI</b>	Korea Environmental Industry and Technology Institute
<b>KPIs</b>	Key Performance Indicators
<b>LED</b>	Light Emitting Diode
<b>LPRP</b>	Logo for Products with Reduced Packaging
<b>MEELS</b>	Mandatory Energy Efficiency Labelling Scheme
<b>MoE</b>	Korean Ministry of Environment
<b>MSC</b>	Marine Stewardship Council
<b>MSW</b>	Municipal Solid Waste
<b>Mt</b>	Metric Tonnes
<b>NEA</b>	National Environment Agency
<b>NGOs</b>	Non-governmental Organisations
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PMEB</b>	Professionals, Managers, Executives and Businessmen
<b>PPP</b>	Packaging Partnership Programme
<b>PRS</b>	Producer Responsibility Schemes
<b>PSB</b>	Plastic Shopping Bags
<b>RE</b>	Renewable Energy
<b>REE</b>	Regulated Electrical Equipment
<b>RFID</b>	Radio Frequency Identification
<b>RVMs</b>	Reverse Vending Machines
<b>SARS-CoV-2</b>	Severe Acute Respiratory Syndrome Coronavirus 2
<b>SC</b>	Sustainable Consumption
<b>SCI</b>	Sustainable Consumption Index
<b>SCP</b>	Sustainable Consumption and Production
<b>SDF</b>	Sustainable Development Fund
<b>TD</b>	Transport Department
<b>TJ</b>	Terajoules
<b>TMG</b>	Tokyo Metropolitan Government
<b>UK</b>	United Kingdom
<b>UN</b>	United Nations
<b>UNEP</b>	United Nations Environment Programme
<b>US</b>	United States
<b>VAT</b>	Value-added Tax
<b>VBWF</b>	Volume-based Waste Fee
<b>WELS</b>	Water Efficiency Labelling Scheme
<b>WPRS</b>	Producer Responsibility Schemes on Waste Electrical and Electronic Equipment
<b>WSD</b>	Water Supplies Department
<b>WWF</b>	World Wide Fund for Nature







## **Executive Summary**



## The Pressing Sustainable Consumption Issue

Sustainable Consumption (SC) refers to “the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations” – a definition set out at the Oslo Symposium on Sustainable Consumption in 1994.

Now, more than twenty years have passed, how well has this important concept affected our consumption pattern? How serious have people taken it and how mindful have they brought it into real actions in their daily lives?

While the world population continues to expand, human consumption pattern has resulted in resource depletion, pollution, environmental degradation and climate change, pushing the earth towards its limits. It is predicted in 2020 that, if we do nothing to diminish our impact on climate change, as soon as in the 2030s, ice caps and crucial ice sheet would continue to melt and swell sea levels by 20cm, 60% of coral reefs would be highly endangered, and that dwindling crop yields would push 100 million more people into extreme poverty, and climate change-related illnesses would kill an extra 250,000 people each year.<sup>1</sup>

Over the past decade, there were heated discussions on SC across the globe. International organisations, governments, environmental groups, academia and consumer groups have been seeking effective ways to promote SC, some programmes have excelled at empowering consumers with sufficient product information, while some others encourage SC behaviour by making it easier and more appealing, such as through the use of incentives, legislations, and/or good practices adopted by business sector.

In developing Hong Kong into a more sustainable city, the Hong Kong Government has mapped out various strategies, targets, policies and action plans, as well as implemented education programmes in relation to sustainable development, including SC, such as reduction of energy consumption, carbon emission and waste disposal. Businesses have been catching up the trend and the community has also been becoming more aware about SC. Yet, its pace is lagging behind the global trend. There are still a lot of challenges on the city’s road to achieve its sustainable goals.

Hong Kong is a high consumption city. It stands out as a big user of water resources among its international peers<sup>2</sup> and ranks second in terms of per capita seafood consumption in Asia.<sup>3</sup> Although it is not a self-sufficient city in terms of production, with limited manufacturing and farming activities, there is no lack of consumption choice. Loads of choices of products imported worldwide are easily available just around the corner. Being a hustle and bustle city, people are in pursuit of convenience. They are buying into a culture of disposability instead of approaching product purchases as sustainable options.

The COVID-19 pandemic evolved in 2020 has brought drastic changes to the community at various levels and to people’s daily lives in many ways. It offers the world an opportunity to build recovery

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<sup>1</sup> World Economic Forum. (2020) Here’s what to expect over the coming decades.

<sup>2</sup> Civic Exchange. (2019) Modernising Hong Kong’s Water Management Policy PART I.

<sup>3</sup> Our World in Data. According to the quantity of fish and seafood supply per person in 2017, the top three places in Asia were Maldives (90kg), Hong Kong (71kg) and Malaysia (58kg).

plans that will reverse current trends and change our consumption and production patterns towards a more sustainable future.

It is high time that Hong Kong should quicken its pace to catch up with the global development of achieving sustainability. It should respond promptly to ways to drive changes with joint efforts of all stakeholders, including consumers, businesses and the Government, to build a sustainable city.

## This Study

With its vision on advocating SC, the Consumer Council (the Council) published its first in-depth report on the subject in 2016. The report presented findings from a baseline survey conducted in 2015 (hereafter collectively referred as the “baseline survey”) which revealed that consumers were fairly concerned and aware about the impact of their consumption behaviour on the environment, but did not always act consistently to reflect this concern. Consumers had to be more determined and motivated themselves to change their behaviour.

As a tracking study of the baseline survey, the Council conducted an in-depth study to review the latest local and overseas development on the subject after five years (this Study), with a view to finding out the status of change in consumer attitude and behaviour for formulating recommendations for stakeholders to join hands in promoting SC in Hong Kong. Despite the challenges encountered in the fieldwork amid the COVID-19, this Study was completed with strong support from the respondents.

This Study took a mixed-method approach comprising consumer surveys through telephone and on-street face-to-face interviews with a total of 1,517 respondents aged between 15 to 64, focus group discussions, and desk research on relevant experience in thirteen jurisdictions.

## Tracking of Consumers’ Knowledge, Attitude and Behaviour

This Study found that while most respondents perceived their consumption behaviour only had an average impact on the environment and perceived they had an average understanding towards the concept of SC, they could in general relate SC to most of its aspects, in particular energy conservation, waste reduction and avoid pollution in production. Also, a majority of the respondents were concerned about product information related to the pollution caused by the products during their production process or usage, and the lifespan of product. While the respondents have improved in acknowledging the benefits of energy conservation and waste separation, various barriers such as recycling outlets not being enough or too far away, or lack of knowledge on waste separation had held them back from taking further actions. Of the six common recyclables, only around 30% of the respondents always or usually recycle metal, glass or small home appliances, whereas about half of the respondents always or usually recycle clothes, paper and plastics. On the flip side, around 30% of the respondents indicated they seldom or never recycled paper or plastics, such percentages have increased since the baseline survey was conducted. In other words, it indicated that there are more consumers who do not recycle papers or plastics. Focus group discussions of this Study revealed that consumers lack confidence in how recyclables were managed after their collection by the relevant parties. Some consumers believe that recyclables were probably dumped into the landfills together with other garbage, and hence they did not see any point in spending effort to recycle items to save the environment.

In terms of consumer behaviour, there was a high (over 70%) take-up rate of behaviour which could bring tangible benefit (e.g. save money), easy to do or with accessible information, for instance buy appliances with Grade 1 Energy Label, give priority to purchase products with environmental label, buy claimed water-efficient products, avoid excessive order, avoid buying single-use products and repair broken domestic appliance. There are significant increases in the percentages of respondents who bought appliances with Grade 1 Energy Label, claimed water-efficient products and avoided single-use products as compared with the baseline survey. However, only around 60% of the respondents tried eating more vegetables and less meat to reduce the environmental impact or paid attention to return policies when shopping online to avoid wastage of unsuitable products. This Study also showed that less than half of the respondents borrowed seldomly used items (more respondents strongly disagreed/disagreed that they had such behaviour as compared with the baseline survey); gave priority to simple packaged or packaging-free products; used less air conditioners as much as possible (fewer respondents did so as compared with the baseline survey); or gave priority to local produce (which can reduce carbon footprint by transportation). Only 35% of the respondents preferred organic food (which avoids using pesticides and thus causing less harm to the environment).

As regards motive and support, there is improvement in both aspects. When asked their willingness to pay extra for products or services produced or provided along the principle of SC, a vast majority (87%) of the respondents indicated they were willing to pay an extra 5% or more, which in general has increased as compared with the baseline survey (around 70%). However, more than one-third of the respondents perceived the availability of such products in the market not enough or not enough at all. At the same time, close to 50% of the respondents suggested they did not usually purchase such products or services, with “not enough information”, “too expensive” and “not easy to acquire” being the greatest hurdles. Whereas, a mild growth in willingness to commit more to support SC was observed – 68% of the respondents in the current survey as compared with 63% in the baseline survey. Respondents indicated they would even commit more if the Government, retailers or service providers did more or if they were provided with more information to help them understand how to practise SC.

## Update on Sustainable Consumption Index (SCI)

Briefly, there is progress, albeit marginally, in consumers’ awareness, attitude, behaviour and readiness towards SC over the past five years. As reflected by the Sustainable Consumption Index (SCI), the score of “Consumers’ Awareness and Attitude” has increased from 74 in the baseline survey to 77 in the current survey; while “Consumers’ Behaviour and Readiness” has increased from 69 (Consumers’ Behaviour) and 65 (Consumers’ Readiness) in the baseline survey to 71 in the current survey. Although most sub-indexes have improved, the score of the sub-index “Recycling Behaviour” remains unchanged. In summary, a lower score of “Consumers’ Behaviour and Readiness” as compared with “Consumers’ Awareness and Attitude” reflects that there is still a gap between consumers’ awareness and their behaviour in reality, in particular their participation in recycling.

Our city needs appropriate and effective policies and measures, as well as support from the businesses, to facilitate behavioural change of consumers to narrow such gap and ensure Hong Kong develops in a sustainable manner.



# Sustainable Consumption Index (SCI) and Sub-index Score of Hong Kong - 2020 Survey

## Consumers' Awareness and Attitude



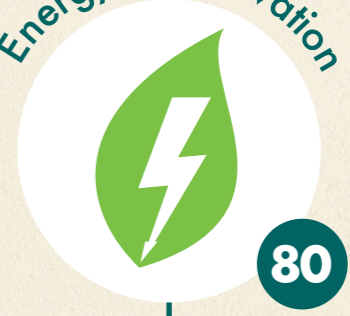
### Product Information



How are consumers concerned about product information with respect to sustainability



### Energy Conservation



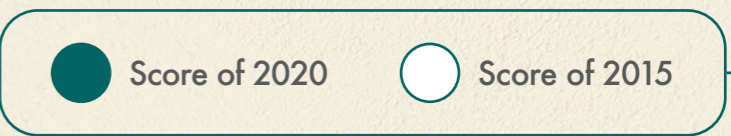
How do consumers consider energy conservation at home is beneficial and easy to achieve



### Waste Separation



How do consumers consider waste separation at home is beneficial and easy to achieve



## Consumers' Behaviour and Readiness



- 69 Consumers' Behaviour
- 65 Consumers' Readiness



### Purchasing Behaviour



To what extent do consumers practise sustainable consumption when they purchase



### Conservation Behaviour



To what extent do consumers practise conservation and waste reduction behaviour



### Recycling Behaviour



How often and how well do consumers practise recycling



### Willingness to Pay and Motivation



How much extra will consumers pay for sustainable products/services; and accord priority to companies which are environmentally friendly



### Support



Willingness of consumers to commit more to support SC and related motives





## Learnings from Other Jurisdictions

Thirteen jurisdictions were selected for in-depth desk research for experience and good practices in promoting SC, with a view to explore valuable references for adaption to Hong Kong. They were selected based on various factors, for instance their good performance in sustainability and comparable social and economic structure. The review showed that efforts were made in these jurisdictions in removing the barriers in driving SC through the carrot and stick approach and with the help of technology and innovation:

- Enabling choices and safeguarding consumers' right to know by information provision: Guidelines on "Green marketing and the Australian Consumer Law" in **Australia** sets out principles for businesses to consider when practising green marketing; Anti-Waste Law for a Circular Economy in **France** lays down policy on labelling to facilitate sustainable choices by prohibiting "biodegradable" claim, applying a repairability index and providing information about the availability of spare parts; Environmental Technology and Industry Support Act in **South Korea** provides a legal basis to punish false eco-labels; the Logo for Products with Reduced Packaging (LPRP) in **Singapore** enables consumers to identify products that have reduced the amount of packaging materials.
- Promoting waste reduction and recycle: Deposit and refund system for beverage containers are applied in **Denmark, Germany and Luxembourg**; charges are imposed on waste disposal in **South Korea and Switzerland**; mobile apps are used in **Denmark and Japan** to help rescue surplus food; interactive map of recycling points in **Switzerland** facilitates consumers to locate recyclables drop off points; several types of single-use items, such as plastic straws and disposable cups, are banned or on which restrictions will be imposed in Vancouver, **Canada**; supermarkets in the **UK** are taking initiatives in reducing plastic waste; in **France**, there is law that specifies the waste hierarchy in the case of food waste and prohibits large supermarkets from throwing away good quality food approaching the "best before" date; in **Singapore**, there is mandatory packaging reporting which requires regulated businesses to submit annual reports on the types and amounts of packaging they put on the market; in **Taiwan**, Waste Disposal Act obligates household to separate waste and the 4-in-1 Recycling Programme established Recycling Fund which subsidises the recycling disposal system, it also conducted trial programme to reduce container waste of food delivery services by awarding consumers who return their recyclable containers.
- Promoting product repairability and durability: Legislations in **France** restrict the practice of planned obsolescence and extend the duration of the legal guarantee for a product; in **Sweden**, tax deduction for repairing services (i.e. clothes, shoes, bicycles and appliances) helps extend product lifespan and waste reduction.
- Promoting sustainability lifestyle: **South Korea and Taiwan** have launched award earning and redemption programmes which help consumers incorporate SC into their daily lives. Green Credit Card in **South Korea** awards users eco-money points when they purchase low-carbon and eco-friendly products, use public transport and save utility rates including electricity, water, and gas. The eco-money points can be redeemed for cash or use for various purposes. In **Taiwan**, Green Point App awards users green points when they purchase green products, take public transport and participate in eco-friendly activities. The green point can be redeemed for green products, used for discounts when purchasing green products and green services.



## Government's Recent Initiatives

In February 2021, the Government launched the Waste Blueprint for Hong Kong 2035, which advocates a vision of “Waste Reduction • Resources Circulation • Zero Landfill” by setting a medium-term target to gradually reduce the per capita municipal solid waste (MSW) disposal by 40%-45% and increase the recovery rate to about 55% by implementing charging for disposal of Municipal solid waste (MSW), and a long-term target to move away from the reliance on landfills in the long run by developing adequate waste-to-energy facilities. By taking forward actions under six major areas: waste reduction, waste separation, resources circulation, industry support, innovation and cooperation, and education and publicity, the blueprint expects that the city will no longer need to rely on landfills for direct disposal of its MSW, if the proposed waste-to-energy infrastructure with adequate treatment capacity can be in place by around 2035.

About the same time, the Government also launched two public consultations, namely the Producer Responsibility Scheme (PRS) on Plastic Beverage Containers and the fourth phase of Mandatory Energy Efficiency Labelling (MEEL) Scheme. Along the principle of “polluter pays” and the concept of “eco-responsibility”, the former requires the sharing of responsibility by all relevant stakeholders for the collection, treatment, recycling and proper disposal of end-of-life products to avoid and minimise the environmental impacts caused by them. Through the provision of rebate, the scheme also incentivises consumers to actively participate in the recycling of plastic beverage containers. As for the latter, it proposes extending the coverage of MEEL to include three additional types of products, namely LED lamps, gas cookers and gas instantaneous water heaters, on top of the existing eight types of products.<sup>4</sup> It is expected that, through effective waste collection and management system, provision of suitable incentives and available labelling information, behavioural changes of consumers could then be induced and a sustainability lifestyle could be cultivated.

## Council's Recommendations

Despite the modest improvement in consumers' awareness and behaviour in supporting SC, the realisation of the vision to build Hong Kong as a sustainable city is a long road ahead and requires strenuous efforts from consumers, businesses and the Government to take solid and prompt actions, in order to catch up the international pace of development in SC.

On one hand, consumers need to challenge themselves to realise their belief in SC by taking up more SC behaviours; on the other hand, businesses and the Government need to promote behavioural changes of consumers by facilitating consumption choice and recycling management. The Government's latest Waste Blueprint for Hong Kong 2035 updates its strategy in reduction of waste and carbon emission; and its vision in the building up of a circular economy, but a wider scope of initiatives is needed both in the short term and long term. Based on the findings of this Study, the Council puts forward, from the perspective of consumers, recommendations for the consideration of all stakeholders concerned in addressing barriers experienced by consumers, with a view to enable their behavioural changes and building Hong Kong into a more sustainable city.

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<sup>4</sup> The existing eight types of products include: room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines, dehumidifiers, televisions, storage type electric water heaters and induction cookers.

# A Tripartite Relationship between Consumers, Businesses and the Government

## Sustainable Living



### Businesses

Adopt sustainability principle in product life cycle and value chain



Adopt sustainable principles along the value chain, from design, production to end-of-life disposal



Provide accurate information about the sustainability of products and services



Set measurable sustainability targets and roadmaps



### Consumers

Strengthen drivers for behavioural change:  
Facilitate consumption choice and recycling management



Nurture SC understanding and culture through public education and creation of support platform



Strengthen availability and choice of products and services with relevant incentives



Rebuild recycling habit by convenient, stringent and transparent waste management system



### Government

Establish policies and legislations to nurture consumers' behavioural change and ensure businesses' sustainable production and responsibility



Promote research in advancing SC related pattern



Establish long-term and holistic policy to foster recycling and sustainable industry



Introduce legislation and enforcement measures to achieve specific SC goals



## Drivers for Behavioural Change of Consumers

### **Nurture SC Understanding and Culture through Public Education and Creation of Support Platform**

This Study found that only close to one-fifth of the respondents reckoned themselves fully understood or quite understood the concept of SC. Consumers reflected that they rarely heard about “SC” in daily life, or had only learnt little about it in schools. Also, comparing to other occupation groups, more retirees and homemakers reflected as they did not know how to recycle or separate waste, it was not easy for them to do so.

**Recommendation (1):** To nurture consumers’ understanding on SC and develop a SC culture in the society, the Council recommends that public education on this aspect should be strengthened. In order to instil SC value in our children at a young age, the Government may review the current school curriculum and explore approaches to strengthen the curriculum to stress the incorporation of SC in every part of the daily life, e.g. all the way from selection, purchase, use to discard. To facilitate consumers to enquire, search and receive relevant information, the Council proposes that a single and easily accessible platform be developed, such platform should provide a quick-to-respond mechanism for consumers to enquire for the types and ways to recycle their waste at home. It may also consolidate various SC-related information, for instance to report the progress of the city’s development such as, resources usage and waste statistics.

### **Strengthen Availability and Choice of Products and Services with Relevant Incentives to Encourage Consumption**

This Study revealed that 36% of the respondents thought the availability of sustainable products were not enough or not enough at all. Without sufficient and suitable supply of products or services, consumption could be limited even though consumers have a good sense in practising SC. Experience of other jurisdictions also suggests that effective use of incentives could help promote SC as a lifestyle and put SC actions into habit.

**Recommendation (2):** The Council recommends businesses to grasp the SC trend in enhancing the availability of products and services which are produced or provided along the principle of sustainable consumption and production. As for the provision of incentives, the Council recommends the point-saving and redemption of the Government’s existing GREEN\$ Electronic Participation Incentive Scheme be modified to attract consumers’ participation in the scheme and in turn promote consumer behavioural changes. For instance, apart from putting recyclables at the recycling outlets, the scheme may reward points to consumers who buy sustainable or environmentally friendly products or services or save utility rates. The earned points may be used to redeem cash or coupon, or for use to buy sustainable products with discount.

### **Rebuild Recycling Habit by Convenient, Stringent and Transparent Waste Management System**

As reflected by the SCI, there is a general improvement in all the sub-indexes, except that of “Recycling Behaviour” which remains unchanged. Apart from the obstacles of “recycling outlets not enough or far away from home” and “laziness/troublesome”, focus group participants also expressed their lack of confidence in the current recycling management system.

**Recommendation (3):** Firstly, to address the issue of convenience, the Council suggests that the recyclables collection network, in terms of both quantity and location, be substantially expanded

and easily searchable online. Secondly, more stringent requirements should be imposed to monitor performance of contractors of the recyclables collection services, so as to ensure the recyclables are collected properly and delivered to downstream recycling facilities, instead of dumping at landfills together with other garbage. Lastly, information as to the quantity of the recyclables collected, recovered and used as secondary raw materials, should be properly recorded and disseminated through public accessible channels, such as the support platform as stated in Recommendation (1), on a regular basis. The Council believes big data technology can be applied in collecting and analysing relevant data to support SC development in this regard.

## Role and Responsibility of Businesses

### **Adopt Sustainable Principles Along the Value Chain, from Production to End-of-life Disposal**

This Study found that there was a significant number of the respondents who were concerned about excessive packaging of products; gave priority to products with simple, environmentally friendly packaging or packaging-free; avoided buying single-use products; and were willing to repair broken appliances. However, some focus group participants expressed that they did not always patronise repairing services due to previous bad experience and high price. The fact is that there is a demand on sustainable products and services.

**Recommendation (4):** The Council recommends that, in enhancing the availability of sustainable products and services, businesses should adopt the concepts of circular economy, optimal use of resources and waste reduction in all production stages and along the value chain, for instance, from design, production, sale and distribution, product lifespan to collection, disposal and recycling of end-of-life products. Such products or services should be provided at a reasonable price. Effective use of incentives can also encourage consumers to purchase. Examples of actions which the businesses could explore may include a shift to sustainable materials; provide sustainable options; provide end-of-life product collection services; and extend product lifespan as well as provide affordable repairing services.

### **Provide Accurate Information about the Sustainability of Products and Services**

Lack of information is the hurdle always suggested by consumers which hinders them from taking up more sustainable actions. This Study found that more than two-thirds of the respondents were willing to do more if they had more information. When asked the reasons why they did not usually purchase sustainable products or services, "not enough information" was the top reason chosen by the respondents.

**Recommendation (5):** The Council recommends businesses to provide reliable, useful, appropriate and substantiated information about the sustainability of the products and services. Such description should not be ambiguous or misleading. Environmental labels certified and accredited by credible and authoritative third party are preferred. With the help of information technology, businesses may also provide production information and labels in a more friendly and convenient way, as well as allowing consumers to receive updates on the products.

### **Set Measurable Sustainability Targets and Roadmaps**

Consumer research found that almost 6-in-10 of the respondents were willing to give priority to companies which embraced environmental protection and sustainability. Similarly, nearly 7-in-10 of the respondents expressed they were willing to commit more in SC if businesses do more on sustainability.

**Recommendation (6):** To drive for change, the Council recommends businesses to set clear targets and roadmaps by following these steps: review the sustainability status of the current business model, production line and value chain; set sustainability strategy and targets, which should be practical and measurable; conduct training to staff; present targets to the public; monitor progress through third party assessment and make necessary corrections; and report progress and explain irregularities through different means on a regular basis.

## Role and Responsibility of the Government

### **Promote Research in Advancing SC Related Pattern**

By leveraging on advancement in information technology, SC initiatives can become more efficient, effective and convenient. Basic research on resources usage and waste generation pattern, sustainability of current production and consumption pattern, as well as advanced technology enabling SC, can provide valuable data and ideas for discussion and development of policies and action plans, driving changes towards sustainable production models and provide sustainable alternatives to consumers and motivate them to support the required behaviour.

**Recommendation (7):** The Council recommends the Government to invest in studies, investigations and innovations which help the promotion of SC pattern. Such research is not necessarily being conducted solely by the Government itself, on the contrary, the Government could set up funding mechanisms to encourage involvements from all stakeholders (e.g. businesses, NGOs and academia). Apart from the current Recycling Fund and Green Tech Fund, the Council recommends to set up more different types of funds or expand the existing funding schemes to support research of different nature and scope, such as pattern of both resources usage and waste generation of different community and business activities; sustainability of existing products and services in the local market; innovative technology for producing sustainable products and services; advance waste management and promote behavioural changes of consumers.

### **Establish Long-term and Holistic Policy to Foster Recycling and Sustainable Industry**

To foster the recycling industry, a long-term and holistic policy is needed, which may include multiple elements, for instance, regulation, infrastructure, incentives, levies or subsidies.

**Recommendations (8):** The Council recommends the Government to establish mechanisms to foster recycling, directing the flow of recyclables, from disposal, collection to recovery. Such mechanisms may include deposit refund systems (or rebate systems), extended PRSs, recycling mandates, collection and waste-to-resources infrastructure, and for special areas to impose levies or subsidies. In improving quality of recycled materials and creating market, the Government may invest in technologies such as artificial intelligence and higher-quality washing systems which can improve sorting and the quality of recycled materials; provide funding and lay down policy to create a common marketplace for both raw materials and recyclates. The Government may also explore provision of funding or incentives to entrepreneurs that have adopted sustainable production policies to introduce, produce or provide sustainable products or services, and to recognise their achievements and contributions.



### **Introduce Legislation and Enforcement Measures to Achieve Specific SC Goals**

Examples are observed in Australia and South Korea where legislation and guidelines are in place to improve the accuracy and usefulness of environmental claims and to combat deceptive labels; France where there are laws to promote product lifespan; and EU where legislation is enacted to ban single-use plastics and ensure “right to repair”. These are good references to introduce legislative instruments and enforcement measures to help achieve specific SC goals in the long run.

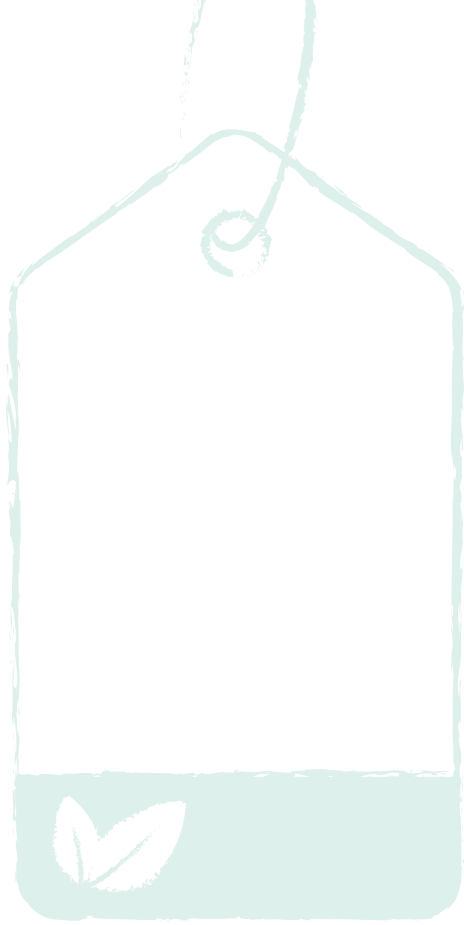
**Recommendation (9):** The Council recommends the Government to consider enactment of legislation in the following areas: introduce specific regulation on environmental labelling to combating green washing and misleading labels; regulate single-use plastics; mandate “right of repair” for specific products at a reasonable price and for a sufficient period of time (e.g. at least 10 years for commonly used household electronic appliances, such as washing machines, refrigerators and televisions); and mandate minimum warranty period (e.g. 2 years).

## **The Way Forward**

In summary, there is moderate progress in consumers’ awareness, attitude, behaviour and readiness towards SC over the past five years. However, there is still a gap between consumers’ awareness and their behaviour in reality, in particular their participation in recycling. Key drivers for behavioural change to meet the city’s SC vision are identified as facilitating consumption choice and recycling management.

This Study’s findings point to the fact that there is an urgent need of a substantial change of consumer behaviour to achieve sustainable development of the city. SC is not a luxury or a leisure activity. It should be a part of our daily lives. In recent years, the Government has invested more resources in strengthening relevant promotion work, such as education, research, infrastructure facilities and action plans, and the effect of some new initiatives is remained to be seen. To realise the city’s SC goals, more measures have to be implemented to catch up the pace. In view of the pressing sustainability issues, such as waste reduction (in particular plastic waste), climate change, reduction of biological resources, etc., all stakeholders, including consumers, businesses and the Government, should do their part to change their modes of consumption and production in all aspects of life and business activities. The Council believes that by making good use of information technology and innovative business models, SC can be achieved more effectively. The Council calls for all stakeholders to join hands in that endeavour in order to propel Hong Kong towards being a more sustainable and prosperous economy.





## 報告摘要

## 可持續消費議題刻不容緩

可持續消費是指「在滿足當代人基本需求並改善生活的同時，盡量減少在服務或產品生命週期內使用自然資源和有毒物質，以及製造廢物和排放污染物，從而不會危及後代的需求」。這是1994年在奧斯陸召開的可持續消費專題研討會上確立的定義。

現在，二十多年過去了，這個重要的概念有否對消費行為帶來深遠影響？人們對它的重視程度如何，消費者在日常生活中有多大認真地將其付諸實際行動？

在世界人口不斷增長的同時，人類的消費方式導致資源枯竭、污染、環境惡化和氣候變化，將地球的健康推向極限。根據2020年的一項估計，<sup>5</sup>如果我們再不採取任何行動來應對氣候變化，那麼到2030年代，冰層將繼續融化並使海平面上升20厘米，60%的珊瑚礁將瀕臨絕種，不斷下降的農作物產量將導致1億人口陷入極端貧困，而與氣候變化有關的疾病每年將使25萬人喪生。

過去十年間，全球對可持續消費進行熱烈討論。國際組織、政府、環保組織、學術界和消費者組織一直在尋求有效的方式來推廣可持續消費，當中有一些計劃主要針對正確訊息發放以提升消費者對議題的認知和支持，而另一些計劃則透過提升可持續消費的方便度和吸引力來鼓勵相關行為，例如提供誘因、立法或透過企業採取良好的做法。

為使香港成為一個可持續發展的城市，政府已制訂了各種策略、目標、政策和行動藍圖，以及進行與可持續發展（包括可持續消費）相關的教育計劃，例如節約能源，減少碳排放和減少廢物棄置等主要議題。然而，儘管企業正在趕上這個勢頭和社會對可持續消費的意識也逐漸增加，香港仍需克服許多挑戰才能趕上全球的發展步伐，落實其可持續發展目標。

香港是一個消耗量高的城市。與國際同儕比較，香港是水資源的大用家，<sup>6</sup>亦在亞洲人均海鮮消耗量方面排名第二。<sup>7</sup>儘管本地製造和農業活動有限，生產量不能自給自足，但活在香港從不缺乏消費選擇，世界各地進口的林林總總貨品垂手可得。在急速的生活節奏下，人們消費追求便利，即棄文化亦成為習慣，消費時便忘卻了可持續性這重要選項。

2020年出現全球大流行的2019冠狀病毒病，在許多方面給社會和人們的日常生活帶來了巨大的變化，亦為世界提供扭轉當前惡化趨勢的契機，制訂修復計劃以改變人們的消費和生產方式，締造可持續的未來。

<sup>5</sup> 世界經濟論壇. (2020) Here's what to expect over the coming decades.

<sup>6</sup> 思匯. (2019) Modernising Hong Kong's Water Management Policy PART I.

<sup>7</sup> Our World in Data. 根據2017年人均海鮮消耗量的數據，亞洲的頭三位依次為馬爾代夫（90公斤），香港（71公斤）及馬來西亞（58公斤）。

現在正是香港迎上全球可持續發展步伐的良機。香港應在所有持份者，包括消費者，企業和政府的共同努力下，迅速推動改變，共同建立可持續的城市。

## 本研究

本著推動可持續消費的願景，消費者委員會（消委會）在2016年發表其首份可持續消費研究報告。該報告發表了其2015年的可持續消費基線調查結果（以下統稱為「基線調查」），當中闡述香港消費者相當關注及意識到其消費行為會對環境造成影響，但亦非能知行合一，付諸實際行動，以減低對環境造成的影響。消費者要以堅定不移的態度，並激勵自己才能真正改變其消費行為。

五年過去，消委會進行了是次追蹤研究（本研究），旨在監察消費者態度和行為是否有所轉變，並審視可持續消費於本地及海外的最新發展，從而為有關持份者制訂建議，共同推動可持續消費。儘管2019冠狀病毒病的疫情增加了進行街頭訪問的難度，但本研究最終仍能在受訪者的大力支持下完成。

本研究以多種形式進行，當中包括以電話及面對面的街頭訪問形式，訪問了1,517名年齡介乎15至64歲消費者的意見調查，聚焦小組討論，以及對十三個司法管轄區相關經驗的研究。

## 消費者的認知、態度和行為的追蹤調查

本研究發現，儘管大多數受訪者認為他們的消費行為僅對環境有一般影響，並對可持續消費的概念只有一般了解，但他們總體上都能將可持續消費的主要層面聯繫起來，尤其是關於節約能源，減少廢物，及避免生產過程中造成污染方面。而且，大多數受訪者期望獲取與產品在生產或使用過程中造成的污染，以及與產品的壽命有關的信息。儘管受訪者對節約能源和廢物分類的好處的認知有所改善，但重重障礙包括回收設施不足或地點太遠，不方便或缺乏相關資訊均窒礙他們採取實際行動。於現時六項常見的回收物中，只有大約30%的受訪者表示常常或有時回收金屬、玻璃或小家電；至於衣服、紙張和塑膠，則有50%受訪者表示有回收行為。較令人憂慮的是，約30%的受訪者表示他們很少或從不回收紙張或塑膠，與基線調查相比有所上升，顯示多了人不回收紙張或塑膠。聚焦小組的討論亦反映出消費者對回收物在收集後的管理缺乏信心。他們相信即使花費精力把回收物放入回收箱，它們可能最終只是與其他垃圾一起被倒入垃圾堆填區，令他們覺得徒勞無功，無助於保護環境。

就消費者行為而言，可以帶來實質好處（例如節省金錢）或容易實踐的行為，或當消費者能方便地獲得相關資訊時，消費者的實踐程度相對較高（超過70%），例如購買附有1級能源標籤的電器、優先購買貼有環保標籤的產品、購買聲稱節水的產品、避免過度點菜、避免購買即棄產品，



以及修理損壞的家居電器。與基線調查相比，明顯多了受訪者表示會購買附有1級能源標籤的電器、聲稱節水產品和避免購買即棄產品。另一方面，只有大約60%的受訪者嘗試多菜少肉以減少對環境的影響，或在網上購物時注意退貨詳情以避免在購物後發現產品不合適而造成浪費。本研究並顯示，少於一半的受訪者會選擇去借用一些不常用的物品（與基線調查相比，多了受訪者表示不會借用）、優先考慮簡約包裝或無包裝的產品、盡量減少使用冷氣機（與基線調查相比，少了受訪者這樣做），或優先考慮本地漁農畜作物（以減少運輸產生的碳排放）。最少實踐的行為是優先考慮有機食品（以減少農藥對環境的損害），只有35%的受訪者作此選擇。

關於實踐動力和支持程度，消費者在這兩個方面都有進步。當被問及是否願意支付額外費用去購買環保或以可持續方式生產的產品或提供的服務時，絕大多數（87%）的受訪者表示願意支付額外5%或更多的費用，總體上比基線調查（大約70%）有所增加。然而，超過三分之一的受訪者認為市場上此類產品並不足夠或非常不足夠。同時，接近50%的受訪者表示並非經常購買此類產品或服務，其中最大的障礙是「沒有足夠資訊」，「太昂貴」和「不容易獲得」。另外，68%的受訪者表示願意做更多行動去支持可持續消費，與基線調查中的63%相比，出現了溫和增長。受訪者認為如果政府在可持續消費上做更多行動，或他們獲得更多資訊去學習如何實踐，他們便會願意付出努力和行動去支持可持續消費。

## 最新的可持續消費指數

簡而言之，在過去五年中，消費者對可持續消費的認知、態度、行為和意願均略有進步。正如可持續消費指數所反映，「消費者的認知和態度」的得分從基線調查的74分提高至是次調查的77分；而「消費者的行為和意願」則從基線調查的69分（消費者的行為）和65分（消費者的意願）增加至是次調查的71分。儘管將主要指數再詳細分析的次指數均有所改善，但「回收行為」次指數的得分保持不變。總括來說，與「消費者的認知和態度」相比，「消費者的行為和意願」得分較低，這反映了消費者的認知與實際行動之間仍然存在差距，尤其是他們對回收的認知及行為。

我們的城市需要適當有效的政策和措施，以及企業的支持，來促進消費者的行為改變，以收窄認知與行為之間的差距，並確保香港以可持續的方式發展。



香港

可持續消費指數

及次指數 -

2020年調查

消費者的  
認知和態度

77

74



產品訊息



75

消費者有多大程度  
關心產品可持續性的  
資訊

72

節約能源



80

消費者有多同意在  
家中節約能源是  
有好處及容易做到

75

廢物分類



77

消費者有多同意把  
家居廢物分類是  
有好處及容易做到

73

2020 分數

2015 分數

購買行為



76

消費者購物時在  
多大程度上  
實行可持續消費

69

節約行為



77

消費者實行節約和  
減少廢物的程度

75

回收行為



63

消費者有多頻密  
和能妥善處理  
回收物品

63

購買意願和實踐動力



60

消費者將願意為可持  
續產品/服務支付多  
少額外費用；並優先  
考慮支持環保的公司

購買意願 48

74 實踐動力

支持程度



77

消費者有多大程度願意  
做更多行動以支持可持  
續消費和相關的動力

73

消費者的  
行為和意願

71

69 消費者行為

65 消費者意願



## 其他司法管轄區的經驗

本研究根據多項準則包括它們在可持續方面有良好表現，以及擁有與香港相若的社會和經濟結構，選擇了13個司法管轄區進行研究，以探索具香港參考價值的經驗和良好做法，促進有效推廣可持續消費。研究顯示，這些地區都通過應用科技和以創新思維，用獎罰制度去移除推動可持續消費的障礙：

- 提供資訊，以保障消費者的知情權，便利選擇：**澳洲**有關綠色營銷的指引（Guidelines on “Green marketing and the Australian Consumer Law”）為企業制訂在進行綠色營銷時應考慮的原則；**法國**有關循環經濟及減廢的法例（Anti-Waste Law for a Circular Economy）設立了標籤政策以促進銷售可持續產品，當中包括禁止產品聲稱「可生物降解」，制訂可維修性指數，並提供有關備用配件供應量的資料；**南韓**有關支持環境技術和工業的法例（Environmental Technology and Industry Support Act）為懲罰虛假的環保標籤提供了法律依據；**新加坡**有關減少包裝物料的標籤（Logo for Products with Reduced Packaging, LPRP）方便消費者識別一些已減少包裝物料的產品。
- 促進減少和回收廢物：**丹麥**、**德國**和**盧森堡**實行了飲品容器的按金退還系統；**韓國**和**瑞士**實行了垃圾徵費；**丹麥**和**日本**使用手機應用程式以減少浪費剩餘食物；**瑞士**的回收點互動地圖可幫助消費者找到收集回收物的地點；**加拿大**溫哥華禁止或將會限制使用指定類型的即棄物品，例如塑膠飲管和即棄杯子；**英國**的超級市場正採取行動減少塑膠垃圾；**法國**有特定法律規定廚餘的處理方法，並禁止大型超市丟棄臨近「此日期前最佳」但品質仍然良好的食品；**新加坡**設立了有關使用包裝物料的強制報告機制，要求受監管的企業提交有關其使用於市場上的包裝物料類型和數量的年度報告；**台灣**設立了《廢棄物清理法》，規定住戶將廢物分類，並於「全民參與回饋式資源回收四合一計劃」設立了「回收基金」，以補貼回收處置系統，台灣還進行了試驗計劃，獎勵消費者使用可重用的外賣盒，以減少餐盒的消耗。
- 促進產品的可維修性和耐用性：**法國**立法限制計劃性報廢的行為，並延長了產品法定保養期的期限；在**瑞典**，維修服務（例如衣服，鞋履，單車和電器）的稅收減免有助於延長產品壽命和減少廢物。
- 倡導可持續的生活方式：**南韓**和**台灣**推出了獎賞計劃以鼓勵消費者將可持續消費融入日常生活中；**南韓**的綠色信用卡會在消費者購買低碳和環保產品，使用公共交通工具，以及節省電費、水費和煤氣費時，向他們提供獎賞積分。該積分可被兌換為現金或在指定用途時使用；在**台灣**，「環保集點 App」會在用戶購買綠色產品，乘坐公共交通工具以及參與環保活動時向其獎賞綠點。綠點可用於兌換綠色產品，或在購買綠色產品和服務時獲得折扣。

## 政府最新措施

政府於2021年2月公布《香港資源循環藍圖2035》，提倡「全民減廢·資源循環·零廢堆填」的願景。藍圖的中期目標是透過推行都市固體廢物收費，把都市固體廢物的人均棄置量逐步減少40%至45%，同時把回收率提升至約55%；長期目標則是發展足夠轉廢為能設施，長遠擺脫依賴堆填區直接處置廢物。為達至以上目標，政府會推出六大主要行動，包括全民減廢、分類回收、資源循環、支援業界、協同創新及教育推廣。藍圖指出，若香港轉廢為能的設施能在約2035年準備就緒，便有處理都市固體廢物的充裕能力，無需再依賴堆填區。

與此同時，政府亦已展開兩份公眾諮詢，分別為《塑膠飲料容器生產者責任計劃》及《強制性能源效益標籤計劃第四階段》。依據「污染者自付」原則和「環保責任」理念，前者要求所有相關持份者分擔回收、處理、循環再造和棄置廢棄產品的責任，以期避免和減少有關產品對環境的影響。透過提供回贈，此計劃能提供誘因，促使消費者積極回收塑膠飲料容器。至於後者則建議，除了強制性標籤計劃現時涵蓋的八類產品外，<sup>8</sup>應再新增三類產品，即發光二極管(LED)燈、氣體煮食爐及即熱式氣體熱水爐。政府期望透過建立有效的廢物回收及處理系統、給予適當誘因及提供標籤資料，促使消費者改變他們的行為，以至培養可持續的生活方式。

## 消委會建議

雖然消費者在支持可持續消費的認知及行為上已略為改善，然而香港要成為可持續都市的願景仍有一段距離。要在可持續消費的發展上追上國際步伐，消費者、企業和政府必須努力不懈、採取務實及迅速的行動。

一方面，消費者應挑戰自我，實踐更多可持續的消費行為以落實其對可持續消費的信念；另一方面，企業及政府亦應為消費者提供更多選擇，同時做好回收處理，以推動消費者作出行為上的改變。在最新公布的《香港資源循環藍圖2035》中，政府更新了減廢及減碳方面的政策，又提出建立循環經濟的願景，當中自然涉及推動範疇更廣濶的短期及長期措施。基於本研究結果，消委會從促進消費者行為的角度出發，提出一系列的建議以移除消費者在實踐可持續消費時遇到的障礙，切實地建立香港成為可持續發展的都市。

<sup>8</sup> 現時涵蓋的八類產品包括：冷氣機、冷凍器具、緊湊型熒光燈（慳電膽）、洗衣機、抽濕機、電視機、儲水式電熱水器以及電磁爐。

# 消費者、企業和政府的三方伙伴關係

## 可持續的生活方式



### 企業

在產品生命週期和價值鏈中採取可持續原則



從產品設計，生產到報廢處理，在價值鏈中採用可持續原則



提供有關產品和服務可持續性的準確信息



設定能衡工量值的可持續發展目標和路線圖



### 消費者

增強行為改變的動力：  
促進消費選擇和  
做好回收管理



加強公眾教育及建構支援平台，以培育對可持續消費的知識及文化



增加市面上產品及服務的供應及選擇、並提供誘因鼓勵購買



制訂方便使用、嚴謹及有透明度的廢物管理系統以重建消費者參與回收的信心



### 政府

制訂政策和法例以培育消費者的行為改變，並確保企業實踐可持續生產和社會責任



推動可促進可持續消費模式的研究



建立長遠和整全的政策以扶持回收和可持續產業的發展



引入法例和執法措施以實現特定的可持續消費目標



## 改變消費者行為的動力

### 加強公眾教育及建構支援平台以培育對可持續消費的知識及文化

本研究發現，只有不到五分之一受訪者認為自己非常了解或了解可持續消費的概念。部份消費者反映，他們在日常生活中甚少聽到「可持續消費」，或只有在學校中偶爾學習到這概念。此外，相較其他職業界別，較多退休人士及家務料理者表示，由於他們不懂得如何回收或分類廢物，支持回收實非易事。

