

**Twenty-ninth Meeting of
the Business Facilitation Advisory Committee**

***Agenda Item 3 : Business Impact Assessment on
a Producer Responsibility Scheme
on Glass Beverage Containers***

Purpose

This paper briefs members that the Environmental Protection Department (“EPD”) has conducted a Business Impact Assessment (“BIA”) study and will suitably incorporate the study findings and recommendations in the development of the new producer responsibility scheme (“PRS”) on glass beverage containers in Hong Kong.

Background

2. Glass containers are widely used in our everyday life. Due to their low residual commercial value, at present, most of the waste glass containers generated in Hong Kong are disposed of at landfills rather than being reused or recycled. EPD conducted a public consultation in 2013 and on the basis of the positive response, affirmed the direction of introducing a mandatory PRS that first targets at glass beverage containers for the purpose of creating a circular economy to turn such containers into a resource. To assess the potential impact of the proposed PRS, EPD commissioned a BIA study in August 2013 to identify the potential impacts on the affected trades and advise on the possible mitigations to alleviate their compliance burden. In parallel, EPD reported the outcome of the public consultation to the Panel of Environmental Affairs (“EAP”) of the Legislative Council (“LegCo”) in November 2013 and started the relevant preparatory works accordingly. EPD also updated the EAP on the progress about the PRS in April 2015 and Members generally supported the introduction of the PRS as soon as practicable.

The BIA Study

3. The key objectives of the BIA study are to –
- (a) assess the business environment of local beverage business sector and identify the major business stakeholder groups that may be impacted by the proposed PRS;
 - (b) collect and assess the stakeholders’ concerns and identify potential impacts of the proposed PRS on the affect trades;
 - (c) assess the identified potential business impacts, in particular related to business compliance cost and difficulties, and the impact to the small and medium-sized enterprises (“SMEs”); and
 - (d) recommend mitigation measures to reduce the compliance cost and difficulties of the stakeholders.

4. We conducted the BIA study through a consultant who collected views from the affected trades through face-to-face interviews with the relevant stakeholders with reference to the framework of the PRS set out in the 2013 consultation document and other necessary details – see Section 1.2 of the final draft Executive Summary of the BIA study at **Annex 1**. As revealed in the study, there are some 2 000 stakeholders involved in the supply of beverage products that are commonly held in glass containers. They operate rather flexibly to respond to various market conditions such as consumer preference, supply and demand, and market competition. In gist, beverage products can reach the end consumers via multiple sales channels once imported or locally manufactured.

5. The BIA study has identified a number of areas that might require further consideration when finalizing the operational details of the PRS. Mitigation measures have been recommended to help alleviate the compliance concerns of the affected trades. For details, please refer to the final draft Executive Summary at **Annex 1**. In gist –

- (a) **Registration of suppliers:** We have proposed that relevant beverage manufacturers and importers must be registered as “registered suppliers” for the purpose of charging a recycling levy. There were concerns that the future legislation may require companies with multiple subsidiaries to be registered separately, thus causing extra administrative and financial burden.

- (b) ***Submission of periodic returns by registered suppliers:*** We have proposed that a registered supplier must submit periodic returns, setting out the information that is necessary for the computation of the recycling levy payable. There were concerns about the level of details that is required in the periodic returns. For instance, if a registered supplier is required to report sales volume with breakdown at product type level, then the reporting would require significant amount of time and effort and the information might also be commercially sensitive. Since self-consumption by a registered supplier would have to be reported for the computing the levy, there were also concerns that it could be difficult to keep separate records on self-consumption.
- (c) ***Annual audit on periodic returns:*** We have also proposed that a registered supplier must engage an independent qualified auditor to conduct annual audits on the periodic returns to ensure factual accuracy and to keep records to facilitate future inspection. There were concerns that the requirement could be costly to some registered suppliers with low trade volume of glass-bottled beverages, particularly SMEs.
- (d) ***Payment period for recycling levy:*** There were concerns about the lead time required for settling the recycling fee payment since a short payment period may create cash flow problems to some of the suppliers, in particular the SMEs. As a rough indication, a “30 day period” was considered too short.
- (e) ***Recovery rate for exemption:*** At present, a small number of local beverage manufacturers have their own recycling arrangements by which waste glass beverage containers of their brands are collected for reuse after proper cleansing and sterilisation. We have proposed a recycling levy exemption arrangement to encourage the continuation of such operations subject to certain terms and conditions. There were concerns that the threshold for being qualified for exemption could be too high. In practice, the Government would also hire contractors to collect glass beverage containers. There were concerns that such service might cause competition making it even more difficult for local beverage manufacturers to qualify for exemption.

6. The BIA study has put forward a series of recommendations on potential mitigation measures, which mainly go for the direction of streamlining the compliance mechanism. The study has also revealed that on the whole, the cost impact on businesses would be more heavily felt by those selling lower-priced products and those operating with lower profit margins. In particular, the SMEs with less resources would be more affected by the increase in cost and additional administrative burden. Hence some of the recommended mitigation measures are specifically targeting at SMEs. Since most of the stakeholders would choose to pass on the recycling levy to consumers, the study concluded that the trade should be able to comply with the requirements of PRS without major compliance difficulties if appropriate mitigation measures could be implemented.

Way Forward and Advice Sought

7. We have taken the findings and recommendations of the BIA study into consideration in finalizing the Promotion of Recycling and Proper Recycling (Product Container) (Amendment) Bill 2015 which has been introduced into the LegCo on 8 July 2015. The Bill is to give effect to the regulatory framework outlined at **Annex 2** while the implementation details will be set out in subsidiary regulation. We will further work out the implementation details with the trades with due reference to the findings and recommendations of the study for further scrutiny by the LegCo.

8. Members are invited to note the contents of this paper and offer comments, if any.

Environment Bureau/Environmental Protection Department
July 2015



Environmental
Protection
Department

Provision of Consultancy Service for
Business Impact Assessment on a
New Producer Responsibility
Scheme on Glass Beverage Bottles
Executive Summary (Final Draft)

July 2015

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Environmental Protection Department (EPD) has commissioned ERM-Hong Kong, Limited (hereafter referred to as “ERM” or “the Consultants”) to carry out the **Business Impact Assessment (BIA) study on a New Producer Responsibility Scheme on Glass Beverage Bottles** (the Study) to assess the potential impacts of the proposed mandatory Producer Responsibility Scheme (PRS) on the trades and advise on the possible mitigations to alleviate their compliance burden. This *Executive Summary* (ES) summarises the key findings and recommendations of the Study.

