



DRAFT POLICY RECOMMENDATION

Single-use Plastic Restriction on Food and Beverage Delivery Service in DKI Jakarta Provincial Government



allas



giz

Berbagai Identifikasi
for Information
Environment for GIZ project

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

Jakarta
kota kolaborasi

DRAFT POLICY RECOMMENDATION SINGLE-USE PLASTIC RESTRICTIONS ON FOOD AND BEVERAGE DELIVERY SERVICES IN DKI JAKARTA PROVINCIAL GOVERNMENT

Prepared for the Collaborative Actions for Single-Use
Plastic Prevention in Southeast Asia (CAP SEA) Project

Implemented by Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

With financial support from



By Indonesia Plastic Bag Diet Movement (GIDKP)
December 2022

TABLE OF CONTENTS

TABLE OF CONTENTS	ii
LIST OF FIGURES	iii
LIST OF TABLES	iii
EXECUTIVE SUMMARY	ivi
PART I INTRODUCTION	1
PART II RESULTS OF RESEARCH STUDIES ON ALAS' SUBSCRIBER	4
PART III PUBLIC CONSULTATION RESULT	10
PART IV DRAFT POLICY RECOMMENDATIONS FOR DKI JAKARTA PROVINCIAL GOVERNMENT	15
Part V CONCLUSION AND RECOMMENDATION	24
5.1 Conclusion	24
5.2 Suggestions	25
5.2.1 Recommendation for Hotels, Restaurants and Cafes	26
5.2.2. Recommendations for Reusable Container Service Provider	26
5.2.3. Recommendation for the DKI Jakarta Provincial Government	27
REFERENCE	28

LIST OF FIGURES

Gambar 1	Frequency of Use of Reusable Products by Respondents	5
Gambar 2	Reuse behaviour that has been done by Respondents	6
Gambar 3	Respondents' reasons for implementing reuse behaviour	7
Gambar 4	Complementary Products for Ready-to-eat Food and Beverage that Need to Be Provided Free of Charge According to Respondents	8
Gambar 5	Respondents' Support for the Issuance of Government Regulations Encouraging the Practice of Reusing Food Container Packaging	8
Gambar 6	Actors Involved in Realizing Reuse Ecosystems According to Respondents	9
Gambar 7	Illustration of Reuse Infrastructure Model	10
Gambar 8	An Alternative to Disposable Plastic in Horeca	22
Gambar 9	Reuse Infrastructure Ecosystem Model for Food and Beverage Delivery Services in DKI Jakarta Province	25

LIAT OF TABLES

Tabel 1	Categorization of Participants' Input Findings in Group Discussion	14
Tabel 2	Regulations Related to Waste Management in Indonesia	16
Tabel 3	Single-Use Plastic Packaging Restriction Policy Options	18
Tabel 4	Policy Options for Reuse Options	19

EXECUTIVE SUMMARY

DKI Jakarta Province has a program, namely Jakarta Resilience City with ambitious goal of reducing greenhouse gas (GHG) emissions through various efforts, one of which is waste management through the Jakarta Waste Awareness Program. The Jakarta Waste Awareness Program focuses on waste management including reduction of single-use plastic waste. The campaigns on phase out plastic food and beverage containers were carried out in order to reduce the consumption of several types of single-use plastic under this program.

The use of plastic food and beverage containers, especially in DKI Jakarta Province, has experienced a significant increase in consumption level in line with the increase in the level of food and beverage shopping transactions through online applications. As a result, it has contributed to an increase in the single-use plastic waste generation. Additionally, the lack of access to alternative reuse system is one of the biggest obstacles to adopting this system. Against these conditions, GIDKP together with Zero Waste Living Lab by Enviu initiated the Jakarta Reuse Movement by carrying out several interventions to create a reuse ecosystem and promote alternative lifestyles for reuse through advocacy and education. This movement is also supported by the Collaborative Actions for Single-Use Plastic Prevention in Southeast Asia (CAP SEA) Program implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The CAP SEA program is part of GIZ's global project module, The Export Initiative Environmental Protection, funded by the German Federal Ministry for Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV).

One of the advocacy activities in this movement is the submission of a draft policy recommendations to encourage reuse ecosystem resulting from research studies and public consultation. From research baseline and monitoring studies with the object of research study being Allas customers, public consultations with various stakeholders, and analysis of regulations in DKI Jakarta Province Government regarding restrictions on the use of single-use plastics in food and beverage delivery services, this document recommends the following: (1) The policy for hotels, restaurants and cafes (in short, Horeca) to no longer voluntarily provide products that use single-use plastic containers to consumers, especially for types of single-use plastic that are very difficult to process such as sauce sachets, straws, and other single-use plastics; (2) The policy for hotels, restaurants and cafes (Horeca) to provide reusable container options for food and beverage containers (ordered online or takeaway) is also working with e-commerce to further expand the scope of the reuse ecosystem that is currently being established; (3) The policy on the obligations of business actors in providing infrastructure to strengthen entities in the reuse ecosystem; and (4) The policy related to the obligation to implement information, education and communication (IEC) related to the reuse movement which is in line with the results of researches on the effectiveness of socialization methods to encourage business actors to implement restrictions on the use of single-use plastic in food and beverage delivery services through the preparation of guideline documents for limiting the use of single-use plastics.

PART I INTRODUCTION

Single-use plastic waste in Indonesia is still a controversial issue today. Based on Jenna Jambeck' research in 2015, Indonesia is the second largest contributor of plastic waste to the sea after China. This problem continues to occur due to the high use of single-use plastic (overconsumption). Not to mention the Covid-19 pandemic which has increased the trend of purchasing goods as well as food and beverage online (through online delivery platforms), which has also resulted in an increase single-use plastic waste. The Indonesian Institute of Sciences (locally named, LIPI) has conducted a study regarding the behaviour of using single-use plastic during the Covid-19 pandemic¹ in 2020. The study shows an increase in online shopping, both through marketplaces and online delivery platforms, where 96% of the packaging is single-use plastic with quite a variety of disposable plastic types, ranging from clear plastic, bubble wrap, cling wrap and other types of plastic. Therefore, currently many landfills in several regions in Indonesia have exceeded their capacity (overload)² and it is suggested to find new land for the construction of a new landfills.

The number of solutions for handling waste, which is quite dominated by recycling efforts, is felt to be insufficient to overcome the problem of plastic waste in Indonesia because the facilities for recycling this plastic waste are still not evenly distributed. Not to mention that there are several types of single-use plastic that have a fairly low recycling value or even cannot be recycled at all, so they end up in landfills, for example plastic foam, disposable plastic cutlery, plastic straws, plastic bags, and sachets. There are many types of single-use plastic that cannot be recycled. In the end, it cannot be managed at all, ending up polluting the environment both on land and in waters (such as rivers and seas) which in turn can ultimately affect the quality of water, soil, and even existing aquatic ecosystems. Additionally, if waste management activities are not appropriate, for example burning plastic waste, which will also pollute the quality of the surrounding natural resources, often even being dangerous to health.

Apart from being a health and environmental problem at the downstream level, single-use plastic is also an environmental problem, even from the process of making plastic itself. The results of a study conducted by the Center for International Environmental Law (CIEL) in 2019 showed that the life cycle of plastic contributes to GHG emissions of 1.34 Gt CO₂e in 2030³.

¹Peningkatan Sampah Plastik dari Belanja Online dan Delivery Selama PSBB.
<http://lipi.go.id/berita/peningkatan-sampah-plastik-dari-belanja-online-dan-delivery-selama-psbb/22037>

²Media Indonesia. 2022. TPA Terancam Penuh, Masyarakat Diminta Bijak Kelola Sampah.
<https://mediaindonesia.com/humaniora/466855/tpa-terancam-penuh-masyarakat-diminta-bijak-kelola-sampah>

³Plastic & Climate: The Hidden Costs of a Plastic Planet. Center for International Environmental Law.
<https://www.ciel.org/plasticandclimate/>

It doesn't stop at the visible bad effects, currently plastic also has a bad impact on human health, namely microplastics. At the end of 2021, Greenpeace Indonesia conducted research and found microplastic content in springs in Indonesia⁴. The research was conducted by the Indonesian Plastic Bag Diet Movement (GIDKP) with the DKI Jakarta Provincial Environmental and Ecological Observation and Wetlands Conservation Agency (ECOTON)⁵ also found microplastic particles in several water points in DKI Jakarta Province. Not only found in the environment, microplastics are also found in the human body, starting from the discovery of microplastics in human feces⁶ to the placenta and meconium in pregnant women⁷, human blood⁸, human lungs⁹, and recent research has also found microplastic particles in breast milk¹⁰. The increasing number of studies regarding the discovery of microplastics in the human body proves that single-use plastics do not only have an impact on the environmental, but also on human health.