**建議（一）：**為了加深消費者對可持續消費的認識，及培養社會的相關文化，消委會建議政府加強此方面的公眾教育。政府可檢視現有學校課程並探討加強相關教育的可行做法，將可持續消費融入到日常生活的各個層面中（例如從挑選、購買、使用，以至掉棄產品的整個過程），從小灌輸可持續消費的概念予學童。為方便消費者查詢、搜尋及接收相關資訊，消委會建議政府設立一個方便易用並能提供迅速回應的平台，讓消費者查詢在家居回收不同種類廢物的方法。此平台亦可整合有關可持續消費的不同資訊，例如向市民大眾匯報發展進度包括資源使用及廢物統計數據。

### 增加市面上產品及服務的供應及選擇、並提供誘因鼓勵購買

本研究顯示，36%的受訪者認為市面上的可持續產品供應不足夠或完全不足夠。若市場上缺乏合適的產品或服務，消費者即使有正確的可持續消費意識和動力亦難以消費。此外，外國經驗顯示，運用有效的誘因有助推廣可持續消費的生活方式，亦能幫助消費者養成可持續消費的習慣。

**建議（二）：**消委會建議企業把握可持續消費的商機，製造和提供遵從可持續消費與生產原則的商品及服務。

提供誘因方面，消委會建議政府優化《綠綠賞（電子）積分計劃》現有的儲分及換領獎賞制度，以吸引更多消費者參與計劃，從而推動消費者的行為轉變。例如，除了提交回收物外，此計劃可以向購買可持續或環保的產品或服務，以及節省能源的消費者獎賞積分。另外，除了現時有限的禮品種類，獎賞積分可用於換領現金、購物券或以優惠折扣購買可持續產品。

### 制訂方便使用、嚴謹及有透明度的廢物管理系統，以重建消費者參與回收的信心

可持續消費指數反映，除「消費者的行為和意願」中的「回收行為」次指數維持不變外，所有次指數均普遍有改善。除了「回收設施不足或太遠」及「懶惰/麻煩」的原因，聚焦小組的參加者亦表示他們對現時的回收處理系統缺乏信心。

**建議（三）：**首先，為解決回收不便的問題，消委會建議政府從數量及覆蓋範圍上，大幅擴展收集回收物的網絡，並使其地點位置可容易於網上搜尋。其次，政府亦應就承辦商的回收服務訂立更嚴謹的要求，以監察其表現，從而確保回收物被妥善收集及運送到下游回收設施，而非與其他垃圾一併被棄置於堆填區。最後，已被收集、再造或轉化成二次物料的回收物數量應被妥善記錄，及透過市民易於瀏覽的渠道（例如建議（一）的支援平台）定期發布。消委會相信如能善用大數據技術收集及分析相關數據，能有助於可持續消費的發展。

## 企業的角色和責任

### 從產品生產到報廢處理，在價值鏈中採用可持續原則

本研究發現，有相當部份的受訪者關心產品是否過度包裝；會優先考慮購買簡約或環保包裝的產品；少買用完即棄的產品；及願意修理損壞的電器。但是，一些聚焦小組參加者表示，由於過往不理想的經驗和維修費用高昂，他們並不常光顧維修服務。這些結果顯示，消費者對可持續產品和服務存在需求。

**建議（四）：**消委會建議，在增加可持續產品和服務的供應時，企業應在所有生產階段和價值鏈中採用循環經濟的概念，善用資源和減少廢物，包括從設計、生產、銷售和分銷、到產品報廢後的收集、處置和回收。此類產品或服務應以合理的價格提供。另外，有效使用獎勵措施可增加消費者購買意慾。企業可以探討的方案包括：轉用可持續原料；提供可持續的選擇；提供報廢產品的收集服務；並延長產品壽命及提供價格合理的維修服務。

### 提供有關產品和服務可持續性的準確信息

缺乏資訊是消費者經常提及的障礙，削弱了他們實踐可持續消費的動力。本研究發現，超過三分之二的受訪者表示需要更多資訊去學習怎樣實行可持續消費。當被問及是什麼原因令他們不會經常選購可持續的產品或服務時，「沒有足夠的資訊」是最多受訪者選擇的原因。

**建議（五）：**消委會建議企業提供有關產品和服務的可持續性的準確資訊。這些資訊必須是可靠、有用、適當和有實質支持的，並不應含糊或具有誤導性。較可信方法是出示由權威的第三方認證和認可的環保標籤。企業更應善用資訊科技，以便捷的方式提供產品生產的資訊和標籤，並不時更新資訊，讓消費者隨時參閱。

### 設定能衡工量值的可持續發展目標和路線圖

消費者調查發現，在十個受訪者中，大約有六個表示願意優先考慮那些擁護環保和可持續發展的公司。同樣，十個受訪者中有近七個表示，如果企業能就可持續消費落實更多有效措施，他們亦會積極支持。

**建議（六）：**為推動改變，消委會建議企業參考以下步驟制訂支持可持續消費的目標和路線圖：檢視當前業務模式、生產線和價值鏈的可持續性狀況；制訂切實可行及可量度的可持續消費策略和目標；對員工進行培訓；向公眾展示相關目標；通過第三方評估監察進度並進行必要的修正；以及定期報告進度，並透過不同渠道解說項目不達標的因由。

## 政府的角色和責任

### 推動可促進可持續消費模式的研究

把握資訊科技的優勢，令推動可持續消費的措施可以變得更有效率，更有果效和便利。若對資源使用和廢物產生的模式，目前生產和消費方式的可持續性加以探討，以及支援可持續消費的先進技術進行基礎研究，均能為政策和行動計劃的討論和制訂提供有參考價值的數據和理據。結合多層面的分析能有助推動可持續生產模式的轉變，為消費者提供較佳選擇，以鼓勵他們支持可持續消費。

**建議（七）：**消委會建議政府對有助於促進可持續消費發展的研究、調查和創新科技投放資源。相關研究不一定只由政府進行，相反，政府可以建立資助機制以鼓勵所有持份者（例如企業，非政府組織，學術界等）參與。除現有的「回收基金」和「低碳綠色科研基金」外，消委會建議設立更多類型的基金或擴大現有的基金計劃，以支持不同性質和範疇的研究，例如分析不同社會和商業活動的資源運用和廢物生產模式；研究本地市場產品和服務的可持續性；開發可持續產品和服務的創新技術；發展廢物管理；以及促進消費者的行為改變。

### 建立長遠和整全的政策以促進回收和可持續產業的發展

為了促進循環再造業的發展，社會需要一套長遠而全面的政策，其中可能包括多項原素，例如法規、基礎設施、獎勵、徵稅或補貼。

**建議（八）：**消委會建議政府建立促進回收的機制，從棄置，收集到回收再造層面帶動回收物的走向。相關機制可包括按金及回贈系統，擴展生產者責任計劃，強制回收，收集和轉廢為材的基礎設施，以及對特定範疇徵稅或補助。為了提高回收物的質量並創造市場，政府可投資於有助改善分類和質量的技術，例如人工智能和更高質量的清洗系統等；並為建立原材料和二次物料的共同市場而提供資金並制訂政策。另外，政府可考慮為引進、生產或供應可持續產品或服務的企業提供資助，以及表揚其成就與貢獻。

### 引入法例和執法措施以實現特定的可持續消費目標

借鑒其他地區的經驗，例如澳洲和南韓經已制訂法例和指引來改善環保聲稱的準確性和實用性，並打擊虛假標籤；法國設有法例延長產品的壽命；歐盟亦已立法禁止即棄塑膠物品並確保

消費者享有維修服務的權利。這些都是很好的例子，透過引入立法手段和執法措施，長遠而言實現特定的可持續消費目標。

**建議（九）：**消委會建議政府考慮在以下領域制訂法例：引入環保標籤的特定法例，以打擊漂綠手法和誤導性標籤；規範使用即棄塑膠產品；強制商戶在合理的時間以合理的價格為特定產品提供維修服務（例如就洗衣機，雪櫃和電視機等常用家居電器，提供至少十年維修服務）；並規訂最短保養期（例如兩年）。

## 未來路向

總括之言，在過去的五年中，消費者對可持續消費的認知、態度、行為和意願有輕微進步。但是，消費者的認知和他們在現實中的行為（尤其是回收行為）之間仍然存在差距。要實現香港可持續發展目標，便需要推動行為轉變，而主要的推動力是促進消費選擇和改善回收系統。

本研究結果指出，為實現城市的可持續發展，消費者必需要坐言起行，切實地改變其消費行為，使可持續消費成為其日常生活的一部份而並非奢侈或休閒活動。近年來，政府已投入相當資源以加強相關的促進工作，例如教育、研究、基礎設施和行動計劃，而一些新措施的效果還有待觀察。現在有不少可持續消費議題逼在眉睫，例如減少廢物（尤其是塑膠廢物）、氣候變化、減少使用生物資源等，政府必須制訂更多措施，加快實現所定目標。而所有持份者，包括消費者、企業和政府，都必須要克盡已任，在生活和商業活動各個層面，改變消費和生產方式。消委會深信如能善用資訊科技和以創新的營商模式推動可持續消費，達到目標是指日可待的事。消委會期望所有持份者能風雨同行，一起締造香港成為更加可持續和繁榮的經濟體。





# Introduction

- 1.1 Background
- 1.2 Objectives of this Study
- 1.3 Study Methodology
- 1.4 Structure of the Report



## Definition of Sustainable Consumption

The use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations. (The Oslo Symposium on Sustainable Consumption in 1994)

Year 2020 was a challenging year to the world and to Hong Kong. The COVID-19 pandemic has brought drastic changes to the community on various levels and to people's daily lives in many ways. Sustainable consumption (SC) is no exception.

On one hand, there has been an impact on waste generation. For instance, the consumption of single-used items (e.g. surgical masks and takeaway tableware) has become unavoidable in order to meet the Government's anti-pandemic measures. There is also a rising demand for online shopping, which leads to a jump in packaging waste. Even worse is the extra waste resulted from excessive buying, which is witnessed among some consumers in meeting the spending amount to enjoy free shipment or certain privileges.

On the other hand, while acknowledging that diseases passed from animals to human (zoonotic diseases) are on the rise, as the world continues to see unprecedented destruction of wild habitats by human activities; and the same human activities that drive climate change and biodiversity loss also drive pandemic risk through their impacts on our environment,<sup>9</sup> the pandemic is also arousing people's concern on the environment and influencing trends towards sustainable lifestyles and conscious consumption. There are people around the world making changes to the way they live and what they purchase. Many of them are eager to keep their new sustainable behaviour and consumption habits.<sup>10</sup>

The COVID-19 pandemic offers the world an opportunity to build recovery plans that will reverse current trends and change our consumption and production patterns towards a more sustainable future. As a policy agenda in shaping the environmental sustainability of Hong Kong, the Government in recent years has mapped out various strategies, targets, policies and action plans but the city's road to sustainable development and SC is filled with hurdles. For instance, as economic and consumption activities blossomed, the yearly volume

<sup>9</sup> Geneva Environment Network. (2021) COVID-19 and the Environment.

<sup>10</sup> The One Planet Network. (2020) Consumer trends in the context of Covid-19.

of municipal solid waste (MSW) disposed of at landfills has been increasing in Hong Kong, which has surged 21.2% in the past decade.<sup>11</sup>

With its vision on advocating SC, the Consumer Council (the Council) published its first in-depth report on the subject in 2016. A copy of the report can be downloaded from the Council's website.<sup>12</sup> The report presented findings from a baseline survey conducted in 2015 (hereafter collectively referred as the "baseline survey") which revealed that consumers were fairly concerned and aware about the impact of their consumption behaviour on the environment, but did not always act consistently to reflect the same. Consumers had to be more determined and motivate themselves to change their behaviours.

As a regular tracking study of the baseline survey, this Study serves to review the latest local and overseas development on the subject after five years, with a view to find out the status of change in consumer attitude and behaviour for formulating recommendations for stakeholders to join hands in promoting SC in Hong Kong. Despite of the challenges encountered in the fieldwork amid the COVID-19, this Study completed with strong support from the respondents.

This Study aimed to:

- Collect information on consumers' knowledge, attitude, and behaviour towards SC;
- Review whether consumers' attitude and behaviour have changed since the Council's baseline survey; and
- Formulate recommendations on government policies, business practices and consumer education directions.

This Study took a mixed-method approach comprising of consumer surveys, focus group discussions, and desk research on relevant experience in selected jurisdictions.

This Chapter gives an overview of the definition of SC, the urgency of taking immediate actions to diminish the impact of human consumption activities on the environment, and the current resources consumption situation in Hong Kong. The objectives and the methodology of this Study were also described in this Chapter.

<sup>11</sup> Total quantity of MSW disposed of at landfills in 2019 = 4.0 million tonnes per year; 2010 = 3.3 million tonnes per year. The Environmental Protection Department (EPD). (2020) Hong Kong Waste Treatment and Disposal Statistics.

<sup>12</sup> See [https://www.consumer.org.hk/ws\\_en/competition\\_issues/reports/2016/sustainable-consumption.html](https://www.consumer.org.hk/ws_en/competition_issues/reports/2016/sustainable-consumption.html)

## 1.1 Background

### Sustainable Consumption

SC is not achieved by stopping consumption or consuming much less. It is about consuming more wisely and bearing in mind the interests of future generations.

The Oslo Symposium on Sustainable Consumption in 1994 defined SC as “the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations”.<sup>13</sup>

Later in 2002 at the World Summit on Sustainable Development where the Johannesburg Plan of Implementation was adopted, the concept of sustainable consumption and production (SCP) was recognised as one of the three overarching objectives of, and essential requirements for, sustainable development, together with poverty eradication and the management of natural resources in order to foster economic and social development.

As one of the objectives of sustainable development, SC, in the broadest sense, refers to consuming sustainably in both the environmental (pollution, waste, resource use) and social (health, welfare) perspectives. In other words, environmental protection plays a key component in SC, but the latter embraces a wider concept.

SCP aims at “doing more and better with less”, promoting resource and energy efficiency and sustainable infrastructures. Through innovation, education and policy development, its implementation provides solutions to increase net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole lifecycle, while increasing quality of life, creating green and decent jobs and reducing poverty. The emerging trend of “circular economy” is considered as a key concept to achieve this. Circular economy explores opportunities to promote closed material loops and enhanced resource efficiency along the value chains. It represents a systematic shift that generates business and economic opportunities and provides environmental and social benefits, such as social equity, resource security, pollution prevention and job creation.<sup>14</sup>

### Current Situation

In the last few decades since the definition of SC was proposed in 1994, the world population has increased by around 2 billion from around 5.6 billion to 7.7 billion in 2019,<sup>15</sup> which has driven increasing demand for energy, food, water and other resources. Such rapid expansion of population and the situation of people lifting out of poverty have resulted in resource depletion, pollution, environmental degradation and climate change, pushing the earth towards its limits. With human now consuming more resources than ever before, the current patterns of consumption across the world are not sustainable in the long run. It is predicted that, if we do nothing to diminish our

<sup>13</sup> United Nations Sustainable Development Goal. Sustainable Consumption and Production.

<sup>14</sup> 2019 Ministerial Conference. Sustainable Consumption and Production – Circular Economy.

<sup>15</sup> The World Bank. Population, total.

impact on climate change, as soon as in the 2030s, ice caps and crucial ice sheet would continue to melt and swell sea levels by 20cm, 60% of coral reefs would be highly endangered, and that dwindling crop yields would push 100 million more people into extreme poverty, and climate change-related illnesses would kill an extra 250,000 people each year.<sup>16</sup>

In Hong Kong, for the last decade its population has risen by approximately 7.1% from around 7.0 million in 2010 to around 7.5 million in 2019,<sup>17</sup> and its Gross Domestic Product (GDP) has surged by approximately 61.3% from around HK\$1,776.3 billion to HK\$2,865.7 billion in the same period.<sup>18</sup> With strong awareness on energy and water consumption, Hong Kong's energy consumption per capita had gradually reduced by 3.3% from 40.0 gigajoule (GJ) in 2009 to 38.7GJ in 2018.<sup>19</sup> The average yearly per capita freshwater consumption remained fairly steady, with an average of around 133m<sup>3</sup>/year.<sup>20</sup> However, waste production remained an acute issue in the city. The volume of MSW has been increasing in Hong Kong in the past decade. The total quantity of MSW disposed of at landfills had increased from 3.3 million tonnes in 2010 to 4.0 million tonnes in 2019 (i.e. an increase of 21.2%); which was equivalent to the increase of per capita MSW disposal rate from 1.3kg/person/day in 2010 to 1.5kg/person/day in 2019 (i.e. an increase of 15.4%).<sup>21</sup>

In recent years, the Government has published a series of action plans<sup>22</sup> to develop Hong Kong into a more sustainable city but its success is highly dependent on the participation and cooperation of all the stakeholders in the community. During the preparation of this Report, the Government published its latest action plan on waste reduction, namely Waste Blueprint for Hong Kong 2035, in February 2021, targeting to achieve "Waste Reduction, Resources Circulation, Zero Landfill".

## Consumer Advocacy on SC

Advocating SC has been one of the priorities of the Council. The vision of the Council is: "To be the trusted voice in striving for consumer betterment towards safe and sustainable consumption in a fair and just market".

Over the years, the Council has been incorporating SC concept in various aspects of its work, such as product tests and surveys, as well as its effort on youth education. In 2016, the Council for the first time published an in-depth report on SC, namely "Sustainable Consumption for a Better Future – A Study on Consumer Behaviour and Business Reporting", featuring its baseline survey on consumers' awareness, behaviour and readiness towards SC.

The baseline survey indicated consumers were fairly concerned and aware about the impact of their consumption behaviour on the environment, but did not always act consistently to

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<sup>16</sup> World Economic Forum. (2020) Here's what to expect over the coming decades.

<sup>17</sup> The World Bank. Hong Kong SAR, China.

<sup>18</sup> Census and Statistics Department (CSD). 2019 Gross Domestic Product.

<sup>19</sup> The Electrical and Mechanical Services Department (EMSD). (2019) Hong Kong Energy End-use Data.

<sup>20</sup> The Water Supplies Department (WSD). Annual Report - Water Supplies Department 2017 – 2018; The Water Supplies Department. Annual Report – Water Supplies Department 2013 – 2014.

<sup>21</sup> The EPD. Waste Disposal Statistics.

<sup>22</sup> Hong Kong: Blueprint for Sustainable Use of Resources 2013 – 2022, Energy Saving Plan for the Built Environment 2015-2025+, Hong Kong's Climate Action Plan 2030+, and Smart City Blueprint for Hong Kong.



reflect the same. While consumers believed in the benefits and effectiveness of recycling and energy conservation, real actions significantly dropped off. Impact of sustainability on consumers' purchases and behaviour also varied. There were high levels of reported take-up of SC purchasing habit or behaviour that saved money and where there was credible information available (energy-efficient appliances) or which were simple to execute (turning lights off). Support was lower where the sustainable choice was more expensive (products with "Environmental Label"), or where the behaviour change took more effort or compromised the quality of living e.g. using less air conditioners. The large majority of consumers (around 75%) said they were prepared to pay a price premium for more sustainable products, however, only half of the respondents said they usually purchased sustainable products. As reflected by the Sustainable Consumption Indexes constructed based on the baseline survey, there was a gradual decrease from awareness (74) to behaviour (69) and readiness (65) towards SC, indicated that consumers had to be more determined in taking real actions in supporting SC.

The baseline survey has facilitated the Council's strategic direction of its advocacy on SC, and the Council considered it meaningful to conduct another survey after a five-year interval to assess whether consumer attitude has changed and their behaviour has improved, following the different initiatives being taken by different stakeholders of the society. Supported by the funding from the Sustainable Development Fund (SDF), this Study updates the baseline survey to assess whether consumers' attitude and behaviour have changed in the past five years. This Study was under the stewardship of the Council's Working Group on Sustainable Consumption Programme.

## 1.2 Objectives of this Study

Against this background, the Council conducted an in-depth study to track the changes of consumers' awareness and behaviour towards SC have had since the baseline survey; and review the latest development in local and selected jurisdictions with respect to SC policies and initiatives, with a view to provide insights in promoting SC in Hong Kong more effectively.

The objectives of this Study are to:

- Collect information on consumers' knowledge, attitude, and behaviour towards SC;
- Review whether consumers' attitude and behaviour have changed since the Council's baseline survey; and
- Formulate recommendations on government policies, business practices and consumer education directions with a view to promote SC at consumer and business level.

The Council considers that, with this and any future tracking studies, the effectiveness of actions to promote SC in Hong Kong should be assessed regularly.

## 1.3 Study Methodology

In order to achieve the above objectives, this Study took a mixed-method approach. This comprised of:

- (1) Quantitative surveys to gauge consumers' knowledge, attitude, and behaviour towards SC;
- (2) Qualitative focus group discussions to explore consumers' experience and opinion in detail; and
- (3) Desk research to review the local situation, government policies, and initiatives advocated by stakeholders; as well as the latest relevant development in selected jurisdictions.

### Consumer Research

The Council commissioned a research agency to conduct the quantitative surveys and qualitative focus group discussions. Apart from tracking the changes since the baseline survey, in order to gauge consumers' awareness and attitude towards emerging SC trends and issues in recent years, a review exercise was conducted to streamline the baseline questionnaire and add in new questions to construct a modified questionnaire for the quantitative surveys.

To extend the reach to the wider population, besides telephone survey, which was the method adopted in the baseline survey, the current consumer research also collected views from respondents by means of on-street face-to-face survey. The latter served to reach people who did not possess a residential fixed line, especially in inviting participation from young people.

#### Modification of Questionnaire

For incorporating the latest development in SC to the questionnaire, one focus group with Millennial consumers (6 participants aged 18 – 25) and four interviews with experts in SC from the business sector and green groups<sup>23</sup> were conducted. They were invited to share views on the priority of the topics in the baseline questionnaire and suggestions of new topics which might be included in the modified questionnaire making reference to their insights on the outlook for SC. The modified questionnaire adopted in this Study included new questions of the following aspects:<sup>24</sup>

- Quality of living of the next generation
- Feed-in Tariff
- Local produce
- Consumption of less meat
- Return policy of online purchase

<sup>23</sup> This included Business Environment Council, Friends of the Earth, Green Council and World Wide Fund for Nature, Hong Kong (WWF).

<sup>24</sup> The questionnaire is available at the Council's website.

- Recycling of small electrical appliances and clothes
- Good recycling practice
- Availability of sustainable products or services

### **Telephone Survey**

The telephone survey took place between 29 June and 14 August 2020. Target respondents were Cantonese-speaking Hong Kong residents who aged 15 – 64. Households were drawn by a probabilistic sampling method from a database of telephone numbers. Demographic quota based on age, gender, working status, monthly personal income, monthly household income, education attainment and living district was set according to the 2016 Population By-census Data. A total of 1,005 respondents were surveyed.

### **On-street Face-to-face Survey**

The on-street face-to-face survey through street intercept interview took place between 29 June and 23 July 2020. Same as the telephone survey, target respondents were Cantonese-speaking Hong Kong residents who aged 15 – 64, and the same demographic quota was applied. Respondents were randomly approached in 11 locations<sup>25</sup> across Hong Kong Island, Kowloon and New Territories. A total of 512 respondents were interviewed.

Dataset of the two surveys were weighted by demographic respectively, including age, gender, monthly personal income, occupation and housing type according to the 2016 Population By-census Data, and then merged as a whole for minimising the demographic difference possibly caused by different interviewing methods.

The sum of the percentages for survey questions in the consumer research as presented in this Report may not equal to 100 due to rounding.

The analysis shown in this Report excludes non-responses to a question.

### **Focus Group Discussions**

After the completion of the surveys, four focus groups were conducted to gather a deep-dive understanding of consumers' knowledge and perceived impact of SC; reasons behind the sub-segment differences in terms of their level of knowledge and behaviour; and relevant motives and obstacles. A total of 30 respondents, with a mix of gender and various generations/life stages and socio-economic background, were interviewed. The composition of each focus group is as follows:

- Group 1: Full-time students aged 15 – 24;
- Group 2: Working adults aged 25 – 44;
- Group 3: Working adults aged 45 – 64; and
- Group 4: Non-working adults (homemakers, retired and unemployed) aged 25 – 64.

<sup>25</sup> Causeway Bay – Paterson Street, Taikoo Shing – Aeon, Kowloon Tong – Kowloon Tong MTR station, Mei Foo – Mei Foo Sun Chuen, Mong Kok – Soy Street, Hang Hau – Hang Hau MTR station, Sha Tin – Sha Tin Market, Tai Po – Tai Po Centre, Tsing Yi – Tsing Yi MTR station, Tsuen Wan – Citistore, and Tuen Mun – Tuen Mun Town Hall.

### **Limitation to Fieldwork during COVID-19**

In view of the COVID-19 development, the Government launched various disease prevention measures and social distancing arrangements during the fieldwork period, which increased the difficulties for the fieldworkers to approach respondents for the on-street face-to-face survey.

## **Review of Policies and Initiatives in Local and Selected Jurisdictions**

Desk research was conducted to review Hong Kong's policies and initiatives in relation to SC, and explore experience and good practices from other jurisdictions in advocating and promoting SC.

The Council reviewed 13 jurisdictions, namely, Australia, Canada, Denmark, France, Germany, Japan, Luxembourg, Singapore, South Korea, Sweden, Switzerland, Taiwan and the United Kingdom (UK). These jurisdictions were selected based on three considerations: (i) reference from Government's previous strategies/action plans; (ii) jurisdictions which had a good track record and momentum of sustainable development; and (iii) neighbouring Asian jurisdictions, of which have similar context of lifestyle, culture and infrastructure of relevant value to this Study.

## **1.4 Structure of the Report**

The remainder of this Report is structured as follows:

- Chapter 2 presents an overview of the current policies and initiatives in relation to SC in Hong Kong and global trends of SC;
- Chapter 3 explores consumers' awareness, behaviour and readiness towards SC, changes of such as compared with the baseline survey;
- Chapter 4 discusses experience in and good practices adopted by selected jurisdictions; and
- Chapter 5 provides the conclusion and recommendations to promote SC in Hong Kong.





## **Recent Developments in SC in Hong Kong and the Global Arena**

- 2.1 Use of Resources and Waste Production in Hong Kong**
- 2.2 Government Policies and Initiatives in Hong Kong**
- 2.3 Local Business Initiatives**
- 2.4 Local NGO Initiatives**
- 2.5 Local Consumer Education**
- 2.6 Global Trends**
- 2.7 Summary**

Globally, the concept of sustainability has gained popularity in recent years, while the **waste problems (especially plastic waste), product information with respect to sustainability, sustainable mobility, circular design, sustainable packaging and product durability are hot topics being discussed at the international arena.**

Over the past few years, the Government, the business sector and Non-governmental organisations (NGOs) have launched **various initiatives to promote SC in Hong Kong, for instance, waste reduction, waste recycling, energy saving, sustainable consumption of biological resources, conservation of natural resources, and enhancement of Environmental, Social and Governance (ESG) reporting.**

There have been some improvements in certain areas but not in others. **Energy consumption and carbon emission of Hong Kong have been on downward trends in recent years.** The extent of reduction of the former is largely on track in meeting the Government target, yet the reduction of the latter is just moderate. Whereas, waste management is the most pressing issue of the city. **Instead of reduction, the per capita MSW disposal rate was actually on an upward trend in the last decade. It had not only failed to meet the Government target of a reduction by 40% from 2011 to 2019; on the contrary, it had even increased by 15.4% during the period.**

Multiple reasons might have hindered the waste reduction progress, such as the **public's lack of confidence in waste separation scheme, transparency of the flow of recyclables and availability of local recycling outlets and facilities.** The effectiveness of the initiatives needs evaluation and improvement in policy monitoring, development of infrastructure and public education to strengthen participation of Hong Kong people.

In view of the complexity of SC, apart from reduction on resources consumption and waste, the Government may also explore action plans or policies to embrace a wider scope of topics in catching up global development in SC.

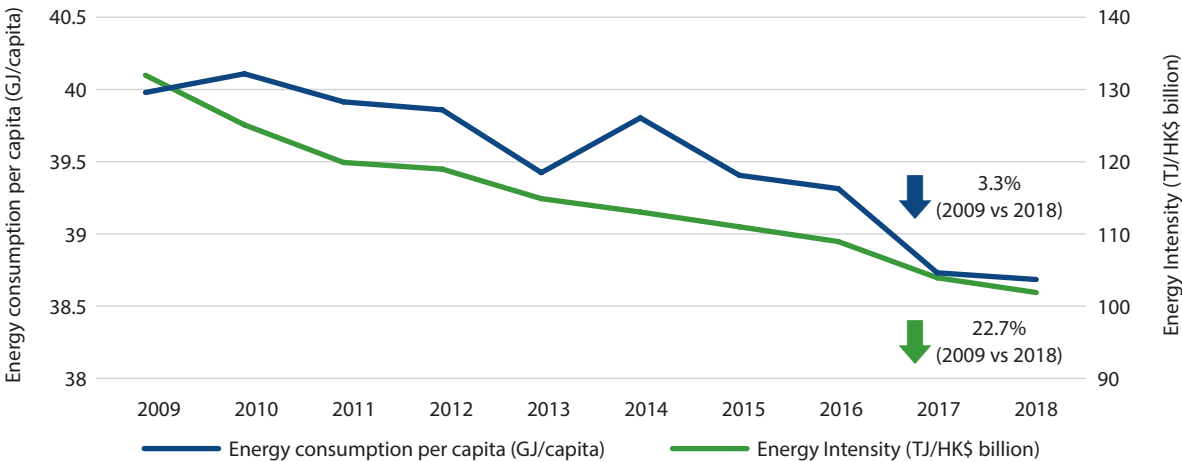
This Chapter presents the recent developments and trends in SC in Hong Kong and global arena, especially the past five years since the Council published its baseline survey. It reviews the performance of local targets set on energy consumption, carbon emission and waste production, recent policies and initiatives launched by the Government, the business sector and NGOs. The examples of which listed in the Chapter are not meant to be exhaustive, but attempt to illustrate the scope of initiatives that are in place by far. Highlights of emerging SC trends in the global arena will also be covered and more details about policies and initiatives in selected jurisdictions can be found in Chapter 4.

# 2.1 Use of Resources and Waste Production in Hong Kong

## Energy Consumption

Compared with the energy consumption per capita, it is more promising that the energy intensity in the city has experienced a larger decrease in the last decade. As shown in Figure 1, the energy consumption per capita in Hong Kong decreased slightly by around 3.3% from approximately 40.0GJ in 2009 to approximately 38.7GJ in 2018 according to the data from the Electrical and Mechanical Services Department (EMSD). For energy intensity,<sup>26</sup> it had decreased by around 22.7% from 132 to 102 Terajoules (TJ)/GDP (HK\$ billion) in the same period. The Energy Saving Plan For Hong Kong's Built Environment 2015-2025+ issued by the Government sets a target by 2025 for reducing energy intensity by 40% with 2005 as the base year. According to the Hong Kong Energy End-use Data 2020, Hong Kong's energy intensity has decreased by 32.8% from 2005 to 2018, largely on track in meeting the target. The commercial sector (44% in terms of total energy consumption as in 2018) is the largest user of energy in Hong Kong, followed by the transport (30%), residential (21%) and industrial (4%) sectors.

Figure 1: Energy Consumption Per Capita and Energy Intensity in Hong Kong from 2009 to 2018



Source: The EMSD<sup>27</sup>

## Carbon Emission

Although Hong Kong has reduced its carbon emission and carbon intensity over the years, they are still far from the policy targets.

As shown in Figure 2, Hong Kong's carbon intensity had gradually reduced by around 28.6% from 0.021 to 0.015 kilogram carbon dioxide equivalent/GDP (HK\$) from 2009 to 2018. While the carbon

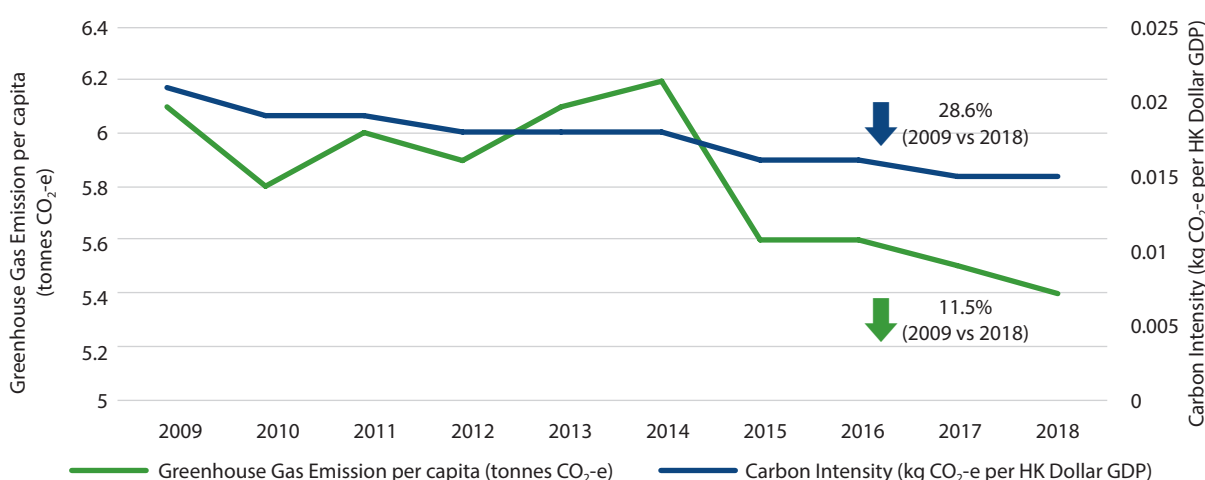
<sup>26</sup> Energy intensity is represented by the ratio of "energy end-use" to "GDP", i.e. the amount of "energy end-use" consumed in producing a dollar of "GDP".

<sup>27</sup> The EMSD. Hong Kong Energy End-use Data 2020.

emission per capita had increased from around 6.1 to 6.2 tonnes carbon dioxide equivalent from 2009 to 2014, then dropped to 5.4 tonnes in 2018. Currently, the largest carbon emissions come from electricity generation (65.6% as in 2018), followed by transport (18.1%), waste management (7.4%) and others (8.9%).

Table 1 shows the reduction targets set in Hong Kong’s Climate Action Plan 2030+. To meet the reduction targets, more effort should be done to lower the carbon emission and carbon intensity to a larger extent.

**Figure 2: Greenhouse Gas (GHG) Emission Per Capita and Carbon Intensity in Hong Kong from 2009 to 2018**



Source: The EPD<sup>28</sup>

**Table 1: Reduction Targets and Actual Performance of GHG Emission Per Capita and Carbon Intensity**

	Actual (2018)	Target (2020)	Target (2030)
GHG Emission Per Capita	5.4	<4.5	3.3 – 3.8
Carbon Intensity	0.015	0.009 to 0.011 (equivalent to a reduction of 50% to 60% using 2005 as the base)	0.007 to 0.008 (equivalent to a reduction of 65% to 70% using 2005 as the base)

According to the Environmental Protection Department (EPD), currently about two-thirds of Hong Kong’s carbon emissions come from electricity generation. As an effort in using cleaner fuel by the power companies, coal only accounts for about one quarter of the fuel mix for electricity generation in 2020, substantially lower than its share in 2015 which was about half. In the coming decade, the two power companies will continue to replace coal-fired generating units with gas-fired ones. This may help meet the reduction targets.<sup>29</sup>

<sup>28</sup> The EPD. (2020) Greenhouse Gas Emissions and Carbon Intensity in Hong Kong.

<sup>29</sup> GovHK. (2021) Climate Change.



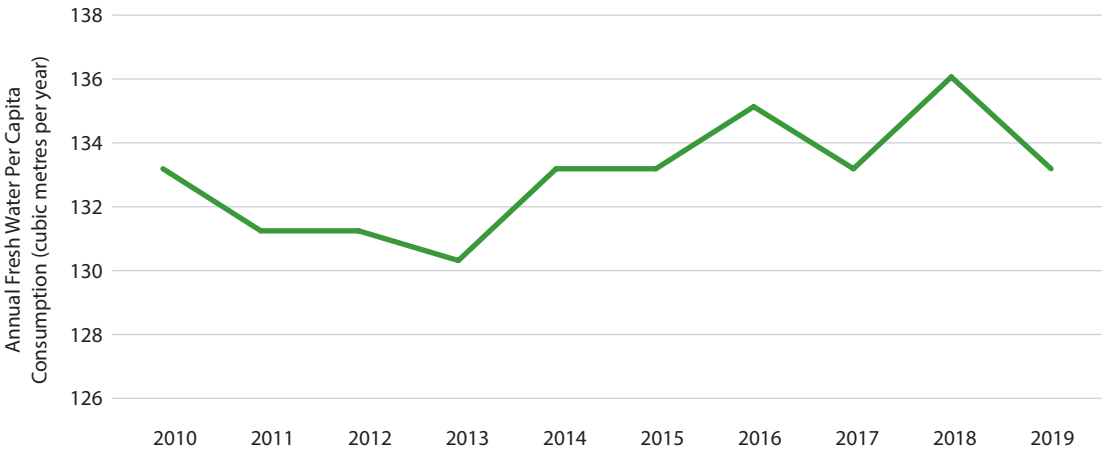
## Water Consumption

Despite recording a stable consumption pattern in recent years, the precautionary hygiene measures imposed to fight against the COVID-19 has jacked up the city’s total fresh water consumption in 2020 by 3.1% to 1,027.1 million cubic metres.

As shown in Figure 3, the available yearly per capita freshwater consumption of the city as provided by the Water Supplies Department (WSD) fluctuated slightly between 130m<sup>3</sup>/year and 136m<sup>3</sup>/year during 2010 to 2019, with an average of around 133m<sup>3</sup>/year.

That said, Hong Kong stands out as a big user of water resources among its international peers (see Table 2), although it has limited manufacturing activities and almost no agriculture. As suggested by a study report, the domestic users sector<sup>30</sup> is by far the largest user group of local fresh water, following by the services and trade sector, these two sectors consume nearly 80% of local fresh water. There are several reasons for the high level of water consumption. Firstly, Hong Kong has low water prices, which have remained unchanged since 1995. Secondly, there is huge wastage resulted from pipe leakages – over 30% of fresh water went unmetered during 2006-2016 due to main pipe leakages, unauthorised consumption and inaccurate metering. Finally, outdated information, incomplete records and data gaps also impair the monitoring of water consumption, pipeline repair efforts and accountability enforcement.<sup>31</sup>

**Figure 3: Freshwater Consumption Per Capita in Hong Kong from 2010 to 2019**



Source: The WSD<sup>32</sup>

<sup>30</sup> The IWA defines domestic consumption as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, car washing, and watering lawns and gardens.

<sup>31</sup> Civic Exchange. (2019) Modernising Hong Kong’s Water Management Policy PART I. For a comparison with international peers, the study examined the 2016 per capita household water consumption of some other cities (namely Berlin, Madrid, Ankara, London, Melbourne, Brisbane, Paris, Seoul, Sydney, Los Angeles, New York City). These were selected from the International Water Association’s (IWA) database because their population figures exceeded 3 million but were less than 10 million, to provide some realistic comparison with Hong Kong.

<sup>32</sup> The WSD. Annual Report - Water Supplies Department 2017 – 2018; The WSD. Annual Report – Water Supplies Department 2013 – 2014. Water Resource Data.

**Table 2: Daily Per Capita Household Water Consumption of Selected International Cities (2016)**

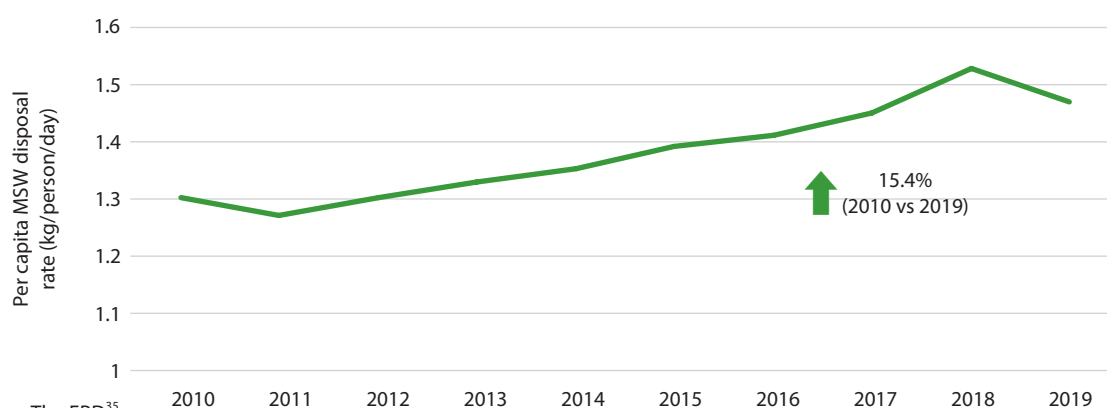
City	Water Consumption (Litre/capita/day)
Berlin	114
Madrid	127
Ankara	145
London	149
Melbourne	149
Brisbane	154
Paris	187
Seoul	193
Sydney	206
Hong Kong	217
Los Angeles	428
New York City	447

Source: International Water Association

## Waste Production

In 2013, Hong Kong Blueprint for Sustainable Use of Resources 2013 – 2022 set a target to reduce Hong Kong’s MSW disposal rate from 2011 to 2022 on a per capita basis by 40%, reaching 0.8kg or below per capita per day. However, in 2019, Hong Kong people generated 1.5kg per capita per day (a 15.4% increase as compared with the figure in 2010)(Figure 4). That means the city had not only failed to match its waste reduction target in the past few years, on the contrary, it had even produced an amount of waste far more than the target (Table 3). Domestic waste is the major categories of MSW,<sup>33</sup> which contributed to around 59% of MSW in 2019. By composition, putrescibles (usually referred to as “food waste” which is the largest component of putrescibles)<sup>34</sup> (33.1% as in 2019) is the largest constituent of MSW, followed by paper (24.5%), plastics (21.0%), glass (2.3%) and metals (2.3%).

**Figure 4: Per Capita MSW Disposal Rate in Hong Kong from 2010 to 2019**



Source: The EPD<sup>35</sup>

<sup>33</sup> MSW includes three categories: domestic waste, commercial waste and industrial waste.

<sup>34</sup> Food waste is the major component of putrescibles: As of 2019, 91.7% of putrescibles was food waste, followed by yard waste (7.8%) and others (0.5%).

<sup>35</sup> The EPD. Monitoring of Solid Waste in Hong Kong 2019.

**Table 3: Reduction Target and Actual Performance of per capita MSW disposal rate**

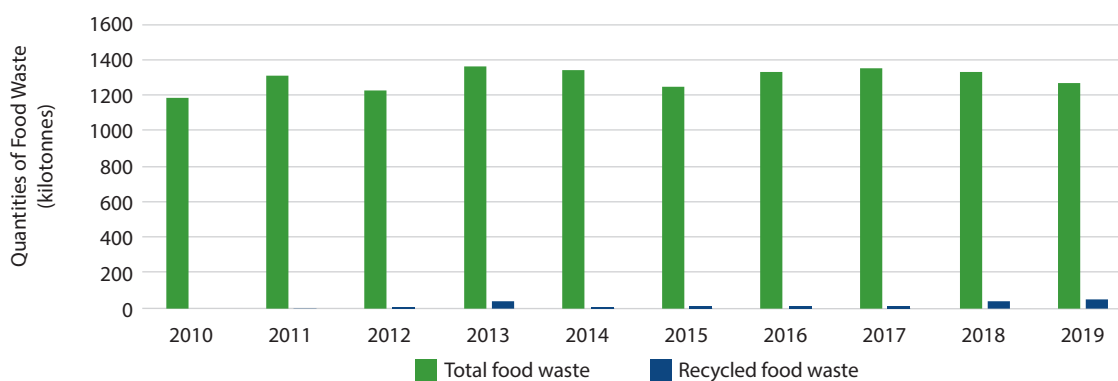
	Actual (2017)	Target (2017)	Target (2022)
Per capita MSW disposal rate (kg per day)	1.5	≤1.0	≤0.8

The above blueprint also set a target to transform the waste management structure, for instance from 52% landfilling and 48% recycling in 2011, to 22% landfilling, 23% waste-to-energy (modern incineration) and 55% recycling in 2022. However, as shown in the following figures (Figures 5 to 7), of the three major types of MSW, except food waste of which the recycling rate has increased slightly, the recycling rate of paper and plastics have been decreasing in recent years.