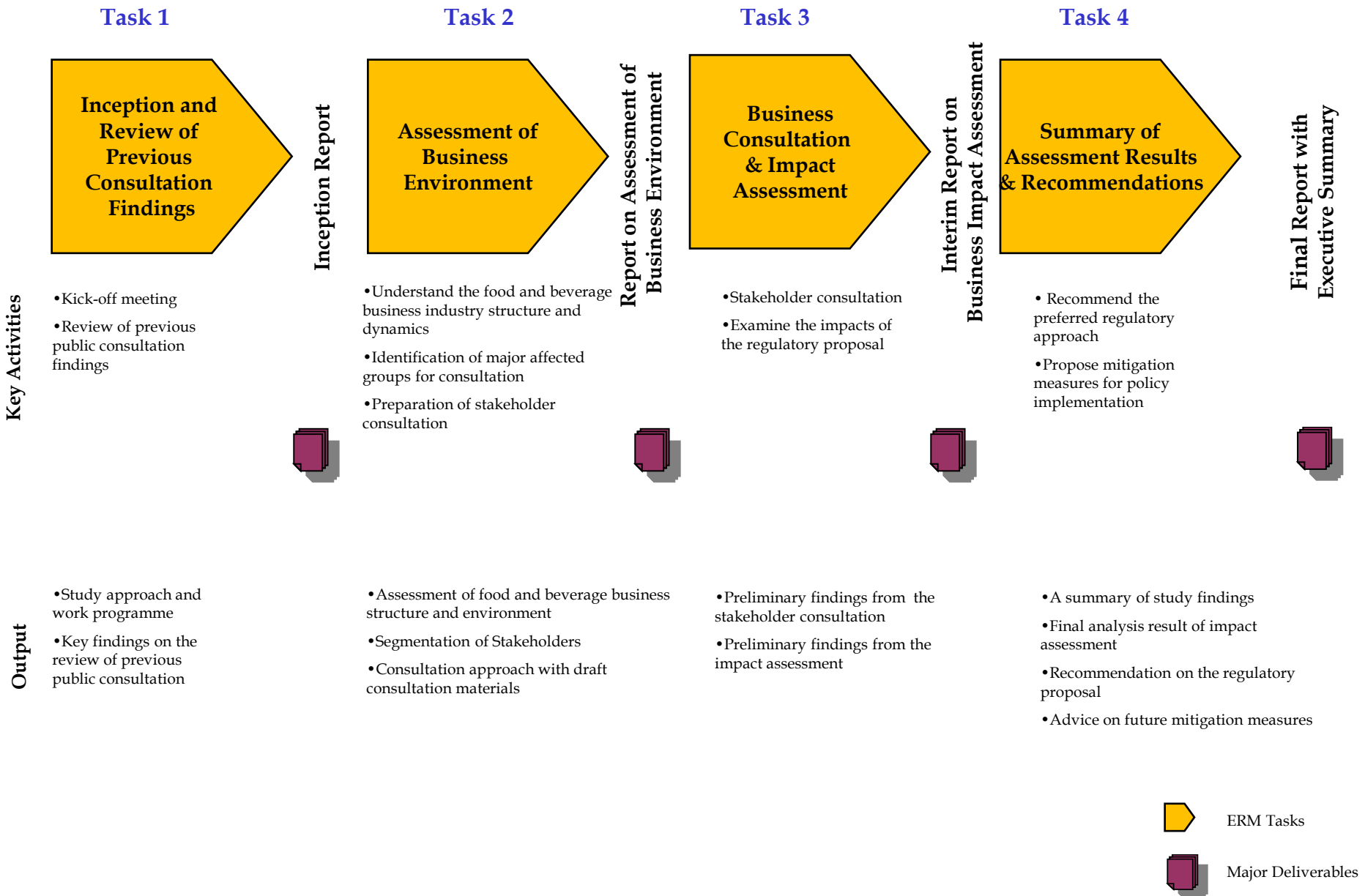
1.1**STUDY OBJECTIVES**



The objectives of the Study are to:

- assess the business environment of local food and beverage business sectors and identify the major business stakeholder groups and segments that may be impacted by the proposed PRS;
- collect the views and concerns of the stakeholders on the proposed PRS and data for the BIA through the stakeholder interviews;
- assess the stakeholders’ responses and concerns and identify potential impacts of the proposed PRS on the affected trades;
- assess the identified potential business impacts, in particular related to business compliance cost and difficulties, and the impacts to the small and medium-sized business operators; and
- recommend the mitigation measures to reduce the compliance cost and difficulties of the stakeholders.

The key tasks of the Study are outlined in *Figure 1.1*

Figure 1.1 Study Approach



 ERM Tasks
 Major Deliverables

In summary, the Government proposes to impose under the *Product Eco-responsibility Ordinance* (PERO) a recycling fee upon the “suppliers” of glass-bottled beverages. There will be exemption for those suppliers who operate an environmentally sound reuse or recycling programmes subject to certain terms and conditions. Glass-bottled beverages imported into Hong Kong for re-export purposes or manufactured locally for export purposes will not be subject to the recycling fee. Licensing control will be introduced under the *Waste Disposal Ordinance* (Cap 354; “WDO”) to ensure that proper treatment processes are employed to turn the waste glass beverage bottles collected under the mandatory PRS into reusable materials.

1.2.1

Roles and Responsibilities of the Key Stakeholders

The outline arrangement of the PRS on glass beverage bottles set out in this section is adopted for the purpose of the BIA study.

Suppliers

“Supplier” means any person (including importer and manufacturer) who engages in the business of importing and/or manufacturing glass-bottled beverages ⁽¹⁾ into/in Hong Kong and supplying the beverage products to any other persons or discard them locally ⁽²⁾.

“Supply” in respect of glass-bottled beverages means (a) sale of the products, (b) exchange or dispose of the products for consideration, and (c) provide the products as gifts or prizes for commercial purpose.

Under the proposed PRS, suppliers are obliged to:

- register with the authority (e.g. the EPD) by:
 - completing and submitting a registration form which provides the information on the company; and
 - providing a documentary proof of identity.
- submit a return every three months to the authority on the quantities of different types (including product type and brand name ⁽³⁾) of the glass-bottled beverages (in litres) with the following categories:
 - imported (or/and manufactured);

(1) “Beverage” means any drinking products that is principally in liquid form, suitable or intend for human consumption, either without or after dilution, and fall under the following categories: water, alcoholic beverage (including beer and ale), milk and milk beverage, tea and tea beverage, soft drink and other carbonate drink, fruit and vegetable juice drink, other non-alcoholic beverage including coffee, decaffeinated coffee, soybean milk, chocolate drink, coconut drink, vinegar drink, energy drink, isotonic sports drink etc.