Research conducted to examine the adverse effects of the life cycle of single-use plastic products demonstrates the urgency for behaviour change to reduce, or even eliminate consumption of single-use plastic. This plastic waste emergency has finally become a global agenda agreed in the 'Global Plastic Treaty' agreement in March 2022 which was ratified at the fifth United Nation Environmental Assembly. In the agreement, it was agreed that the handling of single-use plastics was not focused on waste management solutions, but more emphasis on preventive solutions or not producing waste at all. This is in line with the plan or vision of the Ministry of Environment and Forestry (MoEF) through the Minister of Environment and Forestry Regulation No. P75 of 2019 concerning the Roadmap for Waste Reduction by Producers. Not only at the national level but also at the regional level many local governments have started to initiate reductions in the use of single-use plastics through implemented policies, one of which is DKI Jakarta Province. The DKI Jakarta Provincial Government has the Jakarta Resilience City program with the ambition to reduce GHG emissions through various efforts, one of which is waste management through the Jakarta Waste Awareness Program¹¹. The Jakarta Waste Awareness Program also focuses on waste reduction, especially single-use plastic waste such as food and beverage plastic containers, with the motto Reduce, Sorting and Recycle.

⁴Greenpeace Indonesia. 2021. Uji Laboratorium Terhadap Galon Sekali Pakai Menemukan Kandungan Mikroplastik yang Tidak Sedikit. <https://www.greenpeace.org/indonesia/siaran-pers/45341/uji-laboratorium-terhadap-galon-sekali-pakai-menemukan-kandungan-mikroplastik-yang-tidak-sedikit/>

⁵GIDKP dan Ecoton. 2022. Screening Awal Mikroplastik di Perairan Provinsi DKI Jakarta <https://dietkantongplastik.info/screening-awal-mikroplastik-di-perairan-provinsi-dki-jakarta/>

⁶Ibrahim, Yusuf Shuaib et al. (2021). Detection of Microplastics in Human Colectomy Specimens. *JGH Open* 2021 Jan; 5(1): 116–121. doi: 10.1002/jgh3.12457

⁷Braun, Thorsten et al. (2021). Detection of Microplastic in Human Placenta and Meconium in a Clinical Setting. *Pharmaceutics* 2021, 13(7), 921; <https://doi.org/10.3390/pharmaceutics13070921>

⁸Fortune. 2022. Tiny particles of plastic have been detected in human blood for the very first time. They can't be filtered out. <https://fortune.com/2022/03/24/tiny-microplastics-particles-human-blood/>

⁹Guardian. 2022. Microplastics found deep in lungs of living people for first time. <https://amp.theguardian.com/environment/2022/apr/06/microplastics-found-deep-in-lungs-of-living-people-for-first-time>

¹⁰Ragusa, Antonio, et al. 2022. Raman Microspectroscopy Detection and Characterisation of Microplastics in Human Breastmilk.

¹¹Jakarta Sadar Sampah - Jakarta Rendah Emisi

The use of food and beverage plastic containers, especially in DKI Jakarta Province, has experienced a relatively high level of consumption due to the increasing level of food and beverage shopping transactions through online applications. Unfortunately, most of the single-use plastic used for food and beverage containers, such as styrofoam and plastic cups, often cannot be recycled, so they eventually end up in landfill. This ongoing problem certainly requires solutions that can be applied by the community and have a sustainable impact on both the environment and health. The solution in question is ultimately to return to old habits or local wisdom which has always applied environmentally friendly behaviour or lifestyle, namely reuse lifestyle. The habit of reusing things that people don't realize already exists, such as carrying drinking bottles, lunch boxes, and so on, proves that people are familiar with this movement, meaning that it is very possible to apply it in everyday life.

However, the lack of access to alternative reuse system is one of the biggest obstacles to adopting this lifestyle in food and beverage delivery services. Therefore, GIDKP together with Zero Waste Living Lab by Enviu initiated the Jakarta Reuse Movement by carrying out several interventions to create a reuse ecosystem and promote alternative reuse lifestyles through advocacy and education. One of the alternative reuse solutions offered in this movement is reuse as a service. Allas, one of the ventures incorporated in Enviu, runs its business to reduce consumption of single-use plastic containers for food and beverages by using reusable and returnable containers. Allas collaborates with several business actors, such as restaurants and cafes to create a reusable ecosystem as a service for online food and beverage consumers. One of the advocacy activities in this movement is the preparation of policy recommendations to encourage reuse ecosystem, in which there are several data from the results of research studies and public consultations as reference for consideration of policy recommendations, especially for the DKI Jakarta Provincial Government.

PART II

RESULTS OF RESEARCH STUDIES ON ALLAS' SUBSCRIBER

In the period May, September, and December 2022, GIDKP together with Allas carried out three online data collection for people of DKI Jakarta who have known or used Allas' services. The first data collection serves as the initial reference data (baseline), while the second and third data collection serve as indicators of monitoring and evaluation progress from the initial data, which are called midline and endline.

Online data collection was carried out after considering specific targets and the situation in the midst of the Covid-19 pandemic which did not allow face-to-face interviews to be conducted. Therefore, data was obtained by distributing online questionnaires using an application, namely SurveyMonkey, for baseline¹² and monitoring and evaluation¹³ research studies.

These three surveys mainly use a quantitative approach, meaning that almost all of the data obtained is in the form of numbers or weights from several answer choices, so the data will also be processed using certain statistical techniques. While it is possible that certain questions are relevant, there are open questions to generate a selection of qualitative answers that can be further analyzed.

The sampling technique used in this survey was purposive sampling, which was limited to the qualifications of respondents who had been recorded on the Allas contact list, with a total population of 330 people for the baseline survey, while the data for the midline survey population with total 600 people. The purposive sampling technique is a type of non-probabilistic sampling technique that has the characteristics of non-random sampling, where the sampling is not done randomly, and the researcher determines the sampling by determining certain characteristics that are in accordance with the research objectives so that it is expected to be able to answer research problem. This type of sampling was chosen because the online questionnaire method can only be filled in after giving consent, so that random sampling is not possible because the probability of returning the questionnaire cannot be ascertained.

Respondents filled out a questionnaire as a research instrument with a self-administrated questionnaire scheme, meaning that the respondents filled out the questionnaire themselves directly without any question-and-answer process in face-to-face interviews. Baseline data collection was carried out on 10 to 24 May 2022, while monitoring and evaluation data was collected on 9 to 29 September 2022 and 3-20 December 2022, with achievements of 39, 45 and 55 respondents, respectively. Part of the population at the baseline survey is also part of the population at the midline and endline surveys, so it is possible for some respondents to fill out and take part in a series of all surveys. However, the analysis in this report does not consider the occurrence of these possibilities which may affect the measurement results over time. This means that there is no use of time-series analysis, which is a form of statistical analysis that considers movement over time due to changes in the number of respondents and insufficient samples size for prerequisite testing. Therefore, the statistical calculations carried out only compare the average data descriptively.

¹²Tautan pertanyaan studi baseline: <https://www.surveymonkey.com/r/XVCBCLG>

¹³Tautan pertanyaan studi monitoring: <https://www.surveymonkey.com/r/X6F2J5D> dan <https://www.surveymonkey.com/r/6L95VRP>

Of the three phases of data collection, most of the respondents had fairly similar characteristics, where 46.15% (N=39) were baseline respondents, 73.33% (N=45) were midline respondents, and 80.00% (N= 55) endline respondents can be categorized as middle to high income group, especially with indicators of having income/expenses above the DKI Jakarta Provincial Minimum Wage, which is around IDR 4,500,000 per month. This figure is certainly much higher than the standard lower limit for the middle-income group according to the Asian Development Bank (2010), which is \$2 per day, or according to the World Bank standard (2020), which is IDR 1.2 million per month.