### Food Waste

Despite the commissioning of new recycling facilities like O•PARK1 and Food Waste Pre-treatment Facilities for Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme in recent years,<sup>36</sup> the insufficient local recycling facilities deterred food waste recycling in Hong Kong. Notwithstanding a slight improvement in 2019 to reach the food waste recycling rate to 3.6%, it remained at very low rate at around 1.0% annually on average.<sup>37</sup>

**Figure 5: Quantities of Total and Recycled Food Waste in Hong Kong from 2010 to 2019**



Source: The EPD

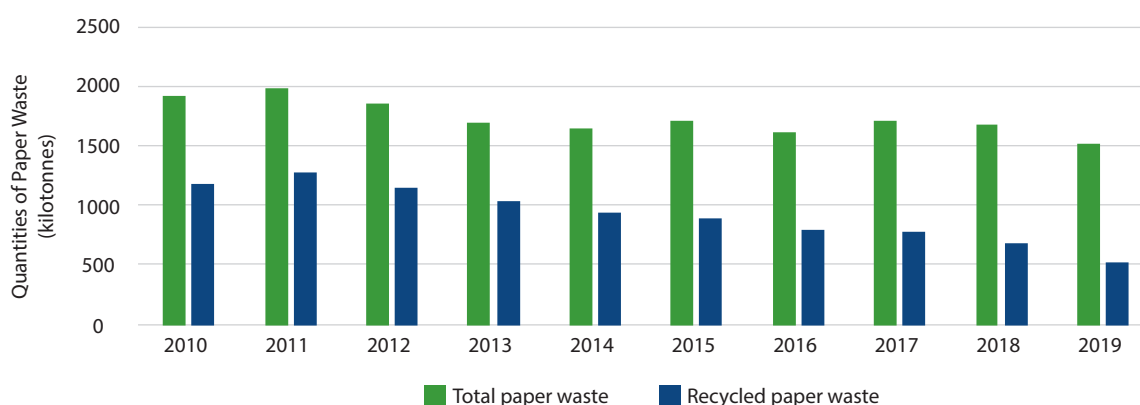
<sup>36</sup> In July 2018, the O•PARK1 commenced operation. It was designed to have the capacity of dealing with 200 tonnes food waste per day upon its full operation. In 2019, the Food Waste Pre-treatment Facilities for Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme at Tai Po was commissioned.

<sup>37</sup> There was an increase of food waste recycle rate in 2013 which might be potentially due to the implementation of the Food Wise Hong Kong Campaign in May 2013, a territory-wide food waste reduction campaign that aims to promote public awareness of food waste problems in Hong Kong and behavioural changes in various sectors of the community, including commercial and industrial establishments and at the individual and household levels, with a view to avoiding and reducing food waste generation. The EPD. (2021) Problems & Solutions.

## Paper Waste

Paper waste in Hong Kong mainly consists of tissue paper, paper bags, cardboard and newsprint. Despite that the recycling rate of paper has been the highest among the top three types of MSW in Hong Kong, which might be due to the relatively high demand for waste paper and existence of exporting outlets, its recycling rate has been only around 50% or below throughout the recent years, and a decreasing trend is also observed, for instance reduced from around 62.0% in 2010 to 35.1% in 2019. Currently, almost all the recovered recyclable papers were exported for recycling due to the lack of relevant local facilities. In December 2018, the Government awarded a company to build and operate a paper recycling and manufacturing plant at the EcoPark by 2023, however, it was reported in September 2020 that a new pulping facility may replace such proposal.<sup>38</sup> Owing to the lack of local facilities, the demand for recyclable papers in the local market has been largely influenced by the policies and demand from the importing countries, typically the Mainland China,<sup>39</sup> as well as international prices. With the tightening of import controls on the Mainland China and other importing countries, the recycling rate of waste paper would become uncertain.

Figure 6: Quantities of Total and Recycled Paper Waste in Hong Kong from 2010 to 2019



Source: The EPD

## Plastic Waste

Plastic waste in Hong Kong mainly consists of plastic bags, plastic dining wares, transparent stretch film for packaging, toys, off-cuts, and scrap, and the majority of them went straight to the landfills. Although the total number of plastic shopping bags (PSB) disposed of within the first year of the full implementation of the PSB Charging Scheme reduced by 25% (quoted in Waste Blueprint for Hong Kong 2035)<sup>40</sup> from 2014 to 2015, the number of PSB disposal surged again until 2018, then dropped in 2019, which was potentially due to the economic downturn in the same year.

<sup>38</sup> SCMP. (2020) Recycling in Hong Kong takes another hit as plan for waste paper processing 'falls through'.

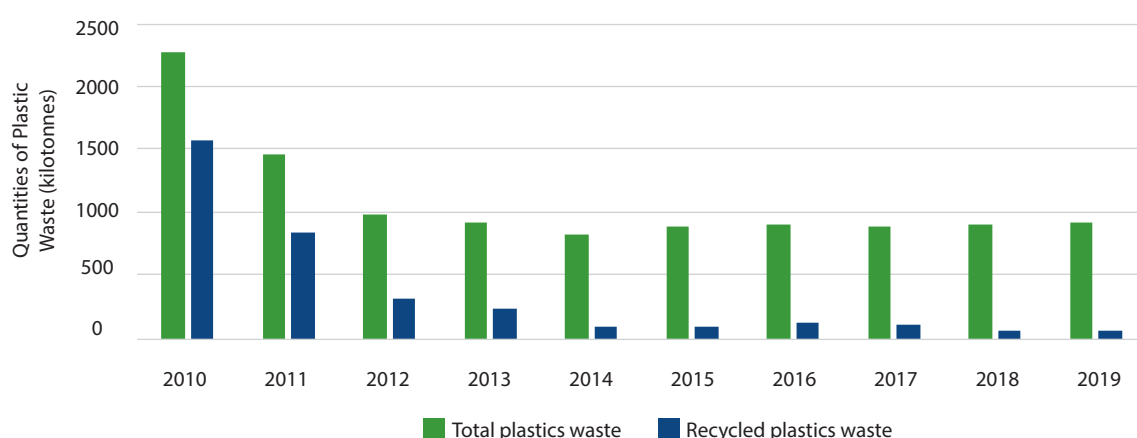
<sup>39</sup> The Mainland China announced in 2018 that it would stop accepting imports of polluting waste including paper, plastics and metals. It previously set various quotas on waste paper imports before halting them completely after 31 December 2020, and subsequently allowed four designated paper recycling plants in the Mainland China to take up the waste paper from Hong Kong until the operation of the city's new pulping facility.

<sup>40</sup> Environment Bureau (ENB). (2021) Waste Blueprint for Hong Kong 2035.



The plastic recycling rate has experienced a plummet in early 2010s due to a drop in plastic exporting price mainly resulted from the decrease in international crude oil price and the demand from the Mainland China's manufacturers, as well as the tightened requirement on importing plastic recyclables by the Mainland China authorities.<sup>41</sup> It remained at a low level at around 12% on average each year from 2014 to 2017 and further reduced to 7% in 2018. Such rate increased slightly to around 8% in 2019 with the increase in the quantity of locally recycled plastic recyclables by around 33.3% from 55,800 tonnes in 2018 to 74,400 tonnes in 2019, which was resulted from the local recycling industry shifting its mode of operation to meet the tightened import control by importing economies.

**Figure 7: Quantities of Total and Recycled Plastic Waste in Hong Kong from 2010 to 2019**



Source: The EPD<sup>42</sup>

## Impact of COVID-19 on Waste Production

According to the EPD, the volume of MSW for the first five months in 2020 had dropped by 6% as compared to the same period of the previous year. An NGO was of the view that, the impact of the COVID-19 pandemic on MSW disposal rates has yet to be seen.<sup>43</sup> It was observed that the COVID-19 pandemic had both positive and negative impacts on waste production.

On the positive side, the drop of visitor arrivals during the pandemic, which plunged by around 99% in February, might have reduced the MSW of the city. Such decrease of visitors could be quite significant, considering the hotel sector alone contributes to almost 1% of Hong Kong's total MSW. Also, according to a local survey,<sup>44</sup> two out of three people in Hong Kong stated changes in their clothing consumption behaviour because of the COVID-19, including being more rational with clothing purchases, re-wearing the same clothes more often than pre-COVID-19, and donating clothes to charitable organisations.

<sup>41</sup> On.cc (2015) 塑膠回收逐年跌 港府委顧問研土地支援措施.

<sup>42</sup> The EPD. (2019) Waste Disposal Statistics 2019.

<sup>43</sup> Green Earth. (2020) 「未能確定」的抗疫減廢政策.

<sup>44</sup> Redress. (2020) Redress Study: 2/5 Hong Kongers Only Keep Clothes For One Year Or Less.

As for the negative side, it is obvious that there was a surge in consumption of single-use items such as surgical masks, sanitisers and disposable food containers and cutlery during the COVID-19 pandemic. A local NGO estimated that, based on its survey conducted in April 2020,<sup>45</sup> the volume of single-use plastics given out for takeaways during the pandemic was 2.2 times more than the figure for the previous year. Another source of the increase in waste might be from industrial waste generated from renovation activities due to the high turnover rate of retail shops resulted from the economic downturn. Also, according to a study conducted by a digital payment service provider,<sup>46</sup> 74% Hong Kong consumers had used a new shopping or payment method for the first time since the start of the COVID-19 while 35% of them were more willing to do shopping online, which might in turn increased the use of single-use packaging and produced waste. It is uncertain whether such momentum will continue after the pandemic, but the issue of environmental sustainability has to be addressed proactively by the businesses while they are enjoying the growth.

## 2.2 Government Policies and Initiatives in Hong Kong

### Overview of Government Policy Direction on SC

In recent years, the Government has set various action plans with a view to develop Hong Kong into a more sustainable city, which covered a wide range of aspects such as waste management, energy saving, conservation and carbon reduction. A list of the action plans is provided below (in chronological order):

- **Hong Kong Blueprint for Sustainable Use of Resources 2013 – 2022:** Set target to reduce the per capita disposal rate of MSW by 40% by 2022 using 2011 as the base, and that each person would throw away no more than 0.8kg of waste per day.
- **A Food Waste & Yard Waste Plan for Hong Kong 2014 – 2022:** Set target to cut down the amount of food waste that goes to landfills by at least 40% by 2022 using 2011 as the base, referring to a reduction from around 3,600 tonnes a day to around 2,160 tonnes a day.
- **Energy Saving Plan for the Built Environment 2015 – 2025+:** Set target to achieve energy intensity reduction in Hong Kong by 40% by 2025 using 2005 as the base; and BEAM<sup>47</sup> Plus Gold and BEAM Plus Gold Ready for all major new government buildings and new public housing respectively.
- **Hong Kong Biodiversity and Action Plan 2016 – 2021:** Set out specific actions in four major areas: enhancing conservation measures; mainstreaming biodiversity; improving the knowledge on biodiversity; and promoting community involvement.
- **Hong Kong's Climate Action Plan 2030+:** Set a target to reduce Hong Kong's carbon intensity by 65% to 70% by 2030 compared with the 2005 level.

<sup>45</sup> Greeners Action. (2020) Hong Kong people consume over 100 million single-use takeaway plastics every week during the COVID-19 pandemic.

<sup>46</sup> Visa. (2020) The Visa Back to Business Study.

<sup>47</sup> Building Environmental Assessment Method. A qualified BEAM green building should be aimed at sustainability, providing a safer, healthier, more comfortable, more functional and more efficient living or working environment.

- **Hong Kong Smart City Blueprint:** Set out initiatives related to green and intelligent buildings, waste management and pollution monitoring in the area of smart environment.
- **Waste Blueprint for Hong Kong 2035** (launched in February 2021; advocates a vision of “Waste Reduction • Resources Circulation • Zero Landfill”): Set a medium-term target to gradually reduce the per capita MSW disposal by 40%-45% and increase the recovery rate to about 55% by implementing charging for disposal of MSW, and a long-term target to move away from the reliance on landfills in the long run by developing adequate waste-to-energy facilities; take forward actions under six major areas: waste reduction, waste separation, resources circulation, industry support, innovation and cooperation, and education and publicity. The blueprint expects that the city will no longer need to rely on landfills for direct disposal of its MSW, if the proposed waste-to-energy infrastructure with adequate treatment capacity can be in place by around 2035.
- **Hong Kong Roadmap on Popularisation of Electric Vehicles (EVs)** (launched in March 2021): Set out the long-term policy objectives and plan to promote the adoption of EVs and their associated supporting facilities in Hong Kong. Key initiatives include ceasing new registration of fuel-propelled private cars including hybrid vehicles in 2035 or earlier, expanding the EV charging network and legislating a producer responsibility scheme for retired EV batteries.<sup>48</sup>

## Recent Initiatives and Developments

Most of the abovementioned action plans are interrelated and supplementary to one another, and that a range of environmental and low-carbon policies and initiatives from the Government have already been put forward in recent years. Below lists examples of major or recently introduced initiatives (since 2015) (details are appended in Annex 1).

- Reducing waste at source (“Food Wise Eateries” Scheme, Cessation of dispensing bottles of water measuring 1 litre (L) or less in government venues, Reusable Tableware Lending Programme, “Plastic-Free Takeaway, Use Reusable Tableware” Campaign)
- Recycling (Recycling Stations (formerly known as Community Green Station (CGS)), Recycling Stores and Recycling Spots, “Reduce and Recycle 2.0” Campaign, Producer Responsibility Schemes (PRS) on Waste Electrical and Electronic Equipment, PRS on Glass Beverage Containers, Pilot Scheme on Reverse Vending Machines to collect Waste Plastic Beverage Containers, Waste Paper Collection and Recycling Services)
- Energy Saving (The Fourth Phase of the Mandatory Energy Efficiency Labelling Scheme (MEELS))
- Biodiversity (Hong Kong Biodiversity Strategy and Action Plan (2016 – 21) (BSAP), Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018)
- Climate Action (Feed-in tariff (FiT) and Renewable Energy (RE) Certificates, First Registration Tax (FRT) Concessions for Electric Vehicles, Tightening Emission Standards for Motor Vehicles, Voluntary Water Efficiency Labelling Scheme (WELS))

<sup>48</sup> The ENB. (2021) Hong Kong Roadmap on Popularisation of Electric Vehicles.

- Smart City (Carbon Audit Green Partner, Walk in HK, New Territories Cycle Track Network)
- Funding Support (Recycling Fund, Green Tech Fund)

## Policies under Legislative Process or under Planning

Currently there are a couple of policies targeting waste and pollution reduction that are undergoing legislative process or under planning, for instance:

- Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018
- PRS on Plastic Beverage Containers
- Electronic Road Pricing Pilot Scheme in Central Core District

## Issues Faced by Consumers with Existing Policies and Initiatives

It is encouraging to see the implementation of the various action plans, policies and initiatives. However, certain issues have been observed and subsequently criticised by the media and different key stakeholders which might affect consumer confidence and support in practising sustainable lifestyle.

### **Lack of monitoring in three-coloured waste separation bins scheme**

Based on the current statistics discussed in this Chapter, the Government's goal on energy intensity reduction is largely on track. However, the progress of MSW reduction has been fallen behind the target, especially in recent years. More effort, along with solutions targeting the underlying cause of the issue, are needed. For instance, the three-coloured waste separation bin scheme is a programme which aims to enhance recovery of recyclables and encourage people to participate in recycling. However, negative news and feedbacks have arisen from time to time over the years, which might be a blow to the public participation rate.

The three-coloured waste separation bins scheme was initiated by the Environmental Campaign Committee (ECC) in 1998 through the "Waste Recycling Campaign in Housing Estates". The campaign, commonly referred to as the 3R Campaign to signify "reduce, reuse and recycle", was carried out in eight phases between 1998 and March 2005 to promote the recovery of waste paper, aluminium cans and plastic bottles.<sup>49</sup>

Early in 2013, it was revealed by media that a contractor commissioned by the Food and Environmental Hygiene Department (FEHD)'s actually dumped the recyclables inside the three-coloured waste separation bins as general rubbish.<sup>50</sup> In 2020, there was press report revealing again that in the 9 out of 14 housing estates under investigation, plastic bottles in the three-

<sup>49</sup> The three-coloured waste separation bins are placed at housing estates, schools and public places (e.g. roadside, parks, sports venues, leisure and cultural facilities, etc.). Before the EPD's takeover in 2020, the Food and Environmental Hygiene Department (FEHD) provided maintenance and recyclable collection services through its contractor for these bins placed at public streets and refuse collection points. The FEHD contractor also collected recyclables from parks, sports venues, and leisure and cultural facilities, country parks and some schools. While recyclables recovered from housing estates are, depending on the practices of different property management companies, may be collected by cleansing contractors or recyclers as arranged.

<sup>50</sup> SCMP. (2013) Street cleaners send waste for recycling to landfills.



coloured waste separation bins ended up in landfills or refuse transfer stations, instead of being collected by recyclers.<sup>51</sup> Such issues reflect the insufficiency in monitoring work which would lead to the lack of confidence in the recycling system by the citizens.

Apart from the alleged mishandling of the waste materials, it was also reported that only part of the materials thrown into the bins by people was suitable for recycling. According to an investigation conducted by an NGO in 2017, only about 38.6% of such materials were actually recyclables.<sup>52</sup> A market specialist also advised that Government contractors were often forced to dump contents collected from roadside recycling bins with other trash because they are heavily contaminated with things such as half-eaten meals and cigarette butts.<sup>53</sup>

Since October 2020, the EPD has taken over the management of recycling bins in public places from the FEHD. Under the new arrangement, the collection of recyclables and general waste will be managed separately by the EPD and the FEHD respectively. Also, the EPD announced that the recycling bins in public places will be strengthened to achieve “Bigger Capacity, Easy Reporting”, i.e. to change the litter compartment previously connected with the recycling bins to collect recyclables for avoiding the public to put litter into recycling bins by mistake, and to put new labels with a QR code and service hotline number on the recycling bins for facilitating the public to report overfilled or damaged bins to improve the efficiency of the recyclables collection contractors in taking follow-up actions. At the same time, it also added a number of new requirements in the new contract of recyclables collection services to increase their efficiency and to restore the public's confidence in the proper handling of recyclables.

In November 2020, the Office of The Ombudsman, Hong Kong announced the launch of a direct investigation to examine the management of waste separation bins by the ENB and the EPD, and the effectiveness of the relevant programme. It is expected that the investigation could shed insights for improvement.

Meanwhile, to scale up public education with respect to proper handling of recyclables is also an important factor in promoting the effectiveness of the recycling bins.

### **Delay in implementation schedule**

For the existing recent government initiatives, delay in completion date behind the targeted schedule were sometimes observed. For instance, the CGS project, which was subsequently renamed as Recycling Stations in late 2020, was initiated by the EPD in 2014 to encourage clean recycling through environmental education and community partnership, and assist local communities in the collection of various recyclables. It was expected that 18 CGSs would be built by 2017. However, as of May 2021, the construction works of only 9 CGSs were completed and 2 others in progress, and the remaining 7 were at planning or site selection stage.

Despite such delay, 22 new Recycling Stores and pop-up Recycling Spots have been introduced since November 2020 to strengthen the community recycling network.

### **Insufficient recycling infrastructure**

As discussed in this Chapter, there is a lack of local recycling infrastructure for food waste, paper

<sup>51</sup> HK01. (2020) 【01實測】追蹤器揭白做回收 9大屋苑疑將回收膠樽 直送堆填區.

<sup>52</sup> Greeners Action. (2017) 回收箱淪為垃圾桶 6成物料為錯誤或垃圾 促請「上樓」杜絕濫用.

<sup>53</sup> SCMP. (2015) Straight to landfill? Why Hong Kong is recycling less of your rubbish.

waste and plastic waste, which had resulted in a relatively low recycling rate of food waste over the years and rendered the recycling rate of waste paper and plastics uncertain.

Revealed in Waste Blueprint for Hong Kong 2035, another food waste treatment facility, O-PARK2, which can transform up to 300 tonnes of food waste into electricity each day, is currently under construction and scheduled to commence operation by 2023; and the Government plans to tender for the development of a local modern pulping facility to recycle part of local waste paper.

### **Inadequate transparent and timely information on effectiveness**

To foster public support to all the programmes launched, they expect to be informed on the programme effectiveness with up-to-date official figures presented. However, it is definitely a gap to fill. For example, the annual release of waste data and statistics by the EPD is not frequent enough to motivate and sustain the supportive behaviour of the public.

Also, the figures with respect to energy consumption, carbon emission, water usage and waste reduction are publicised through separate channels but missed integrated access for the public. For instance, data on energy consumption, water consumption and MSW are currently distributed amongst the EMSD's, the WSD's and the EPD's website. While appreciating the administrative convenience to report the statistics under different government departments, the public, especially supporters for green and SC initiatives, probably look for a designated single platform to gather data relevant to SC in a holistic and easily accessible way.

## **2.3 Local Business Initiatives**

### **Environmental, Social and Governance Reporting**

In the Council's baseline survey on SC, a review on the status and quality of disclosure on SC related information, in particular environmental sustainability, of 100 selected local listed companies was conducted. It was found that less than half of those reviewed companies provided some sort of environmental statements either in their annual report or in a standalone report, while only a few of them disclosed meaningful and specific information with quantitative information on their targets and achievements regarding their environmental performance.

During the course of the Council's baseline survey, the Hong Kong Exchanges and Clearing Limited (HKEX) launched a public consultation on the review of its Environmental, Social and Governance Reporting Guide (the ESG Reporting Guide), which among other things, proposed the upgrade of the General Disclosures for each aspect of the ESG Reporting Guide to "comply or explain". The amendments then came into effect for issuers' financial years commencing on or after 1 January 2016. Subsequent to such review, the HKEX launched further consultation and announced additional requirements to the ESG governance and disclosure framework for Hong Kong-listed companies in December 2019. Key changes to the ESG Reporting Guide and related Listing Rules included:<sup>54</sup>

<sup>54</sup> HKEX. (2019) Exchange Publishes ESG Guide Consultation Conclusions and its ESG Disclosure Review Findings.

- Introducing mandatory disclosure requirements to include
  - a broad statement setting out the board of listed company’s consideration of ESG matters;
  - application of Reporting Principles “materiality”, “quantitative” and “consistency”; and
  - explanation of reporting boundaries of ESG reports;
- Requiring disclosure of significant climate-related issues which have impacted and may impact the issuer;
- Amending the “Environmental” key performance indicators (KPIs) to require disclosure of relevant targets; and
- Upgrading the disclosure obligation of all “Social” KPIs to “comply or explain”.

It is considered that strengthening the environmental indicators reported in ESG reports would help consumers, investors and stakeholders in better understanding of how listed companies manage their ESG related performance and risks and how well the listed companies are operating a “sustainable business”.

Despite the positive change, a report, on 400 sampled most-recent ESG reports released by the listed companies on or before 31 July 2020, published by a local accounting firm in January 2021 highlighted that businesses could improve further on reporting compliance and quality, in particular, results on ESG risk management and materiality assessment. Reporting quality of those sampled ESG reports did not allow for meaningful comparison and that disclosure of issues related to climate change was limited.<sup>55</sup>

## Recent Initiatives

In 2021, the World Economic Forum released its 16<sup>th</sup> edition of Global Risks Report, and 4 of the top 5 global risks in terms of likelihood are environmental problems, as evaluated by global experts. Whilst only 1 out of 5 were environmental problem 10 years ago in 2012’s report.<sup>56</sup>

In addressing the global environmental crisis, more businesses plan to or have put more focus on environmental protection, seeking to strike a balance between economic development and environmental sustainability. According to a survey conducted by an international company in 2020, among more than 2,600 surveyed companies in 14 countries and territories, some 91% aimed to make their business more sustainable, while 27% intended to make their supply chains more environmentally friendly over the next two years.<sup>57</sup>

In Hong Kong, various initiatives and campaigns have been rolled out by the business sector to advocate SC. The following set some instances (in chronological order):

<sup>55</sup> BDO. (2020) BDO Survey: Fourth-year ESG reporting performance survey shows the evolvement in overall ESG involvement of majority listed companies but which remain inadequate to meet the requirements of the Revised Guide.

<sup>56</sup> World Economic Forum. The Global Risks Report 2021. Top Global Risks by Likelihood in 2021 in descending order: Extreme weather, Climate action failure, Human environmental damage, Infectious disease, Biodiversity loss.

<sup>57</sup> HSBC. (2020) Navigating a crisis and emerging resilient.

- “Drink without waste” Initiative
- Plastic reduction initiatives by fast food chains
- Clothing recycling service
- Smart Energy Programme/Smart Power Services

## 2.4 Local NGO Initiatives

Across the territory, many NGOs have implemented SC programmes in different scale and some recent ones are listed as below:

- Sustainable Seafood Procurement Policy Scorecard, introduced by World Wide Fund for Nature (WWF), Hong Kong<sup>58</sup>
- Trial on Plastic Bottle Deposit Refund Scheme by the Green Earth<sup>59</sup>
- Beverage Carton Recycling programmes by Green Power<sup>60</sup>
- Get Redressed Month by Redress<sup>61</sup>
- Food sharing scheme by Food Angel<sup>62</sup>
- Plastic-free purchases of beverages by BottLess<sup>63</sup>

## 2.5 Local Consumer Education

Since the release of the Council’s last report on SC, the Council has rolled out different initiatives and delivered various work related to the promotion of SC, for instance:

- In 2016, the Consumer Rights Reporting Awards (CRRA) introduced the “Sustainable Consumption Awards” category.<sup>64</sup>
- In 2018, the 19th Consumer Culture Study Award (CCSA) introduced the “Innovative Design for Sustainable Consumption” category;<sup>65</sup> and the Council launched the Environment and Conservation Fund-Earth 2038’s Learning Journey of Sustainable Consumption.

<sup>58</sup> WWF. Sustainable Seafood Procurement Policy Scorecard.

<sup>59</sup> The Green Earth. (2018) 按樽費1元 回收率估計可達75%.

<sup>60</sup> Green Power. Hong Kong’s First Drink Carton Recycling Campaign.

<sup>61</sup> Redress. Get Redressed Month 2020 in Review.

<sup>62</sup> Food Angel. Food Rescue Programme.

<sup>63</sup> BottLess

<sup>64</sup> The CRRA is jointly organised by the Council, the Hong Kong Journalists Association and the Hong Kong Press Photographers Association with an aim to recognise excellence in reporting of consumer rights and interests.

<sup>65</sup> The CCSA is co-organised by the Council and the Education Bureau. It is one of the largest project-based learning platforms for local secondary school students in which participants select a topic on local consumer culture for study and submitted a report as their entry for the award.

- In 2020, the Council participated in the World Consumer Rights Day to raise consumers' awareness of SC by producing videos and inviting consumers to challenge themselves on their participation in SC by way of a quiz.<sup>66</sup>
- In 2021, the Council participated in the World Consumer Rights Day with the theme "Tackling Plastic Pollution". An article and a video were published in the Choice magazine to call for collective action by the Government, businesses & consumers to tackle global plastic pollution.<sup>67</sup> The Council also participated in an international study in assessing the packaging for the same set of some internationally available branded products.
- From time to time, the Council has introduced SC aspects in conducting product tests and surveys in relation to sustainability, such as energy efficiency of electrical appliances, chemical safety of children toys, and product durability, reliability and reparability of household and electrical appliances etc.

Besides, stakeholders including NGOs, businesses and other segments in the community also contributed in consumer education in SC. Among other things, the Education Bureau (EDB) has been cooperating with various government departments and NGOs in organising various types of activities for students, such as the "Student Environmental Protection Ambassador Scheme" and "The Hong Kong Green School Award".

## 2.6 Global Trends

### Overview

In the past five years, numerous articles, journals, reports worldwide, from global warming to loss in biodiversity, have warned people the seriousness of climate crisis the world faces. The concept of sustainability has gained attention in recent years, while the waste problems, especially plastic waste, have also remained topics of discussion at the international arena, and that regulatory bodies, business, and organisations worldwide have set up aggressive carbon reduction targets in order to cope with the issue of climate change.

In achieving environmental policy targets and addressing the environmental challenges,<sup>68</sup> more nations in the world have recently announced their carbon reduction targets, or plans to reduce waste and develop renewable and clean energy.

Yet, according to the latest report released by United Nations Environment Programme (UNEP) in December 2020, despite recent pledges from major polluters to cut their emissions, the report described concrete commitments as "woefully inadequate" that world leaders fell short of meeting the Paris Agreement targets.<sup>69</sup>

<sup>66</sup> Self-Challenge Quiz on Eco-Friendly Consumption. See [https://www.consumer.org.hk/ws\\_en/choice/521/sustainable-consumption.html](https://www.consumer.org.hk/ws_en/choice/521/sustainable-consumption.html)

<sup>67</sup> See <https://www.youtube.com/watch?v=DARUgR5m0S8>

<sup>68</sup> Yale Center for Environmental Law & Policy and The Center for International Earth Science Information Network at Columbia University's Earth Institute. About the EPI.

<sup>69</sup> UNEP. Emissions Gap Report 2020.



More attention has been paid to the topic of sustainability since the outbreak of COVID-19 which has triggered a sense of reflection among individual of the impact of their daily lives and behaviour on the environment. SC is said to be the new post-coronavirus normal. There have been international voices saying that the COVID-19 offers an opportunity to develop recovery plans that will reverse current trends and shift in consumption and production patterns to a more sustainable course.<sup>70</sup> A recent survey found out that in the midst of the COVID-19 pandemic in June 2020, consumers around the world were willing to change their behaviour to become healthier and more sustainable but they did not know where to start.<sup>71</sup> They need education and be more committed to act. Despite the sharp drop in pollution levels and the re-emergence of wildlife to cities resulted from the economic shutdown in many countries at the beginning of the outbreak, in September 2020, a new report by the United Nations (UN) and a number of leading climate organisations found that GHG concentrations in the atmosphere are at record high and increasing, meaning the planet is heading to its warmest five years on record.<sup>72</sup>

According to UNEP's Emissions Gap Report 2020, with factories closed, flights grounded and people buying fewer things, the pandemic is expected to lower carbon dioxide emissions by up to 7% in 2020. However, the coronavirus pandemic would do little to help governments meet temperature targets unless world leaders prioritise a green recovery, such as investing in green jobs and infrastructure, as well as setting out climate-friendly policies.<sup>73</sup>

## Consumption Trends towards SC

In the UK, the top eco-conscious and sustainability trends in 2020 showed veganism, smart shopping, e-vehicles and staycations were high on the consumer agenda. Consumers were looking for longer-lasting, more environmentally friendly solutions, for instance, “alternative to single use” search terms had grown 137% when comparing 2019/2020 with 2017/2018 according to a search engine statistics.<sup>74</sup> A recent survey found that nearly 95% of consumer respondents believed their personal actions could help reduce unsustainable waste, tackle climate change, and protect wildlife and biodiversity, with 27% to 30% noting that this belief had strengthened as a result of the COVID-19 pandemic crisis.<sup>75</sup>

Even prior to the outbreak of COVID-19, the trend is reflected in sales of sustainable products in the United States (US). Solely in 2018, the US consumers had spent US\$128.5 billion<sup>76</sup> on sustainable fast-moving consumer goods products. When compared to conventional product market, sustainability market had a much faster growth rate. From 2014 to 2018, sustainable product sales

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<sup>70</sup> UN. (2020) SDG 12 is the goal of the month.

<sup>71</sup> GlobeScan. Healthy and Sustainable Living Highlights Report 2020.

<sup>72</sup> World Meteorological Organization, Global Carbon Project, United Nations Educational, Scientific and Cultural Organization Intergovernmental Oceanographic Commission, Intergovernmental Panel on Climate Change, UNEP and the Met Office. United in Science 2020.

<sup>73</sup> UNEP. Emissions Gap Report 2020.

<sup>74</sup> The Telegraph. (2020) Why sustainable consumption will be the new post-coronavirus normal.

<sup>75</sup> Boston Consulting Group (2020) Sustainability Matters Now More Than Ever for Consumer Companies.

<sup>76</sup> Convenience Store News (2019). 2018 Was the Year of the Sustainable Consumer. HK\$1,002.3 billion (using the exchange rate of US\$1 = HK\$7.8, as of April 2021).

in the US had increased by nearly 20%, with a compound average growth rate of 3.5%, while that of conventional products had reduced 1.0%. In 2018, more than 22% of total store sales were contributed by products with sustainable attributes, such as “organic”, “sustainable” and “clean”.

In the Mainland China, according to a joint tracking study,<sup>77</sup> SC topics related to personal wellbeing remained the top concern of consumers, while they generally had a positive attitude towards SC and believed that achieving SC could help construct a better environment. However, the massive waste generated from online shopping remains an issue. From the flourishing e-commerce market,<sup>78</sup> the consumption of courier packaging materials increased drastically from 20,600 tonnes in 2000 to 9,412,300 tonnes in 2018.<sup>79</sup> Being the top carbon dioxide emitting country<sup>80</sup> and with the target of capping carbon emission by 2030 and achieving carbon neutral by 2060,<sup>81</sup> it may be necessary to roll out more measures to achieve those targets and help the consumers practise SC.

## Aspiration of the Younger Generation

It is also observed that the younger generation is more concerned with climate crisis. Just last year, a US survey reported that younger people were increasingly alarmed over the impact of global warming with 80% of the respondents aged between 18 and 29 considered the climate crisis “a major threat to life on Earth”.<sup>82</sup>

Similar result was also observed in another research in 2017, millennials (aged 21 – 34) (75%) in the US were twice as likely than baby boomers (aged 50 – 64) (34%) to say they were definitely or probably changing their habits to reduce their impact on the environment. They were also more willing to pay more for products that contain environmentally friendly or sustainable ingredients (90% vs. 61%), organic/natural ingredients (86% vs. 59%), or products that have social responsibility claims (80% vs. 48%).<sup>83</sup>

## Plastic Waste emerged as the Biggest Issue

Usage of plastics and its waste remain one of the most frequently discussed topics in the international arena. There has been growing concern on the contamination brought by plastics and plastic particles to major ecosystems on the planet. From 2009 to 2019, global plastic production increased 47.2% from 250 to 368 million metric tonnes (Mt).<sup>84</sup>

As the issue intensified, more people are now concerned about plastic waste. In an international survey, plastic was viewed as the most negative material used for consumer goods items, with 65% of global consumers associating it with ocean pollution and 57% considering it harmful. Plastic pollution was considered the second most pressing environmental concern, following

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<sup>77</sup> SynTao Co., Ltd. and Jiemian.com. 2020 China Sustainable Consumption Report.

<sup>78</sup> Consumer News and Business Channel. (2021) China says it now has nearly 1 billion internet users.

<sup>79</sup> Greenpeace. (2019) Environmental protection groups: Greening of E-commerce, express industry packaging urgently needs to be promoted.

<sup>80</sup> Union of Concerned Scientists. (2020) Each Country's Share of CO2 Emissions.

<sup>81</sup> SCMP. (2021) China wants to be carbon neutral by 2060, but can its provinces manage it?

<sup>82</sup> The Guardian. (2020) Climate crisis breaks open generational rifts in US families.

<sup>83</sup> Meat+Poultry. (2019) Nielsen: Sustainable food products on the rise.

<sup>84</sup> Statista. (2020) Production of plastics worldwide from 1950 to 2019 (in million metric tons).

climate change, among global consumers; while it ranked first among Asian consumers.<sup>85</sup> It also showed that the COVID-19 pandemic had positive impact to the public's plastic pollution and waste reduction behaviour. 27% of the respondents tried to adopt a zero-waste behaviour more than before, while only 7% were doing less. Similar changes were also observed in recycling, composting, and purchasing behaviour on plastic products.

Regarding plastic waste problem, pollution lead by plastics in the ocean or microplastics is one of the greatest concerns. Microplastics can be microbeads, manufactured plastic particles in cleansers and toothpastes, or part of a degraded larger plastic fragment.<sup>86</sup> These can easily pass through the soil ecosystems,<sup>87</sup> water filtration systems and enter the ocean, posing a potential threat to terrestrial and aquatic life, which could then end up consumed by human.<sup>88</sup>

## Trends driving progress towards SC

In 2019, the Consumers International (CI) shared five notable trends that are actively driving progress towards SC:

- **Consumer demand for more sustainability information:** Clear and intuitive information on sustainability is a vital tool for consumers. To enable consumers to make decisions which support a more sustainable lifestyle for all, they need access to education and clear, reliable information about product sustainability claims.
- **Sustainable mobility and ridesharing:** Advance in mobility technology provides opportunity to reduce global carbon footprint, for instance a gradual shift to electric vehicles and innovation in the mobility sector.
- **Circular design and sustainable fashion:** Gen Z (generally referred to the generation that was born between 1996 – 2010) is playing in demanding more transparency on the sustainability claims of brands and manufacturers. In the fashion industry, some brands are providing clear and comparable information on the production approach and costs for each product, so consumers can make the call on which products are suitably sustainable.
- **The drive for sustainable packaging:** Global research shows that consumers value packaging that is either recyclable or reusable.<sup>89</sup>

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<sup>85</sup> WWF, the Ellen MacArthur Foundation and BCG. (2020) The business case for a UN treaty on plastic pollution.

<sup>86</sup> Microplastics are plastics that are less than 5 mm in length. National Oceanic and Atmospheric Administration. (2020) What are microplastics?

<sup>87</sup> Boots B. & Russell C. W. & Green D. S. (2019) Effects of Microplastics in Soil Ecosystems: Above and Below Ground.

<sup>88</sup> EcoWatch. (2021) Hundreds of Fish Species, Including Many That Humans Eat, Are Consuming Plastic.

<sup>89</sup> GlobalWebIndex (2019) Sustainable Packaging Unwrapped.

- **Building products to last – awareness of planned obsolescence:** E-waste is one of the world's fastest-growing domestic waste stream. Some 53.6 million Mt of electronic waste were generated worldwide in 2019, up 21% in the past five years.<sup>90</sup> It was also estimated in 2019 that only around 20% of the electronics disposed each year was collected for formal recycling.<sup>91</sup> Improper treatment prior to disposal as well as illegal dumping have posed damage to human and environmental health such as the release of toxic heavy metals to the soil, groundwater and the atmosphere, typically at informal recycling markets in developing countries.<sup>92</sup> A study in 2017 reported that the majority of the European Union (EU) respondents (64%) had repaired products in the past, while the main reasons of the remaining without repairing experience were due to the lack of information on product durability and reparability, as well as convenience.<sup>93</sup> Legislation has been enacted in some countries, such as Australia, France and Mainland China,<sup>94</sup> to deal with such global problem of e-waste, with some of the leading technology firms setting ambitious targets for using renewable materials. Some actions are being taken to strengthen and protect the rights of consumers as regards their right to repair broken products.<sup>95</sup>

<sup>90</sup> The Global E-waste Statistics Partnership. The Global E-waste Monitor 2020.

<sup>91</sup> UNEP. (2019) UN report: Time to seize opportunity, tackle challenge of e-waste.

<sup>92</sup> Rucevska I. & Nellemann C. & Isarin N. & Yang W. & Liu N. & Yu K. & Sandnæs S. & Olley K. & McCann H. & Devia L. & Bisschop L. & Soesilo D. & Schoolmeester T. & Henriksen R. & Nilsen, R. (2015) Waste Crime – Waste Risks: Gaps in Meeting the Global Waste Challenge. A UNEP Rapid Response Assessment.

<sup>93</sup> EC. (2018) Behavioural Study on Consumers' Engagement in the Circular Economy.

<sup>94</sup> Forti V. & Baldé C. P. & Kuehr R. & Bel. G. Global E-waste Monitor 2020.

<sup>95</sup> In an approved resolution on sustainable Single Market in October 2020, Members of European Parliament called on the European Commission to grant consumers a "right to repair" by making repairs more appealing, systematic, and cost-efficient. As at February 2021, such proposal was under legislative procedure. European Parliament. (2020) EU consumers should enjoy a "right to repair" and enhanced product safety.

## 2.7 Summary

- In recent years, waste problems (especially plastic waste), information about product sustainability, sustainable mobility, circular design, sustainable packaging and product durability are hot topics being discussed globally.
- Energy consumption and carbon emission of Hong Kong have been on downward trends.
- The per capita MSW disposal rate was on an upward trend. It had not only failed to meet the Government target of a reduction by 40% from 2011 to 2019; on the contrary, it had even increased by 15.4% during the period.
- Various initiatives to promote SC, e.g. waste reduction, waste recycling, energy saving, sustainable consumption of biological resources, conservation of natural resources, and enhancement of ESG reporting were launched by the Government, businesses and NGOs.
- Table 4 presents a summary of different countries leading to recent global trend reviewed.

**Table 4: A summary of recent surveys of different countries**

Country	Recent surveys
The Mainland China	SC topics related to personal wellbeing remained the top concern of consumers in 2020
The UK	Veganism, smart shopping, e-vehicles and staycations were high on the consumer agenda in 2020
The US	<ul style="list-style-type: none"> <li>• A research in 2017 showed millennials were twice as likely than baby boomers to say they were definitely or probably changing their habits to reduce their impact on the environment</li> <li>• The US consumers spent US\$128.5 billion (HK\$1,002.3 billion) on sustainable fast-moving consumer goods products in 2018</li> <li>• In a survey of 18- to 29-year-old conducted in 2019, 80% of the respondents considered the climate crisis “a major threat to life on Earth”</li> </ul>
International survey: Argentina, Brazil, France Germany, Italy, Poland, Spain, The US, The UK	In 2020, 65% of global consumers associated plastics with ocean pollution and 57% considered it harmful





# **Tracking on Consumers' Attitude and Behaviour Towards SC in Hong Kong**

- 3.1 Consumers' Attitude and Behaviour Towards SC in 2020**
- 3.2 Sustainable Consumption Index**
- 3.3 Highlight of Changes since the Baseline Survey**
- 3.4 Summary**

As compared with the baseline survey, **this Study shows that there is an improvement in consumer awareness, attitude, behaviour and readiness towards SC**, as reflected by the Sustainable Consumption Indexes (SCI), though the changes are moderate. **The score of “Consumers’ Awareness and Attitude” has increased from 74 in the baseline survey to 77 in the current survey.** For instance, consumers have concerned more on excessive packaging of products and improved in acknowledging the benefits of energy conservation and waste separation. **Likewise, “Consumers’ Behaviour and Readiness” has increased from 69 (Consumers’ Behaviour) and 65 (Consumers’ Readiness) in the baseline survey to 71 in the current survey.** For instance, consumers were more likely to avoid buying single-use items or repair items to prolong usage. Also, they were more likely to buy energy-efficient or water saving products. They were more willing to pay more for products or services with environmental values. Although most sub-indexes have improved, the score of the sub-index “Recycling Behaviour” remains unchanged. In summary, **a lower score of “Consumers’ Behaviour and Readiness” as compared with “Consumers’ Awareness and Attitude” reflects that there is still a gap between consumers’ awareness and their behaviour in reality, in particular their participation in recycling.** Measures are needed to narrow the gap between consumers’ awareness and their behaviour in reality, in particular their action in recycling.

In summary, the findings from the Council’s consumer research suggest the following patterns of consumer awareness, attitude and behaviour on SC:

- **Perceived average impact of consumption behaviour on the environment and understanding towards SC concept** – 28% of the respondents claimed their consumption behaviour had a very big or quite big impact on the environment (decreased from 39% of the baseline survey); 18% of the respondents stated they fully or quite understood the concept of SC (decreased from 23% of the baseline survey). The findings were poorer than that of the baseline survey, but such a decline does not necessarily reflect a weakening of consumer’s awareness or knowledge in SC in general, as there was study suggested that consumers who made more progress towards SC tended to be less likely to believe that individuals could affect their society’s environmental impact.
- **Related SC to various aspects** – A majority of the respondents could relate SC to most of its aspects, with energy conservation, waste reduction, avoid pollution in production and waste recycling as the top four aspects.
- **Concerned about product information** – Similar to the baseline survey, the respondents were concerned about pollution caused by the products in the production process and during use. Besides, they were also concerned about product lifespan and the concern on excessive packaging was growing.