(2) Companies exclusively engaged in re-export businesses will be excluded from definition of “supplier” and thus the requirement of registration as well as payment of recycling fee.

(3) During the stakeholder engagement, stakeholders responded that the proposed PRS requirement is equivalent to reporting by Stock Keeping Unit (SKU) which records the product type, brand and the size of a product.

- re-exported (or/and exported);
- self-consumed for non-business purpose;
- supplied to any person in Hong Kong; and
- disposal of in Hong Kong.

A registered supplier has to submit the periodic return whether or not he/she has supplied any glass-bottled beverages to any person locally during the report period.

- Pay a recycling fee to the authority:
 - The recycling fee payable will be calculated based on the periodic returns from registered suppliers. Only those who have supplied glass-bottled beverages to any persons locally will be subject to the recycling fee.
 - The Government will send to the registered suppliers a payment notice for the recycling fee which should be settled within 30 days.
 - Those glass-bottled beverage products exported and/or re-exported and self-consumed for non-business purpose will not be subject to the recycling fee.
 - The recycling fee ⁽¹⁾ is yet to be confirmed at this stage but initial estimate based on the overseas experience suggests an indicative fee of HK\$1 per litre volume of glass-bottled beverage.
- Undertake an annual audit of the periodic return by a qualified person (e.g. a Certified Public Accountant (CPA));
- Keep the transaction records ⁽²⁾ for five years and provide them to the authority for inspection upon request;
- Notify the authority if the businesses cease operation or the businesses no longer engage in supplying glass-bottled beverages in Hong Kong. The authority will cancel the registrations of such suppliers.

(1) The recycling fee collected will be used to pay the cost of the PRS in line with the “polluter pays” principle and the fee level would depend on the outcome of the open tender of the GMCs’ contracts.

(2) Any accounting record related to the purchases, sales and any other handling of glass beverage bottles (e.g. invoices) and the litre-volume of glass-bottled beverage supplied to different parties.

Exemptions

Suppliers who have made their own arrangements for glass beverage bottle recovery for refilling may apply for an exemption for the recycling fee. To get an exemption the suppliers must:

- (a) achieve a glass beverage bottle recovery rate of no less than 90%;
- (b) set up a robust and reliable monitoring and audit system;
- (c) put in place arrangements for proper recycling of any off-specification or damaged glass bottles;
- (d) pay an application fee; and
- (e) submit annual audit on the recovery system to the authority.

Retailers

Retailers are encouraged to support the PRS voluntarily by:

- (a) participating in disseminating the glass bottles recycling information provided by the Glass Management Contractors (GMCs), which would include the nearby glass bottle collection points and their opening hours;
- (b) providing temporary storage for waste glass bottles ⁽¹⁾;
- (c) if necessary, delivering the waste glass bottles to the designated collection points set up by the GMCs.

The GMCs will provide the waste glass bottles collection service to the retailers free of charge. However, the retailers will have to cooperate with the GMCs to facilitate the waste glass bottle collection.

Glass Management Contractors (GMCs)

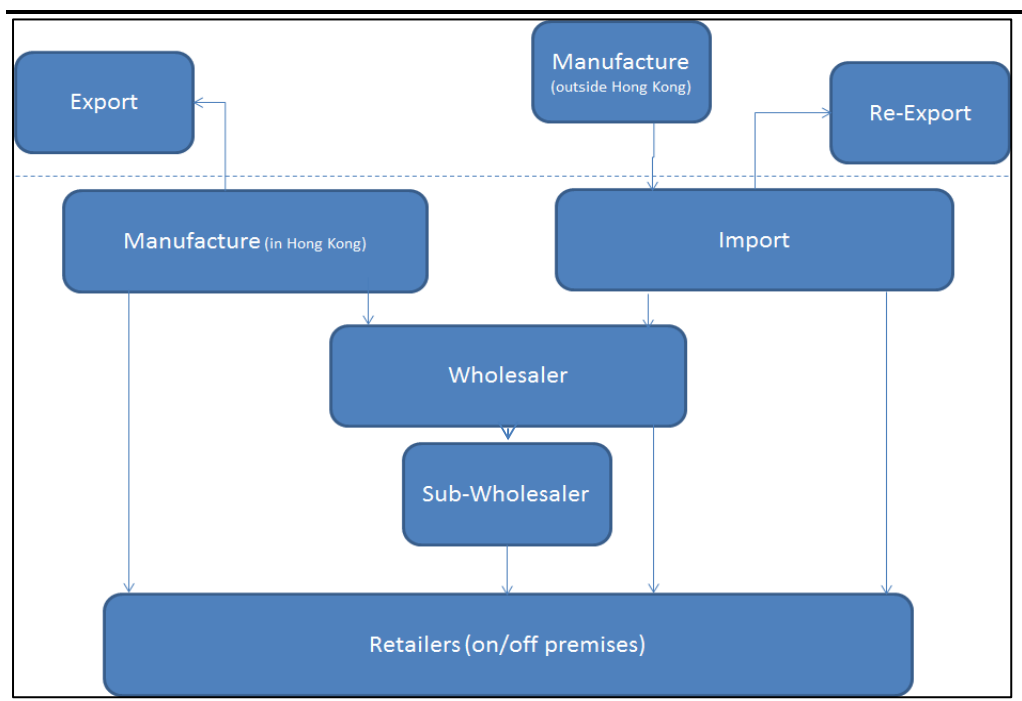
A number of GMCs will be engaged by the EPD via an open tendering process. The GMCs will be required to collect the waste glass bottles generated in their catchment region and arrange for proper reuse or recycling of such bottles, or treat them until they become reusable materials meeting the technical specifications set out in the GMC Contracts. The GMCs will be required to:

- (a) provide collection services for waste glass bottles within the catchment area designated in the GMC Contract and achieve progressively a recovery target of 70% of glass beverage bottles; and
- (b) liaise and collaborate with the relevant stakeholders to set up collection points or/and suitable arrangement to facilitate glass bottle collection.

(1) For on-premises retailers.

The beverage and food industry in Hong Kong is complex. Imported and manufactured goods can get to end consumers via multiple sales channels.

