



State Economic  
Development Division



Penang Green  
Council

## **PUBLIC SURVEY: THE PUBLIC PERCEPTION OF THE STATE POLICY IMPLEMENTATION OF NO PLASTIC BAG EVERYDAY IN PENANG**

by: Siti Sarah Jamil (Research Officer, Penang Green Council)

Nur Syuhada Mustakim (Research Officer, Universiti Sains Malaysia)

### **EXECUTIVE SUMMARY**

Penang was the first state in Malaysia to launch the "No Free Plastic Bags" campaign in July 2009. On 1<sup>st</sup> January 2011, Penang created history by being the first state to do it every single day. Penang Green Council has conducted the "Public Survey: No Free Plastic Bags in Penang" from 13<sup>th</sup> November until 22<sup>nd</sup> December 2017. 2,582 people in Penang responded to the questionnaire survey. The questionnaire survey was distributed online and offline, including shopping malls, wet markets and roadshows at public places.

From this study, all 2,582 respondents were aware of the state policy of "No Free Plastic Bag Every Day in Penang". The majority or 65% of the respondents brought their own shopping bags instead of using or buying plastic bags. This study also found that 85% of female respondents used their own shopping bags compared to only 49.4% among male respondents. Referring to the respondent profession, 98.4% of the respondents from the retired society in Penang brought their own shopping bags. Meanwhile, the majority of the people who have no or lower income carried their own shopping bags (98.7%) compared to the other income groups.

The majority or 64% of the 646 respondents who tend to buy plastic bags did so because they always forgot to bring their own shopping bags. 28% of them admitted that plastic bags were the best carrier to carry variety of goods (especially groceries and fresh products). From this study, 67% of the 2,582 respondents strongly agreed that Penang would be able to reduce waste problems by reducing the usage of plastic bags. 73% of the respondents were not aware of the policy that 20 cents from each plastic bags sold are distributed to eradicate poverty in Penang. The respondents were also asked about their level of concern on the environmental issues in Penang. The majority or 79% of the respondents were extremely concerned. However, their level of concern was unable to change their behaviour (for this study, behaviour refers to bringing their own shopping bags instead of using or buying plastic bags). The results also showed that the groups of people who practiced the use of shopping bags but were not extremely concerned about the environment: self-employed society, housewives, students, no or low-income group, retired society, people who earned RM7,501 until RM10,000 per month and people who earned more than RM10,000 per month, and people with no income.

## 1.0 Introduction

Malaysians are dumping RM 163 million worth of recyclable sources in plastic forms. On average, an individual uses eight pieces of plastic bags in a week. The use of plastic items must be stopped to save the environment and also money.

Penang was the first state in Malaysia to launch the "No Free Plastic Bags" campaign in July 2009. On 1<sup>st</sup> January 2011, Penang made history by being the first state to do it every day of the week, every week of the month and every month of the year.

Penang Green Council assisted Penang State Government by conducting "Public Survey: No Free Plastic Bags in Penang" from the 13<sup>th</sup> November until 22<sup>nd</sup> December 2017.

The objectives of the survey are:

- i) To provide the policymakers a better understanding of the public views on the state policy of "No Free plastic bags every day" in Penang; and
- ii) To become a foundation to develop future state policy.

Ultimately, the environment could be preserved and conserved if human beings could understand their responsibilities towards nature. Therefore, this study was performed with the aim to identify whether or not the people of Penang have positive behaviour towards the state policy that was carried out since 2011.

## **2.0 Methodology**

Methodology is a systematic, theoretical analysis of the methods applied to a field of study.

In order to achieve the objectives, a questionnaire survey was conducted on 2,582 people in Penang. Referring to the Department of Statistics Malaysia (2013), a sample of 2,582 is able to represent the total population in Penang which is 1.76 million residents. Respondents in this study was selected through convenience sampling. In convenience sampling, the respondents are not predetermined and it is up to each person to participate in the survey through survey form distribution in the approaches listed below. Due to non-random sampling, this survey may not be fully representative of the views of Penang residents as a whole.