- **Considered beneficial on energy conservation and waste separation and recycling** – A vast majority of the respondents strongly agreed or agreed energy conservation and waste separation were beneficial, but the agreement dropped sharply when it came to whether it was easy to achieve, though more consumers considered it was easy as compared with the baseline survey. That said, **consumers’ action in recycling remained reluctant**. Of the six common recyclables, only around 30% of the respondents always or usually recycled metal, glass or small home appliances; whereas for clothes, paper and plastics, the rates were around 50%. More worrying is, **consumers who never or seldom recycled paper or plastics have increased as compared with five years ago**. Hurdles which had held them back, such as inconvenience factors (e.g. recycling outlets were not enough or far way) and lack of relevant knowledge, need attention.
- **Supportive purchasing and conservation behaviour** – The respondents were supportive of those purchasing behaviour which sustainable alternatives were easily available or could bring tangible benefits, for instance saving money (e.g. by buying energy or water saving products, repairing broken products) and aligning with healthy living style (e.g. avoid excessive order of food). They also supported avoiding single-use products, which was heavily called for in recent years. Using less air conditioners was, however, less supported.
- **Purchase of sustainable products but availability is limited** – Akin to the baseline survey, around half of the respondents usually purchased products or services that were produced in an environmentally friendly or sustainable way. However, more than one-third of the respondents perceived the availability of such products were limited in the market. “Not enough information” and “too expensive” remain the top two reasons for those who do not usually purchase sustainable products.
- **Increased willingness to pay a premium for sustainable products** – A vast majority of the respondents was willing to pay an extra 5% or more, an improvement over the baseline, for sustainable products.
- **Increased willingness to commit more** – Over two-thirds of the respondents were willing to commit more to support SC, which has improved over the past 5 years, with government commitment and more information provision being the biggest drivers.

## Characteristics of Iconic Consumer Segments

The diverse thoughts and behaviour towards SC between different profile groups should be taken into consideration when formulating suitable measures to optimise their effectiveness. For instance, although younger generation has a higher perceived understanding on SC and knowledge in waste separation, students were less frequent in doing waste recycling in actual practice. On the contrary, homemakers were less work-shy but required more information about waste separation. Other highlights of the characteristics of iconic consumer segments are as follows:

- Students (Aged 15 to 24): More willing to pay extra for sustainable products/services; less in buying local produce; reluctant in using less air conditioners; less in recycling plastics, metal and small home appliances.
- Professionals, Managers, Executives and Businessmen (PMEBs) (Aged 25 to 54): Showed the highest support towards SC; found energy conservation beneficial and that waste separation is easy to achieve; more willing to pay extra for sustainable products/services; bought more organic foods; bought products with environmental labels and which save energy or water; avoided buying single-use products.
- Homemakers (Aged 25 to 54): Borrowed seldomly used items; bought local produce; used washing machine only when there are enough clothes; recycled plastics, metal and glass; reluctant in paying extra for sustainable products/services.
- Grass-root non-working soon-to-be-olds (Aged 55 to 64): Showed the least support towards SC; less concern on pollution caused by the use of a product; fewer in finding waste separation easy to achieve; less in buying simple packaged products; reluctant in recycling plastics and paying extra for sustainable products/services.

This Chapter presents the findings of the consumer research which looked into consumers' awareness and attitude towards SC; consumers' purchasing, conservation and recycling behaviour related to SC; and consumers' willingness to support SC and their motives.

Findings as compared to the baseline survey are discussed with a view to track changes on the above aspects in the past 5 years.

## 3.1 Consumers' Attitude and Behaviour Towards SC in 2020

This Section focuses on the results of the survey conducted in 2020 and highlights significant subgroup differences based on the following profile segments (Table 5):

**Table 5: Profile groups applied in statistical analysis**

Age	15 – 24	25 – 34	35 – 44	45 – 54	55 – 64
Educational attainment	Lower secondary or below		Upper to post secondary		University or above
Occupation	Working	Non-working	Professionals, Managers, Executives and Businessmen (PMEB)		
	White collar	Blue collar	Students	Homemakers	Retired
Monthly personal income (HK\$)	No income	>\$0 – <\$15,000	\$15,000 – <\$25,000	\$25,000 – <\$40,000	\$40,000 or above
Perceived understanding of SC	Fully/quite understand	Average	Not quite understand/ not understand at all		

Comparison between the results of the baseline survey and the 2020 survey is illustrated in Section 3.3.

### Consumers' Awareness and Attitude

Same as the baseline survey, a set of questions were asked to assess consumers' awareness towards SC, including the perceived impact of the respondents' consumption behaviour on the environment and their perceived understanding towards the concept of SC, as well as their awareness on the relationship between SC and various aspects.

More than a quarter of the respondents claimed that their consumption behaviour had either very big impact (5%) or quite big impact (23%) on the environment. Most of the respondents rated average (49%) for their impact, while more than one-fifth of them stated that their consumption behaviour had a little impact (16%) or no impact at all (6%) to the environment.

Respondents from the PMEB segment (45% for very big impact or quite big impact, the same hereinafter) and those with higher monthly personal income (i.e. HK\$40,000 or above: 44%) or higher education attainment (i.e. university or above: 35%) tended to rate themselves as having a higher perceived impact on the environment. The perceived low impact was particularly seen among the retired segment (44% for a little or no impact at all, the same hereinafter), those with lower education attainment (i.e. lower secondary or below: 42%) and older respondents (aged 55 to 64) (33%).

When the respondents rated the impact of their consumption behaviour on the environment, some of them might have based on their own perceptions about the impact of a single individual's action brought to the environment, instead of basing on the impact of their current behaviour



brought to the environment. It was found in the focus group discussions that some participants opined that the power of an individual was minimal to bring impact to the world and that tackling climate change is the business of governments.

For instance, one 44-year-old working adult participant of the focus group believed that his consumption had a little or no impact on the environment as: “「我覺得一個人做的事情是沒有可能影響（環境）…一個人即使把事情做至無限大，都很難影響這個世界。如果不是很多人都做、或針對同一件事的話，一個人就影響不大。」 - I think there is no way an individual can affect (the environment), even if a person has put plenty of effort, it is hard to influence the world. One person will not bring much influence when there is no contribution from other people targeting the same goal.”

Another 29-year-old working adult participant opined that governments have a greater responsibility: “「因為氣候是很大的一件事，而且都是政府、一整個國家的事，不是個人的問題。」 - Climate is a big issue, involving government and national business. It is not a personal issue.”

Quite the opposite, some considered their consumption behaviour with big or quite big impact on the environment as they thought it would be significant if everyone was willing to take part in supporting environmental movement.

A 30 to 34-year-old working adult participant believed that: “「（我的影響力可以很大）如果每人都買少一點…供求之間是有關係的，買少一點，它們（商家）就會生產少一點，因為沒有人光顧。」 - (My influence on the environment can be large) If each of us buys less...there is a relationship between demand and supply, if you buy less, they (businesses) will produce less as there is a short of demand.”

With regard to the level of understanding, only close to one-fifth of the respondents reckoned themselves fully understood (2%) or quite understood (16%) the concept of SC. Most respondents were not familiar with the concept and represented that they did not quite understand (28%) or did not understand at all (15%) about it. The remaining of 39% rated their understanding to the concept average.

Respondents with a monthly personal income of HK\$40,000 or above (35% for fully or quite understand, the same hereinafter), the PMEB segment (31%), those with higher education attainment (i.e. university or above: 27%) and the younger generation (i.e. aged 15 to 24: 26%) tended to rate themselves a higher perceived understanding of the concept of SC. Such tendency is also observed in those had a higher perceived impact of their consumption on the environment. On the contrary, low understanding is observed among homemakers (59% for not quite understand or not understand at all, the same hereinafter) and those with lower education attainment (i.e. lower secondary or below: 58%).

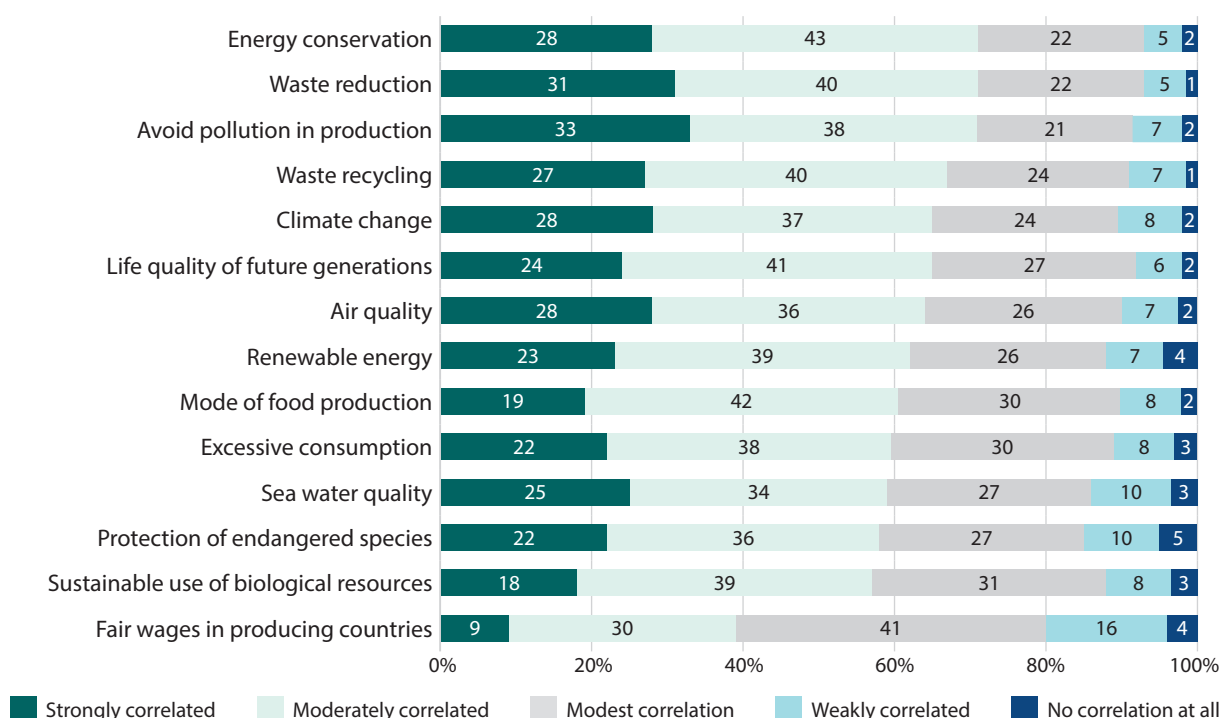
It is worth to note that the term “sustainable consumption”（可持續消費）may not be an everyday language to the general consumers. The young generation may have a higher exposure to the concept of SC at schools, but not in their daily lives. Such insufficiency in the awareness on the term may explain the low rate of perceived understanding on the concept of SC.

One 52-year-old non-working adult participant of the focus group commented: “「(平時睇電視, 上網) 好少見到呢個字眼, 除非刻意去搵」 - I have not heard of SC (in media), unless I deliberately search the keywords.”

A few full-time student participants commented that “「(呢個字眼) 係通識科(聽返嚟)」 - (I heard of this term) from Hong Kong Diploma of Secondary Education (HKDSE) Liberal Studies” and “「我係大學課堂聽過一次」 - I heard of this term once from a lecture at university.”

Surprisingly, despite most respondents perceived they had a low understanding on the concept of SC, a majority of the respondents managed to relate SC with its various aspects (Figure 8).

**Figure 8: How do you rate the relationship between SC and the following aspects?**



Consumers associated SC more to energy conservation (71%), waste reduction (71%) and avoiding pollution in production (71%), which are environmental issues closely related to their daily lives. Other environmental aspects, and aspects related to energy generation, food production and consumption like waste recycling (67%), climate change (65%), air quality (64%), renewable energy (62%), mode of food production (61%), excessive consumption (60%) and sea water quality (59%) were less associated with SC.

People generally tend to link SC to environmental protection rather than to social aspects, such as worker and animal welfare.

It is encouraging to see that close to two-thirds of the respondents related SC to the life quality of future generations (65% for strongly correlated or moderately correlated, the same hereinafter). Such aspect was newly added to the question in this survey. The key definition of SC refers to the improvement of the quality of life without increasing environmental degradation and without

compromising the resource needs of future generations. Such a relatively high correlation may imply local consumers' willingness to embrace SC.

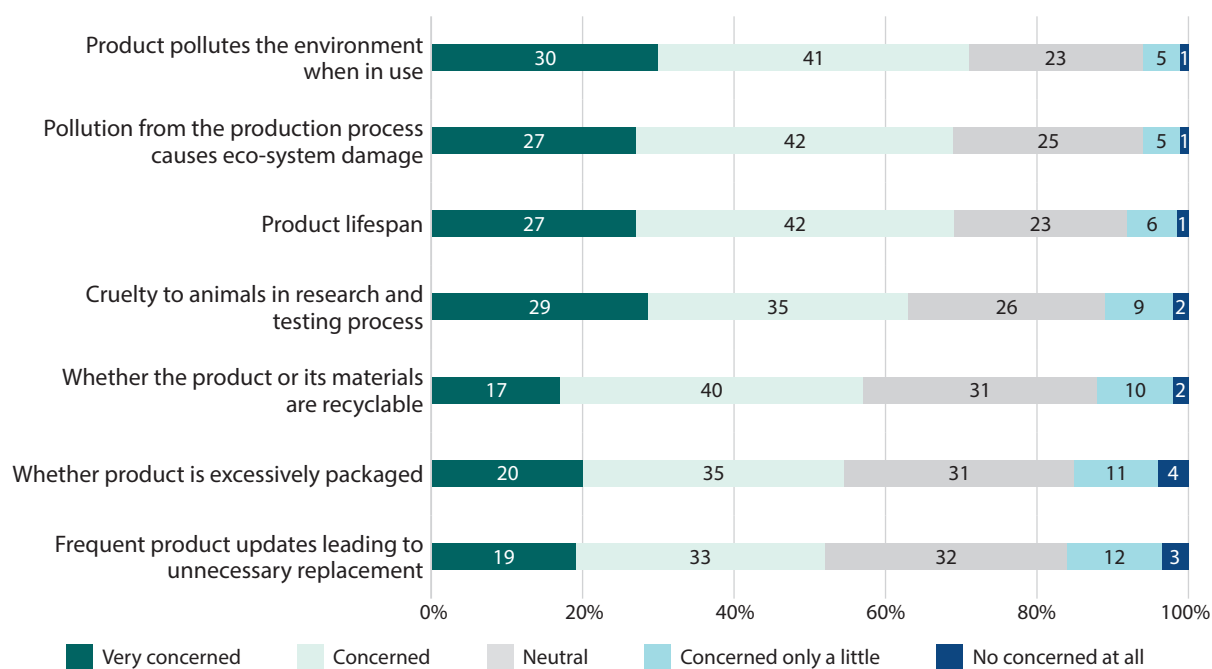
Themes in relation to species, including protection of endangered species (58%) and sustainable use of biological resources (57%), were even less associated with SC. The least respondents associated SC with fair wages in producing countries (39%), which might be an issue seemed to be more remote to the general consumers in Hong Kong.

In the focus group, two working adult participants aged 37 suggested: “「(可持續消費是指) 環保, 保護環境」 - SC is about environmental protection”, “「(可持續消費) 是關於環保...可以回收、重用, 不用再消耗其他東西」 - SC is about environmental protection... recyclable, reusable, and without extra consumption.”

It is noted that those respondents who perceived themselves with a higher understanding on SC were more likely to associate the attributes with SC.

Respondents were also asked whether they were concerned about product information on different SC themes (Figure 9).

**Figure 9: How much are you concerned about product information on the following?**



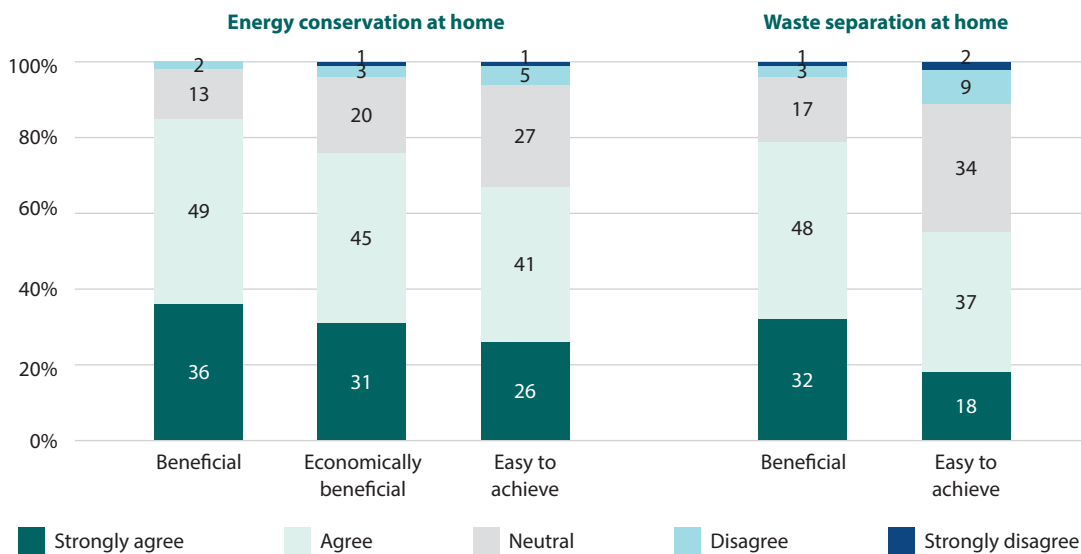
Typically, when it comes to concerns about product information, consumers cared relatively more about the damage caused to the eco-system by the production and usage of a product, including whether the product pollutes the environment when in use (71% for very concerned or concerned, the same hereinafter), whether the pollution from the production process causes eco-system damage (69%) and any cruelty to animals in research and testing process (64%). Less concern was placed on the potential post-consumption waste generated by a product, including whether the product or its materials are recyclable (57%), whether the product is excessively packaged (55%) and the frequent product updates leading to unnecessary replacement (52%).

Interestingly, although consumers were less concerned about whether a product is frequently updated leading to product replacement, they did concern about product lifespan (69%) across all profile segments.

When asked their awareness on “Environmental Labels” and “FiT Scheme”, there were far more respondents who had heard of Environmental Labels (89%) than that of FiT Scheme (20%). The PMEB segment was relatively more aware of both (Environmental Labels: 93%; FiT Scheme: 34%). Given the FiT Scheme<sup>96</sup> only applies to renewable energy generation, it is not a surprise for having less people to be aware of the scheme.

As regards their attitude towards energy conservation and waste separation at home, a vast majority of the respondents agreed that energy conservation (85% for strongly agree or agree, the same hereinafter) and waste separation (80%) at home were beneficial to the environment, while slightly fewer people reckoned energy conservation was economically beneficial (76%) to them. However, when it came to action, there was a big drop in agreement when asked whether energy conservation (67%) and waste separation (55%) were easy to achieve (Figure 10).

**Figure 10: To what extent do you agree energy conservation and waste separation at home is beneficial and easy to achieve?**



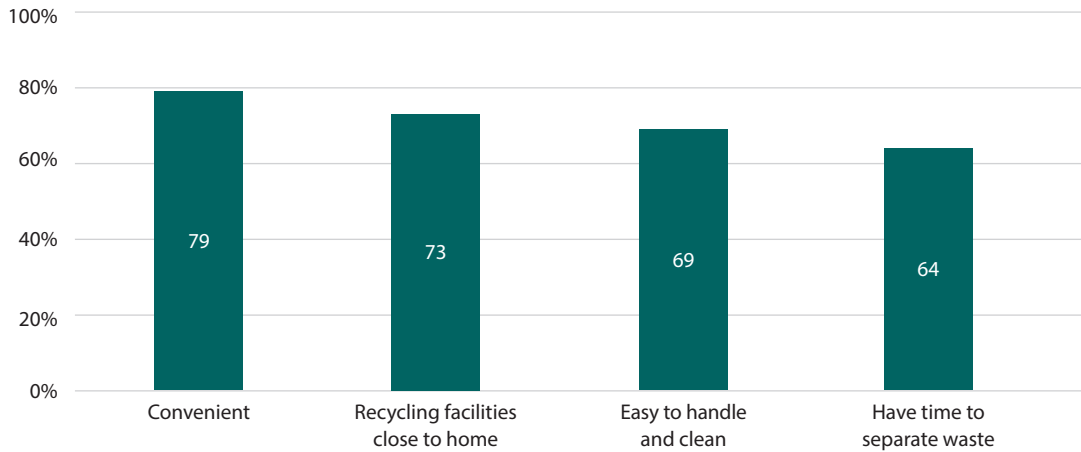
It is typical that consumers perceived energy conservation was easier to achieve than waste separation. The former may be achieved simply by switching off the appliances when not in use, but the latter may require more knowledge and effort, such as washing, sorting and disposing different types of recyclables.

The level of convenience will highly impact the public support to waste separation (Figures 11 and 12). For those who rated waste separation at home was easy to achieve, convenient (79%) was the top motivation, followed by recycling facilities are close to home (73%). Whereas, for those who rated the opposite, inconvenient was the key barrier, as the top reason chosen was recycling

<sup>96</sup> The CLP Power Hong Kong Limited and the Hongkong Electric Company Limited officially commenced the FiT Scheme since October 2018 and January 2019 respectively.

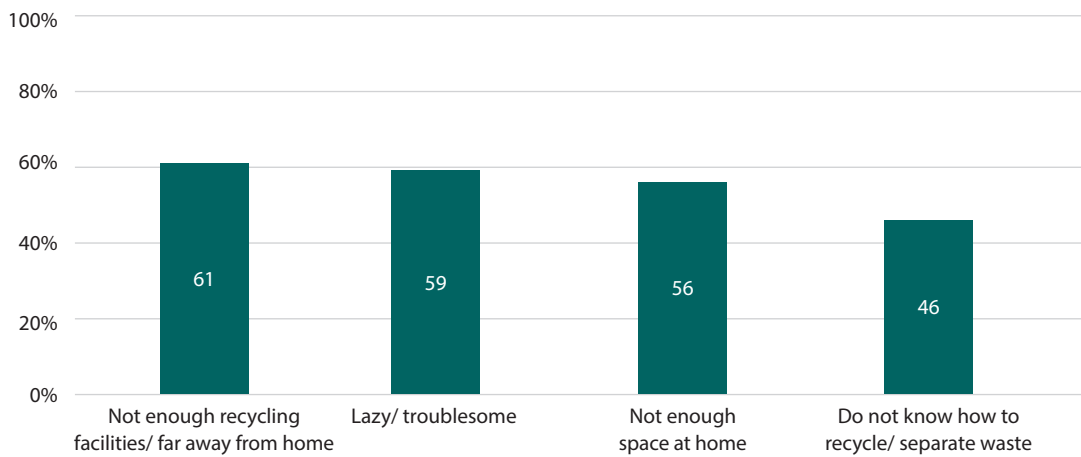
facilities are not enough/far away from home (61%), followed by lazy/troublesome (59%). It is worth noting that for the mature segment (aged 55 – 64) and those who were homemakers or retired, they were more likely than other segment groups to consider do not know how to recycle/separate waste was a barrier, which may imply that more education on waste separation is needed for them.

**Figure 11: Why do you think waste separation at home is easy to achieve?**



Remark: Multiple answers were allowed. 1% of the respondents selected "others".

**Figure 12: Why do you think waste separation at home is not easy to achieve?**



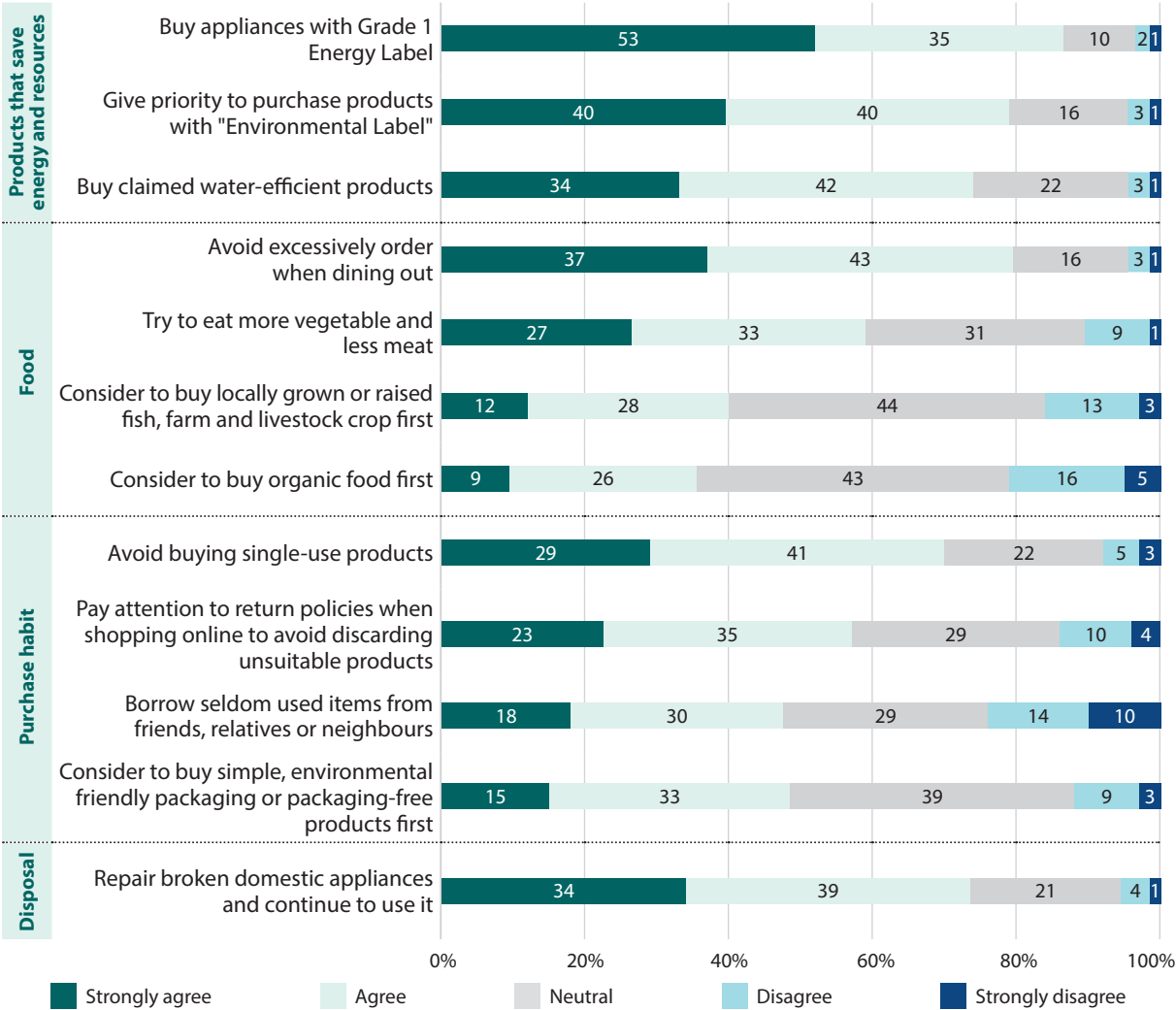
Remark: Multiple answers were allowed. 1% of the respondents selected "others".



# Consumers' Behaviour and Readiness

Respondents were asked what SC actions they personally took. Figure 13 shows results about whether they agreed or disagreed with various sustainable purchasing behaviours.

**Figure 13: To what extent do you agree with the following statements about your purchasing behaviour?**



Consumers strongly agreed or agreed to buying products that save energy or resources, especially in: buy appliances with Grade 1 Energy Label (88%), give priority to purchase products with "Environmental Label" (80%) and buy claimed water-efficient products (76%).

However, when buying food, although they strongly agreed or agreed to avoid excessively order (80%) and try to eat more vegetable and less meat (60%), the degree of agreement dropped sharply when it came to consider buying locally grown or raised fish, farm and livestock and crop first (40%) and consider buying organic food (35%). Such findings implied that even with a growing trend in healthy eating, the support to local and organic food stocks probably is limited by their availability and relatively high cost.

In a focus group discussion, some participants suggested that the lack of affordable options was the major barrier to purchasing organic products.

A working adult participant aged 44 opined that “「主要是看價錢…(有機食物)要是只貴兩、三元，我就會選擇有機食品，要是貴二十、三十元，我就未必會選擇有機食品了」- It mainly depends on price. If it (the organic food) is a few dollars more expensive, I will choose organic food. If I have to pay twenty to thirty more for organic food, I may not choose them.”

As for purchasing habit, more than two-thirds of the respondents strongly agreed or agreed to avoid buying single-use products (70%). Less agreement was observed in paying attention to return policies when shopping online (58%), borrowing seldom used items from others (48%) and considering buying simple, environmentally friendly packaging or packaging-free products first (48%).

To some consumers, avoid buying single-use products, such as disposable utensils and cutlery, are something they can control within their own capacity. However, when it comes to product packaging, consumers are usually passive recipients. When consumers make purchase decision, the consideration on a product's eco-friendly package is sometimes secondary to its brand, quality, design and taste. In a focus group discussion, some participants expressed they did not have much say over product packaging for many situations.

A non-working adult participant aged 34 stated that “「一個玩具拆出嚟…攝滿唔同嘅紙皮，綁好多條鐵線…一堆垃圾，仲大過件玩具。」- There is so many cardboard and wires that wrapped around the toy. The packaging is even bigger than the toy itself.”

Regarding the behaviour on disposal habit, a majority of the respondents strongly agreed or agreed to repair broken domestic appliances and continue to use it if possible (73%). Despite such a strong support, some consumers may think that repairing a product in the city is not cost-effective. Value for money is a crucial factor when consumers decide whether to repair a product or buy a new one. They may go for the latter if the repairing costs are unreasonable.

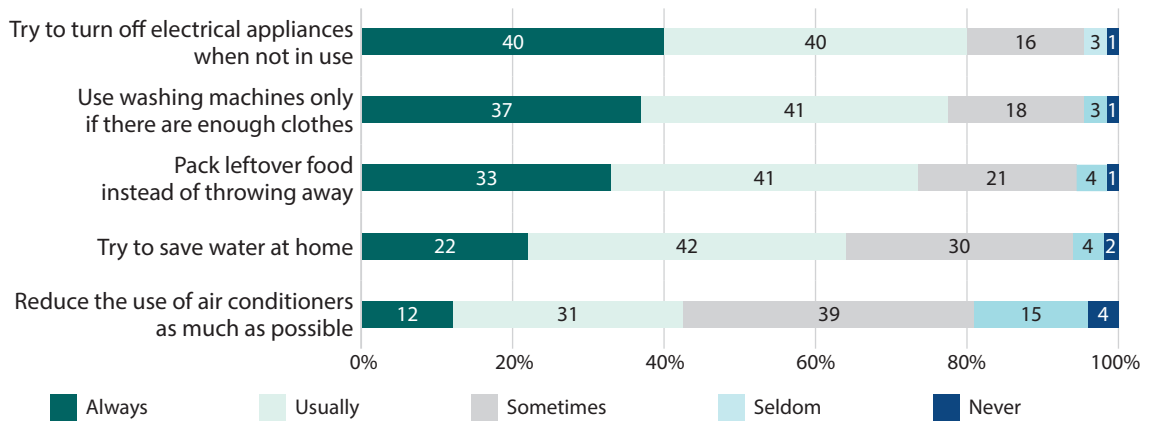
A working adult participant aged 37 opined that “「一部手提電話，你去維修都要一千至二千元，我多付幾百元就可以換一部新的電話，那為什麼還要修理呢？」- There is no way I would repair my phone when I can get a new one by paying a few hundred dollars on top of the repairing fee of HK\$1,000-2,000.”

Also, poor experience may diminish consumers' confidence and willingness in partaking in repairing services.

In another focus group, a non-working adult aged 62 expressed that “「洗衣機壞咗，整完千八蚊之後，佢一年唔夠又壞。」- The washing machine was broken, after spending HK\$1,800 for repairing, it failed again within 1 year.”

Figure 14 shows results about the frequency of the respondents carrying out different conservation and waste reduction behaviours.

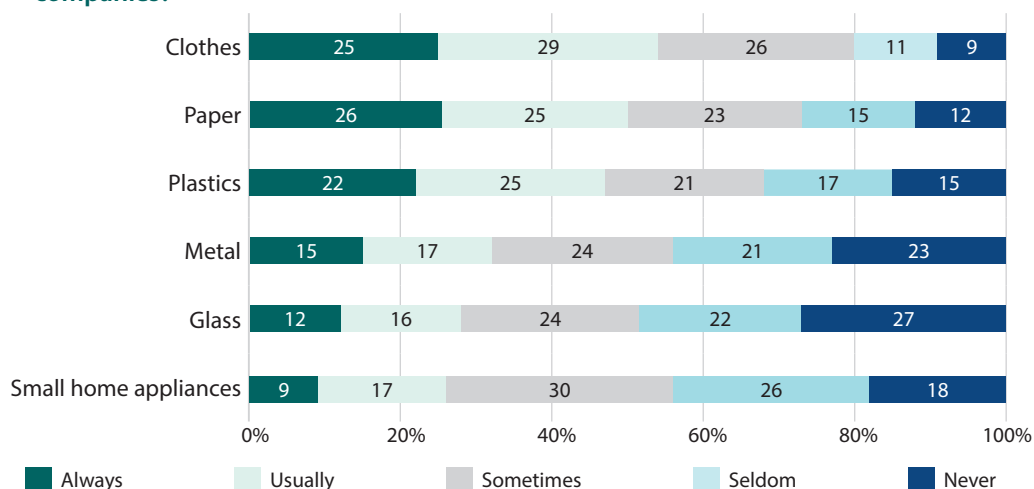
**Figure 14: How often do you conduct the following conservation and waste reduction behaviour?**



Except the reduction in the use of air conditioners, a large proportion of the respondents strived to have conservation and waste reduction behaviour, especially those that are easy to achieve and require less effort, including turning off electrical appliances when not in use (80%), using washing machines only if there are enough clothes (78%), packing leftover food instead of throwing away (74%) and trying to save water at home (64%). Aligning with previous questions, energy conservation is the behaviour which has gained the most support and practice. Yet, giving up comfort seemed to be difficult to consumers, as a significantly smaller portion of respondents stated they always or usually reduced the use of air conditioners as much as possible (43%), especially for the young adult segment aged 25 to 34 (34%), who may value quality of living and may be willing to pay more for the pleasure of air conditioners.

Respondents were then asked about their recycle habit regarding six common types of recyclables, namely clothes, paper, plastics, metal, glass and small home appliance (Figure 15). Only three types, clothes (54%), paper (51%) and plastics (47%), were always or usually recycled by around half of the respondents. As for metal, glass and small home appliance, there were only 32%, 28% and 26% of the respondents (around 3-in-10) expressed they had always or usually recycled them respectively. It is worth noting that over one-fifth and one-fourth of the respondents expressed they had never recycled metal (23%) and glass (27%) ever before. These findings are in line with the previous question regarding consumers' attitude towards waste separation, where merely half (55%) of the respondents strongly agreed or agreed waste separation at home was easy to achieve. As reflected by the low recycling rate in Hong Kong as previously discussed at Chapter 2, consumers are less prompted to recycling waste.

**Figure 15: How often do you put the following items into recycling bins or return them to recycling companies?**



Homemakers (64% for always or usually, the same hereinafter) and females (64%) recycled clothes more frequently than the fellow respondents, probably due to the fact that they are the one who takes charge of household cleaning and tidying up of wardrobes, while females are usually rather keen on fashion and thus may have more waste clothes. For the retired segment (39%) and older segment (aged 55 – 64) (33%), they were more likely to recycle small home appliances.

It is more worrying to find that students, who supposedly have gained more knowledge on SC and recycling from school, were less likely to recycle plastics (35%), metal (23%) and small home appliances (13%) than other respondents. It might be reasonable that students participated less in recycling small home appliances, as they might be usually less involved in family affairs. However, their low participation rate in recycling plastics and metal may deter the effectiveness of local waste recycling in the long run. Discussions in the full-time students focus group may shed light on the reasons behind. The mismanagement of the recycling bins might have discouraged the young generation or even the general population to do more in recycling.

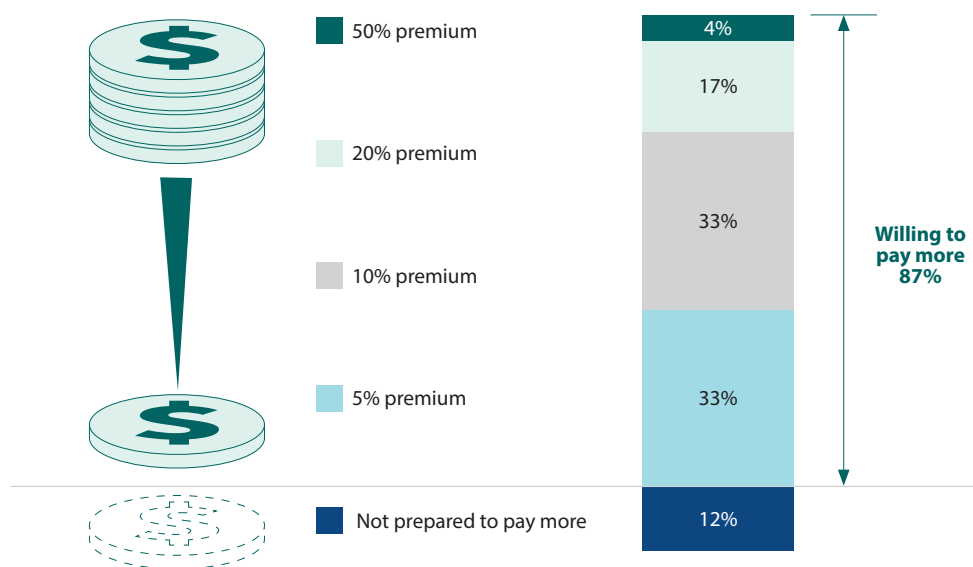
A full-time student expressed that “「我哋住（大學）宿舍嗰啲都有回收桶嘅，但係…都係歸返同一架垃圾車送走㗎喇。嗰度個接頭唔好（實際運作的員工做得不好），同埋冇人關心（相關機構唔重視）。」 - There are recycling bins at my university dorm, but the recyclables collected were loaded into the same rubbish truck with other rubbish. Those responsible staff are not performing well, and no one cares about that.”

Similar query on the destination of the recyclables collected had been raised in the baseline survey conducted five years ago. To regain public confidence in recycling waste, the long-demand on a more effective recycling system and transparency in reporting has to be met in the coming years.

Besides the low participation rate, the approach of consumers’ recycling behaviour was less than satisfactory. Less than two-thirds of the respondents strongly agreed or agreed to wash the item before recycling (62%), and even fewer of them separate out the non-recyclables when handling recycling items (40%). However, students and younger generation were relatively more likely to separate materials that are recyclable and non-recyclable when handling recycling items (age 15 to 24: 47%; students: 50%).

A working adult participant aged 30 to 34 from the focus group claimed that “「經常不清楚物品有哪部份是可以回收、哪部份不可以。例如一個膠樽，上面的招紙是否可以回收？因為有些國家是不可以的，要完全清潔乾淨，膠樽蓋也是要分開。」 - Always not sure which part of an object is recyclable. For example, it is unclear whether the film on a plastic bottle is recyclable. In some countries, that piece of film cannot be put into recycling bins and the plastic bottle has to be cleaned before recycling, with its cap removed.”

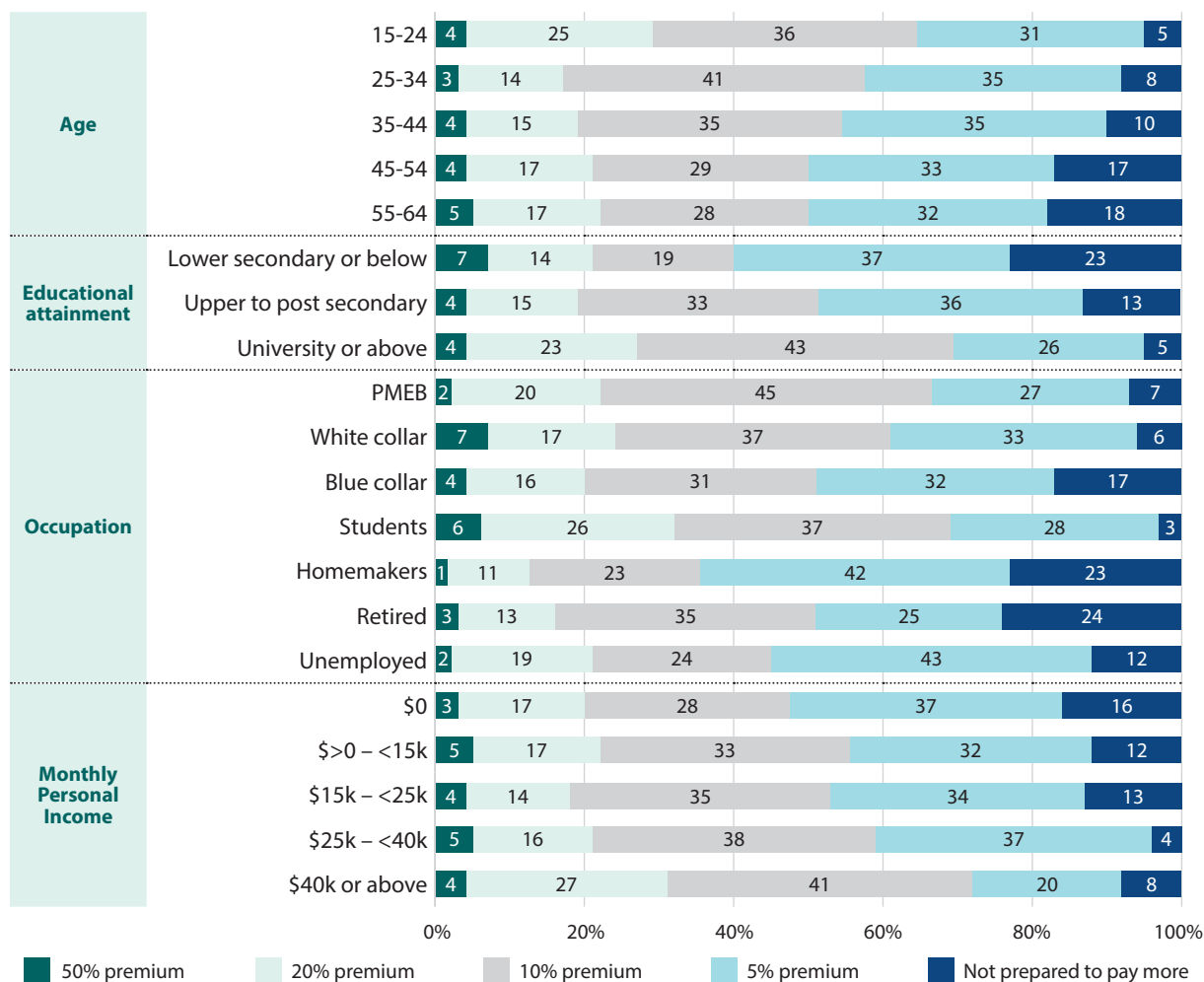
Figure 16: How much extra would you be prepared to pay for sustainable products?



Remark: Response percentages do not add up to 100% due to rounding.

A vast majority (87%) of the respondents were willing to pay a premium for sustainable products or services, with only 12% of the respondents were not willing at all (Figure 16). The younger generation and the higher income group are more willing to do so (Figure 17). Over 90% of the younger generation (aged 15 to 24: 95%; aged 25 to 34: 92%) and those with a higher monthly personal income (HK\$25,000 – <HK\$40,000) (96%), as well as the students (97%), the white collar (94%) and the PMEBs (93%), showed a positive answer. On the contrary, those were not prepared to pay any extra cost at all for sustainable products mostly came from the retired segment (24%), homemakers (23%), those with lower education attainment (lower secondary or below) (23%), those of older age (aged 45 – 54: 17%; aged 55 – 64: 18%) and the segment with lower monthly personal income (16%). Among those who were willing to pay a premium, most of them were willing to pay an extra 5% (33%) or 10% (33%).