Figure 2.1 *Structure of Food and Beverage Sector*



The general structure of food and beverage sector in Hong Kong is illustrated in *Figure 2.1*. The sector includes:

- Importers of food and beverages made outside Hong Kong;
- Re-exporters (i.e. those who export food and beverages that were imported without changing the nature of the product);
- Local manufacturers making food and beverages in Hong Kong;
- Those exporting food and beverages from Hong Kong;

Certain local manufacturers and importers may deliver food and beverage products to the retailers directly while others would distribute through:

- Wholesalers (directly to customers or to sub-wholesalers); and
- Sub-wholesalers.

It should be noted that the supplier sector in Hong Kong is very fluid. There are many factors that may affect the supplier and retailer environment. The main factors include:

1. Consumer preference – season, trend, fashion

2. Supply and demand – availability of the product in stock
3. Competition – number of players in the market

The beverage industry is generally categorised into alcoholic beverages, non-alcoholic beverages and milk & dairy beverages.

The alcoholic beverage sector can be further divided into five categories:

- Beer
- Wine
- Spirits
- Cider/Perry
- Ready-To-Drink (RTD) & High-Strength Premixes

Milk & dairy beverages include liquid milk and flavoured milk drinks.

Non-alcoholic beverages include bottled water, carbonates, RTD coffee, fruit/vegetable juice, sports and energy drinks, Asian speciality drinks⁽¹⁾, and concentrate.

For food industry, the variety of packaged food is highly diverse. The common packaged food sold in glass containers are dressing, sauces & condiments, cooking oil, jam & spread and many more.

(1) Asian Speciality Drinks include Asian Still RTD tea (e.g. RTD Lemon Tea), Asian Juice Drinks, Cereal/Pulse-based Drinks (e.g. Sugar cane drink) and other Asian Speciality Drinks.

This section summarises the respective business environment of each segment of the local beverage industry and the overall food sector.

3.1 ALCOHOLIC BEVERAGES

Beer

The beer industry in Hong Kong is mainly dominated by a few major companies. The top five companies have over 75% of the local market share by volume. However, the largest volume share of beer imported into Hong Kong comes from China. Many major brands in Hong Kong have their breweries in Mainland China.

According to the beverage trade associations, about 33% of the beer supplied to the Hong Kong market is packaged in glass containers and is the largest source of waste glass beverage bottles among all beverage sectors.

Although the structure of the beer industry is complex, there is a preference for the use of wholesalers and sub-wholesalers for the distribution of beer in Hong Kong. This is reflected in the fact that beer is sold more widely in remote areas than wine and spirits. Although beer is sold in larger quantities, its price is relatively lower than that of wine and its profit margin is generally lower.

Wine

There are a large numbers of wine suppliers in Hong Kong and they are very diverse. Many of them are specialised in certain types of wine and champagne. Some are also among or part of the well-known global branded companies that have significant market share among the food and beverage industry. Nevertheless, the majority (over 1,500 according to interviewed stakeholders) of the suppliers in the wine industry are expected to be the small and medium enterprises (SMEs), typically employed less than 10 persons. SMEs usually take up many roles in the supply chain where a significant number of them act as importer, wholesaler, distributor and even retailer simultaneously. However, large international brands tend to have more focused role (e.g. being importer and/or wholesaler only).

More than 95% of all wine sold in Hong Kong is packaged in glass bottles. In 2012, there were 31.9 million litres of retained import of wine⁽¹⁾. Assuming that all wine retained was consumed and disposed locally in 2012, an estimate of approximately 42.5 million of 750ml waste glass beverage bottles would be generated from wine alone.

(1) Census & Statistics Department

Compared with beer, the price of wine particularly for the “fine wine” is relatively higher.

Spirits

Similar to the wine industry, spirits are mainly imported and are dominated by a number of international brands. It is imported in very small quantities as compared with wine and beer, and a significant proportion of it is re-exported.

Companies that dominate the supply of spirits are also the leading suppliers of sales by volume for wine. However, there are also many specialised spirits (or liquor) manufacturers and distributors in Hong Kong which caters a very particular niche in the local market. The majority of spirits are packaged in glass bottles.

Spirits are largely sold through on-premises retailers (around 60% based on sales volume) rather than off-premises. Industry stakeholders indicated that spirits sold on-premises usually sell at a higher margin compare to off-premises retailers.

Other alcoholic beverages

For other types of alcoholic beverages such as RTD, high-strength premixes and cider/perry, imported quantities are considered to be extremely small relative to the overall volume. These alcoholic beverage products are imported, distributed by wholesalers and sub-wholesalers and sold mainly by off-premises retailers (convenience stores) or imported and sold directly by retailers that are key accounts. Alcoholic RTDs are unlikely to be sold in bars due to the fixed pricing and restriction in types available.

3.2

NON-ALCOHOLIC BEVERAGES

The products of non-alcoholic beverages are very diverse, however, glass container is not a major container type used for non-alcoholic beverages. Industry sources estimate that in 2012, less than 2.5% of the non-alcoholic beverages were sold in glass containers. Over half of the products are sold in plastic containers and about 30% of them sold in liquid cartons. This means the potential business impact of the proposed mandatory PRS on non-alcoholic beverage suppliers as a whole is relatively minimal as compared to those for alcoholic beverages.

The four largest non-alcoholic beverage suppliers contributed over 60% of the market share in 2012. Two of them have an ongoing deposit-return glass bottle recovery scheme which may be less impacted by the proposed mandatory PRS should they successfully apply for exemption. Among those products sold in glass containers, bottled water and fruit/ vegetable juice together constitutes the highest proportion, thus the impact on them are likely to be the largest.

For products sold in plastic containers, similar to glass containers, bottled water has the largest share (44%). Together with RTD Tea, these two categories of non-alcoholic beverages represent more than 70% of the market share. Asian specialty drinks and carbonates each represent more than 10% of the share.

It is also estimated that for products sold in liquid carton containers, RTD Tea and Asian specialty drinks together represent more than 85% of the share for non-alcoholic beverages sold in liquid cartons. Summarising the business environment, bottled water, RTD Tea, and Asian Specialty Drinks are the three major items using glass, plastic and carton containers for sales.

Stakeholders estimated that the off-premises/on-premises distribution based on sales volume was about 80:20 in 2012, which means an obvious majority of non-alcoholic beverages are consumed off-premises rather than on-premises.

3.3 *MILK BEVERAGES*

With the information provided by interviewed stakeholders, only a small proportion (3%) of the milk beverages is in glass bottles. Vast majority of these glass bottled milk beverage products belong to a company operating a glass bottle recovery scheme. Therefore, generation or disposal of waste glass bottles from milk beverage sector is considered to be small. However, both cartons and plastic containers are the dominant container types for milk beverages with carton being the most commonly used container.