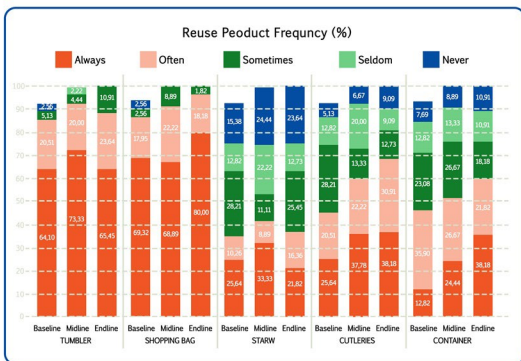


Figure 1. Frequency of Use of Reusable Products by Respondents

The three groups of respondents showed behaviour that was considered to have adopted an environmentally friendly lifestyle where the majority "always" (light blue) used tumblers and shopping bags in their activities. For other products, such as straws, cutlery, and food containers, the number of respondents who "always" use them is not as much as the two previous products. However, an interesting finding is that the proportion of respondents who "frequently" (orange color) uses cutlery and cutlery is quite significant, on average between 20% - 36%. Even the presentation of the "often" category for food container products dominates all frequency category, namely 35.90% (N=39) for the baseline, 26.67% (N=45) for the midline, even at the endline it increases to "always" of 38.18% (N=55), meaning that with a little more precise effort, it will be able to increase the frequency of use to a higher and more stable frequency level.

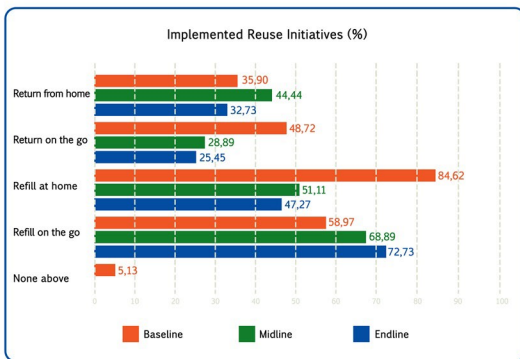


Figure 2. Reuse behaviour that has been done by Respondents

These findings were considered coherent with other findings which revealed that respondents in the three groups were more familiar with the types of reuse models, namely Refill at home and Refill on the go. According to the Ellen MacArthur Foundation model, Refill at home can be understood as purchasing product contents delivered to the consumer's homes, which are filled into consumer's container. Meanwhile, Refill on the go can be understood by buying a product at a store/kiosk by refilling the product contents in a personal container that you bring yourself. Type of Return on the go initiative, which is returning the rented container owned by the tenant/kiosk/merchant service after consuming the product contents, which is delivered to the owner's location or collection point, as well as Return from home, namely returning the rented/borrowed container belonging to the tenant/kiosk/merchant service after consuming the product contents taken at home.

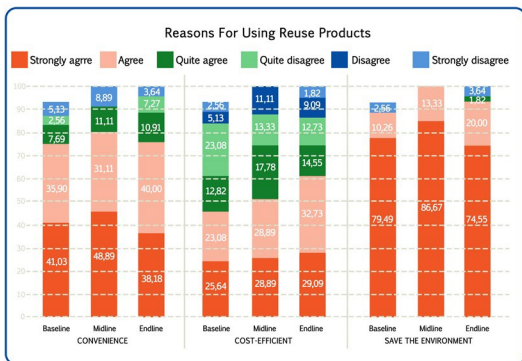


Figure 3. Respondents' reasons for implementing reuse behaviour

When asked about respondents' reasons for using reusable products, several respondents stated that this was mostly done due to environmental factors, followed by convenience factors and perceived savings from using these products.

Reuse Container Aspiration

For respondents, the characteristics considered most important for food packaging that can be reused in delivery services (online) are that it at least meets the food grade criteria, is considered clean, does not leak when used, can be used directly as a food container, and is heat resistant. These findings were obtained from the baseline survey.

Respondents are willing to pay more for the additional items they normally receive. This was shown by the majority of respondents in the baseline survey, 56.41% (N=39) stated that neither spoons/forks/chopsticks, tissues, nor other sauces/condiments which usually contribute to plastic waste, need not be given free of charge. (Figure 4). It is also believed to be part of an indirect disincentive for consumers to no longer receive the additional item.

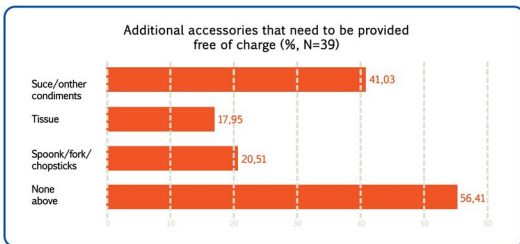


Figure 4. Complementary Products for Ready-to-eat Food and Beverage that Need to Be Provided Free of Charge According to Respondents

Support for Issuance of Government Regulations

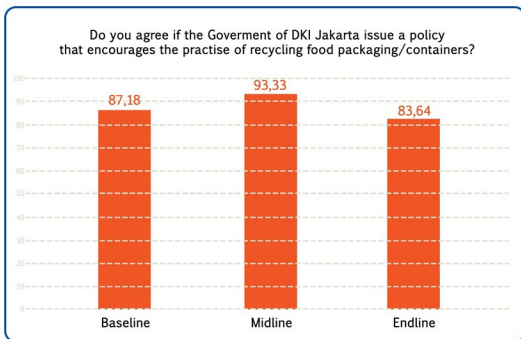


Figure 5. Respondents' Support for the Issuance of Government Regulations Encouraging the Practice of Reusing Food Container Packaging

Basically, the majority of respondents show high support for the issuance of regulations that can support the reuse ecosystem in DKI Jakarta Province. They also assessed that from the several actors involved, the reuse container service provider is the most prepared among the other actors involved. Although it still needs to be followed significantly by other actors. This can still be considered as a positive thing because at least there are parties who have started the initiative to implement reuse practices. The readiness of the government and related institutions, such as the National Food and Drug Supervisory Agency (locally named BPOM) to provide legal certainty and appropriate standardization, is still considered to be the lowest among the others. This implicitly also supports previous findings that respondents' pressure on the government's role needs to be increased as optimally as possible.

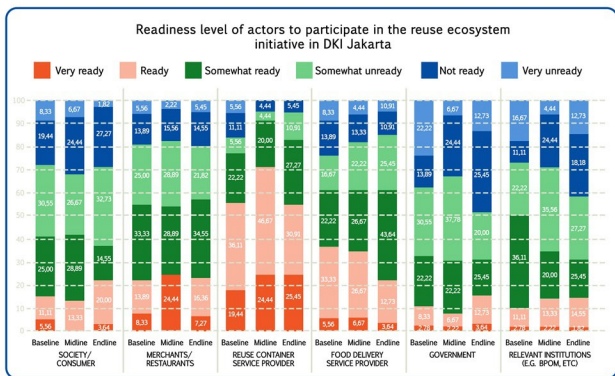


Figure 6. Actors Involved in Realizing Reuse Ecosystems According to Respondents

PART III PUBLIC CONSULTATION RESULT

The public consultation using the focus group discussion (FGD) method invited various stakeholders in the reuse ecosystem, including food sellers, consumer representatives, online food delivery service providers, providers of returnable and/or reusable containers, as well as representatives of the central government and regions to discuss together discussing various challenges and inputs in strengthening reuse ideas and practices. The public consultation is expected to provide input as material for consideration in preparing draft policy recommendations to the DKI Jakarta Provincial Government.