**Figure 17: Willingness to pay extra by profile groups**

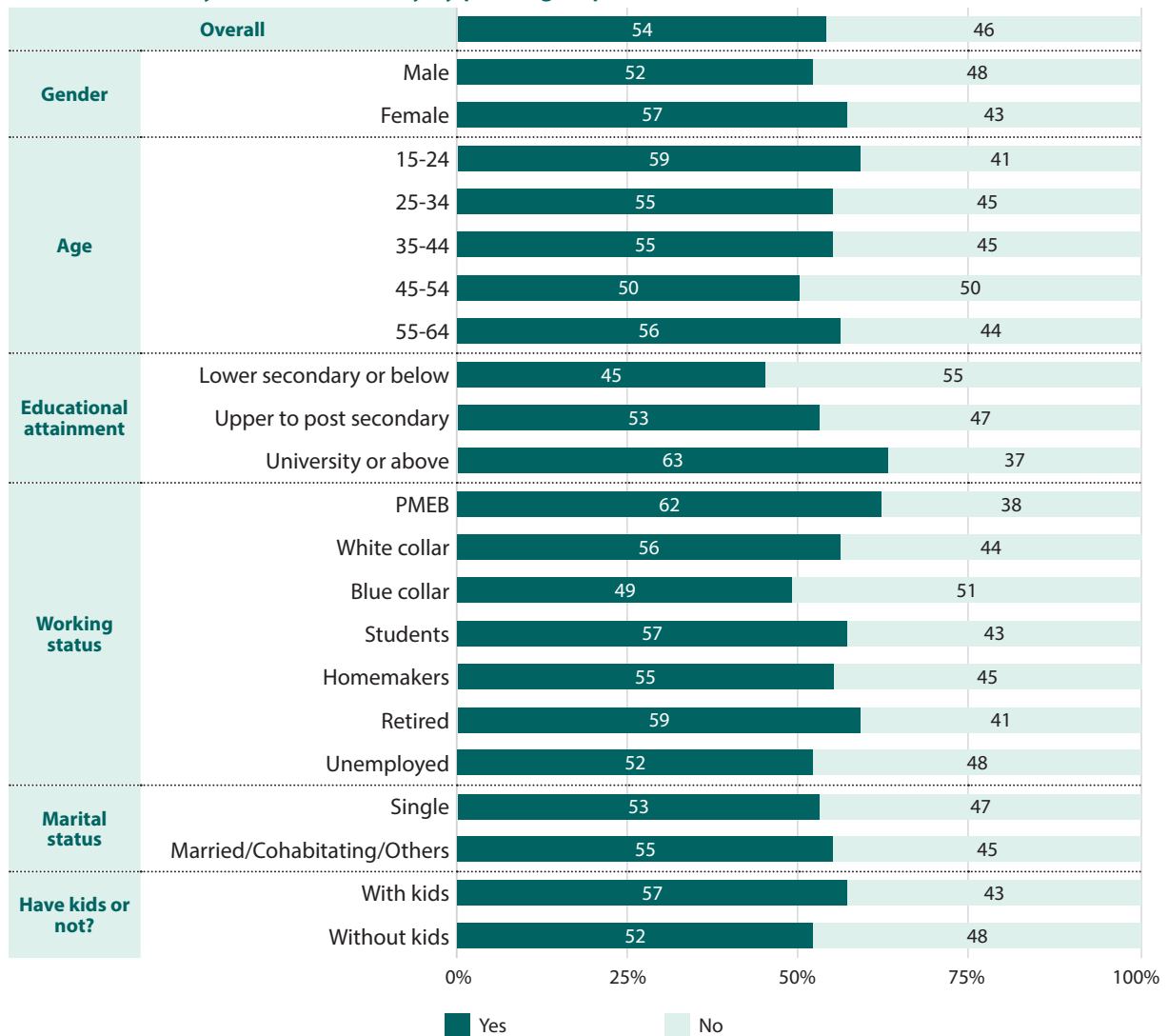


Nevertheless, more than one-third of the respondents perceived the availability of sustainable products to be limited in the market. 36% of the respondents thought such products were not enough or not enough at all. That was particularly true for those highly educated (45% for university or above).

Further, almost 6-in-10 of the respondents would give priority to those companies which were environmentally friendly when choosing products or services, especially for the PMEBS (74%), those with a higher monthly personal income (68%) and the segment with higher education attainment (66%). Similarly, more than half (54%) of the respondents expressed they usually purchased products or services that were produced in an environmentally friendly or sustainable way, especially the higher educated group (63% for university or above) and the PMEBS (62%). Figure 18 reports the proportions answering "Yes" and "No" by demographic variables.

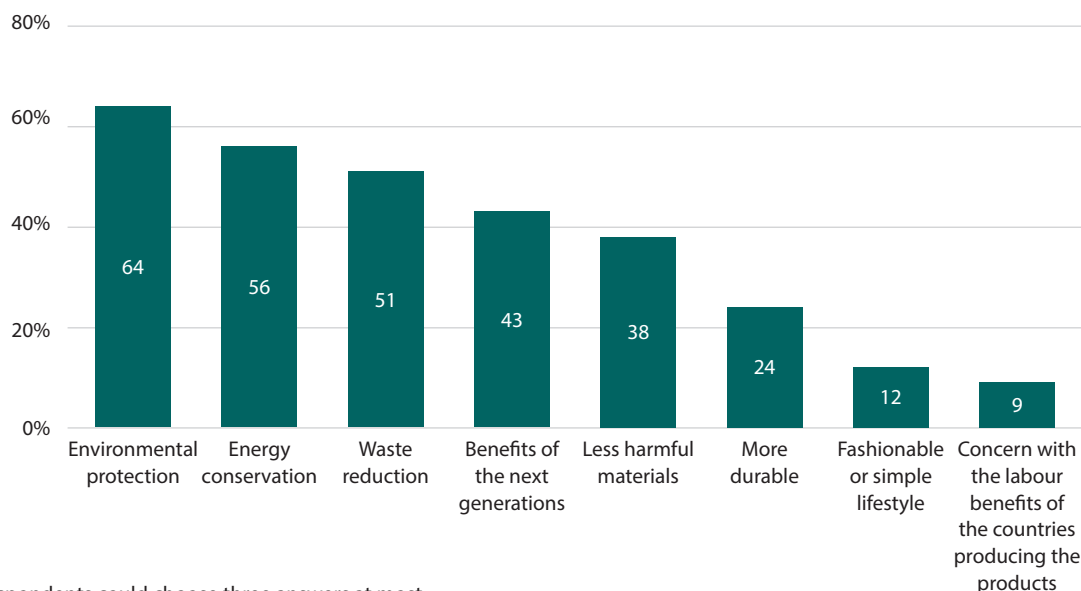


**Figure 18: Incidence of usually purchase products or services that are produced in an environmentally friendly or sustainable way by profile groups**



Respondents were then asked to select three options for the reasons why they did (“Yes”) or did not (“No”) usually purchase products or services that were produced in an environmentally friendly or sustainable way. The top three reasons for the "Yes" side were environmental protection (64%), energy conservation (56%) and waste reduction (51%)(Figure 19 and Table 6). Concern with the labour benefits of the countries producing the products (9%) was the bottom reason, which was only selected by less than one-tenth of the respondents.

**Figure 19: Reasons given by respondents who usually purchase products or services that are produced in an environmentally friendly or sustainable way**



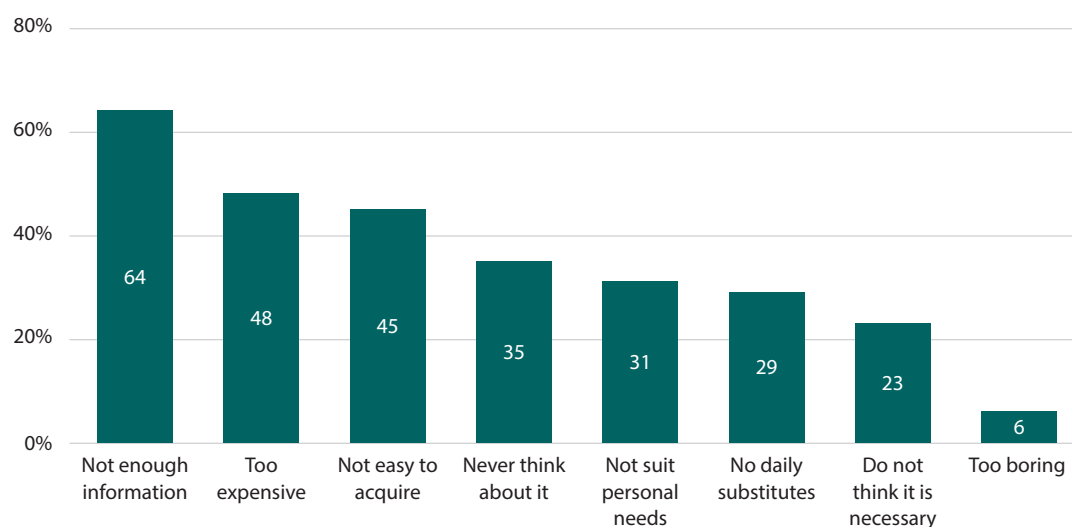
Remark: Respondents could choose three answers at most

**Table 6: Ranking of reasons given by respondents who usually purchase products or services that are produced in an environmentally friendly or sustainable way**

Occupation	Environmental protection	Energy conservation	Waste reduction	Benefits of the next generations	Less harmful materials
PMEB	Top 1	Top 2	Top 3		
Retired				Top 2	Top 3
Students					
White collar			Top 3		
Homemakers				Top 2	
Unemployed					
Blue collar		Top 2			

Of the respondents who answered "No", the top three reasons cited were not enough information (64%), too expensive (48%) and not easy to acquire (45%)(Figure 20 and Table 7). It is worrying that almost one-fourth of the respondents expressed they did not think it was necessary to purchase sustainable products or services (23%), that is particularly true for homemakers (33%), that echoes with their less willingness to pay extra for sustainable products or services. This suggests that there is substantial room for improvement in conveying the pressing needs of SC to consumers and mobilising them in pursuing a sustainable lifestyle.

**Figure 20: Reasons given by respondents who do not usually purchase products or services that are produced in an environmentally friendly or sustainable way**



Remark: Respondents could choose three answers at most

**Table 7: Ranking of reasons given by respondents who do not usually purchase products or services that are produced in an environmentally friendly or sustainable way**

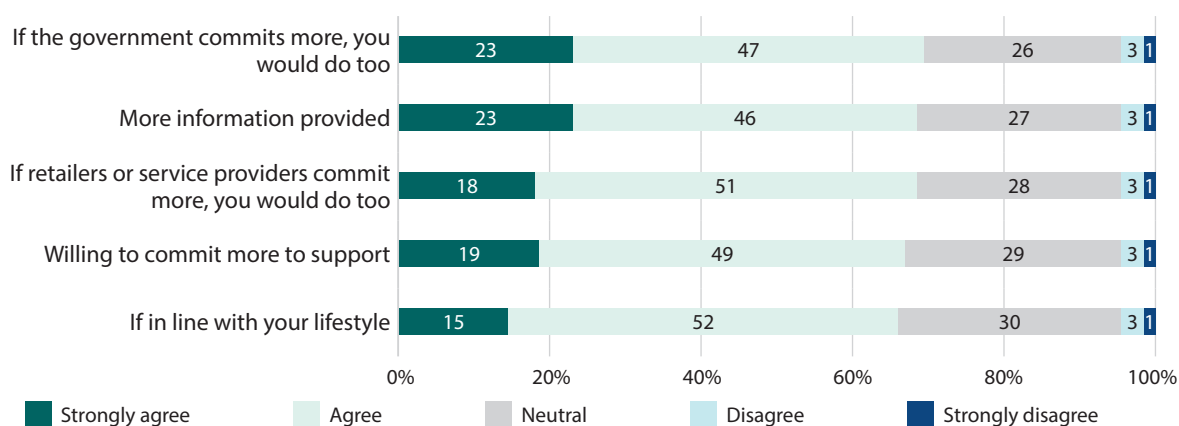
Occupation	Not enough information	Too expensive	Not easy to acquire	You never think about it	No daily substitute
PMEB	Top 1	Top 3	Top 2		
Retired	Top 2	Top 1		Top 3	
Students	Top 1	Top 3	Top 2		
White collar					
Homemakers		Top 2		Top 3	
Unemployed		Top 3	Top 2		Top 3
Blue collar		Top 2	Top 3		

Besides, the lack of availability of sustainable alternatives may also be a hurdle holding consumers back from embracing and practising sustainable lifestyle. For example, it is common for restaurants to pack takeaway meals in plastic containers and some of them do not accept reusable containers provided by consumers.

One non-working adult participant aged 62 in the focus group elaborated on this point: “「(買外賣) 其實我有帶嘢去 (自備食物盒), 但好多就話唔得, 因為衛生問題。」 - Many restaurants refused to put food into my container (for takeaways meals) because of hygiene concern.”

Having said that, based on the high willingness to support SC (68% for strongly agree or agree, the same hereinafter), there are factors to better motivate the public especially if government commits more (70%), there being more information (69%), retailers/service providers commit more (69%) and in line with lifestyle (67%) (Figure 21).

**Figure 21: Motives on supporting SC**



Insights on how the Government and the business sector may motivate consumers to do more in supporting SC were deliberated in the focus group discussions. Some participants expected more education on waste recycling, improvement in recyclables management and user-friendly recyclable collection infrastructure.

One full-time student participant in the focus group opined that: “「其實我係希望政府或者商界會有更多嘅支持，因為而家好多屋苑…其實只係得好少回收嘅嘢啦(回收種類少)，同埋就係佢冇一個好明確嘅方式話『呢個樽係咪唔收得』…其實可能真係大部份人都唔知…當你政府都講得唔明確嘅時候人個心態就『反正佢都冇講，不如唔好做啦』」 - I hope that the Government or the business sector could provide more support. The types of recyclables collected in many residential estates are very limited, and there is not a clear and easy to understand guideline to the general public on which specific type of materials could go into the recycling bins. When the guidelines are not clear, people would be more reluctant to commit.”

Another full-time student participant suggested: “「我未必會做再多啲…好老實講政府而家嗰個後續工作根本就完全唔夠…我當你做晒所有嘢啦…佢一樣扔去堆填區，咁有咩用呢？咁其實係冇意思嘅」 - I may not do more, frankly the Government is not doing enough follow-up work for the recyclables, even consumers have done all their responsibility to put recyclables into recycle bins, they are all dumped in landfills eventually, it is meaningless.”

A working adult participant aged 54 expected: “「方便一點的地方，可以接收回收的東西。」 - More convenient places for the collection of recyclables.”

Some participants were looking for incentives. A working adult participant aged 37 opined: “「企業推行環保和可持續消費的時候，政府會提供一點誘因、稅收優惠。」 - When the businesses promote environmental protection and SC, the Government will provide incentives or tax deduction.”

A non-working adult participant aged 62 in another focus group suggested: “「你買咖啡嗰陣時，你擺返啲啲咖啡膠囊俾佢，佢就獎勵你。」 - When you buy coffee, the shop will award you when you return the capsules.”

Another working adult participant aged 63 had similar experience: “「回收衣物，有折...我也有再光顧它。」 - I got a discount when I returned old clothes, and I shopped there again.”

Some shared the importance of the initiatives of businesses.

A full-time student participant expanded on this point: “「譬如好多餐廳其實都唔俾飲管，咁佢唔俾你，你冇得用，你咪照冇得用囉，即係逼住你冇得用。」 - For example, many restaurants do not provide straw, then consumers would have no choice but giving up using straw.”

On the other hand, some consumers expected more information on the sustainability attributes of the products and services to be provided by the business sector.

One 37-year-old working adult participant commented at the focus group that: “「(想知道)假如我用了他們(生產商)的產品，我可以為可持續消費做點什麼？但如果他們的產品根本不能幫助可持續消費的話，那就不行了。」 - (I would like to know) what I could have done for supporting SC if I used their (the producers) product. It is not ok if the product is not sustainable.”

## Impact of COVID-19

Consumers are quite polarised to the influences of the COVID-19 on SC. Some of the respondents were of the view that people would be more conscious after the pandemic as they realised the fact that people were creating too much wastage during COVID-19, and that they were more alert about unnecessary energy usage when staying home more. On the contrary, some respondents were of the view that the demand for better health protection somehow overshadowed one's willingness to support SC, such as the use of many single-use products ranging from surgical mask, cleaning and sanitising products to disposable cutleries. Excessive buying was also witnessed among some respondents in meeting the minimum spending amount for e-commerce, as well as the extra packaging waste, when they shopped online more frequently during the pandemic.

## 3.2 Sustainable Consumption Index

With a view to facilitate the assess of changes of attitude and behaviour of SC among Hong Kong consumers, a set of SCIs has been constructed since the baseline survey to combine responses to the survey into a set of figures that can be tracked over time.

As mentioned in Chapter 1, to keep up with the latest development in consumer market and emerging sustainable issues, an updated questionnaire, which have modifications made against the baseline questionnaire, was adopted in this Study. Likewise, the component of the SCIs has also been modified. Different from the last set of SCIs, instead of having a set of three indexes from nine constituent parts adopted from the framework of the questionnaire, the new SCIs in this Study consolidated the nine constituent parts into eight constituent parts in two indexes, which were “Consumers' Awareness and Attitude” and “Consumers' Behaviour and Readiness”. Each of these eight components was created from taking the average score across the population for each question and rescaling these scores from a 1 to 5 range to a 1 to 100 range, averaging for different questions that feed into one of the eight constituent parts. Since new questions are added to the modified questionnaire and outdated questions are removed, so as the new SCIs.

For the first index of “Consumers' Awareness and Attitude”, the high scores recorded for sub-index “Energy Conservation” (80) and “Waste Separation” (77) could mean that the average respondent acknowledges the importance and benefits of energy conservation and waste separation. However, as discussed in previous Section, the drop in the level of agreement when it came to whether energy conservation and waste separation were easy to achieve reflects the need to provide easier access and greater facilitation for consumers. The score of the sub-index “Product Information” (75) could reflect the average consumer concerns about the sustainability of the products he/she consumes, such as the harm caused on the environment and animals (e.g. cruelty to animals in research and testing process) in the course of producing and using the product. A slightly lower score of this part as compared with the parts on energy conversation and waste separation could reflect that the average consumer concerns more about energy conservation and waste separation then product information. Such difference may be due to the fact that energy and waste are more attached to everyday life.

Yet, the scores for the constituent parts of the second index of “Consumers' Behaviour and Readiness” (60 – 77) are generally lower than the first index (75 – 80). The second index was constructed from thirty-three SC behavioural questions based on respondents' purchasing, conservation and recycling behaviour, as well as their motivation and support towards practising SC. The score of sub-index “Purchasing Behaviour” (76) could be viewed as the consumers' practice when they go shopping, based on their understanding of the concept of SC. Respondents' habit in energy and resources conservation and recycling practices were used to calculate the scores for sub-indexes “Conservation Behaviour” (77) and “Recycling Behaviour” (63). The scores of sub-indexes “Willingness to Pay and Motivation” (60) and “Support” (77) could be considered as a measure of the likelihood and the extent to which consumers are prepared to support SC when relevant options and motivation are available.

The relatively low score for recycling could reflect the current low participation rate of consumers in recycling, with reasons as aforementioned in this Chapter. The lowest score for motivation could imply the low margin of premium consumers willing to pay for sustainable products or services and lack of available products. To boost this score in future, businesses are encouraged to provide more sustainable options of affordable prices in the market. Overall, the slight decrease of the

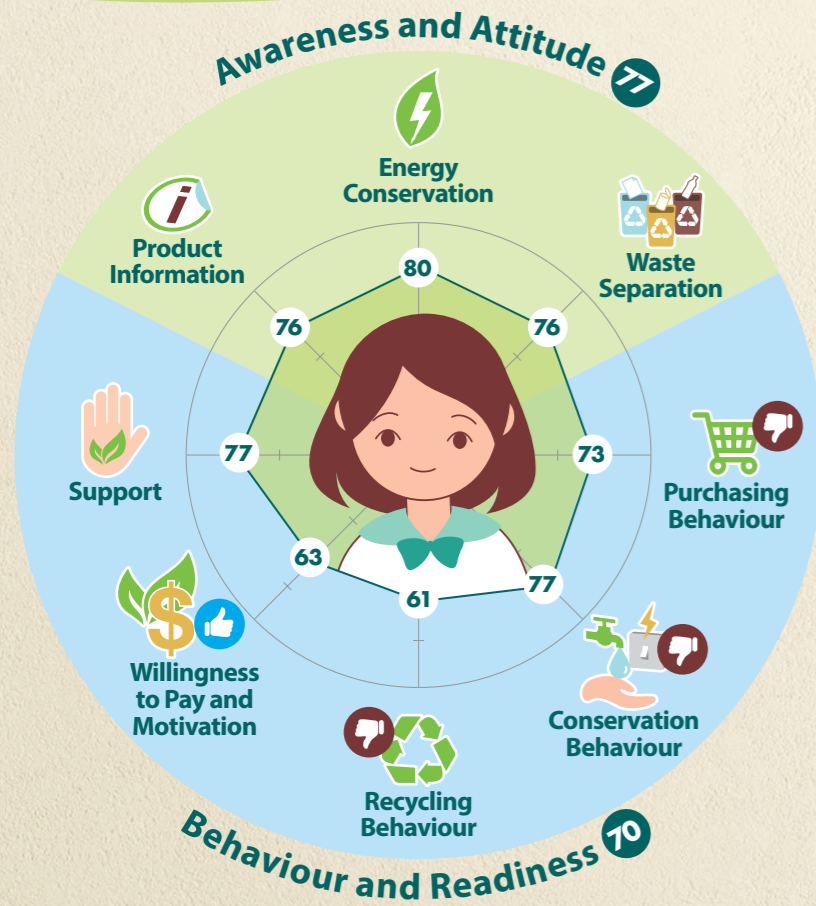


score from “Consumers’ Awareness and Attitude” to “Consumers’ Behaviour and Readiness” implied a gap exists between consumers’ consciousness and action. In other words, consumers’ actual purchase and conservation behaviour, especially in the context where real and actual effort is required, differs from their attitude and belief.

As for different profile groups, the SCI scores are pretty much similar across different age segments. When compared across different education attainment subgroups, the SCI score improves gradually with the education achievement, the higher the education level, the higher the SCI scores. While across different occupation, the SCI scores are the highest among PMEBS, in particular the “Waste Separation” and “Support”. Yet, homemakers and retirees have higher scores in sub-index “Conservation Behaviour”. As regards income subgroups, those with higher monthly personal income (HK\$40,000 or above) record the highest SCI scores across the personal income segments.



# Characteristics of iconic consumer segments



## SC Idea Followers Students (Aged 15-24)

- Willing to pay extra for sustainable products
- Reluctant in using less air conditioners
- Less in recycling plastics, metal and small home appliances
- Less in buying local produce



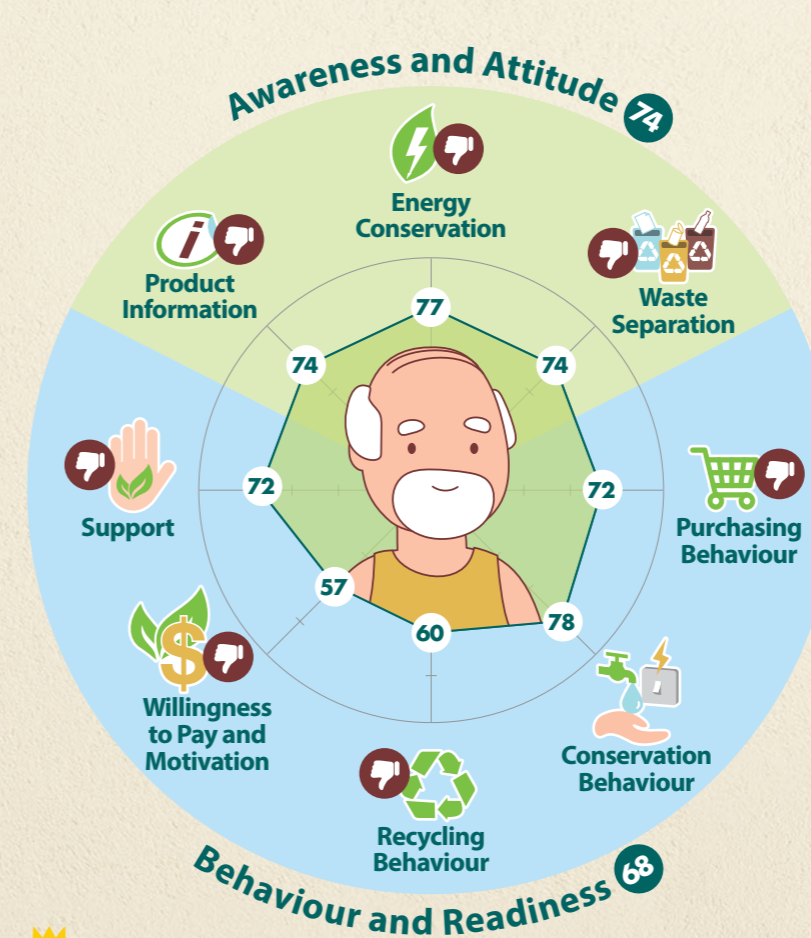
## SC Action Takers Homemakers (Aged 25-54)

- Borrow seldomly used items
- Buy local produce
- Use washing machine only when there are enough clothes
- Recycle plastics, metal and glass
- Reluctant in paying extra for sustainable products



## SC Aspiring Supporters Professionals, Managers, Executives and Businessmen (PMEBs) (Aged 25-54)

- Show the highest support towards SC
- Concern about pollution caused by the use of a product
- Find energy conservation beneficial
- Find waste separation easy to achieve
- Willing to pay extra for sustainable products
- Buy more organic foods
- Buy appliance with Grade 1 Energy Label, "Environmental Label" and water-efficient products
- Avoid buying single-use products



## SC Slow Adopters Grass-root non-working soon-to-be-olds (Aged 55-64)

- Show the least support towards SC
- Less concern on pollution caused by the use of a product
- Less concern on cruelty to animals in research and testing process
- Fewer in finding energy conservation beneficial
- Fewer in finding waste separation easy to achieve
- Less in buying simple packaged or packaging-free products
- Less in borrowing seldomly used products
- Reluctant in recycling plastics
- Reluctant in paying extra for sustainable products



### 3.3 Highlight of Changes since the Baseline Survey

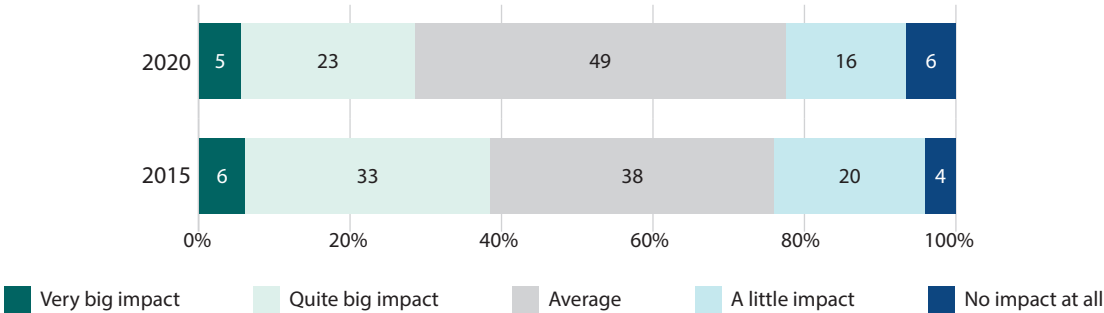
In this Section, discussions are focused on significant changes between the baseline survey and 2020 survey.

#### Consumers' Awareness and Attitude

Since the last report, SCI of "Consumers' Awareness and Attitude" has increased from 74 to 77 in the 2020 survey, which indicates that their awareness in terms of product information, benefit of energy conservation and waste separation has increased in general over the past five years.

However, fewer consumers perceived their consumption behaviour had very/quite big impact (from 39% in baseline to 28% in 2020) on the environment (Figure 22). Similarly, fewer consumers considered themselves fully/quite understood the concept of SC (from 23% in baseline to 18% in 2020) (Figure 23). As discussed in previous Section, the respondents might have different interpretations and associations with the concept. A survey conducted by a global market research firm in 2014 observed that those consumers who made more progress towards SC tended to be less likely to believe that individuals could affect their society's environmental impact.<sup>97</sup> It may explain that lower perceived impact on the environment by consumption behaviour and a lower self-scored understanding on SC might not necessarily reflect an actual decrease in consumer's SC awareness or knowledge in general.

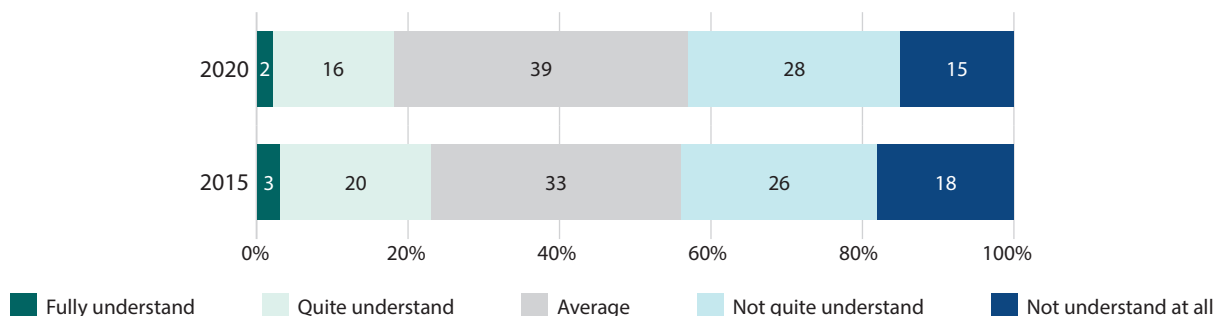
Figure 22: Impact of your consumption behaviour on the environment



In fact, a majority of the respondents could relate SC to most of its aspects, though the rating of the relationship between SC and sustainable use of biological resources (from 63% in baseline to 57% in 2020) and fair wages in producing countries (from 51% in baseline to 39% in 2020) are lower than the baseline survey.

<sup>97</sup> GlobeScan. Greendex 2014.

**Figure 23: Perceived understanding of SC**



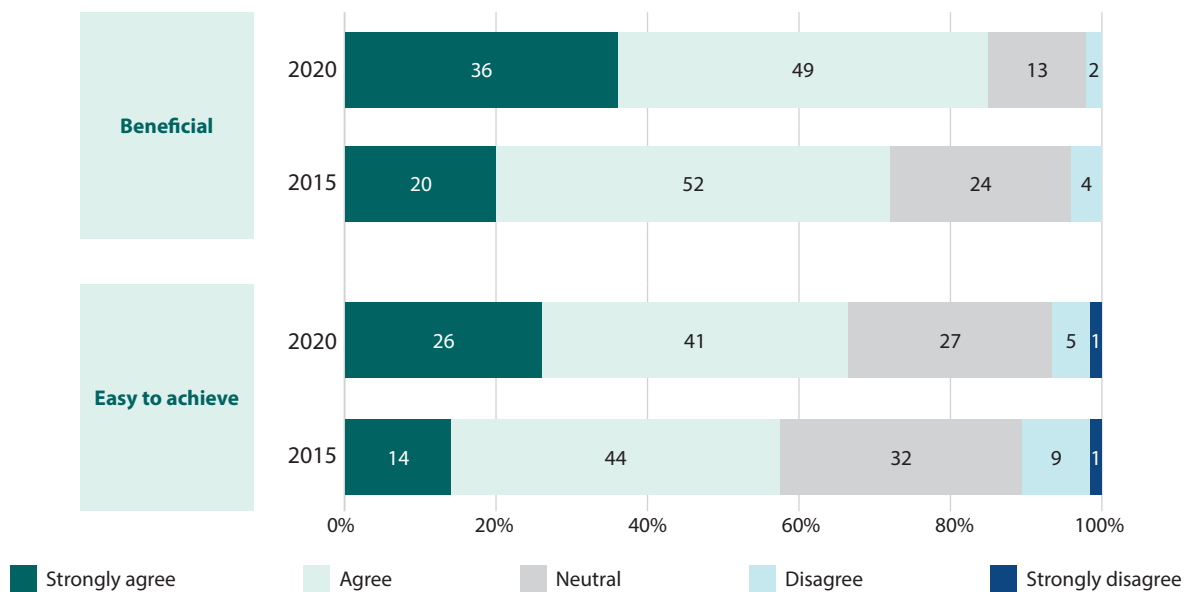
As for the ranking, energy conservation, waste reduction, avoid pollution in production and waste recycling remain the top four aspects rated by consumers as correlated to SC, though the sequence of individual aspect has changed.

As for consumers' concern on product information, product pollutes the environment when in use remains the greatest concern for consumers. Concern on cruelty to animals and excessive packaging is also growing and is affecting the buying decision of consumers. Percentage of consumers who were very concerned/concerned about cruelty to animals in research and testing process has increased from 59% in baseline to 64% in 2020, especially among the younger generation and middle-aged (i.e. from 15 to 44-years-old). Consumers who were very concerned/concerned whether product is excessively packaged has also increased from 44% to 55%. As online shopping is becoming more common in recent years in Hong Kong, more local NGOs have called for attention on the over-packaging issue aroused by it. In March 2021, a local green group launched a Green Online Shopping programme to promote reduction of packaging waste of online shopping at the business and consumer levels. Campaigns or news on excessive packaging issue may be part of the reasons behind such growing concern on the topic.

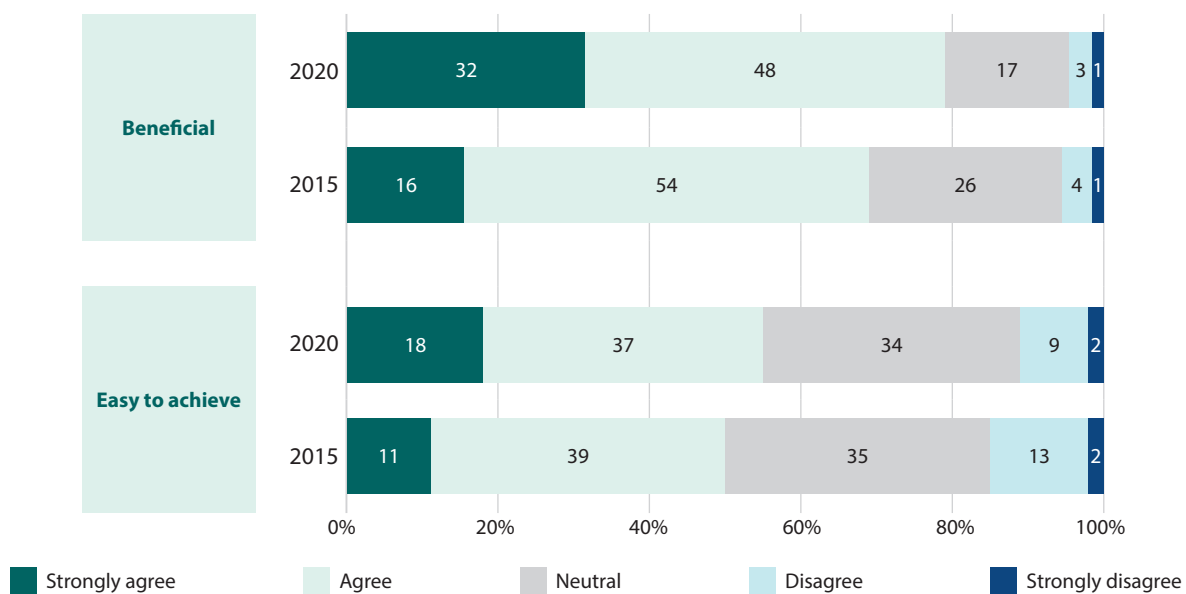
Encouragingly, attitude towards both energy conservation and waste separation has improved as shown in Figures 24 and 25. More consumers now consider these two behaviours are beneficial and easy to achieve. For instance, the percentage of respondents who strongly agreed or agreed energy conservation at home is beneficial has increased from 72% in baseline to 85% in 2020; and easy to achieve has increased from 58% to 67%; while the percentage of respondents who strongly agreed or agreed waste separation at home is beneficial has increased from 70% in baseline to 80% in 2020, and easy to achieve has increased from 50% to 55%. Among all segments, youngsters (aged 15 - 24) have showed a notable increase in their agreement (strongly agree/agree) to the relevant statements.

Overall, consumer awareness in SC has increased over the past 5 years.

**Figure 24: Attitude towards energy conservation**



**Figure 25: Attitude towards waste separation**



In the interview, an expert explained the awakening on environmental issues as a result of natural disasters happened in Hong Kong in recent years: “「以往說到氣候變化，大家都覺得這個議題離他們很遠，只會在新聞上讀到外國發生水浸及大風雪等天災。但自從2018年的颱風山竹後，這些影響就呈現在他們眼前，我猜測市民開始感覺到這些環境議題正在他們周邊發生，可能因此令他們覺醒到氣候變化與自身有關。」 – In the past, people think that climate change is a topic not that relevant to them. They read news about natural disasters elsewhere in the world. It has never happened in Hong Kong. But the Super Typhoon Mangkhut in 2018 showed how devastating the impact of climate change was and how they can be affected by environmental issues. This 'awakened' the general public about environmental issues.”

## Consumers' Behaviour and Readiness

In the 2020 survey, the SCI of Consumers' Behaviour and Readiness is 71, while SCI for Consumers' Behaviour and Consumers' Readiness were 69 and 65 respectively in the baseline survey. It indicates that consumers in Hong Kong have improved in both aspects.

Results show that purchasing products that can save energy/resources has become more common in recent years. The percentage of respondents who would buy appliances with Grade 1 Energy Label has increased from 78% (strongly agree or agree, the same hereinafter) in baseline to 88% in 2020, while that of the respondents who would buy claimed water-efficient products has increased from 69% to 76% (Figures 26 and 27).

Figure 26: Buy appliances with Grade 1 Energy Label

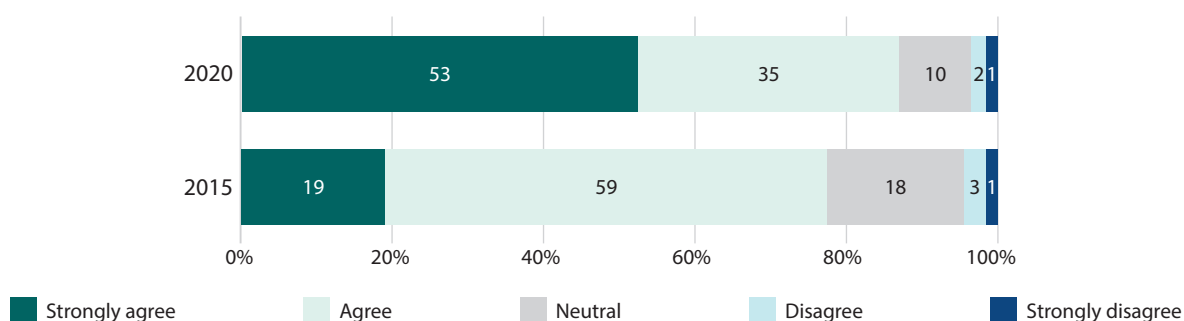
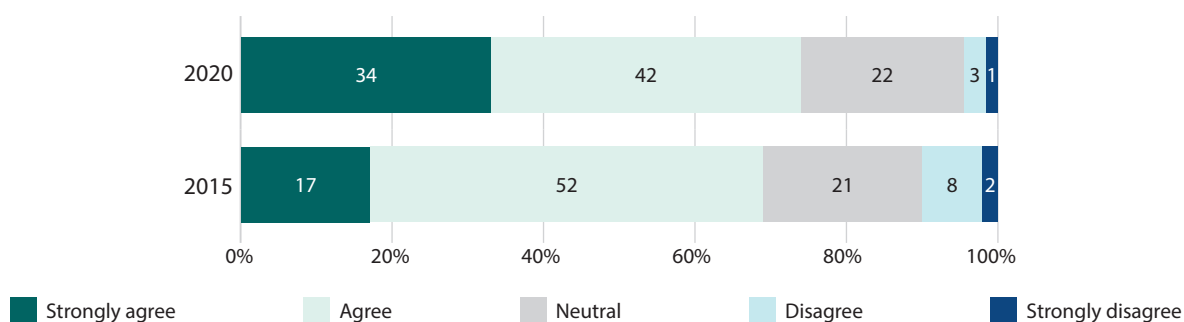


Figure 27: Buy claimed water-efficient products

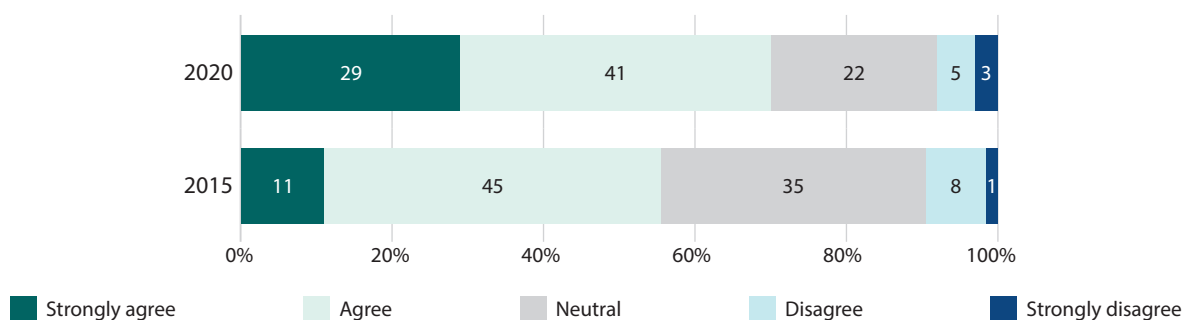




It is also observed that younger consumers (aged 15 – 44) have made greater improvement than older age groups over the past 5 years in terms of purchasing products with Grade 1 Energy Label/ water-efficient products, probably due to their better knowledge on related labels. Another thing worth noting is that, students, homemakers and retired people have experienced a drop among the occupation groups in perceived impact of their consumption behaviour on the environment. However, when asked their purchasing behaviour, these three occupation groups have showed improvement. For instance, students and homemakers have improved in buying appliances with Grade 1 Energy Label, while students and retired people have improved in buying claimed water-efficient products. This finding affirms the observation of the study of selected jurisdictions aforementioned.

Another purchasing behaviour that has improved is avoid buying single-use products, consumers who strongly agreed/agreed they have been practising it have increased notably from 56% to 70% (Figure 28).

**Figure 28: Avoid buying single-use products**



The percentage of respondents strongly agreed/agreed they would avoid buying single-use products has increased among all age groups. As discussed in Chapter 2, sustainable products market has been expanding globally in recent years.

An expert commented in the interview that: “「以前的商戶未必會售賣這麼多環保產品，但現在他們意識到市場上很多人都有意購買這類商品。此外，以前的商戶要面對少量生產帶來的成本上升問題，但現今的環保產品選擇及款式更多，使成本下降。同時，近年的消費者亦更願意花費在環保產品上，相關的專賣店也應運而生。五至十年前，這類商舖的營商環境甚為艱難，但我認為這個情況現已改善。」 – Businesses in the past might not sell so many environmentally friendly products, but now they realise that many people in the market are interested in buying such products. In addition, businesses in the past had to face the problem of rising costs caused by small-scale production, but nowadays, thanks to the increased availability of environmentally friendly products, their costs have reduced. At the same time, consumers in recent years are more willing to spend on environmentally friendly products, and related specialty stores have also emerged. Five to ten years ago, the business environment for such shops was very difficult, but I think the situation has improved now.”

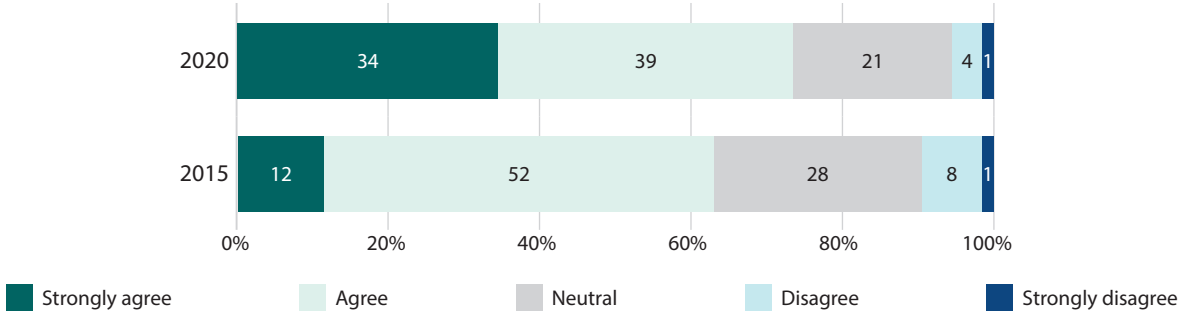
The increased supply and variation of reusable products like collapsible food containers and food wraps may increase people’s willingness and accessibility to reusable choices (Figure 29).