Most glass-bottled milk beverages for local consumption come from a major dairy product manufacturer to off-premises retailers (including key accounts and supermarkets, convenience stores, etc).

3.4 *FOOD SECTOR*

Similar to the non-alcoholic beverage sector, glass bottle is not the major container for packed food. In 2012, only 6% of the off-premises packaged food sold in Hong Kong was packed in glass containers. Of which, 70% were “sauces, dressings and condiments”. On the other hand, majority (over 90%) of the spread (e.g. jam, honey spread) is packed in glass containers. If the proposed mandatory PRS is extended to packaged food in the future, these two types of products may more likely be impacted.

Currently, only a small portion of packaged food is packed in carton box (e.g. Tetra Pak®). Therefore, there is very limited publicly available data on the estimated quantity and share of food stored and sold in carton box. The packaged food industry itself is highly competitive. However, based on interviewed stakeholders and industry sources, in the sauces, dressings and condiments industry, the top four players together have got over 50% of the market share.

In terms of retail channel, over 60% of the packaged food, including sauces, dressings and condiments are sold through supermarkets. However, both convenience stores and non-grocery retailers also have significant market share in selling packaged food.

The Consultants carried out view-seeking exercise with the stakeholders through two focus group discussions (FGDs) and 55 face-to-face (F2Fs) interviews. The findings from each of these exercises are summarised below.

4.1 FOCUS GROUP DISCUSSIONS

A number of the key stakeholder groups including the trade associations attended the two FGD sessions on 5 and 6 December 2013. The main aim of these FGDs was to identify the requirements of the proposed mandatory PRS which the stakeholders would have difficulty in complying with so that the F2F interview can be focused on these concerns.

4.2 FACE-TO-FACE INTERVIEWS

A total of 55 F2F interviews with various stakeholders (particularly the SME beverage and/or food suppliers) were conducted to collect more detailed information on their operations and additional comments on the proposed mandatory PRS.

The segmentation of the F2F interview was based on the business environment of the local beverage industry, the broad function (e.g. supplier or retailer) in the supply chain, product nature (e.g. alcoholic, non-alcoholic or milk beverage) and size of the company (e.g. Large or SME) of different stakeholder groups.

The number of the F2F interviews with respect to the segments of stakeholders are summarised in *Table 4.1*.

Table 4.1 Breakdown of F2F Interviews Conducted

Stakeholders	Number of Interviews	
	SME	Large
Suppliers		
• Beverage manufacturers	2	3 ^(a)
• Alcoholic beverages		
○ Wine & Spirits	11	4 ^(a)
○ Beer	3 ^(b)	4
• Milk and Dairy beverages	1 ^(c)	2
• Non-alcoholic beverages	11 ^(d)	4
Retailers		
On-premises		
• Hotels		1 ^(e)
• Bars	2	1
• Restaurants (Chinese and Non-Chinese)	2	1
Other groups (e.g. exempted beverage trader)		
• Operator of existing glass recycling programme		1

Stakeholders	Number of Interviews	
	SME	Large
• Food supplier		1
• Waste collector		1
Total		55

Note:

- (a) A company specialized in trading duty free products was included in Large Wine & Spirit.
- (b) One additional interview was allocated to SMEs that import beer because the potential impact on this segment may be very large.
- (c) Only one dairy SME was interviewed. Another targeted dairy SMEs that produced glass-bottled milk in Hong Kong ceased their glass-bottled milk production in May 2014. Therefore, no interview was engaged with that stakeholder.
- (d) Extra interviews were allocated to SME non-alcoholic beverage traders since more information were required from this segment of stakeholders.
- (e) Irrespective of the size of the hotels, they tend to be much more spacious than restaurants and bars. Therefore, it is not necessary to interview both large and SME hotels.

Generally speaking, many stakeholders supported the intention of the Government to reduce waste but thought that the scheme could be streamlined to minimise their administrative and financial burden.

All large companies would be able to comply with the requirements of the proposed mandatory PRS with additional marginal input of resources. They are most concerned about the non-compliance of the small players and would like the Government to ensure all relevant importers and manufacturers would be captured under the scheme.

Most of the SMEs stakeholders were of the view that the proposed framework would require significant additional administrative and financial input, especially for the periodic returns and annual audit. SMEs that supply glass-bottled beverages with thin profit margin (e.g. Beer & Non-alcoholic beverage SMEs) were most concerned about the impact of the recycling fee on their competitiveness.

Local beverage manufacturers who might be eligible for exemption were more concerned about how the recovery rate would be calculated, the level of recovery target and whether the GMCs would compete with them for waste glass bottles. They would like the proposed mandatory PRS to provide incentives to reuse waste glass bottles as much as possible.

5.1 SUPPLIER REGISTRATION

All stakeholders responded that there would be minimal compliance difficulty in complying with the registration requirement. However, some interviewed stakeholders commented that the definition of “beverage” was not clearly stated and suggested that it should be defined in accordance with international practice commonly adopted by the trade.

Definition of Beverage

In response to the concern regarding the definition of “beverage”, the Consultants recommend to make reference to the definitions/classifications set out in the “Codex Alimentarius standard 192-1995 General Standard for Food Additives”, which is jointly published by the Food and Agriculture Organisation (FAO) of the United Nations and the World Health Organisation (WHO). It is also recommended that the Government should prepare a list of products to be considered as beverage under the proposed mandatory PRS and the Government should have ultimate authority in deciding whether a product should be regarded as beverage under the scheme.

5.2 PERIODIC RETURNS

Information to be provided in the Periodic Returns

Under the proposed mandatory PRS, suppliers are obliged to submit periodic returns to the Authority including information on the quantities of different types of glass-bottled beverages (in litres and by stock keeping unit (SKU), the industry-wide unit for recording individual product) categorised as follows:

- Imported (or /and manufactured)
- Re-exported (or /and exported)
- Self-consumed for non-business purpose
- Supplied to any person in Hong Kong
- Disposed of in Hong Kong for some reasons

Compliance difficulties

Some stakeholders stated that reporting the volume of glass-bottled beverages by SKU (i.e. by product type under each brand) would require significant time and effort. Sometimes such detailed information is also considered to be commercially sensitive.

Additionally, in terms of the categorisation of the data, almost all stakeholders expressed that they would not be able to report the quantities of glass-bottled beverages for self-consumption as these are currently not recorded.

Recommendation

Having reviewed the necessity of the information in the periodic returns for the determination of recycling fees, it is recommended that:

- The Government should consider streamlining the information to be provided by suppliers in the returns to volume data by brand names only.
- The Government should not require suppliers to report separate figures on glass-bottled beverages for self-consumption in the periodic return but include them as part of the glass-bottled beverages supplied locally and charge respective recycling fee.