In the public consultation activities that have been carried out, a variety of new and up-to-date information regarding ecosystem ideas and practices for reuse that were highlighted by presenters from various roles and initiatives. The presentation session showed that the people of DKI Jakarta themselves have actually started reusing practices in their respective homes such as bringing their own drinking bowls and provisions or by refilling water bottles. Even though such actions are still simple and limited to a small scope, the need for people to be involved in a larger ecosystem is becoming more and more crucial. This is also consistent with the policy trend of reducing plastic in food delivery services, where the use of the reuse model that is currently being implemented is on "return from home" and "return on the go" model when referring to the 'Reuse Framework' compiled by Ellen MacArthur Foundation. In the second part above, respondents are more familiar with the behaviour of "refill at home" and "refill on the go", which indicates that respondents are getting used to carrying and using reusable containers and products. Thus, in order to strengthen the concept of a comprehensive reuse ecosystem, information regarding "return from home" and "return on the go" behaviour needs to be increased through various available information, educational and communication (IEC) channels.

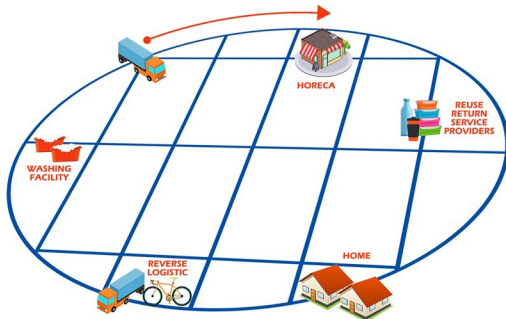


Figure 7. Illustration of Reuse Infrastructure Model

By using the Reuse Infrastructure Grid tool, developed by GIDKP, this activity can be helpful in identifying various constructive ideas from participants for each role in the reuse ecosystem, from hotels, restaurants and cafes (horeca) to reuse-return service providers (for example: Allas), container washing facilities, food delivery service companies using reverse logistics (such as grab/gojek/traveloka eat, etc.), consumers, and the Government. In general, all participants during the public consultation showed great enthusiasm and attention, which also proved that this is an important and urgent issue that must be prioritized. Some identified development needs, such as the absence of hygiene standards and policies governing practices in the reuse ecosystem, especially the concept of reuse as a service, the number of restaurant/merchant participation that is not yet maximized, improvement of the access for borrowing and returning the containers, and usage container fees that have not touched all level of community. From the identification of these needs, it can be used as reference for development opportunities for the DKI Jakarta Provincial Government in preparing the necessary regulations.

HOTEL, RESTAURANT, DAN CAFE (HORECA)

Business ecosystem:

- There needs to be an agreement of all business people to use reusable containers that is regulated by binding legal policies to support the growth of a reuse business ecosystem.

Safety standard:

- Awareness needs to be raised regarding food and beverage packaging standards for reusable packaging based on current standards (Presidential Regulation Number 86 of 2019 concerning Food Safety and the Food and Drugs Agency Law Number 20 of 2019 concerning Food Packaging)
- Guidelines for providing safe and healthy reusable packaging containers

Operational standard:

- Support the implementation of the reuse system with policies
- Practice the use of reusable food or beverage containers
- Restaurants need to provide support (in the form of partnership options) to Allas so they can implement reusable food containers as well
- Dine-ins should always use reusable plates made of glass, ceramics or other materials that can be washed and reused and comply with the provisions of food safety standards (food grade) regulated in Indonesia.

Affordability for the users (consumers):

- Implementing a reuse system without increasing the price for food and beverages
- The community expects many options for using reusable containers or loan and return systems

Incentives for consumers:

- The hotel provides a welcome drink using a dispenser and reusable glasses
- Horeca can provide discounts for consumers who bring/use their reusable containers, like Starbucks
- Offer gimmicks such as free products or discounts so that people are more interested in participating in this activity

Government incentives:

- The government needs to reward restaurants that have adopted reuse solutions

REUSE RETURN SERVICE PROVIDERS (Example: Allas)

Operational standard:

- Waste handling policy for reusable packaging containers that have reached their usage limit (e.g., recycling, disposal, or other safe measures)
- There is a standard procedure for transporting reusable packaging containers to and from the restaurants, to the consumers, and to the washing facilities to maintain the quality and shape of these containers and to ensure the optimal use of the packaging containers in the long term
- There needs to be a price adjustment for container lending services to make them more affordable for consumers (subscribers and partners/merchants)

User affordability:

- It is necessary to pay attention to the middle-class and lower-class consumers so that they can continue to access reusable containers

Business ecosystem:

- Encouraging manufacturers to produce reusable containers that comply with food safety standards and pay attention to the end-of-life materials at affordable prices

WASHING FACILITIES

Operational standard:

- There needs to be a hygiene standard for food and non-food that can be applied to the washing facilities, with a focus on hygiene, cost, and liquid waste

Infrastructure management:

- Establishing waste banks (copying existing designs) in regions as partners (e.g., for packaging or washing)
- Encourage the laundry business to carry out the washing
- Cooperation with the sub-districts to provide washing facilities per Neighbourhood/Community Association (locally named RT and RW)
- The washing facilities should make sure that the used water is recycled properly and safely.

REVERSE LOGISTICS (GRAB/GOJEK/OTHERS)

Operational standard:

- Integrated pick-up and drop-off points
- A scheduling system is necessary for ensuring a timely pick-up at the consumers' location
- Addition of a clearly visible "button" or an alternative option for selecting reusable packaging in the application instead of using the "notes" section

Infrastructure management:

- Implement a more affordable pick-up service for the consumers
- Business actors are required to use reusable containers for deliveries within a 5 km radius to facilitate pick-up
- There needs to be a publication related to technical operations

HOME/CONSUMERS

Consumer Education

- Obtain information on environmental cost externalities of reuse systems (such as pick-up fees, container maintenance, and container borrowing)
- Get big campaigns and education about reusable products (through brand awareness and action plans)
- Get a wide selection of restaurants and types of reusable packaging that consumers may consider

Participation

- Empowering the community so that they can collect and manage their household waste
- Shaping consumer behaviour and promoting a reuse-friendly lifestyle in daily life with the family with additional support from schools (as part of the curriculum)
- Encouraging the community to use reusable products (e.g., products offered by Allas)

DELIVERY FROM WASHING FACILITIES

- Provide information about how many times the containers have been used

(Along with WASHING FACILITIES and REVERSE LOGISTICS)

GOVERNMENT

Rule enforcement

a. To Business Sector

- Regulations stipulating the use of reusable containers for hotel, restaurant and café (horeca) business actors
- Issue regulations that stop the production of single-use plastics
- Pave the way for reuse service providers to expand their services, either in the form of networks or resources
- The Highest Retail Price (locally named HET) rule for reusable containers ensures that the price of container borrowing services is affordable
- In building a reuse ecosystem, the government has expanded regulations to completely prohibit the use single-use plastics in the hospitality business, including plastic straws, Styrofoam, and non-handle plastic; it has also shifted the work of waste collectors to washing facilities for reuse (just transition)
- Formulate synergy regulations and reuse policies that apply internationally
- Regulations are passed as Governor Regulations for reuse provisions in horeca
- Standard packaging policy
- Financial incentives and disincentives, such as incentives for hospitality businesses that are interested in becoming more environmentally friendly via a reuse system
- Recognise business activities that already use reusable packaging
- Create regulations for business activities related to the use of reusable packaging

- Adopt policies related to standards or criteria that guarantee the use of safe containers
 - Standardized container safety guarantee, such as from BPOM, for example Bisphenol A (BPA)-free
 - Provide adequate facilities, for example by increasing the number of places to collect used containers
 - Adopt government regulations that the reuse system mandatory instead for business actors, not voluntary
 - Set up a reuse-friendly infrastructure (washing facilities, reverse logistics, etc.) based on future regulations regarding reuse ecosystems as a solution to single-use plastic restrictions.
- b. To Society**
- Conduct awareness-raising campaigns regarding food and beverage packaging standards in reusable packaging based on current standards (Presidential Regulation Number 86 of 2019 concerning Food Safety and Food and Drugs Agency Law Number 20 of 2019 concerning Food Packaging)
 - Ensure the cleanliness (hygiene) of the container
 - Policies governing reuse down to the RT and RW
 - Rules that allow for sanctions for people who do not return reusable packaging they borrowed