**Figure 29: Sample of collapsible food container**



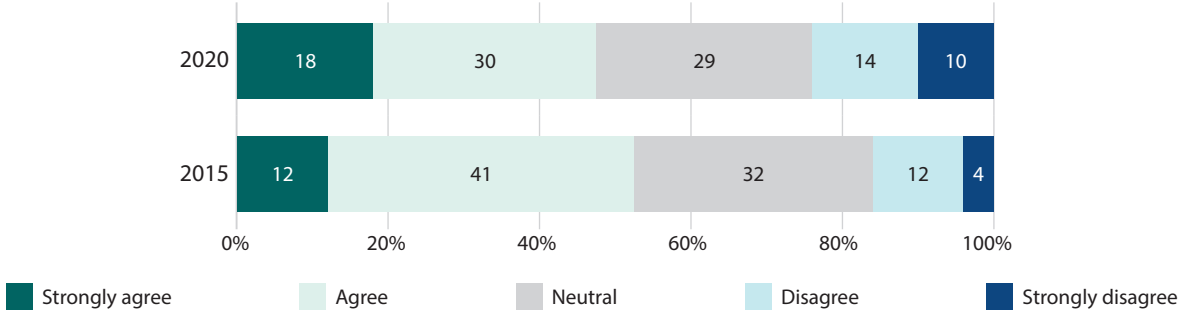
Except for the youngest age group (aged 15 – 24), percentage of respondents who strongly agreed/agreed they would repair broken domestic appliances and continue to use it has increased from 64% to 73% (Figure 30). The reason behind may be the younger generation has not lived through those less affluent decades and consider domestic appliances could be replaced easily, thus prefer buying a new one instead of spending time and money to repair them.

**Figure 30: Repair broken domestic appliances and continue to use it**



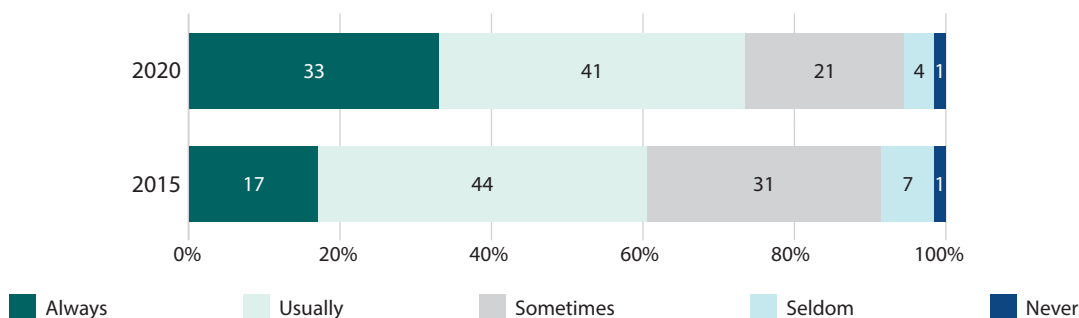
Among all purchasing behaviours, there is one behaviour which becomes less supported by consumers over the years. There are more respondents who strongly disagreed/disagreed that they would borrow seldomly used items from others (increased from 16% to 24%) (Figure 31). One possible reason is that, due to economic growth, those seldomly used items are now more affordable for consumers, so it is not necessary to borrow anymore.

**Figure 31: Borrow seldomly used items from others**

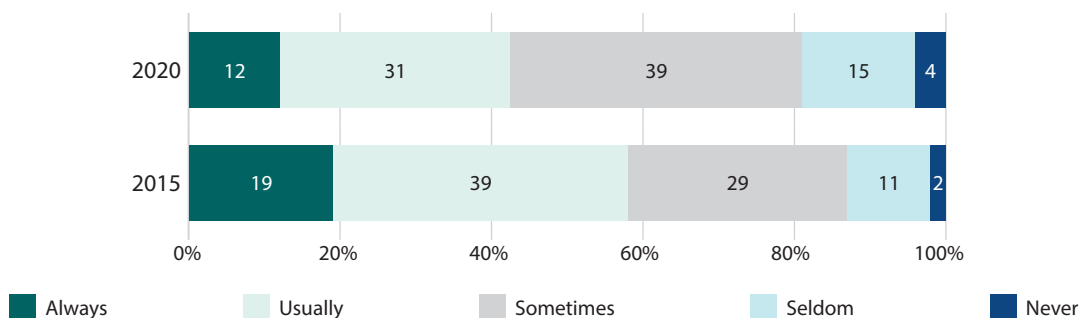


As for conservation and waste reduction behaviour, percentage of respondents who would pack leftover food instead of throwing away has increased from 61% to 74% (Figure 32). However, affected by the increasingly high temperature in Hong Kong, percentage of respondents who would reduce the use of air conditioners as much as possible has decreased remarkably from 58% to 43% (Figure 33), consumers at all age groups except the segment of aged 55 – 64 are performing this behaviour less when compared to 5 years ago.

**Figure 32: Pack leftover food instead of throwing away**



**Figure 33: Reducing the use of air conditioners as much as possible**



Some participants in the focus groups shared their difficulties in reducing the use of air-conditioner and reflected that it would reduce their life quality: “「我認為就比較困難，因為當你不使用冷氣的時候，就會受其他住戶冷氣所排出的熱氣及廢氣影響」– I think it is difficult to not use an air-conditioner. If you don't switch on your own one, you will be affected by the exhaust emitted by the neighbours' air-conditioners.”

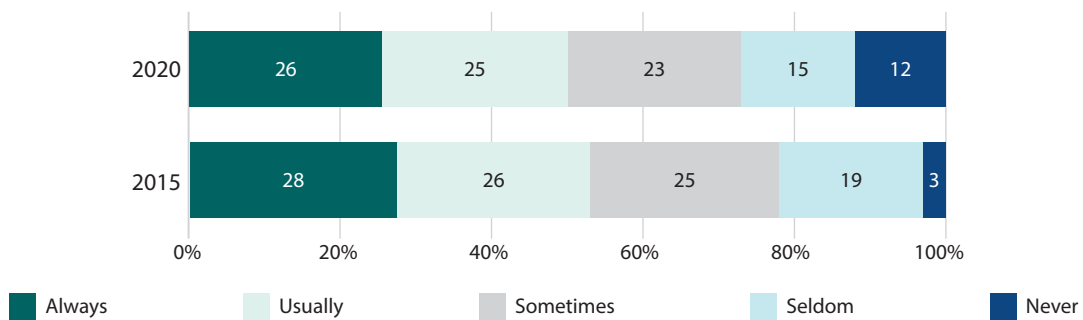
According to the Hong Kong Observatory (HKO), analysis of the annual mean temperature data showed that there was an average rise of 0.13°C per decade from 1885 to 2019. The rate of increase in average temperature became faster in the latter half of the 20th century. The average increasing rate was 0.21°C per decade during 1990-2019.<sup>98</sup> Air-conditioner is nearly a necessity for Hong Kong people during summer. Other statistics from the HKO showed that the number of very hot days in Hong Kong increased remarkably from 19 days in 2011 to 47 days in 2020.<sup>99</sup> Such struggle between maintaining life quality and environmental protection probably will continue despite other SC behaviour improved.

<sup>98</sup> HKO. (2021) Climate change in Hong Kong.

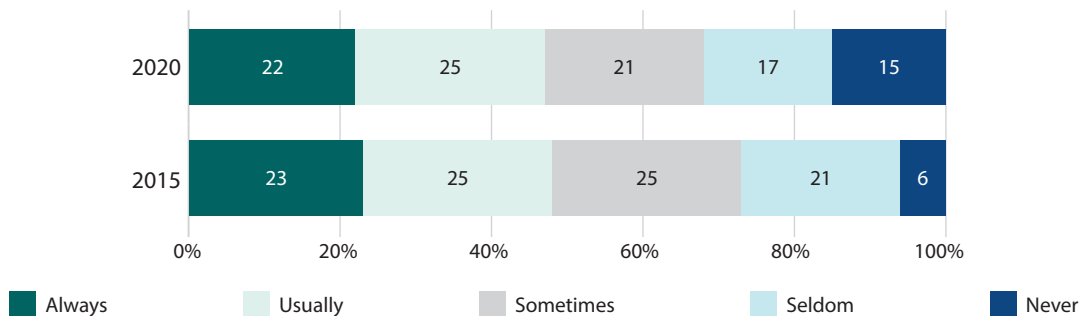
<sup>99</sup> HKO. (2020) Number of very hot days.

Regarding recycling behaviour, a decline of support is observed. The percentages of respondents who never/seldom recycled paper or plastics have both increased (paper: from 22% to 27%; plastics: from 27% to 32%), while that of always/usually recycling such materials is similar to the past result without significant difference, indicating that there are now less consumers performing recycling of paper/plastics than before. Figures 34 and 35 demonstrate the recycling behaviour of all respondents on paper and plastics.

**Figure 34: Recycling paper**



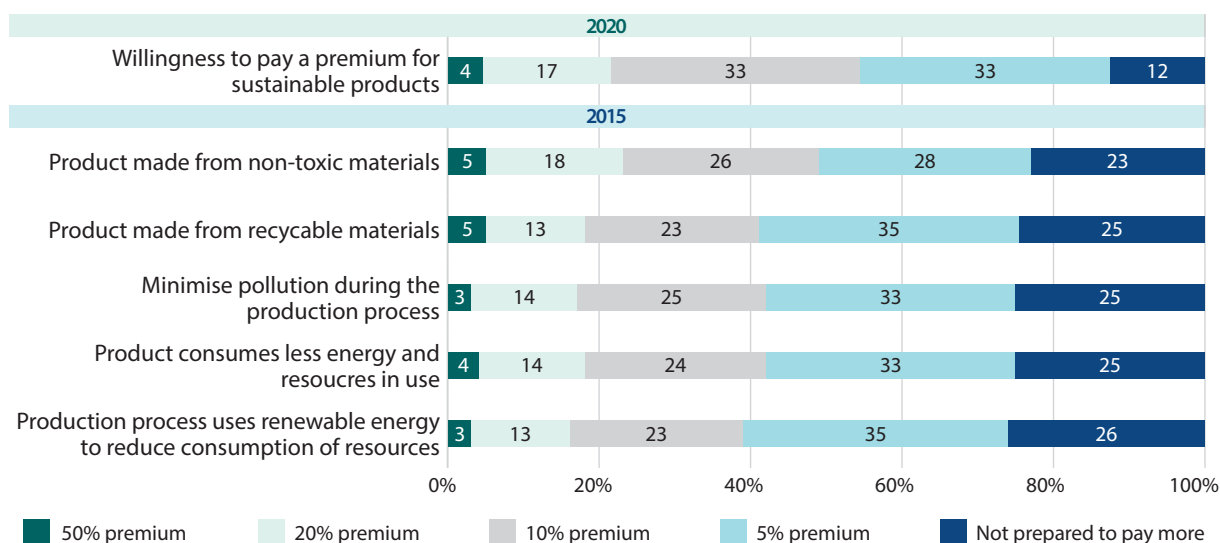
**Figure 35: Recycling plastics**



A notable observation is the percentages of homemakers who always or usually recycle paper (from 66% to 49%), metal (from 47% to 36%) and glass (from 46% to 34%) have decreased over the past 5 years, while similar result is not observed in other segments. At the same time, when asked for reason of strongly disagreed/disagreed waste separation at home was easy to achieve, 58% of homemakers reflected that they did not know how to recycle/separate waste, which is 26% higher than the average of all respondents (46%). Similar to the reason of lower understanding of SC by homemakers, it may imply that the non-working population is less accessible to up-to-date waste reduction related information. Therefore, supports targeting homemakers, such as education in the community, is necessary to encourage recycling behaviour.

As for consumers' readiness towards SC, the result shows that consumers are now more willing to pay for a premium for sustainable products. In the baseline survey, 74% to 77% of the respondents were willing to pay a premium for products that were environmentally friendly in five different aspects (e.g. minimise pollution and consume less energy), while in the latest survey, 87% of the respondents were willing to do so. In other words, 23% to 26% of the respondents responded in the baseline survey that they would not pay any extra for environmentally friendly products, while the percentage has dropped largely to 12% in the latest survey (Figure 36).

**Figure 36: Willingness to pay a premium for sustainable products**

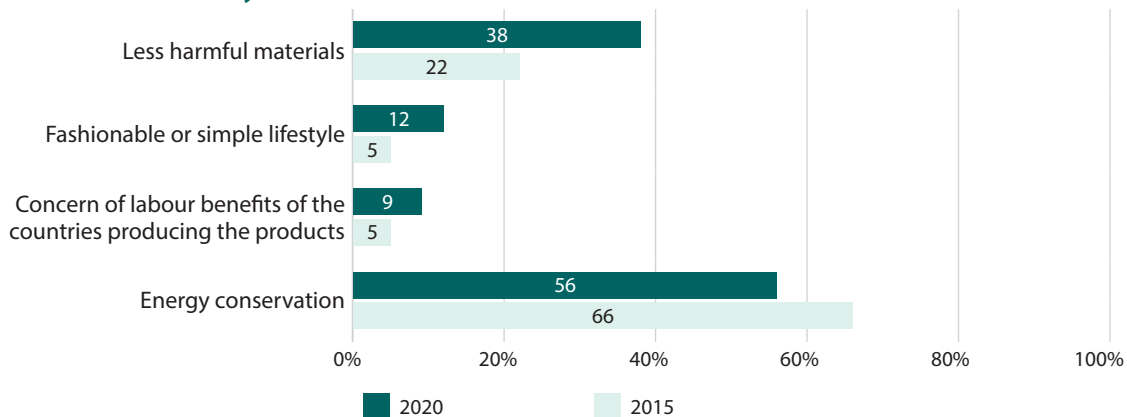


Respondents were also asked for the reasons for purchasing products or services that were produced in an environmentally friendly or sustainable way. The result suggested that more consumers now take less harmful materials (38%), fashionable or simple lifestyle (12%) and concern of labour benefits of the countries producing the products (9%) into their buying decisions, while fewer consumers consider about energy conservation (56%), comparing to 5 years ago (Figure 37). That said, environmental protection (64%) and energy conservation (56%) remain the top two reasons for purchasing products or services that are produced in an environmentally friendly or sustainable way (Figure 19). Whereas, not enough information (64%), too expensive (48%) and not easy to acquire (45%) remain the top three reasons for the opposite side (Figure 20). Further, percentage of respondents chosen "not enough information" has increased 14% as compared with the baseline survey (56%) (Figure 38). Some experts reflected during the interviews that information about the sustainability features of the companies or products may not be sufficient enough for consumers to take action even if they are eager to do so.

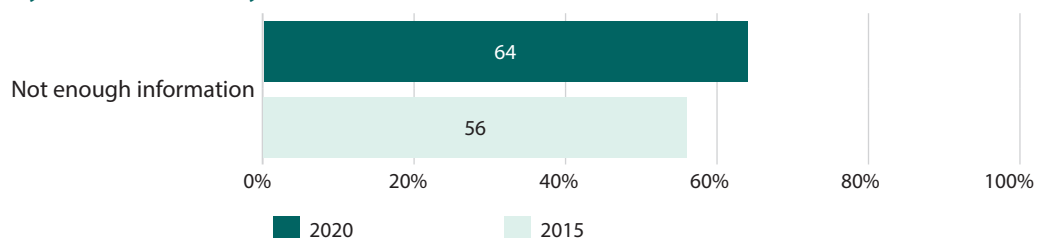
An expert commented that “「我們發現有些服裝品牌在他們的網站上大肆宣傳環保時裝，於是我們就到門市查詢相關產品的資料，然而，店員並不能清楚解釋這些資訊，這反映了他們的環保政策在實行上存在斷層。」 - As we found that some clothing brands were promoting their environmentally friendly products on their websites, we visited the stores to inquire about related information. However, the staff could not explain the information clearly, which reflected that there is a gap between their policies and execution.”

Another expert considered that environmental label can help consumers to make informed decision, but the labels are not widely adopted in Hong Kong: “「當消費者要購買洗髮露時，他們未必知道製造過程會否對環境帶來污染，亦未必知道產品有否做過動物測試。消費者只能透過「零殘忍標籤(Cruelty Free Label)」來辨別關注動物權益的產品，但我估計一百件產品中只有一至兩件有這個標籤，消費者的選擇因此有限。」 - When buying shampoos, consumers may not know if the products have caused pollution in the production. They won't know if the product has gone through animal test or if it is a product concerning animal right, unless there is a "cruelty free label". However, I guess only 1 – 2 products out of 100 are with this label. Therefore, consumers only have limited choice.”

**Figure 37: Reason of purchasing products or services that are produced in an environmentally friendly or sustainable way**

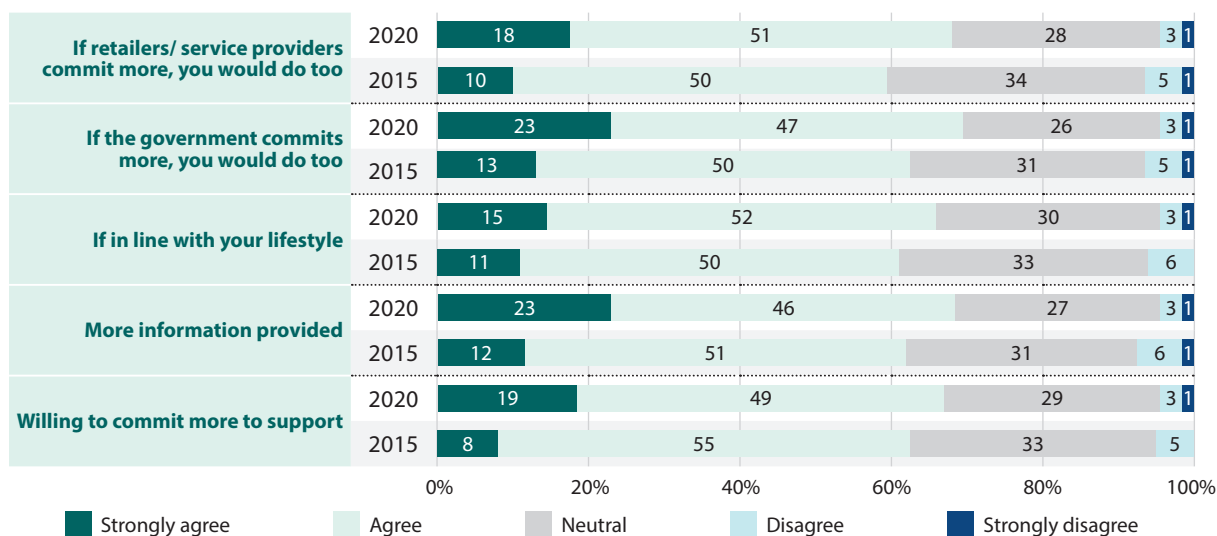


**Figure 38: Reason of not purchasing products or services that are produced in an environmentally friendly or sustainable way**



As for the motives for SC behaviour, consumers are now expecting more motivations from all 5 aspects. Figure 39 demonstrates the results of the five questions.

**Figure 39: Motives on SC**



Percentages of respondents who strongly agreed/agreed those 5 attributes have increased by 8% – 15% as compared with the baseline survey, with the greatest increase observed on the motive from retailers/service providers' commitment. Among all age groups, the young adults (aged 25 – 34) had a higher support to the five attributes than the baseline survey.



## 3.4 Summary

- Moderate improvement in consumer awareness, attitude, behaviour and readiness towards SC was observed. The score of “Consumers’ Awareness and Attitude” has increased from 74 in the baseline survey to 77 in the current survey. Likewise, “Consumers’ Behaviour and Readiness” has increased from 69 (Consumers’ Behaviour) and 65 (Consumers’ Readiness) to 71. Although most sub-indexes have improved, the score of the sub-index “Recycling Behaviour” remains unchanged.
- A lower score of “Consumers’ Behaviour and Readiness” as compared with “Consumers’ Awareness and Attitude” reflects there is still a gap between consumers’ awareness and their behaviour in reality, in particular their participation in recycling.
- Most respondents perceived an average impact of consumption behaviour on the environment and an average understanding towards SC concept.
- A majority of the respondents could relate SC to most of its aspects, with energy conservation, waste reduction, avoid pollution in production and waste recycling as the top four aspects.
- Respondents were concerned about pollution caused by the products in the production process and during use. Besides, they were also concerned about product lifespan and the concern on excessive packaging was growing.
- A vast majority of the respondents strongly agreed or agreed energy conservation and waste separation were beneficial, but the agreement dropped sharply when it came to whether it was easy to achieve. Of the six common recyclables, only around 30% of the respondents always or usually recycled metal, glass or small home appliances; whereas for clothes, paper and plastics, the rates were around 50%. More worrying is, percentage of respondents who never or seldom recycled paper or plastics has increased as compared with five years ago.
- Respondents were supportive of those purchasing behaviour which sustainable alternatives are easily available or can bring tangible benefits, for instance saving money (e.g. by buying energy or water saving products, repairing broken products) and aligning with healthy living style (e.g. avoid excessive order of food). They also supported avoiding single-use products, which was heavily called for in recent years. Using less air conditioners was, however, less supported.
- Akin to the baseline survey, around half of the respondents usually purchased products or services that were produced in an environmentally friendly or sustainable way. However, more than one-third of the respondents perceived the availability of such products were limited in the market. “Not enough information” and “too expensive” remain the top two reasons for those who do not usually purchase sustainable products.
- Vast majority of the respondents was willing to pay an extra 5% or more, an improvement over the baseline, for sustainable products.
- Over two-thirds of the respondents were willing to commit more to support SC, which has improved over the past 5 years, with government commitment and more information provision being the biggest drivers.



## **SC Related Policies and Initiatives in Selected Jurisdictions**

- 4.1 Scope of the Review**
- 4.2 Product Information**
- 4.3 Waste Reduction and Recycle**
- 4.4 Product Repairability and Durability**
- 4.5 Promotion of Sustainable Lifestyle**
- 4.6 Summary**

In thirteen selected jurisdictions which have good performance in sustainability, the Council's desktop research identifies various policies and initiatives have been adopted to promote SC in the areas of **product information, waste reduction and recycle, product repairability and durability**, and **sustainable lifestyle**.

- **Enabling choices and safeguarding consumers' right to know by information provision**, there are guidelines on green marketing and law in disciplining false eco-labels, voluntary label on reduced packaging, as well as legislation on repairability rating.
- **Promoting waste reduction and recycle**, there are examples on mandatory waste separation, charge on waste disposal, ban of disposing of food waste to landfills, ban on single-use plastics, extended producer responsibility programme for recycling packaging and printed paper, requirement on demolition waste, incentive programmes or deposit system to award recycling behaviour, funding system for recycling system, supermarket initiatives on plastic reduction, government-business-collaboration on reducing container waste of food delivery and takeaway containers, mobile apps for saving surplus food, interactives map of recycling points and mandatory packaging reporting.
- **Promoting product repairability and durability**, examples are found on legislation which prohibit planned obsolescence, law in prolonging warranty period, and tax deduction for repairing services.
- **Promoting sustainability lifestyle**, incentive programmes in the form of award-saving credit card and mobile app provide convenient and easy-to-use tools for consumers to gain tangible benefits in practising SC.

All these examples show the effort of selected jurisdictions in removing the barriers in driving SC through the use of carrot and stick approach and with the help of technology and innovation. Some programmes have excelled at empowering consumers with sufficient product information, while some others encourage SC behaviour by making it easier and more appealing, such as through the use of incentives, legislations and/or good practices adopted by business sector.

This Chapter presents good practices of selected jurisdictions (Australia, Canada, Denmark, France, Germany, Japan, Luxembourg, Singapore, South Korea, Sweden, Switzerland, Taiwan, The UK) that could be made reference of in promoting SC with respect to the following areas, which are the pressing issues of Hong Kong and emerging trends of SC across the globe: enabling product information, promoting waste reduction and recycle, product repairability and durability, and sustainable lifestyle. The good practices of which illustrated in the Chapter are not meant to be exhaustive, but attempt to stimulate discussion and consideration among stakeholders in exploring possibilities of SC policies and initiatives in the local context of Hong Kong.

## 4.1 Scope of the Review

The consumer research presented in Chapter 3 reveal the importance of information provision and accuracy about the sustainability features of products and services in enabling the uptake of SC by consumers. For respondents who did not usually purchase sustainable products or services, the top barrier was “not enough information” (Figure 20). In addition, a majority of the respondents suggested that they needed more information to understand how to consume more sustainably.

Apart from that, consumers are looking for product durability and repairability. When asked their level of concern with respect to various attributes of product information, close to 7-in-10 respondents said they were very concerned/concerned about “product lifespan” and over half of the respondents were very concerned/concerned about “frequent product updates leading to unnecessary replacement” (Figure 9). Furthermore, a majority of respondents strongly agreed/agreed that they would choose to repair broken domestic appliances.

As discussed in Chapter 2, among the Government reduction targets (e.g. energy consumption, carbon emission, waste reduction), the most critical issue in Hong Kong which need immediate action is obviously waste reduction. Globally, plastic waste has emerged as the second most pressing environmental concern, following climate change, as ranked by consumers in a survey.<sup>100</sup>

In view of the above considerations, the latest development and international good practices on the following topics are reviewed, with an aim to explore if there are valuable experience and lesson to learn in addressing the above findings and observations:

- Product information
- Waste reduction and recycle
- Product repairability and durability
- Promotion of sustainable lifestyle

Apart from international literature review, experiences and pioneering ideas from the following jurisdictions, including those rolled out by government and business sector, are also reviewed. They are jurisdictions having good performance in sustainability, in descending order of the Environmental Performance Index (EPI):<sup>101</sup>

- |               |               |
|---------------|---------------|
| • Denmark     | • Japan       |
| • Luxembourg  | • Australia   |
| • Switzerland | • Canada      |
| • The UK      | • South Korea |
| • France      | • Singapore   |
| • Sweden      | • Taiwan      |
| • Germany     |               |

<sup>100</sup> WWF, the Ellen MacArthur Foundation and BCG. (2020) The business case for a UN treaty on plastic pollution.

<sup>101</sup> EPI is a joint project of the Yale Center for Environmental Law & Policy and The Center for International Earth Science Information Network Earth Institute at Columbia University. It provides a data-driven summary of the state of sustainability around the world. Using 32 performance indicators across 11 issue categories, the EPI ranks 180 jurisdictions on environmental health and ecosystem vitality. In 2020, the ranking of the countries selected for this Study was: Denmark (1st), Luxembourg (2nd), Switzerland (3th), the UK (4th), France (5th), Sweden (8th), Germany (10th), Japan (12th, top of the Asia-Pacific region), Australia (13th), Canada (20th) South Korea (28th, second of the Asia-Pacific region), Singapore (39th, third of the Asia-Pacific region) and Taiwan (40th, fourth of the Asia-Pacific region).

# 4.2 Product Information

## An Overview of Environmental Labels

In the everyday language, “eco-labels” may be usually referred to by most people as all labels relating to the environment. However, this is not always correct. There are many labels and declarations of environmental performance in the market. This large and composite family should be referred to as “environmental labels”; eco-labels are a sub-group and they refer to labels which identify overall environmental performance of a product or service based on life-cycle considerations.

The International Organization for Standardization (ISO) has classified the existing environmental labels into three typologies – Type I, II and III.<sup>102</sup> Table 8 below outlines this taxonomy and gives some examples.

**Table 8: Types and examples of environmental labels**




Type	Description
<p><b>Type I Environmental Labelling (ISO 14024)</b></p>	<p>For eco labelling schemes which cover multiple attributes that are life-cycle based and that are verified and certified by a third party.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>Hong Kong Green Label</b></p>  <p>Source: Green Council<sup>103</sup></p> </div> <div style="text-align: center;"> <p><b>EU Ecolabel</b></p>  <p>Source: European Commission (EC)<sup>104</sup></p> </div> </div>

<sup>102</sup> According to a report published by the Organisation for Economic Co-operation and Development (OECD) in 2016, there were more than 500 environmental labelling and information scheme worldwide. OECD. (2016) Environmental labelling and information schemes.

<sup>103</sup> Green Council. Hong Kong Green Label Scheme.

<sup>104</sup> EC. Environment.

**Table 8 (Cont'd): Types and examples of environmental labels**

Type	Description
<p><b>Type I – like</b></p>	<p>Has a verification and certification process similar to that of Type I environmental label but focuses on single issues (e.g. energy consumption, sustainable forestry)</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><b><u>Hong Kong Energy Efficiency Label</u></b></p>  <p>Source: The EMSD<sup>105</sup></p> </div> <div style="text-align: center;"> <p><b><u>Forest Stewardship Council (FSC) Label</u></b></p>  <p>Source: FSC<sup>106</sup></p> </div> <div style="text-align: center;"> <p><b><u>Marine Stewardship Council (MSC) Label</u></b></p>  <p>Source: Marine Stewardship Council<sup>107</sup></p> </div> </div>
<p><b>Type II Self-declared Environmental Claims (ISO 14021)</b></p>	<p>Pertaining to self-declared environmental claims by manufacturers with no requirements or verification by an independent party</p> <p>E.g. Claims such as “made from x% recycled material”</p>
<p><b>Type III Environmental Declaration (ISO 14025)</b></p>	<p>Declarations that show quantified environmental information, which is independently verified, on the life-cycle of a product enable comparisons between similar products. Unlike Type I labels, the output report is known as an Environmental Product Declaration, which are constituted in accordance with sets of standard Product Category Rules.</p> <p>E.g. Environmental Product Declaration which provides data with respect to the use of resources, output flows, potential environmental impacts and waste production of a product.<sup>108</sup></p>

## UNEP: Fundamental Principles for Sustainability Claims

The Rio+20 UN Conference on Sustainable Development in 2012 adopted a 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP). One of the programmes refers to Consumer Information for Sustainable Consumption and Production.<sup>109</sup> In 2017, such programme published Guidelines for Providing Product Sustainability Information,<sup>110</sup> with an aim to provide value chain and public sector professionals with clear guidance on how to make effective, trustworthy claims to consumers, on product-related sustainability information. The Guidelines established minimum requirements that must be met when providing product sustainability information to consumers, which included:

<sup>105</sup> The EMSD. The Mandatory Energy Efficiency Labelling Scheme.

<sup>106</sup> FSC. What It Means When You See the FSC Labels on a Product.

<sup>107</sup> Marine Stewardship Council. The MSC Fisheries Standard.

<sup>108</sup> Environmental Product Declaration. (2020) Durum wheat semolina pasta 5kg for Food Service Environmental Product Declaration.

<sup>109</sup> The 10YFP consisted of six programmes: Sustainable Public Procurement, Consumer Information for SCP, Sustainable Tourism, Sustainable Lifestyles and Education, Sustainable Buildings and Construction, and Sustainable Food Systems.

<sup>110</sup> One Planet Network. (2017) Guidelines for Providing Product Sustainability Information.



**Reliability – Build sustainability claims on a reliable basis**

The sustainability claim must be accurate and based on a generally accepted methodology in the relevant scientific field. The methods and standards must be applied in a way that is consistent with the sustainability claim. The sources of information and data must be trustworthy. Trustworthiness can be enhanced by asking an external body to provide its assurance on the information and data, to different levels of reliability. When third party verification is applied, the verifying organisation must be independent and competent.

**Relevance – Talk about major improvements, in areas that matter**

The sustainability claim must provide information on the relevant aspects (e.g. processes, materials used in production; or impacts linked to the intended use of the product), which, according to the selected scope of the underlying study and the applied methods, contribute significantly to the sustainability profile of the product. At the same time, the claim must not enhance one aspect where the product is performing well (or has improved) while masking other aspects where the product is performing poorly (or has deteriorated). The claim must refer to a genuine and measurable benefit of the product and must exceed what is already required by law.

**Clarity – Make the information useful for consumers**

Avoid vague, ambiguous and broad “general environmental/social benefit” claims. There must be a direct link between the sustainability claim and the product to avoid generalisation of the claim. Consumers must be able to differentiate between product and brand information. The information (visual, text-based or via design) provided to consumers must be explicit and easy to understand and must be complemented, if otherwise misleading, with an explanatory statement.

The limits of the sustainability claim must be clearly stated and must not be misleading or ambiguous. A single-issue criterion must not be used to claim that the entire product is “sustainable” when other issues may make it otherwise.

**Transparency – Satisfy consumer’s appetite for information, and do not hide**

Allow consumers to evaluate the information that underpins the claim. Consumers must be able to trace how the sustainability claim was generated. In other words, the claims must be substantiated with third party certification.

**Accessibility – Let the information get to consumers, not the other way around**

The required information must be clearly visible (e.g. front of pack, appropriate font size, graphics/logo). The information must be readily accessible at the time and location consumers need it, during research into buying options, the point of purchase or use.

## CI, UNEP and One Planet Network: Recommendations on Plastic Recycling Labelling

In May 2020, CI, UNEP and One Planet Network released their global assessment of recycling and sustainability labelling on plastic packaging. The research found only 19% of assessed labels gave consumers quality information to make informed recycling and purchasing decisions. Five global recommendations were proposed for action to engage businesses, policy makers, standard setters in creating better plastics labelling that make sustainability the easy choice for consumers, for instance:

1. Businesses following the Guidelines for Providing Product Sustainability Information in their plastic packaging communications.
2. Global consistency when it comes to definitions relating to the content and reusability of packaging or disposable items.
3. The definitions and technical requirements used in standards related to recyclability, compostability, and biodegradability should better reflect real world conditions and be more attentive to accessibility and consumer understanding.
4. The use of the “chasing arrows” symbol should be restricted to indicating recyclability.



5. Informative and verified recycling labels should be adopted and their proper use enforced.

## Australia: Guidelines on Green Marketing

In 2011, the Australian Competition and Consumer Commission published a guide on “Green marketing and the Australian Consumer Law”, which purpose is to educate businesses about their obligations under the Australian Consumer Law.<sup>111</sup> The guide aims to assist manufacturers, suppliers, advertisers and others to assess the strength of any environmental claims they make and to improve the accuracy and usefulness to consumers of their labelling, packaging and advertising. It sets out the following principles for businesses to consider:<sup>112</sup>

- Claims must be accurate
- Claims should be able to be substantiated
- Claims should be specific, not unqualified and/or general statements
- Claims should be in plain language

<sup>111</sup> The Australian Consumer Law sets out consumer rights that are called consumer guarantees. These include consumers’ rights to a repair, replacement or refund as well as compensation for damages and loss and being able to cancel a faulty service. It also ensures consumers have the right to receive accurate and truthful messages about the products and services they buy. It contains a broad prohibition of misleading and deceptive conduct.

<sup>112</sup> Australian Competition & Consumer Commission. (2011) Green marketing and the Australian Consumer Law.

- Claims should only be made for a real benefit
- Claims must not overstate a benefit
- Pictures can also be representations
- Claims should make it clear whether claimed benefits refer to packaging or content
- Claims should consider the whole product life cycle
- Claims using endorsement or certification should be used with caution
- Claims should not overstate the level of scientific acceptance

The guide also suggests that some commonly used broad and unqualified claims which are ambiguous and do not explain any specific environmental benefit might in risk of breaching the Australian Consumer Law if such claims are used without the provision of any factually based information, for instance “Green”, “Environmentally friendly (or safe)”, “Energy efficient”, “Recyclable”, “Carbon neutral”, “Renewable (or green) energy”.

## France: Enhancement in Labelling Requirements and Repairability Rating

In February 2020, the French Government enacted the Anti-Waste Law for a Circular Economy, which contains about 50 measures providing for new obligations with the creation of new producer responsibility sectors to include new product families in the circular economy (toys, sports and do-it-yourself equipment, building materials, cigarette butts, sanitary textiles); new prohibitions on single-use plastics and to fight waste of food and non-food unsold products; and new tools to better control and sanction offences against the environment (greater power for mayors to combat littering and illegal dumping), to support companies in their eco-design initiatives (bonus/malus-type incentives) and to assist citizens in new consumption practices (repairability index, information on environment and health impacts of products, harmonisation of information on sorting, etc.).<sup>113</sup>

The followings set forth provisions related to labelling, which have entered into force in January 2021:

### **Prohibit “biodegradable” claim or any equivalent claim on products and packaging**

The consideration behind is that there is no scientific consensus on the definition of “biodegradable”. The “biodegradable” claim does not encourage consumers to be careful and not dispose of these products in the environment. It misleads them by suggesting that they will not affect natural environment and that is detrimental to the fight against plastic pollution.

### **Make sorting more efficient through a single logo**

The French recycling logo (the Triman logo) will be mandatory and indicated on the product, its packaging, or on the documents provided with the product, and will be accompanied by information on the sorting process for each type of product.

<sup>113</sup> Ministère de la Transition écologique. (2020) The Anti Waste Law in the daily lives of the French people, what does that mean in practice?

### **Apply a repairability index and make progress towards a durability index**

It targets to provide a repairability index to consumers which will allow them to know whether the product concerned is repairable, difficult to repair, or non-repairable. The Ministry for an Ecological and Inclusive Transition, the French Agency for Ecological Transition (ADEME) and the actors in the sector are working on a simple index (a score out of 10) affixed directly on the product or its packaging, and at the point of sale (alongside the price of the product for example). It focuses on 5 categories of “pilot” products: washing machines, TV sets, smartphones, laptop computers and mowers. In the medium term, the work on the durability index will enrich it in order to work towards a durability index.

### **Facilitate repair and promote the use of used spare parts**

The law provides that when making a purchase, consumer will have all the complete and reliable information, whether the spare parts of the product purchased are available or not. This measure will apply to electric and electronic equipment (e.g. mobile phones, computer equipment, large and small household appliances, TV sets, hi-fi stereo systems) and furniture. The list of available spare parts will be displayed at the point of sale. The manufacturer will also be able to indicate it on the product. The period within which the spare parts must be made available by the manufacturer to the seller or repairer is 15 working days.

## **Singapore: Logo for Products with Reduced Packaging (LPRP)**

LPRP is a voluntary environmental label administrated by the Packaging Partnership Programme (PPP), an industry-led programme initiated by a trade federation and partnered with the government. It was introduced in 2017 to enable consumers to identify products with reduced packaging and recognise companies that have made efforts to minimise packaging waste.<sup>114</sup>

The logo is offered to companies who have made notable efforts and achievements in reducing packaging waste and members of the PPP to print on products that have undergone improvements to reduce the amount of packaging materials used.

## **South Korea: Regulatory Framework in Combating Deceptive Eco-labels**

In a 2012 study by the Korea Consumer Agency (KCA), 46.4% of the investigated products featured unsubstantiated claims of eco-friendliness, illegitimate eco-friendly certification labels, or were disguised as officially recognised environmentally friendly goods.<sup>115</sup> Such finding led the South Korean Government to revise its Environmental Technology and Industry Support Act in 2014 to provide a legal basis to punish false eco-labels. Article 16-10 “Prohibition against Unfair Labelling or Advertising, etc.” of the said Act stipulates that manufacturers, manufacturing sellers, or sellers shall not engage in any acts that may deceive or mislead consumers with respect to the environmental impact of products, for instance: false or exaggerated labelling or advertising; deceptive labelling or advertising; unfairly comparative labelling or advertising; slanderous labelling or advertising. The regulatory authority may inspect products in distribution or sale in order to examine whether

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<sup>114</sup> PPP. About Logo for Products with Reduced Packaging (LPRP).

<sup>115</sup> The Korea Bizwire. (2016) Study Shows Greenwashing Prevalent, but Consumers Ignorant.

or not their labels or advertisements placed by manufacturers, etc. violate such stipulation.<sup>116,117</sup>

Additionally, the Act on Fair Labelling and Advertising in South Korea protects consumers by preventing unfair labelling or advertising of a product or service, which is likely to deceive or mislead consumers, and by ensuring the provision of correct and useful information to consumers.<sup>118</sup> Under which there is a set of Guidelines for examination on labelling and advertising of environmental facts. It illustrates with cases where a business operator labels or advertises any fact concerning an environmental issue the types of unfair labelling and advertising, which are likely to mislead consumers with respect to the raw materials, ingredients, quality, performance, manufacturing process, price, warranty or other terms and conditions of a transaction of a commodity or service supplied by a business operator.<sup>119</sup>

For example, the Guidelines provide that an absolute expression, such as "pollution-free", may be considered fraudulent labelling if the business entity expresses "pollution-free" only in labelling without any explanation. The consideration behind is that consumers may misinterpret such expression to mean that the product does not cause any environmental pollution, which in reality is hardly achievable. Another example is that, labelling or advertising gasoline using simple expression such as "reducing harmful substances, creating a pleasant environment" or "creating a pleasant environment" is fraudulent as the use of more gasoline causes air to become more polluted even if pollutants in gaseous emissions emitted after ignition are reduced.

## Eco-labels in Hong Kong

According to the Organisation for Economic Co-operation and Development (OECD)'s report on "Environmental labelling and information schemes" published in 2016, environmental labelling and information schemes (ELIS) owned or operated by governments were a minority, with non-governmental bodies (private sector or non-profit) forming the bulk of schemes introduced over the past 20 years. Business-to-consumer schemes represented 70% of all schemes, indicating that businesses were the main drivers of new schemes, though government-to-consumer scheme have also grown.<sup>120</sup>

At present, there are about 3 local eco-labelling schemes in Hong Kong,<sup>121</sup> namely Hong Kong Green Label Scheme, Construction Industry Council (CIC) Green Product Certification, Hong Kong Quality Assurance Agency (HKQAA) Hong Kong Registration – Eco-friendly Series which are all operated by non-government bodies.

<sup>116</sup> OECD. (2017) OECD Environmental Performance Reviews: Korea 2017.

<sup>117</sup> Korean Ministry of Environment (MoE). Environmental Technology and Industry Support Act.

<sup>118</sup> Fair Trade Commission, South Korea. Misleading Advertisement.

<sup>119</sup> Fair Trade Commission, South Korea. (2016) Guidelines for examination of labelling and advertising with reference to the environment.

<sup>120</sup> OECD. (2016) Environmental labelling and information schemes.

<sup>121</sup> The EPD. (2019) Green Procurement.

- Hong Kong Green Label Scheme: An independent and voluntary scheme for the certification of environmentally preferable products launched in 2000 by the Green Council. It sets 10 types of product criteria: General Packaging Materials, Common Paper Products with Recycled Content (e.g. paper envelope, note-pad), Common Plastic Products with Recycled Content (e.g. plastic folder, plastic bags for non-food products), Common Cleaning Products (e.g. laundry detergent, machine dishwashing detergent), Stationery (e.g. pen, pencil), Other Common Consumable (e.g. rechargeable battery, ink and toner cartridges), Computer Products (e.g. personal computer, computer monitor), Electronic and Electrical Appliances (e.g. water heaters, washing machines), Construction Materials (e.g. flooring materials, wall coverings) and Automotive Products (e.g. fuel additive).
- CIC Green Product Certification: Owned by CIC and operated by Hong Kong Green Building Council (HKGBC), it is the leading building and construction products/materials certification scheme serving the Hong Kong construction industry. Its objective is to have a comprehensive scheme taking into consideration of a wide spectrum of aspects such as carbon footprint, greenhouse gases emission, energy/water efficiency, recyclability, and minimal use of irritating, harmful and toxic materials throughout the products' life cycle. This scheme enables building and construction practitioners in making informed decision on selection and procurement of products and materials with minimal environmental impact.
- HKQAA Hong Kong Registration – Eco-friendly Series: Developed by Hong Kong Quality Assurance Agency (HKQAA), the initiative is intended for the manufacturers, importers, traders, retailers and service providers of environmentally friendly products. It encourages organisations to commit to the environment at different stages of the product life cycle by registering their products or services in the following categories: Eco-friendly Material; Eco-friendly Production; Eco-friendly Product; Eco-friendly Service; Eco-friendly Facility; and Eco-friendly Project.



Source: Green Council<sup>122</sup>



Source: CIC<sup>123</sup>



Source: HKQAA<sup>124</sup>

<sup>122</sup> Green Council. Hong Kong Green Label Scheme.

<sup>123</sup> CIC. CIC Green Product certification.

<sup>124</sup> HKQAA. HKQAA Hong Kong Registration - Eco-friendly Series.



So far, the Government does not have any specific legislation which regulates the certification of eco-labels and environmental labels, and the use of such labels and relevant environmental claims in Hong Kong.