Frequency of Periodic Return

Under the proposed mandatory PRS, the suppliers are obliged to submit a return every three months.

Compliance difficulties

Some stakeholders considered that providing a periodic return every 3 months would be too frequent which may impose undue administrative burden on their operations. Some suggested that the frequency of submitting a periodic return should be similar to the requirement of submitting the tax return, i.e. once a year. Others stated that a frequency of once every six months would be more acceptable to them.

Recommendation

In order to ensure that the Government can enforce the proposed mandatory PRS properly starting from the beginning, it is recommended that the frequency of the periodic return should be maintained as proposed. Nevertheless, the Government should review the frequency of the periodic return once the scheme is operating smoothly.

5.3

RECYCLING FEE

30-day Payment Period

Under the proposed mandatory PRS, suppliers are obliged to settle the payment notice issued by the Government within 30 days from the date of the notice.

Compliance difficulties

Some stakeholders considered that the 30-day payment period would be too short, particularly for those suppliers who sell products to the key accounts

(e.g. supermarkets and convenience stores) and for some large companies which may have more complex internal approval procedures which usually take more than 30 days to approve any payments.

Recommendation

Having reviewed all the lead time allowed for the submission of period returns, assessment of recycling fees and issuance of the payment notices which should together provide more than 90 days of turnover period on average for payment of recycling fee, it is recommended that the Government should maintain the payment period of 30 days from the date of the payment notice issued.

5.4

ANNUAL AUDIT

Under the proposed mandatory PRS, suppliers are obliged to arrange annual audit on their periodic returns of the whole year conducted by a qualified person (e.g. CPA) and submit the report to the EPD.

Compliance difficulties

Based on information provided by stakeholders and the Consultant's analysis, the cost of commissioning a qualified person (e.g. CPA) to carry out an annual audit is estimated to be around HK\$11,395 and HK\$49,688 for SME and Large RTPs, respectively.

It is therefore considered that the requirement of having a qualified person to carry out the annual audit may constitute a fairly significant extra burden for some of the SME suppliers, in particular for those SMEs that trade low volume of glass-bottled beverages.

Recommendation

In order to alleviate the burden on small-volume beverage traders regarding the audit cost, it is recommended that the Government should consider waiving the annual audit requirement on such suppliers. Having reviewed the contribution of annual audit cost to total recurrent cost of compliance and the quantities of glass-bottled beverages and the portion of suppliers that may be affected, it is recommended that the Government may consider drawing the line at 20,000 litres of glass-bottled beverage per annum, at or below which the annual audit requirement should not apply. In replacement, these small-volume beverage traders will be required to make self-declaration on the annual volume of glass-bottled beverage they trade.

With this mitigation measure in place, it is estimated that about 90% of glass-bottled beverage volume would still be subject to audit while some 70% of SME RTPs would be exempted from the annual audit requirement and adopt "self-declaration".

5.5

EXEMPTION

Exemption Requirement of no less than 90% Recovery Rate

Under the proposed mandatory PRS, the suppliers will be entitled to exemption of recycling fee if they operate an environmentally sound system to recover no less than 90% of their glass bottles for reuse.

Compliance difficulties

Based on the discussions with the stakeholders, only three out of the four companies with existing recovery schemes have recovery rate consistently above or at 90%. For some companies with existing glass bottle recovery schemes, they commented that the 90% recovery rate would be too high. Some companies stated that they have tried their very best in recovering the bottles by all means but the bottle recovery rate keeps declining due to lack of public cooperation on returning the bottles. There is also concern about the potential competition between the GMCs and beverage manufacturers for their bottles after the implementation of the proposed mandatory PRS which would lead to further drop in their bottle recovery rate. The sector generally considers that an 80% recovery rate would be more reasonable and acceptable ⁽¹⁾.

Recommendation

There are obvious environmental benefits for the beverage manufacturers to continue to operate their recovery systems to recover their glass bottles for reuse. It is recommended that the Government should consider lowering the glass bottle recovery rate from 90% to 80% in considering an application for exemption so as to preserve the existing glass bottle recovery and reuse systems as far as possible.

5.6

UNINTENDED ISSUES

Suppliers Working under Two or More Companies of the Same Business Group

Through the stakeholder engagement, it is understood that it is not uncommon for a company to operate under two or more registered companies for its beverage businesses (e.g. one company as manufacturer, while the other one as importer / distributor). There would be extra administrative and substantive costs to them if they have to register as two separate suppliers.

(1) In the past few years, the recovery rate of one of the Large Non-alcoholic beverage and the SME Milk beverage manufacturer consistently maintained over 95%. The Large Milk beverage manufacturer has seen its recovery rate steadily decreased from 95% to 90%. The recovery rate of one of the large non-alcoholic beverage manufacturers has decreased from over 80% to 78% in recent years.

Recommendation

It is recommended that for those companies operating under multiple subsidiaries, the Government should consider allowing one of the companies to be registered as supplier for all the subsidiaries.

Competition between the GMCs and the Stakeholders who currently have/ may develop their own recycling schemes

Manufacturers who operate an existing recycling scheme are concerned that the future GMCs will compete with them for their waste glass bottles which may lead to the drop in their glass bottle recovery rate below the recycling target for exemption (see *Section 5.5*).

Recommendations

In order to incentivise the local manufacturers to continue their recycling schemes and maximise the benefits of these schemes, it is recommended that the Government should consider introducing the necessity provisions in the GMC contracts such that the GMCs should avoid competing with those beverage manufacturers under exemption for their glass bottles in their collection work.

Moreover, the GMCs should be allowed to conduct sorting of the bottles they collected and return the bottles to the respective beverage manufacturers on their own business arrangement.

Stakeholders Picking Up Disposed Wine Glass Bottles for Reuse

A local wine manufacturer operating a unique model which he collects the disposed wine glass bottles and used it for bottling its products in Hong Kong. The proposed mandatory PRS may need to clarify how to deal this kind of operation.

Recommendations

Since this particular manufacturer is only picking up waste wine bottles and does not have a system in place to recover its own waste glass bottles, it would not be eligible to apply for exemption under the proposed mandatory PRS. Without a comprehensive recycling system, it would also be difficult for the Government to trace and verify if its recovery rate would reach the required rate for exemption. It is therefore recommended to collect the recycling fee as normal. However, the stakeholder is welcome to set up a system to recover its own bottles so as to be eligible for the exemption.