Information, Education and Communication

- Inform the public about the Roadmap for Reducing Waste by Producers in accordance with Minister of Environmental and Forestry Law No. P75 of 2019, especially about restaurants and catering businesses that have already implemented a reuse system.
- Clear information regarding SUP packaging costs
- Collaborate with reusable product providers, by establishing community-based policies that suit the needs of the community (collection point systems that can be replicated, such as in Japan)
- Engage with consumers so they want to be involved in building a reuse movement
- Regular and consistent education
- Convey the values and benefits of this movement thoroughly and appropriately so that more and more parties are motivated to join this movement
- The context in reuse policies needs to be understandable to the general audience
- Build on good practices in the reuse system carried out by Horeca so that people who have implemented it have a sense of pride and are motivated to do this as a new normal (new habit)
- Start with a pilot project in one area
- At the upstream level, all options for implementing this movement in the communities should be available and affordable for the community namely one RW, one waste bank, one refill store and one collection point for reusable containers

Table 1. Categorization of Participants' Input Findings in Group Discussions

PART IV

DRAFT POLICY REKOMENDATION FOR DKI JAKARTA PROVINCIAL GOVERNMENT

The Provincial Government of DKI Jakarta has a legal basis for implementing various policy options that support reuse system, in particular the concept of reuse as a service which refers to the implementation of the obligation to reduce waste. The obligation to "reduce waste" in the Law (locally named UU) and Government/Presidential Regulation (locally named PP) on Waste Management, is also regulated in the DKI Jakarta Provincial Regulation (locally named Perda) No 03 of 2013 concerning Waste Management, specifically Article 20 and Article 22. If These articles are read along with their explanations, the conclusion is "**Disposable Items Must Be Avoided**", then they are replaced with alternatives in the form of products that can be reused, easily recycled, or easily biodegradable.

The related articles referred to are as follows:

- 1. Article 20 in the DKI Jakarta Provincial Regulation No 03 of 2013**
Everyone is obliged to reduce waste by:
 - Use as little as possible packaging/products that generate waste;
 - Using reusable and/or easily degradable packaging/products
 - Using packaging/products that are environmentally friendly (degradable); and
 - Reusing waste safely for health and the environment
- 2. Article 22 in the DKI Jakarta Provincial Regulation No 03 of 2013:**
Waste reduction is done by:
 - use materials that can be reused, materials that can be recycled, and/or materials that are easily decomposed by natural processes; and/or
 - collect and return waste from packaging and/or used products
- 3. Regulation of the Governor of DKI Jakarta Province No. 142 of 2019 concerning the Obligation to Use Environmentally Friendly Shopping Bags in Shopping Centers, Modern Retail and Traditional Markets**
Every business actor (shopping centers, modern retail, and traditional markets) must stop using single-use plastic bags and must provide shopping bags that can be used repeatedly.
- 4. Regulation of the Governor of DKI Jakarta Province No. 102 of 2021 concerning Obligations for Waste Management in Areas and Companies**
Waste reduction which includes limiting waste generation must also be carried out by each person in charge or manager of Residential Areas, Commercial Areas, and Industrial Estates who must be in the area and/or facilities for which they are responsible.
- 5. Regulation of the Governor of DKI Jakarta Province No. 111 of 2021 concerning Procedures for Providing Regional Fiscal Incentives for the Obligation to Use Environmentally Friendly Shopping Bags**
In enforcing DKI Jakarta Provincial Governor Regulation No. 142 of 2019 concerning the Obligation to Use Environmentally Friendly Shopping Bags, it is necessary to guarantee legal certainty regarding the provision of fiscal incentives to managers of shopping centers, supermarkets and people's markets as a stimulus in fulfilling the obligation to use environmentally friendly shopping bags.

Conclusion:

1. Disposable items should be avoided
2. Disposable items must be replaced with alternatives in the form of:
 - use reusable materials
 - use easily recyclable items
 - using materials that are easily decomposed by natural processes
3. Strive to return the waste to waste source (for example, used bottle packaging is returned to the shop)

National Regulation	<ol style="list-style-type: none">1. Law of the Republic of Indonesia No. 18 of 2008 concerning Waste Management2. Law of the Republic of Indonesia No. 32 of 2009 concerning Environmental Protection and Management
Government Regulation	<ol style="list-style-type: none">1. The Government of the Republic of Indonesia Regulation No. 81 of 2012 concerning Management of Household Waste and Household-like Waste2. The Government of the Republic of Indonesia Regulation No. 22 of 2021 concerning Implementation and Management of the Environment
Presidential Regulation	<ol style="list-style-type: none">1. The President of the Republic of Indonesia Regulation No. 97 of 2017 concerning the National Policy and Strategy for the Management of Household Waste and Household-like Waste
Ministerial Regulation	<ol style="list-style-type: none">1. The Minister of Environment and Forestry of the Republic of Indonesia Regulation No. P/75 of 2019 concerning the Roadmap for Waste Reduction by Producers
DKI Jakarta Provincial Regulation	<ol style="list-style-type: none">1. DKI Jakarta Provincial Regulation No. 3 of 2013 concerning Waste Management
Governor of DKI Jakarta Province Regulation	<ol style="list-style-type: none">1. The Governor of DKI Jakarta Province Regulation No. 142 of 2019 concerning the Obligation to Use Environmentally Friendly Shopping Bags in Shopping Centers, Modern Ritel and Traditional Markets2. The Governor of DKI Jakarta Province Regulation No. 102 of 2021 concerning Obligations for Waste Management in Areas and Companies3. The Governor of DKI Jakarta Province Regulation No. 111 of 2021 concerning Procedures for Providing Regional Fiscal Incentives for the Obligation to Use Environmentally Friendly Shopping Bags

Table 2. Regulations Related to Waste Management in Indonesia

Therefore, there are at least four types of draft policy recommendations proposed to be derived from the legal basis (1) a policy for hotels, restaurants, cafes (Horeca) not to provide single-use plastic, (2) a packaging policy so that Horeca can reuse options, and (3) the policy of providing infrastructure, public facilities, and (4) social communication by the Provincial Government of DKI Jakarta in order to facilitate the development of reuse system. The fourth recommendation above is based on the subject matter of regulations regulated at the national level, namely Regulation of the Minister of Environment and Forestry No. P75 of 2019 concerning the Roadmap for Reducing Waste by Producers. Against the regulation, local government has an authority to issue permit to the subject of regulations (hotel, restaurant, cafe and retail) and permit related to manufacturing are at the national level.

1. Policy for Horeca not to provide single-use plastic

In Section 2 above, the survey results show that respondents are willing to pay more for the additional items they normally receive. 57% of respondents stated that neither spoons/forks/chopsticks, tissues, nor other sauces/condiments that usually contribute to plastic waste need not be given away for free.

Followed by the public consultation result in Section 3, participants agreed horeca need to be involved in the policy development process (through public consultation) to strengthen their business ecosystem in order to provide reuse options. As a consequence of the reuse options provisions, the incumbent options or one-time use options granted need to be limited. In research studies and public consultation, the idea emerged about the minimum standards that needed to be achieved, namely **the limits on the provision of single-use products and reuse options.**

Therefore, the draft policy recommendations that are made need to consider two things, namely procedures between business-to-business (B-to-B) and between Business to Consumer (B-to-C).

a. B-to-B procedure

Policy options include procurement process procedures and order preparation to reduce single-use plastic packaging and are not limited to:

- Require Horeca entrepreneurs to have Procurement Policies or Procedures Without Single-Use Plastics, both for kitchen ingredients and food and beverage serving materials and equipment. This allows businesses to have a list of vendors that are declared to be minimal in plastic, with predictable costs and options that are comparable to other vendors. As soon as the regulation is enacted, the list of goods /services procurement providers must be on the procurement list of the Government Goods/Services Procurement Policy Agency (locally named LKPP).
- Require horeca entrepreneurs to have vendor options that avoid sambal/sachet sauce, plastic straws, plastic cutlery, plastic containers and packaging, and other single-use plastic products.
- Urge horeca entrepreneurs to subscribe to sellers of kitchen ingredients that do not use plastic wrap or styrofoam, unless required for hygienic reasons.

b. B-to-C procedure

Policy options include procedures when interacting with customer to reduce single-use plastic packaging during the order preparation process, whether taken home by consumer or via delivery and are not limited to:

- Require horeca entrepreneurs not to provide single-use sachets, unless specifically requested by customers
- Require horeca entrepreneurs not to provide disposable straws, unless specifically requested by customers
- Require horeca entrepreneurs not to provide disposable plastic cutlery or cutlery wrapped in disposable plastic
- Require horeca entrepreneurs to have service procedures or customer service that makes it easier to avoid single-use plastic packaging, for example through posting information on each table, verbal explanation procedures for waiters to customers, or collaborating with online platforms that provide food delivery services to create a choice system for consumers not to choose single-use plastic packaging.