There are currently two official environmental labels, namely the MEEL and the WELS. More details about these labels are presented in Chapter 2.

## 4.3 Waste Reduction and Recycle

### Australia: Single-use Plastics to be Phased out from 2025

In April 2021, the Australian Government confirmed the phase-out of eight types of plastics, namely lightweight plastic bags, plastic misleadingly labelled “degradable”, plastic utensils, plastic stirrers, plastic straws, polystyrene food containers, polystyrene consumer goods packaging and microbeads in personal care products from 2025.<sup>125</sup> Previously, Queensland has already passed laws to ban plastic straws, cutlery, plates, stirrers, and polystyrene food containers, with the legislation to take effect from September 2021.

### Canada: Vancouver’s Zero Waste 2040 Strategic Plan

Launched in 2018, the Zero Waste 2040 is a long-term strategic vision for Vancouver to achieve the goal of zero waste by 2040. It aims to conserve resources; prevent waste of all types, including wasted food at all points between farm and table; compost inedible food or convert it into fuel; repair and maintain products and materials to extend their lives; and share, reuse, and refurbish products and materials before recycling them.<sup>126</sup>

As part of the zero waste strategy, Vancouver has banned or will impose restrictions on several types of single-use items, such as plastic straws and disposable cups.<sup>127</sup> There are also requirements on demolition waste. Some municipalities in Metro Vancouver have implemented regulatory measures to encourage recycling and reuse of building materials. If a contractor, project manager or homeowner wants to demolish an existing home, the person may be required to submit a waste management plan as part of the demolition permit application and submit a compliance report when work is complete. Vancouver had achieved a 32% decrease in solid waste sent to the landfills and incineration from 2008 to 2018.<sup>128</sup>

<sup>125</sup> Department of Agriculture, Water and the Environment, Australian Government. (2021) Environment Ministers Meeting (15 April 2021).

<sup>126</sup> City of Vancouver. Zero Waste 2040;

<sup>127</sup> City of Vancouver. Ban began in April 2020; Effective from January 2022, business licence holders must charge a minimum fee of CAD 0.25 (HK\$1.55) for every disposable cup distributed (CAD 1 = HK\$6.2, as of April 2021)

<sup>128</sup> City of Vancouver. Greenest City 2020 Action Plan.

Instance of successful initiatives include Green Bin programme and Extended Producer Responsibility programme. The former collects and diverts compostable food scraps. In January 2015, a Metro Vancouver region-wide ban on the disposal of organic waste with garbage came into effect. As for the latter, it is a program for recycling packaging and printed paper from residential properties launched in 2014. It increased the types of materials that can be recycled and shifted the burden of dealing with materials from taxpayers to producers and users of products.<sup>129</sup>

## Denmark: Deposit and Refund System for Beverage Cans or Bottles

In Denmark, consumers pay a deposit each time they buy drinks in cans or bottles, the deposit varies subject to the type and volume of the containers under regulation. Consumers can hand in the empty bottles and cans in reverse vending machines and at deposit stations. The system is operated by a non-profit company with three sources of income: (i) aluminium, glass and plastic from returned bottles and cans are sold to companies that process the material and manufacture new packaging from it. The operator receives the income from the sale; (ii) unclaimed deposits (about 10% of all bottles and cans sold); and (iii) producers and importers of bottled and canned beverages pay an annual fee for marketing beverages on which deposits are payable. In 2019, the system reached a return percentage of 92%.<sup>130</sup>

## Denmark: Mobile Application Rescues Food Waste

The Too Good To Go app is a food rescue application launched in 2016 in Denmark. Four years later, the app expanded to 14 European countries, including Germany, France, Italy and the UK. The application provides a marketplace that connects businesses (e.g. supermarkets, restaurants, chefs, bakeries, hotels and retail businesses) which have surplus food with consumers looking to rescue these meals that would otherwise be thrown away at the end of the day. Such food can be purchased at a reduced retail price, and collected by consumers in-store at a pre-set time. As of April 2021, the application has rescued over 70 million meals and has over 37 million users across Europe.<sup>131</sup>

## France: Legislation Against Food Waste

In recent years, France has shown a great commitment in reducing food waste, it was ranked top by the Food Sustainable Index in 2018.<sup>132</sup> Back in 2012, France introduced the Waste Management Enforcement Law, which regulates the amount of organic waste sent to landfills, requiring private sector companies that produce more than 120 tonnes per year, to recycle their organic waste. The

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<sup>129</sup> City of Vancouver. Greenest City 2020 Action Plan Part 2.

<sup>130</sup> Dansk Retursystem

<sup>131</sup> Too Good to Go. Food Waste, A Worldwide Issue.

<sup>132</sup> The Food Sustainability Index, created by the Economist Intelligence Unit and the Barilla Center for Food & Nutrition, is a tool designed to highlight international policies and best practices relating to global paradoxes and to the main Sustainable Development Goals for food, climate change, sustainable cities, responsible production and consumption, health, gender equality, education and infrastructure. The Index ranks countries on food system sustainability based on three pillars: food loss and waste, sustainable agriculture, and nutritional challenges.

requirement was further reduced to 10 tonnes per year, thus extending the law to include not only supermarkets and agricultural companies, but also almost the entire hospitality sector.<sup>133</sup>

In 2016, France became the first country in the world to pass a law prohibiting large supermarkets from throwing away good quality food, approaching the “best before” date.<sup>134</sup> The main features of the law are that (a) it clarifies the waste hierarchy in the case of food waste;<sup>135</sup> (b) it introduces fines in case business operators make safe food voluntarily inedible; and (c) it introduces the obligation for supermarkets with an area of 400 sq. metres or more to sign an agreement with non-profitable organisations to donate food that otherwise would be wasted.<sup>136</sup> Non-compliance to (c) above could result in fines of up to 75,000 EURO<sup>137</sup> or two years of imprisonment. The law helped improve the quality of donated food, as supermarkets are expected to sort produce and donate packaged items 48 hours before their expiration dates.<sup>138</sup> According to a study, the percentage of supermarkets donating unsold products rose from 66% prior to 2016 to more than 90% in 2018.<sup>139</sup>

In 2020, the Anti-Waste Law for a Circular Economy increased the fine for non-compliance to the requirement of (c) above. The fine will be adjustable according to the size of the business, up to 0.1% of the turnover, which is more dissuasive for large retail chains.<sup>140</sup>

## Japan: Mobile Applications Combat Food Loss

As part of the effort in achieving the goal of a “Zero Wasting Tokyo”, the Tokyo Metropolitan Government (TMG) worked with a Japanese mobile carrier on a pilot project referred to as the EcoBuy App in 2018, with a view to reduce food loss. The initiative gave incentives in the form of points to consumers for purchasing foods designated as EcoBuy products that were close to the best-before dates or expiration dates, with stickers stating “Item for EcoBuy”. To reap rewards from the App, customers needed to take a photo of an eligible product and the receipt of such purchase and upload them to the App. Once the purchase had been confirmed, the customer received store credits of about 20% of the purchase’s value.<sup>141</sup> The initiative was launched at a supermarket in the city, where there were about 30 designated food items, including everyday staple foods such as bread, sashimi and milk. The EcoBuy App project ran for two months from mid-January until mid-March 2018 and the future trials were subject to consideration.

There are other apps in Japan which make it simple for consumers to contribute in food waste reduction, for instance Reduce Go, TABETE and FOOD PASSPORT. Reduce Go is a service that matches restaurants wanting to reduce food waste with diners seeking reasonable priced

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<sup>133</sup> Cozzo. (2020) How the French are Leading the Food Waste Revolution through Public Policy.

<sup>134</sup> Legifrance. (2016) LOI n° 2016-138 du 11 février 2016 relative à la lutte contre le gaspillage alimentaire (1).

<sup>135</sup> The law stipulated that action to combat food waste shall be taken in the following order of priority: 1. Preventing food waste; 2. Marking unsold products which are still fit for consumption for donation or processing; 3. Recovering food waste by converting it into animal feed; and 4. Using it as agricultural fertilizer or recovering it as energy, including biogas.

<sup>136</sup> The French law does not establish the proportion of food to be donated. So, if the supermarket signs an agreement to donate 1% of such food, it is already complying with the law.

<sup>137</sup> HK\$697,500 (1 EURO = HK\$9.3, as of April 2021)

<sup>138</sup> The Guardian. (2016) French law forbids food waste by supermarkets.

<sup>139</sup> Foodtank. (2019) Opinion | France’s Ban on Food Waste Three Years Later.

<sup>140</sup> Ministère de la Transition écologique. (2020) The Anti Waste Law in the daily lives of the French people, what does that mean in practice?

<sup>141</sup> Food Navigator-Asia. (2018) Food waste-fighting app launched to tackle Japan’s six-million-tonne burden.

meals. This service is currently available only in Tokyo, but an expanded service area is working in progress. The number of registered shops and restaurants is now at 172, and 11,702 meals have been saved as of the end of August 2019. TABETE is a platform to support the effort to sell every last meal. It connects consumers with meals which are about to be wasted because of an approaching business closing time. Most of the 319 registered restaurants are in Tokyo, but some are in Saitama, Kanagawa, and Ishikawa, as well. FOOD PASSPORT is a food sharing service that offers a chef-select menu made with surplus food. It has 489 registered restaurants, mainly in the Kansai area.<sup>142</sup>

## Luxembourg: Deposit-return Scheme for Takeaway Containers

The Ecobox is a deposit-return scheme for takeaway containers by the Luxembourg authority. In participating restaurants, consumers can purchase their takeaway in a recycled plastic container, with a deposit of 5 EURO.<sup>143</sup> After use, the Ecobox can be taken back to the restaurant to collect the deposit or in exchange for another clean Ecobox, for the next takeaway meal. Defective Ecoboxes are returned to the manufacturer and used as raw material for new products. As of August 2019, 202 restaurants and canteens have joined the initiative.<sup>144</sup>

## Singapore: Mandatory Packaging Reporting

With an aim to raise greater awareness among companies on the benefits of packaging waste reduction and to spur companies to take action to reduce the amount of packaging used and packaging waste disposed of; as well as to lay the foundation for an Extended Producer Responsibility (EPR) framework for managing packaging waste and plastics which Singapore Government is studying and targeting to have in place by 2025, Singapore Government launched the Mandatory Packaging Reporting in 2020.

Under such framework, producers of packaging and packaged products, such as brand owners, manufacturers, importers and retailers, will be required to submit annual reports to National Environment Agency (NEA) on the types and amounts of packaging that they put on the Singapore market, and their 3R plans for packaging (i.e. plans to reduce, reuse, and/or recycle packaging waste).<sup>145</sup>

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<sup>142</sup> Zenbird. (2019) 3 food sharing apps rescuing Japan's food waste.

<sup>143</sup> HK\$46.5 (1 EURO = HK\$9.3, as of April 2021)

<sup>144</sup> SDK resources Innovation Sustainability Circular Economy. ECOBOX.

<sup>145</sup> NEA. (2021) Mandatory Packaging Reporting.

## South Korea: Volume-Based Waste Fee and Food Waste Recycling Measure

Since the 1980s, South Korea has made several legislative efforts to reduce food waste. In 1986, the Waste Control Act was enacted with a view to encourage reduce, reuse and recycle. In 1995, the South Korean Government introduced the Volume-Based Waste Fee (VBWF) system, which imposes a fee on households and small sized commercial enterprises for the waste they disposed of. In 2005, it prohibited the sending of food waste to landfills, implicating that citizens have to dispose of food waste and other wastes separately. In 2013, the VBWF system extended to cover food waste, and the dumping of garbage juice (leftover water from food waste) into the sea became illegal.<sup>146</sup>

The charging methods for general waste and food waste are different. As for general waste, it is charged by the standard bags, which could be bought in desired sizes at designated stores (such as convenience stores, laundries, etc.). As for food waste, it can be disposed of in a variety of ways: standard bags, standard plastic containers with electronic chips or stickers, and for payments based on weight using an electronic card with radio frequency identification (RFID) technology. For RFID-based handling of food waste, the person disposing swipes a card before gaining access to the residential waste bins. The chip contains the user's name and address and allows the authorities to monitor the weight of waste disposed with that card. The system accumulates fees on a monthly basis, and each household receives a monthly food waste disposal bill.

According to a report, after 10 years of VBWF system implementation, the system proved to be very effective and successful policy in limiting MSW generation and increasing the recycling rate. Between 1994 and 2004, MSW generation in South Korea decreased by 14%, while, at the same time, the recycling rate has increased from 15% in 1994 to 49% in 2004.<sup>147</sup> Another report also stated that the amount of food waste had largely reduced. The amount of food waste recycled had surged from 2% in 1995 to 95% in 2019.<sup>148</sup>

The waste collected is squeezed at the processing plant to remove moisture, which is used to create biogas and bio-oil. Dry waste is turned into fertiliser that is, in turn, helping to drive the country's development in urban farm. The number of urban farms or community gardens in Seoul has increased sixfold from 2012 to 2019. The city government provides between 80% and 100% of the start-up costs and has planned to install food waste composters to support urban farms.<sup>149</sup>

## Switzerland: Charge for Garbage Disposal

People in Switzerland discard twice as much garbage as people in the Czech Republic, Japan, Poland and Costa Rica according to the OECD. To promote recycling, Swiss cantons began charging residents by the bag for garbage disposal in 1990s. Disposal of household waste in public places is prohibited and punishable by the authorities. Recycling infrastructure is highly convenient, there is generally no charge for recycling via public facilities. Most municipalities and railway stations have collection points for plastic and glass bottles, food and beverage cans, and paper and cardboard. Supermarkets typically accept plastic beverage and cleanser bottles, as well as batteries, water

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<sup>146</sup> Common Wealth. (2019) South Korea Takes the Lead in Food Waste Recycling.

<sup>147</sup> United Nations Development Programme. (2017) Sustainable Development Goals Policy Brief Series No.3.

<sup>148</sup> World Economic Forum. (2019) South Korea once recycled 2% of its food waste. Now it recycles 95%.

<sup>149</sup> Intelligent Living. (2019) South Korea Has Almost Zero Food Waste, Here's How.

filters and light bulbs. Charities collect old-but-serviceable clothing and shoes. Recently, there are also private collection services which pick up and sort bags of mixed recyclables for a fee. In 2018, Swiss consumers recycled 94% of their cans and glass bottles, 82% of their PET plastic bottles and 82% of their paper and cardboard.<sup>150</sup>

## Switzerland: Interactive Map of Recycling Points

The Recycling Map, operated by a cooperative by companies from the beverage, food, pet food and aluminium industries, groups 16,057 public collection points for different recyclable materials throughout Switzerland. It provides information about the nearest collection point for used aluminium packaging, tins, glass bottles, recyclable plastic bottles, textiles, batteries, electric devices or any other reusable materials. In addition, it shows details about the location and opening hours of collection points, as well as a list of goods that each collection point will accept.<sup>151</sup>

## Taiwan: 4-in-1 Recycling Programme

The 4-in-1 Recycling Programme promoted by the EPAT since January 1997 is a system that uses recycling, clearance, and disposal fees collected from manufacturers and importers to establish a Recycling Fund, which is then used to subsidise the recycling disposal system and extend the responsibility of these enterprises. The Programme has four pillars, namely the public community, private recycling enterprises, government cleaning team and the Recycling Fund.<sup>152,153</sup>

- (1) **Community Residents:** Residents who deposit their waste at local collection points serviced by municipal collection teams must separate their recyclable (e.g. paper, metals, glass, plastics), non-recyclable, and organic (e.g. food) wastes.
- (2) **Recycling Industries:** Private recyclers and collectors buy waste materials, including waste electric and electronic equipment, from residents, communities, commercial enterprises and others in order to recover commodities from these wastes and generate revenue in the process.
- (3) **Local Authorities:** Municipalities and local governments organise municipal collection teams to collect regulated recyclable waste and other wastes from community collection sites. They sell regulated recyclable waste and other MSW of value to private recyclers and give a portion of the income back to the local government in order to fund grants for community waste collection sites.
- (4) **Recycling Fund:** It subsidises municipal regulated recyclable waste collection as well as private collectors and recyclers who meet EPAT's environmental and safety standards. Under the 4-in-1 Recycling Program, manufacturers and importers of new regulated recyclable waste products, including electrical and electronic equipment, are required to pay fees to

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<sup>150</sup> Federal Office for the Environment. ABFALLMENGEN UND RECYCLING 2018 IM ÜBERBLICK.

<sup>151</sup> Recycling-map.CH. Collected items.

<sup>152</sup> EPAT. The 4-in-1 Recycling Program.

<sup>153</sup> EPAT. (2012) Recycling Regulations in Taiwan and the 4-in-1 Recycling Program.



EPAT depending on the quantity of items they put on the market. These fees feed into the Recycling Fund.

In 2017, Taiwan's recycling rate was 52.5% (4.1 million metric tons recycled), which fell behind only Germany and Austria. Its PET plastic bottle recycling rate has reached 95% and new methods have been developed to recycle PET plastic bottles into textiles.<sup>154</sup>

## Taiwan: Collaboration with Food Delivery Services

The EPAT launched a trial in November 2020 to reduce container waste of food delivery services. From November 2020 to January 2021, consumers in Tainan City were able to choose to order their food delivery in recyclable containers. The services were subsidised by the EPAT, and executed by one food delivery platform and one recyclable containers supplier.

During the period, consumers could order their food in recyclable containers in 22 restaurants via a food delivery platform, and return the containers to 30 recycle spots after washing. Consumers using this service could get 30 TWD<sup>155</sup> coupon as a reward.<sup>156</sup>

## Germany: Pfand System in Promoting Beverage Bottle Recycling

The Pfand system is a deposit return system initiated by the German Government in 2003, aiming to encourage drinks companies to use refillable bottles, and encourage consumers to return their bottles for recycling. It works as when manufacturers sell their bottled products to retailers, the latter pay a deposit to the manufacturers. This deposit – or Pfand – is passed on to consumers, and then refunded when they return their bottles (Figure 40). The empty bottles are then reused or recycled. This way, people are incentivised to keep the refillable bottles in circulation, and out of the landfills.<sup>157</sup>

The Pfand system, however, does not apply in all types of bottles. Bottles that require a deposit include beer bottles, soft drink bottles (glass or plastic), aluminium cans, water bottles (glass or plastic) and all multiple use containers. The deposit can vary between 0.08 EURO and 0.25 EURO,<sup>158</sup> depending on the material used. Glass containers usually cost 0.08 EURO, plastic costs either 0.15 EURO or 0.25 EURO and aluminium costs 0.25 EURO.<sup>159</sup> On the contrary, most milk, juice and wine bottles do not have a deposit. An interesting point is that single-use bottles by law carry a higher deposit than reusable bottle, which acts as a disincentive to make them less attractive to manufacturers, leading them to reduce the use of single-use bottles in the long run.

There are return machines (Pfandautomat) near the entrance or at the back of supermarkets. When consumers put bottles into the machine, it will print a coupon, which consumers could bring to the cash register to get money back. Apart from this, liquor stores, convenience stores and charities also accept the bottles.

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<sup>154</sup> Executive Yuan. (2018) Taiwan's recycling achievements a boost for circular economy.

<sup>155</sup> HK\$8.1 (1 TWD = HK\$0.27, as of April 2021)

<sup>156</sup> Environmental Information Center. (2020) 環署與外送平台試推環保餐具 業者祭出歸還優惠.

<sup>157</sup> DW.COM. (2016) What to do about Germany's mounting packaging waste?

<sup>158</sup> HK\$0.74 and HK\$2.3 (1 EURO = HK\$9.3, as of April 2021)

<sup>159</sup> HK\$1.40 (1 EURO = HK\$9.3, as of April 2021)

Figure 40: A bottle return machine (Pfandautomat) at a supermarket in Germany



It is reported that 93.5% of all PET plastic bottles in Germany were recycled in 2015, which ended up in new PET plastic bottles, plastic sheet and film, textile fibres and other uses.<sup>160</sup>

## UK: Plastic-Free Supermarkets

Supermarkets in the UK are taking steps towards going plastic-free. With growing awareness of the effects of single-use plastic on the environment, retailers are making pledges to cut out the use of plastics in their stores.

In July 2019, a supermarket chain in the UK launched the UK's first plastic-free bag store, offering customers paper, jute and cotton bags with different charges as an alternative.<sup>161</sup> It is estimated the trial will save over 210,000 plastic carrier bags from being purchased. In 2018, the retailer became the first in the world to commit to removing all plastics from its own-label packaging by the end of 2023.

Apart from this, other supermarket chains have also launched their own trials or initiatives in selected stores on plastic reduction, for instance:

- Removing plastic bags from fruit and vegetable aisles. Customers are encouraged to bring their own containers for loose fruit and vegetables, or buy a reusable bag made from 100% recyclable materials.<sup>162</sup>

<sup>160</sup> DW.COM. (2018) Plastic bottle recycling champion: Norway or Germany?

<sup>161</sup> Edie. (2019) Iceland to trial UK's first major plastic-bag-free store.

<sup>162</sup> Retail Insight Network. (2019) Plastic-free supermarkets: What commitments are UK retailers making?

- Removing plastic wrapping from greetings cards, unwrapping swedes and removing unnecessary films, trays and windows. Trialing a new type of coating approved for use by the EU Commission on fresh produce, which could double the shelf life.<sup>163,164</sup>
- Allowing customers to fill their own containers with pasta from large jars, beer on tap and pick 'n' mix frozen fruit, doing away with packaging altogether; bring their own containers to the meat, fish or cheese counter; replacing all single use fruit and vegetable bags with a home compostable alternative; removing single use coffee cups; and ensuring all own-label cards, wraps, crackers, tags, flowers and plants are glitter-free.<sup>165</sup>

## **EU: Ban on Single-use Plastic**

In 2019, the EU approved a new law banning single-use plastic items. The following products will be prohibited from placing on the market in the EU by July 2021: single-use plastic cutlery (forks, knives, spoons and chopsticks); single-use plastic plates; plastic straws; cotton bud sticks made of plastics; plastic balloon sticks; and oxo-degradable plastics and food containers and expanded polystyrene cups.<sup>166</sup>

## **Hong Kong : Waste Reduction and Recycle Initiatives**

### ***Food Waste***

Launched in 2013, the Food Wise Hong Kong Campaign encourages the public to reduce food waste at source. The domestic food waste disposal has been reduced by 17% from 2013 to 2019. The Campaign has also gained support from public institutions and the business sector. More than 950 organisations from both public and private sectors have signed the Food Wise Charter and are committed to reducing food waste at source, while over 1,000 eateries have enrolled in the Food Wise Eateries Scheme.<sup>167</sup>

### ***Plastic-Free***

Two territory-wide promotional campaigns on reducing the use of disposable plastic tableware, namely "Plastic-Free Takeaway, Use Reusable Tableware" and "Plastic-Free Beach, Tableware First", were launched in 2018 and 2019 in collaboration with about 700 local eateries of different sizes. About 2.4 million sets of disposable plastic tableware were saved during the campaigns.<sup>168</sup>

<sup>163</sup> ASDA. Asda to remove wrapping from greetings cards, saving over 100 tonnes of plastic per year.

<sup>164</sup> Fresh Fruit Portal. (2019) U.K.: Asda first to trial plant-derived coating on fresh produce.

<sup>165</sup> BBC News. (2019) Plastic packaging: How are supermarkets doing?

<sup>166</sup> European Union. Directive (EU) 2019/904 — on the reduction of the impact of certain plastic products on the environment.

<sup>167</sup> The ENB. (2021) Waste Blueprint for Hong Kong 2035.

<sup>168</sup> Ibid.

### **Reverse Vending Machines**

In recent years, different beverage bottles redemption schemes have been introduced into Hong Kong by the business sector and NGOs. Consumers are offered cash rebate (e.g. HK\$0.1 – HK\$0.2) for every empty beverage bottle returned via the reverse vending machines (RVMs) under these schemes.<sup>169,170</sup>

In August 2020, the EPD announced it awarded a contract for a one-year pilot scheme to collect plastic beverage containers by RVMs to a local retailer, with a view to paving the way for the introduction of PRS on Plastic Beverage Containers. All the plastic containers collected will be delivered to suitable recyclers for proper treatment and recycling locally.<sup>171</sup>

## **4.4 Product Repairability and Durability**

### **UNEP: Recommendations Address Decreasing Product Lifetimes**

According to a report published by the UNEP Consumer Information Programme in 2017, studies had found a decrease on product lifetimes. A study based on Dutch data suggested that the median lifespan of most domestic appliances and consumer electronics had declined slightly between 2000 and 2005. The lifespan of mobile phones for instance decreased from 4.8 to 4.6 years (-4%), washing machines from 12.1 to 11.7 years (-3%), laptops from 4.3 to 4.1 years (-5%) and small consumer electronics from 9.4 to 7.4 years (-21%). Another German study also found that for large household appliances, the first useful service life (the period a product is used by its first user) declined from 14.1 years in 2004 to 13.0 years in 2012/13 (-8%).<sup>172</sup>

The said UNEP's report investigated several ways to extend the useful lives of products: (1) by simply using products for a longer time; (2) by extending their use through design, maintenance and upgrades; and/or (3) by recovering broken products through repair, refurbishment or remanufacturing. It put forward the following policy recommendations for product lifetime extension:<sup>173</sup>

- Legislation of law against planned obsolescence
- Setting up minimum durability criteria

<sup>169</sup> MoneyBack. Watsons Water Green Point Smart Water Bottle Reverse Vending Machine.

<sup>170</sup> World Green Organisation. "Tap, Return & Earn" Beverage Bottles Redemption Scheme.

<sup>171</sup> News.gov.hk. (2020) Bottle collection contract awarded.

<sup>172</sup> UN Environment. (2017) The Long View.

<sup>173</sup> Ibid.

- Developing product lifetime labelling
- Promoting extended product warranty
- Legislation on right to repair
- Monitoring of trends in product lifetimes
- Promoting a positive consumer attitude towards product maintenance and repair

## EU: Right to Repair

The EU introduced new rules on “Right to Repair” in March 2021 that all new washing machines, hairdryers, refrigerators and displays (including televisions) sold in EU countries must be repairable for up to 10 years. Under the new EU rules, manufacturers will have to ensure parts are available for up to a decade. New devices will also be required to come with repair manuals and be made in such a way that they can be dismantled using conventional tools when they really cannot be fixed anymore, to improve recycling.<sup>174</sup>

## France: Laws Promote Lifetime Extension

France is a pioneer in the promotion of lifetime extension. In 2015, it became the first country in the world to pass legislation (Article L441-2 and L454-6) to restrict the practice of planned obsolescence. The law stipulated that planned obsolescence refers to the techniques by which a manufacturer aims to deliberately reduce the life of a product to increase its replacement rate. It requires manufacturers and vendors declare the product's intended lifespan. Manufacturers can receive two years imprisonment and be punished with a 300,000 EURO<sup>175</sup> fine if planned obsolescence is proven. This fine may be increased in proportion to the benefits derived from the offense to 5% of the annual turnover calculated over the last three years.<sup>176</sup>

Under the new Anti-Waste Law for a Circular Economy launched in 2020, the duration of the legal guarantee for a product (i.e. the warranty period) is extended. Before such amendment, the duration of the legal guarantee for a product was two years. The new legislation provides for a 6 months' extension of the legal guarantee of conformity if the appliance is subject to repair under the legal guarantee of conformity. For instance, if a household appliance breaks down during the two-year period and if it is repaired, the guarantee shall then be extended by six months. The consumer will thus have 24 months' guarantee plus 6 additional months. The new legislation also provides that the legal guarantee of conformity will be reset on the “new appliance” for a new period of 2 years; this will be possible only once for the purchase of an appliance.<sup>177</sup>

The French measures are expected to enable consumers to keep their product longer, encourage repair, and will generate savings.

<sup>174</sup> Euronews. (2021) EU law requires companies to fix electronic goods for up to 10 years.

<sup>175</sup> HK\$2,790,000 (1 EURO = HK\$9.3, as of April 2021)

<sup>176</sup> Stop Planned Obsolescence. Understanding planned obsolescence: what it is and its challenges at a glance.

<sup>177</sup> Ministère de la Transition écologique. (2020) The Anti Waste Law in the daily lives of the French people, what does that mean in practice?

## Sweden: Tax Deduction for Repair Services

From 2017, the value-added tax (VAT) for Swedes to repair items like clothes, shoes and bicycles has been cut half, from 25% to 12%. Also, people are able to claim back from income tax half of the labour cost on repairs to appliances such as fridges, ovens, dishwashers and washing machines, up to 2,400 EURO.<sup>178,179</sup> Such policy aims to make it more affordable and economically rational to repair goods and using them for a longer time, instead of throwing them away and buying new ones, with a view to decrease waste in the landfills.

## 4.5 Promotion of Sustainable Lifestyle

Awarding credits or points to every purchase of eco-label products could be a way to provide economic incentives for consumers to practise SC. This has been proved successful and widely applied in South Korea and Taiwan.

### South Korea: Green Credit Card

The Green Credit Card was initiated by the South Korean Ministry of Environment (MoE) in 2011, which is the world's first nation-wide initiative that uses a credit card platform to provide various economic rewards for eco-friendly behaviour.

Green Credit Card users can earn eco-money points when they (i) purchase low-carbon and eco-friendly products (i.e. products certified by the South Korea eco-label, carbon footprint label, or eco-friendly agricultural certification); (ii) use public transport (i.e. bus, subway, express bus and train); and (iii) save utility rates including electricity, water, and gas. The eco-money points for the latter are calculated based on the date of the GHG emission reduction during the period of past six months compared to the average GHG emissions for the previous two years.

Cardholders could then redeem the accumulated eco-money points for cash (e.g. cash-back or use as cash at partner stores) or use for various purposes, such as point swap, buy a green product, pay public transportation fares, pay phone bill or donation to environmental funds. They are also allowed to use the public facilities such as national parks and museums free of charge or at a discount price, which further serves as a means to promote green lifestyle.<sup>180</sup>

In 2016, the Green Credit Card launched new initiatives which provides eco-money points for online shopping, for using automatic bill payment services (electricity, communications, etc.), and offer discounts for electric car charging services and the purchase of recycled automobile parts.<sup>181</sup>

The programme is a joint effort of different stakeholders. For instance, the MoE carries out overall management and supervision on the Green Credit Card system, the Korea Environmental Industry and Technology Institute (KEITI) operates the system and manage the card issuers, the payment

<sup>178</sup> HK\$22,320 (1 EURO = HK\$9.3, as of April 2021)

<sup>179</sup> The World. (2017) Sweden tries to curb buy-and-throw-away culture through tax breaks.

<sup>180</sup> KEITI. (2014) Policy Handbook for Sustainable Consumption and Production of Korea.

<sup>181</sup> The Korea Bizwire. (2016) Korean Banks Introduce Credit Card that Accrues "Eco-Points".



processing company and financial institutions establish and maintain the respective integrated digital system and issues the cards and award eco-money points, and retailers distribute eco-friendly products in stores.

As of December 2016, the number of issued cards exceeded 15 million, which was equivalent to 55% of the economically active population of South Korea. The number of eco-friendly products eligible for the Green Credit Card rewards was 1,957 and the number of participating corporations was 224.<sup>182</sup>

## Taiwan: Green Point App

The Green Point App was launched by the EPAT in 2015, with an aim to encourage green circular consumption.<sup>183</sup> App users can earn green points by three major ways: (i) purchasing green products with any of the eco-labels issued by Taiwan, including the Green Mark, the Carbon Footprint Reduction Label and the Taiwan-made Product MIT Smile logo; (ii) taking public transport; (iii) participating in eco-friendly activities organised by the local government or communities.<sup>184</sup> For example, the EPAT organised an event from July to September 2020 to promote the use of water dispensers. The event awarded participants green point when they scanned the QR code on the designated water dispensers. Participants could also take part in a lucky draw to win a set of reusable silicone collapsible bowl and cup if they took photo with the designated water dispenser and shared it on the EPAT Facebook.<sup>185</sup> The green points can be redeemed for green products, used for discounts when purchasing green products and green services, such as green hotels or eco-tours.

In 2016, private enterprises and public green procurement amount exceeded TWD63.5 billion.<sup>186</sup> In 2017, there were 106,442 members registered under the Green Point system and 515 products with eco-labels or carbon footprint labels on the market.<sup>187</sup>

## 4.6 Summary

Study into the good practices and experience of selected jurisdictions in promoting SC has suggested that the appropriate and effective use of various tools, e.g. guidelines, legislations, incentives and facilitators, can enable SC and help consumers practise SC in their daily lives. Table 9 is a summary of the policies and initiatives with respect to production information, waste reduction and recycle, product repairability and durability, and sustainable lifestyle adopted in the selected jurisdictions.

<sup>182</sup> United Nations. Green Credit Card | Republic of Korea.

<sup>183</sup> EPAT. 環保集點活動開跑！搭捷運集點 消費享優惠.

<sup>184</sup> Green Point. 認識環保集點.

<sup>185</sup> Green Point. 【跳島輕旅遊 水杯帶著走】飲水打卡送綠點、好康分享抽好禮！

<sup>186</sup> HK\$17.1 billion (TWD1 = HK\$0.27, as of April 2021)

<sup>187</sup> EPAT. (2017) 環保集點推動綠色消費.

**Table 9: Summary of the policies and initiatives adopted in the selected jurisdictions**

<p><b>Product Information</b></p>	<ul style="list-style-type: none"> <li>• <b>Australia:</b> The guide on “Green marketing and the Australian Consumer Law”, sets out principles for businesses to consider when practising green marketing, such as claims must be accurate, able to be substantiated and be specific.</li> <li>• <b>France:</b> Anti-Waste Law for a Circular Economy lays down policy on labelling to facilitate sustainable choices: prohibition of the “biodegradable” claim; make sorting more efficient through a single logo; apply a repairability index; information provision as to the availability of spare parts.</li> <li>• <b>Singapore:</b> A logo (LPRP) which enables consumers to identify products that have reduced the amount of packaging materials.</li> <li>• <b>South Korea:</b> Environmental Technology and Industry Support Act provides a legal basis to punish false eco-labels; a set of guidelines illustrates with cases the types of unfair labelling and advertising.</li> </ul>
<p><b>Waste Reduction and recycle</b></p>	<ul style="list-style-type: none"> <li>• <b>Canada:</b> Several types of single-use items, such as plastic straws and disposable cups, are banned or on which restrictions will be imposed in Vancouver, as part of the zero waste strategy.</li> <li>• <b>Denmark:</b> Deposit and refund system for beverage cans or bottles encourages recycling.</li> <li>• <b>Denmark:</b> Mobile app provides a marketplace that connects businesses and consumers, which helps rescues food waste.</li> <li>• <b>France:</b> Law that specifies the waste hierarchy in the case of food waste and prohibits large supermarkets from throwing away good quality food approaching the “best before” date.</li> <li>• <b>Germany:</b> Deposit return system (the Pfand system) encourages drinks companies to use refillable bottles and consumers to return their bottles for recycling.</li> <li>• <b>Japan:</b> EcoBuy App pilot project gave incentives in the form of points to consumers for purchasing foods that were close to the best-before dates or expiration dates. Other apps are also available to facilitate consumers’ contribution in food waste reduction.</li> <li>• <b>Luxembourg:</b> Deposit-return scheme for takeaway containers promotes consumers to use reusable containers.</li> <li>• <b>Singapore:</b> Mandatory packaging reporting requires regulated businesses to submit annual reports on the types and amounts of packaging they put on the market, which helps promote packaging waste reduction.</li> <li>• <b>South Korea:</b> VBWF system imposes a fee on households and small sized commercial enterprises for the waste they disposed of. Prohibition on sending of food waste to landfills.</li> <li>• <b>Switzerland:</b> Charges are imposed on garbage disposal to promote recycling.</li> <li>• <b>Switzerland:</b> Interactive map of recycling points provides useful information in facilitating consumers to drop off recyclables.</li> <li>• <b>Taiwan:</b> Waste Disposal Act obligates household to separate waste. The 4-in-1 Recycling Programme uses recycling, clearance, and disposal fees collected from manufacturers and importers to establish a Recycling Fund, which subsidises the recycling disposal system.</li> <li>• <b>Taiwan:</b> Trial programme aimed to reduce container waste of food delivery services through collaboration with a food delivery company.</li> <li>• <b>The UK:</b> Supermarkets’ initiatives in reducing plastic wastes.</li> </ul>

**Table 9 (Cont'd): Summary of the policies and initiatives adopted in the selected jurisdictions**

<p><b>Product Repairability and Durability</b></p>	<ul style="list-style-type: none"> <li>• <b>France:</b> Legislations which restrict the practice of planned obsolescence; and extend the duration of the legal guarantee for a product.</li> <li>• <b>Sweden:</b> Tax deduction for repairing services (i.e. clothes, shoes, bicycles and appliances)</li> </ul>
<p><b>Sustainable Lifestyle</b></p>	<ul style="list-style-type: none"> <li>• <b>South Korea:</b> Green Credit Card awards users eco-money points when they (i) purchase low-carbon and eco-friendly products; (ii) use public transport; and (iii) save utility rates including electricity, water, and gas. The eco-money points can be redeemed for cash or use for various purposes.</li> <li>• <b>Taiwan:</b> Green Point App awards users green points when they (i) purchase green products; (ii) take public transport; and (iii) participate in eco-friendly activities. The green point can be redeemed for green products, used for discounts when purchasing green products and green services.</li> </ul>



## Recommendations

- 5.1 Drivers for Behavioural Change of Consumers
- 5.2 Role and Responsibility of Business
- 5.3 Role and Responsibility of the Government
- 5.4 The Way Forward

From this Study, the Council has identified key drivers for behavioural change of consumers, and the roles and responsibilities of businesses and the Government in encouraging practise of SC. Below is a list of recommended actions the Council puts forward for stakeholders' consideration:

### **Drivers for Behavioural Change of Consumers**

- **Nurture SC understanding and culture through public education and creation of support platform**, which develops a sense of SC and proper recycling manner among consumers in their daily lives;
- **Strengthen availability and choice of products and services with relevant incentives to encourage consumption**, to enlist support from the public in practising SC; and
- **Rebuild recycling habit by convenient, stringent and transparent waste management system**, which shows tangible effects of recycling efforts and in turn restore consumers' confidence in recycling.

### **Role and Responsibility of Businesses**

- **Adopt sustainable principles along the value chain**, from production to end-of-life disposal, which ensures resources circulation and provides sustainable options to consumers;
- **Provide accurate information about the sustainability of products and services**, which facilitates consumers to make an informed choice; and
- **Set measurable sustainability targets and roadmaps**, which drive corporates' changes towards sustainable production.

### **Role and Responsibility of the Government**

- **Promote research in advancing SC related patterns**, which provides fundamental data for review and development of policies;
- **Establish long-term and holistic policy to foster recycling and sustainable industry**, which enables the sustainable and prosperous development of local recycling industry and provides funding or incentives to recognise achievements and contributions of businesses; and
- **Introduce legislation and enforcement measures to achieve specific SC goals**, for instance regulation of environmental labelling, single-use plastics and "right to repair".

Through this Study, the evolution of consumers' knowledge, attitude, behaviour and readiness towards SC, the recent Government SC policies and initiatives, as well as the latest global trends and good practices in promoting SC are reviewed.

It is found that while consumers' awareness, attitude, behaviour and readiness towards SC have improved, albeit mildly in general, over the past five years, there is still a gap between consumers' awareness and behaviour in reality, and that multiple barriers are holding consumers back from implanting SC concept and action in their daily living. Study into experience and initiatives of selected jurisdictions has suggested that by way of various efforts, for instance provision of information, incentives, convenience, product availability and holistic and visionary policies and strategies, such gap could be narrowed and consumers' habit in SC could be developed.

This Chapter puts forward the Council's recommendations for the consideration of stakeholders, with a view to address barriers experienced by consumers to practise SC, and to promote consumer behavioural change to cultivate sustainable living through the support and motivation by the Government and businesses, for instance information and incentives provision, policy and reinforcement, product design, distribution and warranty. With appropriate use of information technology, some initiatives might be optimised. Proposals listed are not meant to be exhaustive, but attempt to stimulate discussion among stakeholders.

## 5.1 Drivers for Behavioural Change of Consumers

To develop Hong Kong into a more sustainable city, it is obvious that changes are needed for the society, which involve efforts from all stakeholders and at all levels of human and business activities. This Section explores, from the perspective of consumers, key drivers for behavioural change to meet the vision. Such drivers are identified as facilitating consumption choice and recycling management.

Consumption choice could be flourished by increasing product or service availability. Meanwhile, such products or services must also be provided with clear and accurate description as to their sustainability nature and be offered at a reasonable price. The former ensures that consumers are empowered to make an informed choice; while the latter provides sustainable products or services at an affordable price so that the wider population could enjoy and participate in sustainable living.

Consumer habit in waste reduction, separation and recycling could be promoted by provision of information and incentives, as well as rebuilding of recycling behaviour by strengthening their confidence in waste management policies and infrastructure.

In presenting the Council's recommendations, the coming Sections recap the key identified barriers for consumers in practising SC as gathered from the consumer research and corresponding recommendations to address these barriers to drive consumer behavioural change.

### Nurture SC Understanding and Culture through Public Education and Creation of Support Platform

As mentioned in Chapter 3, only close to one-fifth of the respondents reckoned themselves fully understand or quite understand the concept of SC, while the majority of them were not familiar with the concept. Consumers in focus groups also reflected that they rarely heard about "SC" in



daily life, or had only learnt little about it in schools. In comparing to other occupation groups, more retirees and homemakers reflected that they did not know how to recycle or separate waste, it was not easy for them to do so on their own.

**Recommendation (1):** To nurture consumers' understanding on SC and develop a SC culture in the society, the Council recommends that public education on this aspect should be strengthened. For instance, more consumer awareness and education campaigns could be launched; practical guide which is presented in a simple and easy-to-understand manner on resources saving, waste separation and recycling (in particular what kinds of materials could be recycled, how to do waste separation and where the recyclables could be put into), and meanings of environmental labels could be issued; regular information on the impact of consumer behaviour on the eco-system could be disseminated to keep consumers aware of the importance of practising SC and the outcome of their efforts.

Besides, in order to instil SC value in our children at a young age to build a strong sense of responsible consumption, the Government may strengthen the education about SC at schools. The Council is aware that the EDB has all along infused elements of sustainable development into the curriculum of various subjects at different levels of schools, from kindergarten to secondary, and that the EDB has also been cooperating with various government departments and NGOs in organising various types of activities for students, such as the "Student Environmental Protection Ambassador Scheme" and "The Hong Kong Green School Award". These are good foundation. However, in view that the recycling behaviour of students (e.g. on plastics, metal, glass and small home appliances) was less frequent than the other occupation groups and a third of the students said they thought it was not necessary to purchase sustainable products or services as reflected by the consumer research, the Council suggests the Government and education community to explore the gap between student's awareness and behaviour on SC and the way which may help bring academic theory into practice in daily life effectively, e.g. encourage students to consider product life cycle and sustainability in daily consumption and practise reduce, reuse and recycle.

To facilitate consumers to enquire, search and receive relevant information, the Council also proposes that a single and easily accessible platform be developed. Apart from the above-mentioned information, such platform should provide a quick-to-respond, if not immediate, mechanism for consumers to enquire for the types and ways to recycle their waste at home. To share effectiveness and success in waste management efforts, the platform may also consolidate various SC-related information, for instance to report the progress of the city's development such as, resources usage and waste statistics, for consumers' easy reference.

## Strengthen Availability and Choice of Products and Services with Relevant Incentives to Encourage Consumption

Consumer research found that more than one-third of the respondents perceived the availability of sustainable products were limited in the market. 36% of the respondents thought such products were not enough or not enough at all. Without sufficient and suitable supply of products or services, consumption could be limited even though consumers have a good sense in practising SC. Whereas, overseas experience suggests that effective use of incentives could help promote SC as a lifestyle and put SC actions into habit.

**Recommendation (2):** The market should provide more suitable products and services which are produced or provided along the principle of sustainable consumption and production. To this end,

the business sector has a role to innovate and introduce more sustainable products and services into Hong Kong. To accelerate the development, the Government has its responsibility to offer the right policies and support to the business sector. Relevant recommendations will be illustrated in more detail in later Sections.