Following the qualitative assessment outlined in *Section 5*, the Study also looked at the business impact of the proposed PRS quantitatively.

6.1 *METHODOLOGY*

A Business Cost of Compliance (BCC) Framework was used to analyse the impact of the proposed PRS quantitatively. The costs associated in the BCC are categorised by their nature as a one-off cost and recurring cost. The recurring cost of compliance is presented on an annualised basis.

The BCC was estimated as follows:

- First, determine the number of relevant trade participants (RTPs) (i.e. the suppliers of glass bottled beverages in Hong Kong, hereafter referred to as “RTPs”) in each sector that will be subject to the regulation of the proposed scheme; and
- Second, estimate the costs of compliance to be borne by the RTPs in each aspect of the regulatory requirements, namely mandatory registration, quarterly periodic return, annual audit and payment of the recycling fee.

6.2 *ESTIMATED BUSINESS COST OF COMPLIANCE BEFORE MITIGATION MEASURES*

The BIA shows that one-off cost of compliance incurred by the RTPs would be in the range of HK\$ 3,000 – HK\$100,000 while that of the recurring cost of compliance would be in the range of HK\$20,000 – HK\$8.1 million per year assuming all the recycling fees will be borne by the RTPs at the indicative figure of HK\$1 per litre. The recycling fee would form a substantial part of the total recurring cost of compliance (20.0% - 99.3%), followed by the cost of an annual audit (0.7% - 67.6%).

Based on the estimated cost of compliance, the impact on the relevant businesses is considered:

The recurring cost of compliance for large enterprises is generally higher than those of SMEs. This is because recycling fee, which is in direct proportion to the volume of glass-bottled beverages supplied, forms the substantial part of the total recurring cost of compliance for all sectors (except for the milk beverage sector ⁽¹⁾). As the large enterprises usually trade significantly more glass-bottled beverages compared with SMEs, it is not surprising that the recurring cost of compliance for large enterprises will be much higher than that of the SMEs.

(1) Both the large and the SME milk beverage manufacturers interviewed had glass bottle recovery systems with high percentage of recovery that are eligible for exemption.

Across the different beverage sectors, with exemption considered, both the large and SME RTPs in the wine & spirits, and the beer sectors would be affected most:

- for the large enterprise RTPs, the total recurring cost of compliance for each RTP in wine & spirits sector is estimated at HK\$2.1 million, while that for each RTP in beer sector is estimated at HK\$8.1 million annually.
- for the SME RTPs, the total recurring cost of compliance for each RTP in both wine & spirits, and beer sectors is estimated at HK\$40,000 each annually.

Nevertheless, as revealed in the F2F interviews, most if not all of the stakeholders indicated that they would pass on most, if not all, the recycling fees to consumers. The actual recurring cost of compliance on the trade could be significantly lower than that indicated above. For products with high profit margin per product such as wine and spirits, the impact on the operation of the stakeholders would be relatively small. However, for products with low profit margin and low selling prices (e.g. non-alcoholic beverages), some suppliers may not be able to pass down all the recycling fees to consumers which may drive them to stop selling certain glass-bottled non-alcoholic beverages. However, since only very small proportion of non-alcoholic beverages are sold in glass containers that are subject to the recycling fee, the relevant suppliers are not likely to go out of business because of the implementation of the proposed mandatory PRS.

In terms of readiness of the trades, the assessment shows that the RTPs are more ready in the aspects of registration. They are less ready to provide the periodic returns, pay the recycling fee, and carry out the annual audits.

6.3

ESTIMATED BUSINESS IMPACT WITH MITIGATION MEASURES

Subject to the Government's acceptance of the recommendations and mitigation measures put forward by the Consultants, it is considered that all RTPs should be able to comply with the requirements of the PRS without significant difficulties.

With mitigation measures in place, the total recurring cost of compliance per annum will be reduced from HK\$156.1 million to HK\$136.4 million (a reduction of HK\$19.7 million per annum). Although it is estimated that the total recurring cost of compliance would be reduced for all RTPs in the Wine & Spirits, Beer and Non-alcoholic beverage sectors ⁽¹⁾, the SME RTPs, in particular those trading at or below 20,000 litres of glass-bottled beverage per annum, would benefit most from the mitigation measures. Specifically,

(1) The two RTPs in the Milk Beverage Sector are unaffected by the mitigation measures because they are eligible for recycling fee exemption.

- for those SMEs which benefit from both mitigation measures (i.e. reporting volume by brand names and exemption from annual audit),
 - 70% (1,155 out of 1,650) of the SMEs in the Wine & Spirits sector; 50% (75 out of 150) of the SMEs in the Beer sector; and 92% (184 out of 200) of the SMEs in the Non-alcoholic beverage sector would benefit from both mitigation measures;
 - the total annual recurring cost reductions per RTP are HK\$12,946, HK\$15,118 and HK\$12,946 for the relevant SME RTPs in the Wine & Spirits, Beer and Non-alcoholic beverage sectors respectively;
- for all the other RTPs which would benefit from the mitigation measure of reporting volume by brand names only,
 - in the Wine & Spirits sector, the total recurring cost of compliance for the SMEs would be reduced by HK\$1,551 per year per RTP, while such reduction for the Large Enterprise RTPs is negligible;
 - in the Beer sector, the total recurring cost of compliance for the SMEs would be reduced by HK\$3,723 per year per RTP, while such reduction for the Large Enterprise RTPs is negligible;
 - in the Non-alcoholic Beverage sector, the total recurring cost of compliance for the SMEs would be reduced by HK\$1,551 per year per RTP, while such reduction for the Large Enterprise RTPs is negligible; and
 - in the Milk & Dairy Beverage sector, there would be no change in recurring cost of compliance for both the SMEs and Large Enterprises.

Notwithstanding the above, it is understood from F2F interviews that the stakeholders would pass on the recycling fees to consumers as far as practicable. If the stakeholders could pass on the recycling fees to consumers, the actual recurring cost of compliance on the trade could be reduced significantly and hence the impact on the RTPs.

This Study has carried out a comprehensive assessment of business impact resulting from the implementation of the proposed PRS in both qualitative and quantitative manner. A list of recommendations and mitigation measures has been put forward by the Consultants. If the recommendations are fully adopted, it is estimated that the total recurring cost of compliance per annum will be reduced from HK\$156.1 million to HK\$136.4 million (a reduction by HK\$19.7 million per annum). The actual recurring cost of compliance per annum can be further reduced significantly if the stakeholders are able to pass on the recycling fees to consumers as revealed from the F2F interviews. With the aim of minimising the potential impacts to the trades, the recommendations proposed in the sections above are based on in-depth consultation and discussion with the Government, stakeholders and industry advisors. Should all the mitigation measures be adopted, all RTPs should be able to comply with the requirements of the PRS without significant compliance difficulties.