Policy options for limiting single-use plastic packaging, both B-to-B and B-to-C can be summarized in the following table:

<p>a. B-to-B (Business to Business) procedures.</p> <ul style="list-style-type: none"> ■ Require horeca entrepreneurs to have Procurement Policies or Procedures Without Single-Use Plastics, both for kitchen ingredients and food and beverage serving materials and equipment. ■ Require horeca entrepreneurs to have vendor options that avoid sambal/sachet sauce, plastic straws, plastic cutlery, plastic containers and packaging, and other single-use plastic products. ■ Urge horeca entrepreneurs to subscribe to sellers of kitchen ingredients that do not use plastic wrap or styrofoam, unless required for hygienic reasons. 	<p>b. B-to-C (Business to Consumer) procedures.</p> <ul style="list-style-type: none"> ■ Require horeca entrepreneurs not to provide single-use sachets, unless specifically requested by customers ■ Require horeca entrepreneurs not to provide disposable straws, unless specifically requested by customers ■ Require horeca entrepreneurs not to provide disposable plastic cutlery or cutlery wrapped in disposable plastic ■ Require horeca entrepreneurs to have service procedures or customer service that makes it easier to avoid single-use plastic packaging
---	---

Table 3. Single-Use Plastic Packaging Restriction Policy Options

Policy recommendations not to provide single-use plastics can be made through guidelines/circulations/technical instructions as derivatives of DKI Jakarta Provincial Governor Regulation No. 102 of 2021 concerning Obligations for Waste Management in Areas and Companies, so there is no need for a new, independent regulation.

2. Policy for Horeca to provide reuse options

a. B-to-B Procedure

Policy options include procurement process procedures and order preparation to implement the reuse option and are not limited to:

- Require horeca entrepreneurs to have Procurement Policies or Procedure for Reuse, both for kitchen ingredients and food and beverage serving materials and equipment. This allows the entrepreneur to have a list of vendors that provide bulk delivery options for groceries or a system where empty containers can be returned to the vendor, at a predictable cost and comparable to other vendor options. As soon as the regulations are enacted, the list of goods/services procurement providers must be included in the procurement list of the Government Goods/Services Procurement Policy Agency (LKPP). This policy recommendation can be made through guidelines/circulation/technical instructions as derivatives of DKI Jakarta Provincial Governor Regulation No. 102 of 2021 concerning Obligations for Waste Management in Areas and Companies, so there is no need for a new, independent regulation.
- Require horeca entrepreneurs to have vendor reuse options for serving ingredients to customers, for example:
 - Sauce, sugar, salt, pepper and other seasonings in reusable bottles
 - Drinking water from reused gallon with a paid refill system
 - reuse serving and packaging containers for customers, for example: plates, spoons, forks, glasses for reuse, with washing procedures in accordance with existing regulatory standards
 - Reusable packaging containers for delivery or take-away services, either do it by yourself or work with a reusable delivery system service providers.

This policy recommendation can be made through guidelines/circulations/technical instructions as derivatives of DKI Jakarta Provincial Governor Regulation No. of 2021 concerning Obligations for Waste Management in Areas and Companies, so there is no need for a new, independent regulation.

a. B-to-C procedure

Policy options include procedures when interacting with customers to provide reuse options, whether dine in or take-away and are not limited to:

Dine-in or Eat on the spot

- Require horeca entrepreneurs to provide refill drinking water from reuse gallons, from boiled water filtered water, or other potable water

Take-away dan Delivery

- Require horeca entrepreneurs to display reuse options in their menus, whether for dine-in or in e-commerce applications
- Require horeca entrepreneurs to have customer service procedures that facilitate the use of reuse options, for example through displaying information on each table, procedures for verbal explanations of waiters to customers, as well as check-out procedures when customers use e-commerce applications.
- Require e-commerce entrepreneurs to provide easy service to horeca to accommodate the reuse options that need to be provided by horeca.

Policy options for providing reuse options, both B-to-B and B-to-C can be summarized in the following table:

<p>a. B-to-B Procedure (Business to Business)</p> <ul style="list-style-type: none">■ Require horeca to have a Procurement Policy or Procedures for Reuse, both kitchen ingredients and food and beverage serving materials and equipment.■ Require horeca entrepreneurs to have reuse vendor options for serving ingredients to customers.■ Require horeca entrepreneurs to have reuse vendor options to service and package containers for customers.■ Require e-commerce to provide easy service to horeca to accommodate the reuse options that need to be provided by horeca.	<p>b. B-to-C Procedure (Business to Consumer)</p> <ul style="list-style-type: none">■ Require horeca to provide refill drinking water from reuse gallons, from boiled water filtered water, or other potable water■ Require horeca to display reuse options in their menus, whether for dine-in or in e-commerce applications■ Require horeca to have customer service procedures in place that facilitate the use of reuse options to consumers.
---	---

Table 4. Policy Options for Reuse Options

3. Policy for Providing Infrastructure and Facilities

Following the results of public consultation in the Section 3, there are recommendations and inputs on the government's role in promoting reuse system, aside from to respond to subject of regulation, namely horeca. These inputs are aspirational in nature for the provision of public facility infrastructure provided by the government so as to facilitate a more efficient reuse system, can be used by various actors, and reduce reuse operational costs. In the case of horeca center locations (for example canteens, cafeterias, food courts, shared kitchens), the DKI Jakarta Provincial Government may require the location to provide shared facilities to make it easy to reuse, such as dish washing facilities.

Several recommendations for public facility infrastructure that may be required to be provided by the DKI Jakarta Provincial Government, or integrated into existing public facilities, are:

- Require the provision of standard washing facilities that meet existing and applicable regulations for horeca, at each horeca location and/or horeca center location (such as canteens, cafeterias, food courts and shared kitchens);
- Open public facilities for washing food/drinking utensils in public locations, such as markets, tourist attractions, parks, sports halls and stadiums.
- Provide drop-boxes for placing/collecting empty food containers, plates and/or glasses at various points in public facilities, such as bus stops, terminals, shopping centers, markets, waste banks and schools.
- Provide special pick-up transportation for empty containers to pick up empty containers from households to washing facilities.

In addition to the policy options mentioned above, the DKI Jakarta Provincial Government can also provide incentives in the form of awards, ease of licensing, or tax breaks given to entrepreneurs who have contributed to providing facilities that support reuse ecosystem.

4. Information, education and communication policies that are aligned with the results of research studies on the effectiveness of raising awareness method

a. Information, Education and Communication Team

In implementing the policy of prohibiting the use of plastic bags, the DKI Jakarta Provincial Government has an obligation to arrange raising awareness and training about reducing the use of plastic bags to subjects regulated in regulations, namely the community and business actors. This activity will be carried out by a team consisting of:

- i. Head of Region (Governor)
- ii Deputy Regional Head (Deputy Governor)
- iii Regional Secretary
- iv. Related local government organizations (locally named OPDs), including Environmental Agency, Tourism Agency and Office of Industry, Trade, Small and Medium Enterprises Cooperatives

The strategy aims to encourage and invite businesses to implement restrictions on the use of single-use plastic packaging in food and beverage delivery services. In particular, the strategy are:

- i. Compilation of guidance documents about restrictions on the use of single-use plastic packaging in food and beverage delivery services.
- ii Dissemination of guidance documents to business actors
- iii. Create standard examples of visual communication materials
- iv. Publication of good practices from business actors

The strategy will be channeled through the following Communication Channels: (a) Official website; (b) Official social media; (c) Official e-mail; (d) circular letter; and (e) meetings. In order to carry out the implementation action of the IEC strategy, it is necessary to determine the communication tactics as follows:

- i. Compilation of guidance documents about restrictions on the use of single-use plastic packaging in food and beverage delivery services.
 - Development and publication of guidance documents
- ii. Dissemination of guidance documents to business actors
 - Meetings
 - Available on the official website of the Provincial Government of DKI Jakarta for business actors access
 - Mailing out via notification or circular letter

- iii. Create standard examples of visual communication materials.
 - Provide visual material documents that can be modified, replicated, and used by business actors
- iv. Publication of good practices from business actors
 - Do verification based on reporting from good practice guidelines
 - Provide recommendations to the Governor for giving appreciation/award to business actors.