As for the provision of incentives, taking reference from South Korea's Green Credit Card and Taiwan's Green Point App, the Council recommends the point-saving and redemption of the Government's existing GREEN\$ Electronic Participation Incentive Scheme be modified and expanded to attract consumers' participation in the scheme and in turn promote consumer behavioural change. For instance, the scope of benefits with which consumers could enjoy from the earned reward points could be more relevant to the interest of consumers, e.g. apart from the current handful types of daily necessities, groceries and eco-products such as bamboo pulp tissue paper, towels, and eco-bags, redemption may be extended to cash, coupons, discounts for purchasing sustainable or environmentally friendly products or services. Besides, the use of such points to pay for public transport and for tax reduction should be explored to integrate SC behaviour into people's daily lives.

Furthermore, the scope of behaviour by doing which consumers could gain reward points from may also be expanded. For instance, apart from the behaviour of taking recyclables to the recycling outlets, it is worth exploring the feasibility of awarding points to other SC behaviour as well, such as purchase of sustainable or environmentally friendly products or services, save utility rates, etc.

## Rebuild Recycling Habit by Convenient, Stringent and Transparent Waste Management System

As reflected by the SCI, there is a general improvement in all the sub-indexes, except that of "Recycling Behaviour" under "Consumers' Behaviour and Readiness", which remains unchanged. While the percentages of respondents who always or usually recycled the four recyclables, which were asked in the baseline and the current surveys (i.e. paper, plastics, metal and glass), remain stable; it is worth noting that the percentages of respondents who never or seldom recycled paper and plastics have actually increased in this survey. In other words, it may imply that less consumers are participating in recycling as compared with five years ago. Apart from the obstacles of "recycling outlets not enough or far away from home" and "laziness/troublesome", focus group participants also expressed their lack of confidence in the current recycling management system. On one hand, they suspect that the recyclables are dumped into the landfills; on the other hand, they are unsure whether the recyclables are actually recovered into valuable secondary raw materials. They need to see their efforts put in recycling are not in vain and can lead to a positive and meaningful outcome.

**Recommendation (3):** Firstly, to address the issue of convenience, the Council recommends that the recyclables collection network, in terms of both quantity and location, be substantially expanded and easily searchable online. The three-coloured waste separation bins located at roadsides and housing estates only collect a limited type of recyclables. The Government has set up 22 Recycling Stores, which collects more types of recyclables, in 18 districts across the territory starting from 2020. Riding on this foundation, the number, scale and size of the Recycling Stores have to increase to make it more convenient for consumers.

Secondly, in restoring consumers' confidence in recycling management system, the monitoring work on the performance of contractors of the recyclables collection services, in particular for those three-coloured waste separation bins, should be strengthened. More stringent requirements

should be set to ensure the recyclables are collected properly and delivered to downstream recycling facilities, instead of dumping at landfills together with other garbage. The EPD's initiative of "Bigger Capacity, Easy Reporting" launched in September 2020 is a good start and its effect remains to be seen.

Lastly, in response to consumers' aspiration in seeing tangible outcome of their efforts, information as to the quantity of the recyclables collected from various sources, in particular the three-coloured waste separation bins and the collection outlets (e.g. Recycling Stations, Recycling Stores and Recycling Spots) where consumers can participate, and the quantity of recyclables transferred outside Hong Kong and sent to local treatment plants, as well as the quantity of recovered materials and their usages, should be properly recorded and disseminated through public accessible channels, such as the support platform as proposed in Recommendation (1), on a regular basis.

Apart from adopting the strategy of educate, facilitate and reward, the Council strongly believes that the availability of big data technology can help to track and analyse the SC behaviour at individual level and aggregate for difference analysis to support SC development in the long-run.

## 5.2 Role and Responsibility of Businesses

As mentioned in previous Sections, consumers perceived there was a lack of sustainable products and services. Businesses may grasp this opportunity and response to such demand. The below Sections set out key findings and recommendations in relation to the role and responsibility of businesses in promoting the availability of sustainable products and services, through transformation in different stages of the supply chain, provision of sustainability information and formulating sustainability strategy and targets.

### Adopt Sustainable Principles Along the Value Chain, from Production to End-of-life Disposal

Consumer research found that 55% of the respondents were concerned about whether the product was excessively packaged and 48% of the respondents gave priority to products with simple or environmentally friendly packaging or even without packaging. 70% of the respondents avoided buying single-use products. 73% of the respondents were willing to repair broken appliances. However, focus group participants also expressed that they did not always patronise repairing services due to bad experience and unreasonable price. All these findings suggest that there is a genuine demand on sustainable products and services.

**Recommendation (4):** In enhancing the availability of sustainable products and services, the Council recommends that concepts of circular economy, optimal use of resources and waste reduction should be adopted in all production stages and along the value chain, for instance, from design, production, sale and distribution, product lifespan to collection, disposal and recycling of end-of-life products. Novel sustainable products may require extra resources at development stage thus increase their costs. However, sustainable products are not necessarily more expensive. A reasonable price may attract consumers to buy these goods and in turn helps the market to grow. Developing the SC market does not mean to cannibalise the existing market, but to open up a new arena to meet the future need of consumers and the city. At the same time, provision of incentives

and convenience that save resources and minimise waste could also encourage consumers' participation in SC. Examples of actions which the businesses could explore may include the followings:

- Shift to sustainable production: Phase out single-use plastics. If single-use items are unavoidable, use materials that are biodegradable or recyclable. Shift from a linear “take-make-waste” model of production, to one that follows a “take-make-use-reuse” model that turns resources into products, then back into resources again. Improve product designs to facilitate recyclability. Reduce the use of raw materials in production, e.g. recycled polyethylene terephthalate (PET) and high-density polyethylene (HDPE) can be used in primary packaging by retailers and manufacturers for bottles and trays; recycled PET bottles (e.g. soft drink and water bottles) can be used to make polyester fleece clothing and polyester filling for duvets. Shift to sustainable alternatives, such as using sustainable palm oil or sustainable seafood as raw ingredients of food products (e.g. emulsifiers).
- Provide sustainable options: Facilitating consumers to bring their own containers when ordering takeaways (e.g. by offering incentives); adopting make-to-order strategy, using simple, reusable and/or refillable packaging, changing the opt-out regime to opt-in regime when it comes to the provision of disposable cutlery for takeaways. Provide more shelf space for sustainable goods and set up designated area at stores, reference may be taken from the UK's supermarkets' initiatives as mentioned in Chapter 4.
- Provide end-of-life products collection services: Taking reference from the Taiwan's pilot project with an online food delivery company, businesses may use reusable food containers and arrange collection services or set up convenient collection points for consumers to return the used and cleaned food containers after meal. Such waste collection services may also be extended to other types of businesses, such as online shopping carton boxes and packaging.
- Extend product lifespan and provide affordable repairing services: Taking into consideration product durability at the design stage and make spare parts available for replacement. With limited manufacturing activities, Hong Kong imported most of its products. In this connection, good warranty services are the key to extend product lifespan and waste reduction.

According to a test report on air conditioners published by the Council in April 2021, of the 14 models tested, 11 of them only provided a full warranty period of 1 year, while only 3 models offered a 2-year warranty period. As for the warranty period of the compressor in the air conditioner, half the models offered a 5-year warranty, while the remaining 7 models only offered 1 or 3 years of warranty. After the warranty period, the annual warranty renewal fee ranged from HK\$620 to HK\$1,500, a difference of 1.4 times. The model with the highest annual warranty renewal fee only offered an initial warranty period of 1 year, while its annual warranty renewal fee amounted to 13.8% of the cost of a new machine (HK\$10,830). Such relatively high cost may dampen consumers' incentive to renew the warranty. The Council urges that businesses should provide warranty and maintenance services which are easy to access and at a reasonable price, so as to optimise the use of resources and reduce waste.

## Provide Accurate Information about the Sustainability of Products and Services

Lack of information is the hurdle always mentioned by consumers which hinders them from taking up more sustainable actions. Consumer research found that more than two-thirds of the respondents were willing to do more if they had more information. Apart from information about how to do recycling as mentioned above, consumers are also looking for product information. When asked the reasons why they did not usually purchase sustainable products or services, “not enough information” was the top reason chosen by the respondents.

**Recommendation (5):** The Council recommends that information about the sustainability of the products and services should be provided. Such description should be reliable, useful, appropriate and substantiated, but not ambiguous or misleading. Environmental labels certified and accredited by third party should be applied. Equally important is to strengthen the transparency of the whole value chain, making information about the origin and sustainability of raw materials, processing and production transparent. Relevant training to frontline staff should also be available to offer accurate and objective information, so as to assist consumers to understand the claims of the products such as the environmental labels, the sustainability features and the efforts done by the businesses to make it more sustainable. With the help of information technology, businesses may also provide production information and labels in a more friendly and convenient way, as well as allowing consumers to receive updates on the products.

## Set Measurable Sustainability Targets and Roadmaps

Consumer research found that almost 6-in-10 of the respondents were willing to give priority to companies which embraced environmental protection and sustainability. Similarly, nearly 7-in-10 of the respondents expressed they were willing to commit more in SC if businesses do more on sustainability.

**Recommendation (6):** To drive for change, it is worthy for businesses to set clear targets and roadmaps. On one hand it can promote changes and track progress of the corporate; on the other hand it can show consumers its ambition and commitments in sustainable consumption and production. The followings outline relevant steps for stakeholders’ consideration:

- Review the sustainability status of the current business model, production line and value chain;
- Set sustainability strategy and targets, which should be practical and measurable;
- Conduct training to staff;
- Disseminate targets to the public;
- Monitor progress through third party assessment and make necessary corrections; and
- Report progress and explain irregularities on a regular basis.

## 5.3 Role and Responsibility of the Government

There is an indispensable role for governments worldwide in creating sustainable societies and shaping their consumption patterns. Governments can have a strong influence on consumption and its impacts, through their own procurement and through policy measures aimed to incentivise sustainable practice and/or penalise unsustainable practice. Public policy tools promoting sustainable consumption and production could be aimed at enabling the markets (e.g. regulations, taxes, subsidies) or the systems (e.g. labels, communications, education, public procurement). Appropriate use of information and smart technologies and new media can also maximise the efforts of policy tools. The below Sections present recommendations, supplemented with reference on good practices from selected jurisdictions as appropriate, in relation to the role and responsibility of the Government in nurturing behavioural change of consumers and ensuring sustainable production and responsibility of businesses.

### Promote Research in Advancing SC Related Pattern

By leveraging on advancement in information technology, initiatives can become more efficient, effective and convenient. Examples of Japan's various smartphone applications in facilitating consumers' contribution in waste reduction and South Korean's application of RFID technology in waste management as mentioned in Chapter 4 are valuable references. Apart from that, basic research on resources usage and waste generation patterns, sustainability of current production and consumption patterns, as well as advanced technology enabling SC, can provide valuable data and ideas for discussion and development of policies and action plans, driving changes towards sustainable production models, provide sustainable alternatives to consumers and motivate them to support SC behaviour.

**Recommendation (7):** The Government should invest more in studies, investigations and innovations which help the promotion of SC pattern. Such researches are not necessarily being conducted solely by the Government itself, on the contrary, more funding mechanisms should be made available to encourage involvements from all stakeholders (e.g. businesses, NGOs, academia). Currently, the Government has set up two relevant funds, namely Recycling Fund and Green Tech Fund. The former aims to support the sustainable development of the recycling industry; and the latter funds research and development projects which help Hong Kong decarbonise and enhance environmental protection. The Council recommends setting up more different types of funds or expand the existing funding schemes to support research of different nature and scope. Scope of research may include:

- Patterns (on top of existing statistics reporting for surveillance purpose) of resources usage, of different community and business activities;
- Patterns (on top of existing statistics reporting for surveillance purpose) of waste generation, of different community and business activities;
- Sustainability of existing products and services in the local market (e.g. how sustainable is the packaging of products, how well businesses are doing with respect to sustainable consumption and production); and



- Innovative technology for producing sustainable products and services; advance waste management and promote behavioural change of consumers, apart from the current objectives of the Green Tech Fund.<sup>188</sup>

## Establish Long-term and Holistic Policy to Foster Recycling and Sustainable Industry

The followings set forth recommendations on possible approaches for a long-term and holistic policy to foster the recycling industry, which may include multiple elements, for instance, regulation, infrastructure, incentives, levies and/or subsidies.

According to a survey<sup>189</sup> on European recyclers, the top factors which could improve overall business willingness were considered as government intervention, such as mandates for recycled content; public awareness and a shift in mindset to increase the acceptance of recycled material; and competitive pricing with virgin plastics – for example, through taxes levied on virgin materials or subsidies for the use of recyclates.

**Recommendations (8):** The followings put forward the Council’s recommendation on possible directions for establishing a long-term and holistic policy to foster recycling and sustainable industry:

- Establish mechanisms to foster recycling, directing the flow of recyclables, from disposal, collection to recovery. Such mechanisms may include deposit refund systems (or rebate systems), extended PRS, recycling mandates, collection and waste-to-resources infrastructure, and for special areas to impose levies and/or subsidies. Currently, regulated Waste Electrical and Electronic Equipment (WEEE) is turned into valuable secondary raw materials by WEEE•PARK. The Government has planned to invite open tender in the first half of 2021 for the development of a modern pulping facility in EcoPark to turn waste paper into resources. The Council suggests that more treatment plants could be built to reuse glass bottles and plastic bottles. As for PRSs, apart from PRS on glass beverage containers which subsidiary legislation for the operation details is being set out and the PRS on plastic beverage containers which has finished public consultation recently, the Council suggests, besides expanding the scope of containers regulated under the above PRSs, further PRS could be explored, such as Tetra Pak carton boxes, food containers and packaging materials of other types of goods.
- Improve quality of recycled materials and create market. The Government may invest in technologies such as AI and higher-quality washing systems which can improve sorting and the quality of recycled materials, making them more competitive with virgin plastics. Fund support and policy may be laid down to create a common marketplace for both raw materials and recyclates, thereby creating more liquidity and providing more supply and demand security for recyclers and their customers.

<sup>188</sup> R&D and application of decarbonisation and green technologies, expedite low-carbon transformation and enhance environmental protection in Hong Kong (Priority areas: decarbonisation and energy saving, green transport, waste management and air and water quality).

<sup>189</sup> McKinsey & Company (2020). The European recycling landscape—the quiet before the storm?

- Provide funding or incentives to entrepreneurs that have adopted sustainable production policies, introduce, produce or provide sustainable products or services, and to recognise their achievements and contributions.

## Introduce Legislation and Enforcement Measures to Achieve Specific SC Goals

Taking reference from Australia and South Korea where legislation and guidelines are in place to improve the accuracy and usefulness of environmental claims; and to combat deceptive labels; France where there are laws to promote product lifespan; and from Australia and EU where legislations are enacted to ban single-use plastics and ensure “right to repair”, the Council recommends the Government, as an effective strategy, to consider introduce legislative instruments and enforcement measures to help achieve specific SC goals in the long run.

**Recommendation (9):** The followings put forward the Council’s suggestions on legislations in specific areas. Comprehensive feasibility studies, impact studies and consultations should be conducted. In some cases, incentives or subsidies may be provided for businesses to help them to transform and seek alternatives.

- Combating green washing and misleading labelling, description and advertising about the sustainability of products or services.
- Regulating single-use plastics. In Hong Kong, the most common plastic waste being shopping bags, disposable tableware, beverage containers and other sorts of packaging materials. As a start, the Government may consider ban single-use plastic straws, cutlery and utensils for takeaways and dine-in at eateries in a progressive manner.
- Making repair of goods easier and cheaper. Producers should be required to provide repairing services and have spare parts available for specific products for a reasonable period of time (e.g. at least 10 years for commonly used household electronic appliances, such as washing machines, refrigerators and televisions, taking reference from EU’s new legislation on “Right to Repair”). Repairing services should be easily accessible, reliable and at a reasonable price (e.g. cheaper than buying a new model). Minimum warranty period (e.g. at least 2 years, taking reference from French legal guarantee) should be mandated in order to extend product lifespan and reduce waste.

## 5.4 The Way Forward

In summary, this Chapter sets out a list of recommendations for the consideration of stakeholders. The recommendations comprise of three dimensions: drivers for behavioral change of consumers through the perspective of consumers based on the findings of this Study; role and responsibility of businesses in enabling available sustainability choices; and role and responsibility of the Government in enlisting support from consumers in practising SC and nurturing sustainability businesses.

The 9 recommendations as presented in this Chapter is the result of a rigorous study in tracking consumers’ knowledge, awareness, behaviour and readiness towards SC; exploring the good

practices from selected jurisdictions in promoting SC; and reviewing current SC related initiatives and policy in Hong Kong.

This Study's findings reveal that there is still a gap between consumers' awareness in SC and their behaviour in reality. Although consumers' awareness and attitude towards SC have improved, albeit mildly, multiple barriers have held them back from putting their beliefs into action by making purchasing decisions or doing recycling consistent with their concern for the environment. And such barriers, despite a series of new initiatives and measures were implemented in the market, have not been well addressed over the past five years since the Council's baseline survey on the same topic. Among other things, recycling behaviour is identified as the top issue which needs immediate review for improvement. Our city needs to take effective actions to change the status quo to achieve SC.

Changing the way we consume will require individual consumers to adjust their lifestyles, businesses to opt for sustainable consumption and production to provide consumers with sustainable products and services, and the Government to set up holistic policy to provide the infrastructure and support that allow consumers to consume less to reduce wastage or consume more sustainably. While the impact of COVID-19 on our daily lives and business activities will continue to evolve, the opportunities and pressing needs of building resilience in a sustainable way is definite. Product and service providers, recyclers, consumers and the Government each have a role to play, they are equally important and interrelated stakeholders in achieving SC. Quick, decisive and effective responses will certainly help the city to develop a sustainable future and remain its competitiveness.

The Council will continue to undertake its role as advocate of SC; it will also inform and educate the public on SC-related information, including but not limited to disseminating information about sustainability of products and services through product comparative tests and market surveys. The Council will also stay in close dialogue with international and local counterparts and keep in view the latest development of SC-related initiatives across the globe. Concurrently, the Council will continue to participate in discussions about local SC policy and measures, for instance through submission of responses to the Government's consultations. Effective and timely evaluation of consumers' evolution on awareness and behaviour towards SC is essential for assessing effectiveness of stakeholders' efforts and measures, the Council is committed to continue its tracking study on the same topic in future where resources are available. The Council believes that with joint efforts of all stakeholders concerned, a SC culture will be fostered and such behaviour will be realised for sustainable development of Hong Kong.



## Annex 1: Examples of Major Environmental and Low-carbon Policies and Initiatives Launched by the Government in Recent Years

Below is a list of examples of the Government's initiatives launched in Hong Kong and their development in recent years. This list is not exhaustive and only include major items and those related to consumers which have come to the Council's attention during the course of this Study.

It is generally observed that, in view of the waste issue in the city, numerous recent initiatives have been rolled out by the Government to promote waste reduction and recycling. However, the effectiveness of such initiatives on achieving the MSW reduction goals remains to be seen. Whereas, although there are fewer recent initiatives on energy saving targeting general consumers, the city's performance on energy saving is largely on track to the Government's targets, which might be probably resulted from the initiatives targeting at commercial sector, which is the biggest user of energy.<sup>190</sup> Also, more efforts on promoting carbon reduction and enhancing biodiversity will be needed.

### Reducing waste at source

#### **"Food Wise Eateries" Scheme**

Started in 2015, application to the scheme is open to food eatery outlets in the hotel and food & beverage sectors to reduce food waste at source together with customer through offering portioned meals and adopting food waste reduction measures. Participants of the scheme will be awarded by the EPD with a Food Wise Eateries (FWE) accreditation status if they comply with the assessment criteria and will be granted with the FWE Logo and Stickers for displaying in the premises and their promotion for public identification.

As of February 2021, there are more than 1,100 participating eateries.

#### **Cessation of dispensing bottles of water measuring 1L or less in government venues**

Since February 2018, sale of plastic bottled water 1L or less has been prohibited gradually in automatic vending machines in government venues such as sports centres and swimming pools. The Government will install more water dispensers in government venues to encourage venue users to bring their own bottles. The target is to install 500 water dispensers in three years from 2018, and to increase the total number of water dispensers for public access in government venues to 3,200 units by 2022.<sup>191</sup>

Yet, it has been reported that *Escherichia coli* and *Staphylococcus aureus* were detected in some water samples taken from the water dispensers in government venues, arousing public concern about the quality of water from these venues. Whereas the ENB addressed that the quality of the water supplied to the connection point at the building/lot boundary by the WSD conforms with

<sup>190</sup> Some recent initiatives targeting the commercial sector, building and school include Energy Efficiency Registration Scheme for Buildings; 4T Charter (a partnership with major stakeholders in the built environment under the 4T framework, namely target, timeline, transparency and together, under which the 4T partners are encouraged to set their energy saving targets and timelines and to share their existing and planned energy saving measures); Charter on External Lighting; Green Schools 2.0 - Energy Smart.

<sup>191</sup> Legislative Council. (2020) Panel on Environmental Affairs-List of follow-up actions.

the Hong Kong Drinking Water Standards, and that water safety precautions and regular cleaning and maintenance are carried out to ensure water safety.

### **Reusable Tableware Lending Programme**

This programme, launched by the ECC and the EPD in December 2018, involves lending reusable tableware to large-scale event organisers for free to promote the green practice of going plastic-and-disposable-free, and to enhance public awareness of the adverse environmental impacts caused using disposable plastics waste.

As at March 2019, more than ten event organisers had applied for the lending service. The chairman of the ECC expected that more than 100,000 pieces of disposable tableware could have been saved per year. Unfortunately, the programme was suspended during the outbreak of COVID-19.

### **“Plastic-Free Takeaway, Use Reusable Tableware” Campaign**

The campaign, launched by the ECC and the EPD, aims to encourage members of the public to go plastic-and-disposable-free for takeaway orders to reduce the use of disposable plastic tableware. Under the campaign, members of the public can collect stickers, for the redemption of stainless-steel cutlery or complimentary offers/gifts, for the takeaway orders made at the participating restaurants without obtaining disposable tableware (Figure 41).

The first phase of the campaign was held as a pilot programme at the three major fast-food chains in Hong Kong with over 400 eateries across the territory for two months in 2018-2019. Second phase of the campaign was launched at nearly 700 eateries for two months in 2019. The EPD is reviewing the implementation of the promotion programme and its operational experience to consider further collaboration in promoting reduced use of disposable plastic tableware.

**Figure 41: Stainless-steel cutlery**



Source: ECC<sup>192</sup>

<sup>192</sup> ECC. “Plastic-Free Takeaway, Use Reusable Tableware” Campaign.



## Recycling

### Recycling Stations (formerly known as CGS)

The CGS project was initiated by the EPD in 2014 to encourage clean recycling through environmental education and community partnership, and assists local communities in the collection of various recyclables.

It was expected in 2014 that 18 CGSs will be built by 2017. Yet, currently there are only 9 Recycling Stations in operation as the EPD had encountered challenges identifying suitable sites for Recycling Stations (Figure 42), whilst two more Recycling Stations are undergoing tender exercises. Among the existing Recycling Station, some of them are relatively remote to the district centres, such as GREEN @ YUEN LONG, GREEN @ KWAI TSING and GREEN @ TAI PO which are around 26-30 minutes of walking distance from the closest MTR stations and such might have a negative impact on the popularity of the Recycling Stations.

Figure 42: Recycling Station



### Recycling Stores and Recycling Spots

The EPD also provides recycling facilities at more convenient locations in the form of Recycling Stores and Recycling Spots (Figures 43 and 44). Starting from 2020, the EPD has engaged non-profit making organisations in setting up 22 Recycling Stores in 18 districts across the territory, and it has also set up over 100 Recycling Spots at regular location and weekly time schedule since the 4<sup>th</sup> quarter of 2020 to facilitate and encourage the public to practice source separation of waste and clean recycling.

As of the date of this Report, there are 22 Recycling Stores in operation, and 17 more would commence operation in the 4<sup>th</sup> quarter of 2020. For the Recycling Spots, save for less of a dozen of them which are still under preparation, a majority of them are in service.

Figure 43: Recycling Store



Figure 44: Recycling Spot

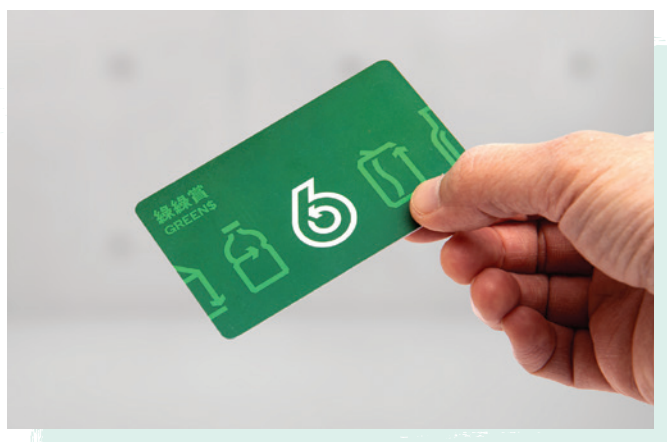


### Reduce and Recycle 2.0 Campaign

With the expansion of the network of the Recycling Stores and Recycling Spots as a part of the campaign, the EPD is expanding its recycling network through the addition of outlets covering all 18 districts in the city by setting up new recycling points in the community and the collection of more recyclable types, including glass bottles, fluorescent lamps and tubes, rechargeable batteries, small electrical appliances, and regulated waste electrical and electronic equipment.

An incentive scheme, namely GREEN\$ Electronic Participation Incentive Scheme, was also launched in November 2020 to enable the public to earn electronic reward points and redeem gifts with their GREEN\$ smart cards (Figure 45) through its smart recycling system pilot programme. The scheme applies at Recycling Stations, Recycling Stores, Recycling Spots and the Community Smart Recycling Vehicle.

Figure 45: GREEN\$ smart card



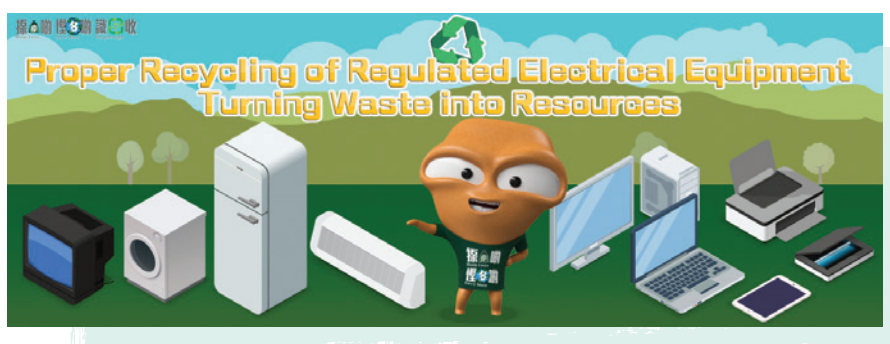
### Producer Responsibility Schemes (PRS)

PRS is a policy tool in the waste management strategy in Hong Kong. The Government has implemented the PRS on Waste Electrical and Electronic Equipment (WPRS) and the PRS on Glass Beverage Containers.

#### WPRS

The scheme was introduced in 2018 and it covers the regulated electrical equipment (REE) (i.e. air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors)(Figure 46). The WPRS provides recycling channel to users and consumers of REE, and that sellers of REE have to fulfil certain statutory obligations such as arranging statutory removal service for consumer. Also, suppliers of REE are required to be registered and pay recycling levy, and recyclers of REE must obtain a waste disposal licence for storage, treatment, reprocessing or recycling of abandoned REE; a permit is also required for import and export of e-waste.

Figure 46: Banner of WEEE recycling programme



Source: The EPD<sup>193</sup>

<sup>193</sup> The EPD. Archive page for the past waste reduction programmes held by the EPD.

### PRS on Glass Beverage Containers

The Government has appointed glass management contractors to undertake the waste glass containers collection and treatment services across the territories. As stipulated in its consultation document, the EPD expected that about 70% of all waste glass beverage bottles generated (i.e. about 38,000 tonnes) annually on the basis of 2011 figure, can be recovered.

The EPD is working on the necessary subsidiary legislation to set out the operation details for the implementation of the PRS for submission to Legislative Council for scrutiny.<sup>194</sup> The EPD launched the Glass Container Recycling Charter in January 2019 inviting the community to join hand in promoting glass container recycling paving way for the full implementation of the PRS on glass beverage containers.

### PRS on Plastic Beverage Containers

The EPD released a consultation paper in February 2021 on the PRS on Plastic Beverage Containers (PPRS) for the proper management of waste plastic bottles. The PPRS proposed a recycling levy to be collected at the beverage supplier level (including manufacturers and importers) to help recover the operation costs of the Scheme. It suggested that certain retail stores selling plastic-bottled beverages serve as collection points to enable the public to return used plastic beverage containers. The plastic beverage containers collected will then be supplied to local recyclers for proper recycling, turning the containers into marketable recycled materials. Furthermore, the proposed PPRS included the provision of rebates to encourage the public to return used plastic beverage containers.

### **Waste Paper Collection and Recycling Services**

The EPD rolled out waste paper collection and recycling services programme in September 2020 by engaging contractors through service contracts to collect waste paper from the street corner recycling shops/mobile recyclers/frontline collectors across the territory at a rate not less than HK\$0.70 per kg for further processing. Qualified waste paper would then be exported to the Mainland China or overseas markets for recycling to paper products, thus turning waste into resources.

## **Energy Saving**

### **The Fourth Phase of the MEELS**

To further facilitate the public in choosing energy efficient appliances and raise public awareness on energy saving, the EMSD has introduced the third phase of MEELS, which has been fully implemented since 1 December 2019. The MEELS now covers eight types of products, namely room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines, dehumidifiers, televisions, storage type electric water heaters and induction cookers (Figure 47).

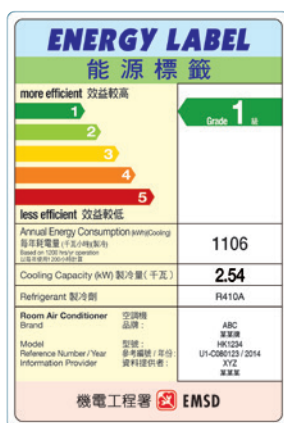
Taking effect on 31 December 2020, energy efficiency grading requirements of single package type room air conditioners, dehumidifiers and compact fluorescent lamps have been tightened, and such will fully implement on 31 December 2021.

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<sup>194</sup> The EPD. (2021) Producer Responsibility Scheme on Glass Beverage Containers.

In March 2021, the EMSD launched a public consultation on the proposal on the coverage of three additional types of products under the fourth phase of the MEELS, namely Light Emitting Diode (LED) lamps, gas cookers and gas instantaneous water heaters.

Figure 47: Energy Efficiency Labelling



Source: The EMSD

## Biodiversity

### Hong Kong Biodiversity Strategy and Action Plan (2016-21)

The Government announced in 2016 the first city-level Biodiversity Strategy and Action Plan (BSAP) for Hong Kong, which outlined the strategy and actions to be taken in the next five years for conserving biodiversity within and outside Hong Kong as well as supporting sustainable development. The BSAP set out an action plan of 67 specific actions in four major areas, namely enhancing conservation measures, mainstreaming biodiversity, improving knowledge and promoting community involvement.

### Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018

The Amendment Ordinance has been passed and commenced since 1 May 2018. It enhances regulations on import and re-export of ivory and elephant hunting trophies, and increases the maximum penalties on smuggling and illegal trade in endangered species. Local ivory trade will be phased out, and the import and re-export of pre-Convention ivory and commercial possession of all ivory will be banned. The commercial possession of pre-Convention ivory in Hong Kong markets is subject to licensing control.

## Climate Action

### FiT and RE Certificates

FiT was introduced in 2018 to allow non-governmental bodies or individuals to receive FiT from power companies by selling the electricity generated from the private wind or solar photovoltaic system. RE Certificates are available for sale by each power company to its respective customers. It will certify the RE generated from local RE sources and help match the supply and demand of RE in HK's electricity market.



As at the end of August 2019, CLP Power Hong Kong Limited and Hongkong Electric Company Limited altogether received nearly 5,000 applications, while the figure accounts for approximately 2% of the approximately 233,000 buildings in Hong Kong which are suitable to install photovoltaic solar systems.

### **FRT Concessions for Electric Vehicles**

Effective from February 2018 and aiming to help improve roadside air quality and reduce GHG emissions, FRT for electric private cars continues to be waived up to HK\$97,500 from 1 April 2018 to 31 March 2021. Private car owners who arrange to scrap and de-register their own eligible old private car and then first register a new electric private car are now allowed to enjoy a higher FRT concession up to HK\$250,000. Electric commercial vehicles, electric motor cycles and electric motor tricycles: their FRT continues to be waived in full from 1 April 2018 to 31 March 2021. Petrol/ electric hybrid cars are not entitled to the related FRT concessions.

### **Tightening Emission Standards for Motor Vehicles**

The following policies have been adopted to reduce the carbon emission from Diesel Commercial Vehicles (DCVs) which are one of the major roadside air pollution sources:<sup>195</sup>

- i. Launching an incentive-cum-regulatory scheme to progressively phase out about 82,000 pre-Euro IV DCVs, with HK\$11.4 billion set aside as ex-gratia payment to help the affected vehicle owners, since 2014.
- ii. Stopping the renewal of vehicle licences for pre-Euro DCVs (since 2016), Euro I DCVs (since 2017), Euro II DCVs (since 2018) and Euro III DCVs (since 2020).
- iii. Tightening the vehicle emission standards for newly registered vehicles (with exceptions) from Euro V to Euro VI in phases and for newly registered diesel private cars from California LEV II to LEV III since 2019.

As at end of August 2018, about 79% of the eligible vehicles were retired under the incentive-cum-regulatory programme. To further improve the roadside air quality, the Air Pollution Control (Air Pollutant Emission) (Controlled Vehicles) (Amendment) Regulation 2020 which came into effect in September 2020 aimed to phase out by the end of 2027 some 40 000 existing Euro IV DCVs.

### **WELS**

The WSD has launched the voluntary WELS since 2009 and implemented it in phases for six types of plumbing fixtures and water-consuming devices, namely showers for bathing, water taps, washing machines, urinal equipment, flow controllers and water closets. With a WELS label, the level of water consumption and water efficiency of the plumbing fixtures and water-consuming devices are shown in order to help consumers to make choices of purchase. In November 2020, the WSD launched a public consultation on the Proposed Amendments to Waterworks Ordinance (Cap. 102) which, among other things, proposed migrating the WELS from voluntary participation to mandatory implementation.

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<sup>195</sup> Legislative Council. (2017) Ex-gratia Payment for Phasing Out Pre-Euro IV Diesel Commercial Vehicles Special Arrangement for Euro II Diesel Public Light Buses.



## Smart City

### **Carbon Audit Green Partner**

The EPD and the EMSD drew up a set of Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purpose) in Hong Kong in July 2008, which allows building owners and managers to account for and report on the GHG emissions arising from the operations of their buildings, and to identify areas of improvement and conduct voluntary programmes to reduce and/or offset emissions arising from buildings according to their own goals. Organisations are invited to join “Carbon Audit Green Partner” by signing the Carbon Reduction Charter and undertaking to carry out activities in support of GHG emission reduction.

As of November 2020, there were 476 organisations signed the Charter, representing an approximately 2.8% increase (i.e. 13 more organisations) compared with the figures as at October 2019.

### **Walk in HK**

To develop Hong Kong into a walkable city, the Transport Department (TD) initiated “Walk in HK” in 2017. A study on “Enhancing Walkability in Hong Kong” was carried out to formulate a planning and design principle that puts priority on pedestrians. Public engagement and workshops were held to envision the initiative.

With consideration of the public’s views and reference to overseas exemplars, TD recommended outline pedestrian plans and improvements for two pilot areas in Central and Sham Shui Po in 2020. The Government is promoting “walkability” in Kowloon East to improve pedestrian facilities in the Kowloon Bay and Kwun Tong business areas, as well as promoting greening and beautification of streetscape, as well as the existing pedestrian linkage systems in various districts such as Admiralty and Wan Chai North.

### **New Territories Cycle Track Network**

To promote cycling as a zero-carbon mode for short-distance commuting or leisure, the ENB has been building in phases a tailor-made recreational cycle-track network in the New Territories. Improvement measures at cycle tracks which include additional bicycle parking spaces, safety enhancement at and extensions to existing cycle tracks were also implemented to foster a bicycle-friendly environment.

Several cycle tracks connection projects are in progress or completed. The entire 60 kilometre-long cycle track backbone connecting eastern and western New Territories between Tuen Mun and Ma On Shan was completed in September 2020. The construction of the cycle track section between Tsing Tsuen Bridge and Bayview Garden is under construction and expected to be opened in mid-2021.

## Funding Support

### **Recycling Fund**

The Recycling Fund, with an initial budget of HK\$1 billion, was launched in October 2015. Following the announcement of the Waste Blueprint for Hong Kong 2035, the Government injected

an additional funding of HK\$1 billion to the Recycling Fund in April 2021 and has extended the application period of the Recycling Fund to 2027. The Recycling Fund provides funding support for (i) individual Hong Kong enterprises to upgrade and expand their waste recycling operations in Hong Kong and (ii) non-profit distributing organisations (NPOs), such as professional bodies, trade and industry organisations, research institutes and other industrial support organisations registered in Hong Kong to undertake non-profit making projects which can assist the local recycling industry in general or in specific sectors in enhancing their operational standards and productivity.

### **Green Tech Fund**

The Government announced in the 2020-21 Budget that HK\$200 million would be allocated for setting up the Green Tech Fund to provide better and more focused funding support for the research and development and application of decarbonisation and green technologies, so as to expedite low-carbon transformation and enhance environmental protection in Hong Kong. It has the following objectives: (i) to encourage and support projects with greater prospect of realisation and commercialisation of decarbonisation and green technologies that can expedite low-carbon transformation and enhance environmental protection in Hong Kong; (ii) to facilitate the development, trial and fine-tuning of decarbonisation and green technologies, to build up 'reference' for subsequent marketing, and to encourage wider adoption of such technologies; and (iii) to motivate and attract more investment in R&D on decarbonisation and green technologies in Hong Kong.

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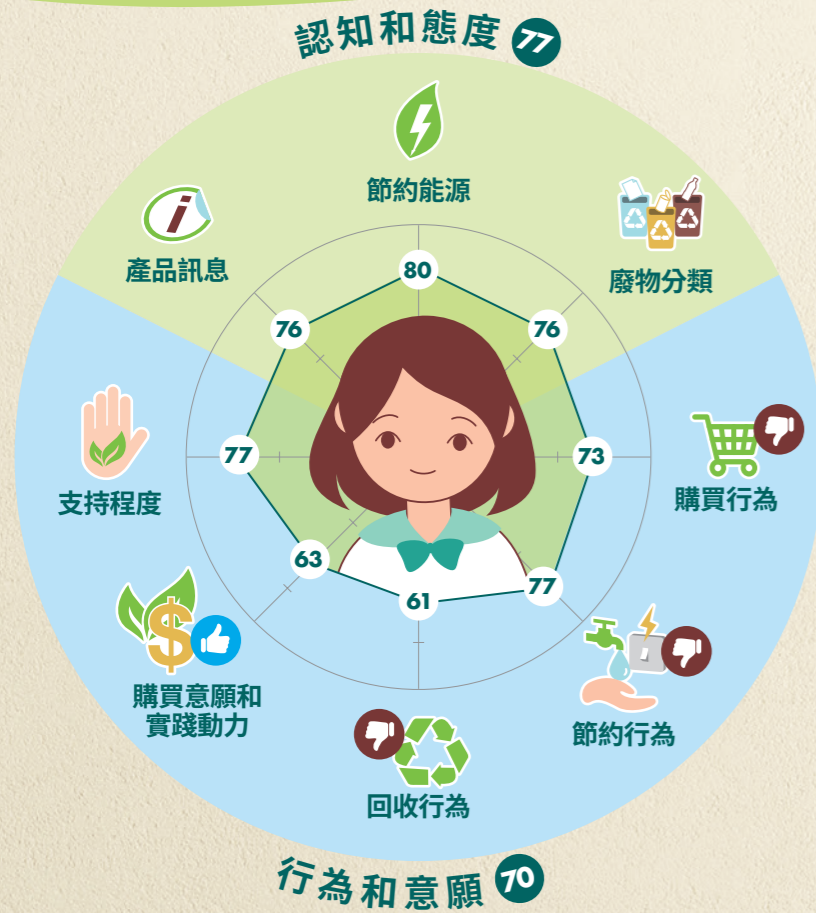
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**可持續消費概念的追隨者**

**學生**  
**(15至24歲)**

- ☑ 願意為購買可持續產品付出額外金錢
- ☑ 不願意少用冷氣機
- ☑ 較少回收塑膠、金屬和小家電
- ☑ 較少購買本地農作物



**可持續消費的行動者**

**家務料理者**  
**(25至54歲)**

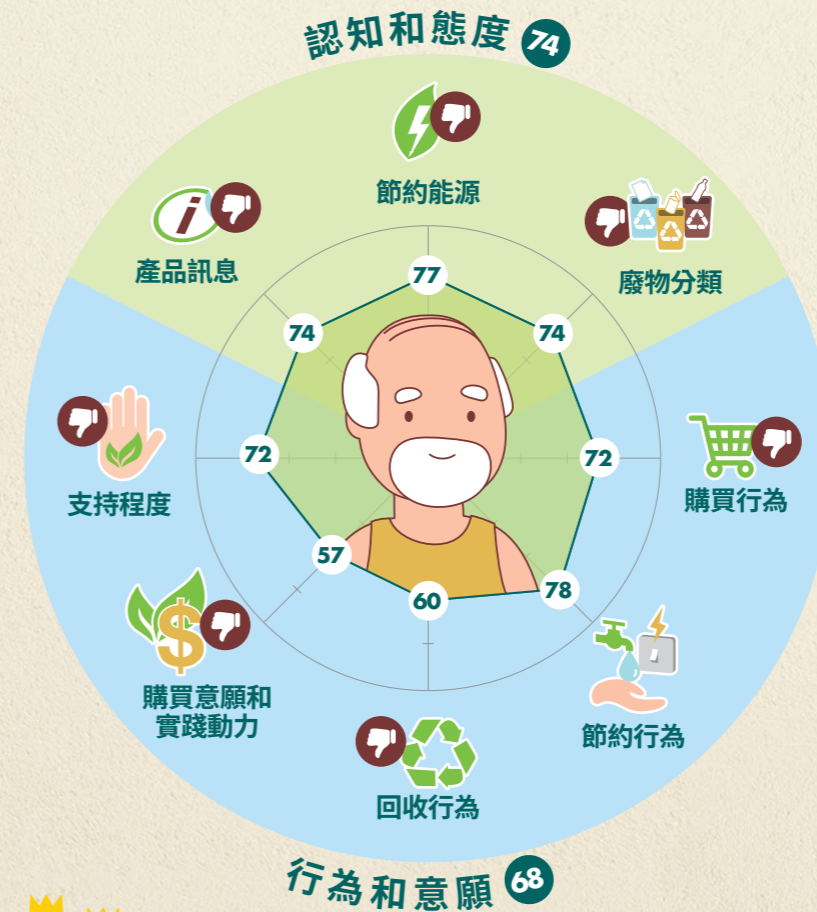
- ☑ 借用不常用的物品
- ☑ 購買本地農作物
- ☑ 儲滿衣物才開動洗衣機
- ☑ 回收塑膠、金屬和玻璃
- ☑ 不願意為購買可持續產品付出額外金錢



**可持續消費的熱誠支持者**

**專業人士、經理、行政人員、商人**  
**(25至54歲)**

- ☑ 最支持可持續消費
- ☑ 關心產品使用過程中會污染環境
- ☑ 認為節約能源有好處
- ☑ 認為廢物分類容易做到
- ☑ 願意為購買可持續產品付出額外金錢
- ☑ 購買較多有機食品
- ☑ 購買一級能源標籤的電器、有「環保標籤」的產品和節約用水的產品
- ☑ 避免購買即棄產品



**可持續消費的慢熱者**

**基層非在職準長者**  
**(55至64歲)**

- ☑ 不熱衷支持可持續消費
- ☑ 較少關心產品使用過程中會污染環境
- ☑ 較少關心產品於研發和試驗中殘害動物
- ☑ 較少認為節約能源有好處
- ☑ 較少認為廢物分類容易做到
- ☑ 較少購買簡約包裝或沒有包裝的產品
- ☑ 較少借用不常用的物品
- ☑ 不實踐回收塑膠
- ☑ 不願意為購買可持續產品付出額外金錢







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