Regulatory Framework of the Producer Responsibility Scheme on Glass Beverage Containers

In order to implement the PRS, we need to introduce legislation to provide for the statutory regulatory framework. That will involve amendments to the Product Eco-responsibility Ordinance (Cap. 603) (“PERO”) and the Waste Disposal Ordinance (Cap. 354) (“WDO”) as outlined below –

Scope of Regulation

2. The PERO seeks to minimize the environmental impact of various types of products by introducing PRSs based on the “polluter pays” principle. At present, it contains provisions for discouraging the excessive use of plastic shopping bags through a mandatory charge at retail level. We have also introduced legislative amendments for the implementation of a mandatory PRS targeting certain regulated electrical equipment. We propose to further apply the PERO to a new group of regulated products (generally referred hereinafter as “regulated articles”) which are distributed or consumed in Hong Kong. “Regulated articles” include beverages that are held in glass containers.

3. We have not proposed to cover all products that are held in glass containers under the mandatory PRS. The reason is that during the 2013 public consultation, different stakeholders expressed concerns about contaminations of the waste glass containers causing nuisance and hence undermining public acceptability of the new PRS. At the treatment end, contaminations may also undermine product quality and hence the marketability of the recycled glass materials. Also, applying the mandatory PRS to glass food/sauce containers simultaneously, which may necessitate other recycling levies on such household items, may lead to a potential livelihood concern. That said, we are committed to encouraging the recycling of all other properly rinsed waste glass containers including those previously used to hold food or sauce. We will not reject the deposit of properly rinsed glass food/sauce containers and will continue to arrange their proper recycling under the mandatory PRS, though the current scope is limited to glass beverage containers under the Amendment Bill. Subject to future review, the mandatory PRS may be expanded to cover other products including food or sauces held in glass containers. This phased approach is more prudent and will allow more time for public education on the “clean recycling” concept to gradually take root in the community.

Charging of Recycling Levy

4. In line with the “polluter pays” principle, we will impose a recycling levy on the regulated articles so as to recover in principle the full PRS costs. To this end, we propose to collect the recycling levy from suppliers. We have considered the alternative of collecting the recycling levy at the retail level, but this approach is far less cost effective given the vast number of catering or retail establishments. Having further engaged the trade, the mechanism for collecting the recycling levy is outlined as follows –

- (a) *Registration of suppliers:* Manufacturers and importers who carry on a business of distributing regulated articles in Hong Kong will have to be registered as “registered suppliers”. By “manufacturers”, we are targeting the persons who, in the course of manufacturing the regulated articles, undertake the process of sealing the containers which form part of the regulated articles;
- (b) *Submission and auditing of periodic returns:* A registered supplier must submit to the Director of Environmental Protection (“DEP”) periodic returns, setting out the information that is necessary for the computation of the recycling levy payable. The registered supplier will also have to engage an independent auditor to conduct annual audits on the periodic returns to ensure factual accuracy and to keep records to facilitate future inspection. The detailed reporting requirements will be prescribed by subsidiary legislation; and
- (c) *Payment of the recycling levy:* Within a specified period of time after receiving a payment notice from DEP, a registered supplier will have to pay the recycling levy computed on the basis of the information contained in the periodic returns. We will only collect the recycling levy for regulated articles that are “distributed” or “consumed” in Hong Kong, thereby excluding (i) exports of locally manufactured regulated articles and (ii) re-exports of imported regulated articles. We will prescribe the level of the recycling levy by subsidiary legislation in due course after ascertaining the full PRS costs.

5. At present, it is premature to ascertain the full costs of the PRS before completion of the open tendering for the required services from the GMCs. We will prescribe the specific level for the recycling levy by way of subsidiary legislation to be introduced in the next stage. But during the

2013 public consultation, stakeholders and members of the public noted that overseas experience suggests an indicative figure of around \$1 per one litre-container volume.

Exemption

6. At present, a small number of local beverage manufacturers have their own recycling arrangements by which waste glass beverage containers of their brands are collected for reuse after proper cleansing and sterilisation. The reuse of waste glass beverage containers is beneficial to the environment because it can save energy used in the manufacturing of glass from raw materials. We encourage the continuation of these reuse arrangements which are underpinned by a robust and reliable monitoring and auditing system to ensure the glass beverage containers are recovered effectively¹. We therefore propose to establish an exemption mechanism such that a registered supplier may apply by submitting a plan setting out the operational details of how the glass beverage containers will be recovered, reused and ultimately recycled. Subject to meeting certain performance standards and other terms and conditions, beverages held in glass containers that are covered by an environmentally sound container reuse/recycling plan will not be subject to the recycling levy. The exemption will be subject to an application fee (to be set at full-cost recovery level) and renewal at appropriate intervals. We will further engage the trade and draw up the detailed requirements at the next stage.

Proper Treatment of Waste Glass Containers

7. Where glass containers have been abandoned as waste, we propose to apply the licensing control under section 16 of the WDO to its disposal (including storage, treatment, reprocessing and recycling). The proposed licensing requirement seeks to ensure that their operations are compatible with the PRS system which will put in place a circular economy for turning waste into reusable resource. As a matter of principle, the licence will only be issued after a recycler has demonstrated the deployment of a recycling process that is sound from safety, health as well as environmental perspectives, and that the recycled glass materials produced from this process can satisfy the technical specifications for their reuse in subsequent manufacturing processes.

¹ Based on our understanding, glass beverage containers would normally be recovered and reused for five times or more under a typical reuse scheme. This has in effect reduced container waste by at least 80% or above as compared to the amount of container waste generated from the consumption of the same amount of beverage held in single-use containers.

8. We plan to hire GMCs through open tender to provide the collection and recovery (including treatment or reuse) services under the mandatory PRS. This can be implemented administratively but the GMCs will have to be properly licensed under the WDO to undertake the treatment of waste glass containers as and if appropriate.

Movement Control of Waste Glass Containers

9. Further, we propose that importers and exporters of waste glass containers should be subject to permit control under sections 20A and 20B of the WDO. No waste glass containers can be exported unless it can be demonstrated that they will be properly reused or recycled through processes which are no less competent than those conducted at a licensed treatment facility in Hong Kong. Imports of waste glass containers into Hong Kong will also be subject to control to ensure that if there is such shipment, there will be a licensed local recycler undertaking proper treatment.