From these tactics, the expected effect is that business actors respond to these documents by being willing to implement good practices and consult with the DKI Jakarta Provincial Government in their implementation. In order to ensure the results achieved are as expected, communication monitoring and evaluation needs to be carried out, such as (a) the government conducts periodic supervision to monitor implementation; (b) the government prepares an official report to describe the implementation; and (c) the government follows up on matters that can be corrected. So that the expected reciprocity is implementation improvement of business actors. Apart from the DKI Jakarta Provincial Government, it is better if the outreach activities involve collaboration with local Civil Society Organizations (CSOs), such as family welfare development, local youth organizations, waste banks, and so on. This is because community organizations can help accelerate the dissemination of information and have a significant influence on changes in people's behavior and norms of life.

- b. Raising Awareness Materials in hotels, restaurants/cafes/catering
In contrast to modern ritels and traditional markets where single-use plastic only uses disposable plastic shopping bags and packaging bags, more diverse type of single-use plastic are used in the food and beverage service sector. In addition to disposable plastic shopping bags and packaging bags, the single-use plastics used include mica/polystyrene foam to wrap food, plastic straws and cutlery, plastic/paper cups, plastic bowls/plates, drinks in plastic packaging (both in the form of bottles, glass, or aseptic packaging), and spices packaged in single-layer or multi-layer packaging. Of course, all of these goods and packaging can be prevented from being used by consumers and business owners. Especially in an era where the buying and selling process was carried out through food delivery applications, these efforts had to also be carried out in an integrated manner. Here are a few things that can be done to reduce the use of single-use plastic in this service sector.

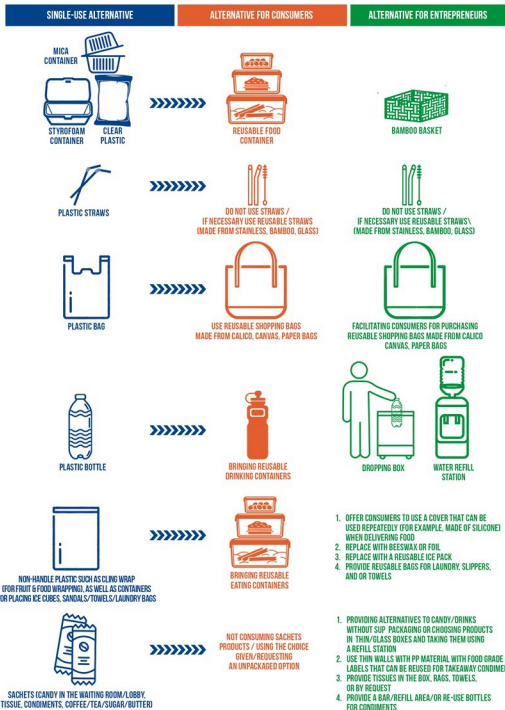


Figure 8. An Alternative to Disposable Plastic in Horeca

In order to carry out implementation actions of the EIC strategy for business actors, it is necessary to determine the Communication Tactics as follows:

1. Implement guidelines for limiting the use of single-use plastic packaging in food and beverage delivery services
 - a. Publish and promote efforts to limit the use of single-use plastic packaging in food and beverage delivery services along with its alternatives.
2. Create visual communication materials based on standard examples
 - a. Print visual communication materials for consumers.
 - b. Publish visual communication materials on websites, social media, and via email blasts.
3. Dissemination of the application of good practice guidelines to consumers
 - a. Cashiers/waitresses/receptionists as frontline business actors actively inform consumers
 - b. Use of multimedia such as paging system and videos

From these tactics, the expected effect is a change in the lifestyle of consumers as a result of the consistency of business actors in implementing restrictions on the use of single-use plastic packaging in food and beverage delivery services. To ensure the results achieved are as expected, communication monitoring and evaluation needs to be carried out. So that the expected reciprocity is an improvement planning in the terms of implementing the guidelines that will have an impact on consumers.

PART V CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The increasing urgency of single-use plastic issues that impact the environment and health requires the right solution for a sustainable impact, namely through reuse solutions. The concept of reuse has also been explained in detail in the 'Reuse Framework' created by the Ellen MacArthur Foundation which includes four reuse methods, including Refill at home, Refill on the go, Return at home, and Return on the go. Refill at home can be understood as purchasing product contents delivered to the consumer's home, which are filled in the customer's container. Meanwhile, Refill on the go can be understood by buying a product at a shop/kiosk by refilling the product contents in a personal container that you bring yourself. Type of Return on the go initiative, which is returning the rented container owned by the tenant/kiosk/merchant service after consuming the product contents, which is delivered to the owner's location or collection point, and Return from home, which is returning the rented/borrowed container belonging to the tenant/kiosk/merchant service after consuming the product contents taken from home. Even this reuse behavior has begun to be carried out by the community in everyday life. Based on research studies conducted by GIDKP on Allas' subscribers, it was found that survey respondents often brought drinking bottles/tumblers and reusable shopping bags, not a few respondents who had brought cutlery and food containers.

In forming a more environmentally friendly lifestyle, policies are also needed to encourage all parties, both in terms of consumers and business actors, to encourage the creation of a reuse ecosystem in society. This is also strengthened by the research studies results which show that most respondents strongly support the issuance of regulations that can support the reuse ecosystem in Jakarta. Of course, in creating a reuse ecosystem, it also requires the involvement of many parties so that this ecosystem can run effectively and sustainably. To ensure that all components needed in the reuse ecosystem are covered in detail and completely in the policy, GIDKP conducted a Focus Group Discussion (FGD) by inviting various stakeholders in the reuse ecosystem starting from business actors, consumers and the government by using tool, namely 'Reuse Infrastructure Grid'. This tool was prepared by GIDKP to identify challenges and obtain inputs in strengthening reuse concept and practices for each party in it which will then be included in the draft policy recommendations for reuse at the Provincial Government of DKI Jakarta.

The DKI Jakarta Provincial Government basically already has a legal basis for implementing various policy options that support reuse system, in particular the concept of reuse as a service which refers to the implementation of the obligation to waste reduction. Emphasizing three important things, namely (1) Avoiding single-use items, (2) Provision of alternative goods disposable with regulated materials, and (3) Efforts to return the waste to waste sources. Therefore, from the results of research studies and public discussion that have been carried out, there are several recommendations that are proposed to be derived from the basic legal regulations, including:

1. Policy for hotels, restaurants and cafes (horeca) to no longer voluntarily provide products that use single-use plastic containers to consumers, especially for single-use plastic types that are very difficult to process such as sauce sachets, straws and other single-use plastics. Additionally, horeca to follow procedures between Business to Business (B-to-B) and Business to Consumer (B-to-C).
2. The policy for hotels, restaurants and cafes (horeca) to provide reusable container options for food and beverage containers (delivery or takeaway). In order to expand the scope of the reuse ecosystem, it is recommended to also cooperate with e-commerce and follow procedures between Business to Business (B-to-B) and Business to Consumer (B-to-C).
3. The policy of the DKI Jakarta Provincial Government's obligations in providing infrastructure to strengthen all parties in the reuse ecosystem, such as providing standard washing facilities, public facilities for washing food/drinking utensils in public places, providing drop-boxes for returning food containers, plates and/or glasses that are empty at collection points in public facilities, facilitating special pick-up transportation for empty containers to be taken from households to washing facilities.
4. Policies related to the obligation to implement information, education and communication related to the reuse movement. This is in line with the results of research studies regarding the effectiveness of socialization methods to encourage and invite business actors to implement restrictions on the use of single-use plastic in food and beverage delivery services. IEC tactics include preparing a guidance document about restrictions on the use of single-use plastics packaging in food and beverage delivery services, disseminating guidance documents to business actors, compiling standard examples of visual communication materials, and publishing good practices from business actors.

5.2 Suggestions

As an illustration, the proposals and recommendations are translated into the Reuse Grid Infrastructure model as follows:

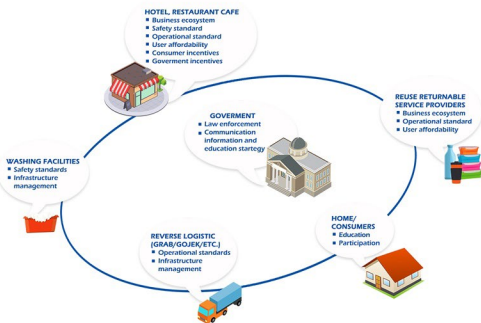


Figure 9. Reuse Infrastructure Ecosystem Model for Food and Beverage Delivery Services in DKI Jakarta Province

5.2.1 Recommendation for Hotels, Restaurants and Cafes

From public consultation results, the participants agreed that hotels, restaurants and cafes (horeca) must strengthen their own business ecosystem to support the reuse ecosystem. In this regard, it requires commitment and agreement from all business actors to participate in using reuse containers. In addition, an important factor that needs to be considered is related to safety standard of using reusable containers. Currently, horeca can adopt and implement the Government Regulation Number 86 of 2019 concerning Food Safety and the Regulation of Food and Drugs Agency Number 20 of 2019 concerning Food Packaging. This is because safety standards for reusable containers are in consultation with authorities at the national government level. In this way, consumers will receive definite guarantees regarding existing hygiene and health standards.

In order to increase consumer involvement, horeca) also needs to make effort to keep product price affordable to various levels of society (from low-middle-high income group), or it could be by giving special incentives for consumers. On the other hand, the DKI Jakarta Provincial Government can contribute by providing various facilities (such as licensing) and incentives (fiscal or non-fiscal) to business actors including horeca who use reusable containers as their contribution to single-use plastic reduction. This proposal is submitted because The DKI Jakarta Provincial Government has implemented a similar policy by issuing Provincial Governor Regulation No. 142 of 2019 concerning Obligations to Use Environmentally Friendly Shopping Bags at Shopping Centers, Modern Retailers and Traditional Markets and strengthens the regulation by issuing The Jakarta Provincial Governor Regulation No. 111 of 2021 concerning Procedures for Providing Regional Fiscal Incentives for the Obligation to Use Reusable Bags.

5.2.2. Recommendations for Reusable Container Service Provider

For reuse container service providers, such as Allas, what must be considered in the reuse ecosystem is to strengthen and develop business operational standards that are safe for consumers. This can be done, among others:

- Internal company policy for containers that have reached their expiration date (end-of lifetime)
- Existence of container return control (quality, shape, damage, etc.).
- Provision of a dedicated platform for user-friendly containers picking as well as door-to door system initiatives to stock containers regularly or daily.
- Provide service prices that remain affordable to be charged to users. Additional information during research baseline study, Allas users must pay a rental fee of IDR 3,000 per container. The price was certainly affordable especially for respondents belong to the middle-to-high income group. Highlighting this point aims to advise Allas in term of maintaining or even considering a prudent price in order to reach low income group so that they can experience the service without feeling burdened. This suggestion can be taken into account if return system is well developed.

The scope of activities from reusable container service provider is also related to one business process that is often neglected, namely washing activity with the aim of maintaining the hygienic or sanitization aspect for consumers convenience. For this reason, standard regarding reusable hygiene and/or sanitization containers should be developed to maintain public trust. In this regard, reusable container service providers can cooperate with certain government agencies, such as the National Standardization Agency and the National Food and Drug Agency to ensure the intended standardization can be more credible for consumers even to be applied during washing activity. Availability of infrastructure and parties involved in the washing activity can be developed with various innovations while taking into account the sanitation/hygiene guidelines and standards that apply at the national level (The Food and Drugs Agency and the Ministry of Health), for instance involving waste banks in regions as partners, inviting laundry businesses to carry out washing, as well as developing cooperation with neighborhood association to provide washing facilities per neighborhood and so on.

5.2.3. Recommendation for the DKI Jakarta Provincial Government

Legal certainty and assurance of practices in accordance with guidelines and standards must be provided through Government policy instruments. This is very relevant, especially in Jakarta, because the Provincial Government is currently preparing draft regulations that are appropriate in overcoming the existing single-use plastic problems, with a wider range of regulatory objects, not only single-use plastic bags which have been regulated in the previous Governor Regulation No. 142 of 2019. In addition to regulatory recommendations, there are several other recommendations that can be submitted to the Government, such as determining the Highest Retail Price (HET) for reusable containers provided, standards for reusable packaging both shape, material, hygiene aspects and also giving sanctions on those who still use single-use plastic containers.

Information, education and communication are also important indicators to increase capacity of each party involved in this reuse ecosystem. Therefore, socialization and/or public awareness regarding the DKI Jakarta Provincial Government's plan to regulate the type of single-use plastic (other than plastic bags) needs be strengthened for example by providing clear information regarding the price of disposable containers, providing regular and consistent education, both at home and at school. This is because the government's plan is to contribute to the implementation of the Regulation of Minister of Environmental and Forestry No. P75 of 2019 concerning the Roadmap for Reducing Waste by Producers, especially horeca actor who have implemented a reuse system.

Consumers, as an important pillar, also get various records that deserve special attention. Various initiatives can be carried out to increase consumer involvement, such as providing information and communication about cost externalities in the system, implementing education about reusable products to increase understanding, and informing various choices that consumers can make in their daily lives. It is hoped that this will increase community participation so that in the end, it will shape consumer behavior and reuse lifestyles in everyday life.

REFERENCES

- Ellen MacArthur Foundation. (2019). Reuse—Rethinking Packaging. <https://ellenmacarthurfoundation.org/reuse-rethinking-packaging>
- Peningkatan Sampah Plastik dari Belanja Online dan Delivery Selama PSBB. LIPI. <http://lipi.go.id/berita/peningkatan-sampah-plastik-dari-blanja-online-dan-delivery-selama-psbb/22037>. Diakses pada 19 November 2022.
- TPA Terancam Penuh, Masyarakat Diminta Bijak Kelola Sampah. Media Indonesia. <https://mediaindonesia.com/humaniora/466855/tpa-terancam-penuh-masyarakat-diminta-bijak-kelola-sampah>. Diakses pada 19 November 2022.
- Uji Laboratorium Terhadap Galon Sekali Pakai Menemukan Kandungan Mikroplastik yang Tidak Sedikit. Greenpeace. Diakses pada 19 November 2022.
- Screening Awal Mikroplastik di Perairan Provinsi DKI Jakarta. Gerakan Indonesia Diet Kantong Plastik. Diakses pada 19 November 2022.
- Detection of Microplastic in Human Placenta and Meconium in a Clinical Setting. *Pharmaceutics* 2021, 13(7), 921; <https://doi.org/10.3390/pharmaceutics13070921>. Diakses pada 19 November 2022.
- Tiny particles of plastic have been detected in human blood for the very first time. They can't be filtered out. *Fortune*. <https://fortune.com/2022/03/24/tiny-microplastics-particles-human-blood/>. Diakses pada 19 November 2022.
- Microplastics found deep in lungs of living people for first time. *Guardian*. <https://amp.theguardian.com/environment/2022/apr/06/microplastics-found-deep-in-lungs-of-living-people-for-first-time>. Diakses pada 19 November 2022.
- Ragusa, Antonio, et al. 2022. Raman Microspectroscopy Detection and Characterisation of Microplastics in Human Breastmilk. Diakses pada 19 November 2022.
- CNBC Indonesia. 2022. Daftar Terbaru UMR 2022 Tertinggi dan Terendah di Jabodetabek. <https://www.cnbcindonesia.com/mymoney/20220912115206-72-371273/daftar-terbaru-umr-2022-tertinggi-dan-terendah-di-jabodetabek>. Diakses pada 19 November 2022.