This study had applied two approaches in order to achieve the sampling size. The first approach was an online survey which was done by asking the respondents to complete the questionnaires through Google Drive. Meanwhile, the second approach was by distributing the survey forms in road shows which were held at shopping malls and wet markets. Additionally, the Penang Green Council was able to distribute the survey forms via roadshows at public places nearby Penang Island City Council (MBPP) and Seberang Perai Municipal Council (MPSP). All the questionnaires were analysed using Statistical Package for Social Sciences (SPSS). A descriptive analysis was performed to present and finalize the results.

### 3.0 Results

Table 1 shows the detailed information of the data collected for this study.

**Table 1:** The two approaches of data collection

<b>Approach</b>		<b>Number of questionnaires distributed</b>	<b>Number of questionnaires returned</b>
Online survey	Google drive	2 000	1 590
Roadshow	Wet market	500	70
	-Gelugor		
	-Seberang Jaya		
	Shopping malls	500	202
	-Tesco Jelutong		
	-Giant Bayan Baru		
	-Aeon Mall Bukit Mertajam		
	MBPP roadshow	500	357
	MPSP roadshow	500	363
<b>TOTAL</b>		<b>4 000</b>	<b>2 582</b>

Source: Fieldwork (2017)

## **4.0 Analysis and Findings**

The analysis and findings from the survey will be discussed in three components:

- I. Respondents' profile;
- II. Public perception of "No Free Plastic Bag Every day in Penang"; and
- III. Public concerns on environmental issues in Penang.

### **4.1 Respondents' profile**

This section is designed to list out the respondents' profile for this survey. The respondents consisted of 56% male and 44% female. The majority or 27.2% of them are 20 years old to 29 years old, followed by 22.8% who were 40 years old to 49 years old, and then 22.2% who were between 30 years old and 39 years old.

The majority of the respondents or 38.6% were Chinese. Meanwhile, 37.2% of them were Malays, 23.7% were Indians and another 0.5% were foreigners.

Based on the respondent's profession, this study was able to obtain information from respondents of various professions. The majority or 23.3% of respondents were from professional groups, followed by 16.7% from skilled worker groups, 13.7% were businessman or businesswoman, 12.2% were from the retired society, 9.9% were students, 9.8% were self-employed society, 8.7% were unskilled workers, 3.6% were housewives, and another 2.1% were from the unemployed group. Table 2 shows the detailed information of the respondents' profile.

**Table 2:** The respondents' profile

Respondents' profile		Total	Percentage
Gender	Male	1 452	56%
	Female	1 130	44%
Descendants	Malay	960	37.2%
	Chinese	996	38.6%
	Indian	611	23.7%
	Foreigner	15	0.5%
Profession	Professional	601	23.3%
	Skilled worker	431	16.7%
	Unskilled worker	225	8.7%
	Businessman/women	353	13.7%
	Self-employed	253	9.8%
	Housewife	93	3.6%
	Student	256	9.9%
	Unemployed	55	2.1%
	Retired	315	12.2%
Age	18 or 19 years old	120	4.6%
	20 – 29 years old	702	27.2%
	30 – 39 years old	574	22.2%
	40 – 49 years old	589	22.8%
	50 – 59 years old	335	13.0%
	60 years old and above	262	10.1%

Source: Fieldwork (2017)

The majority or 72.3% of the 2,582 respondents lived in flats, apartments, condominiums or high-rise buildings. Other than that, most of the respondents for this study had Diploma, Matriculation or Form Six certificate (45.1%). For income level, there were more respondents who earned less than RM3,000.00 per month (37.2%) participated in this survey. In terms of district, this study was able to obtain opinions from respondents in all 5 districts. The majority or 37.4% of the respondents came from Timur Laut, followed by 33.1% from Seberang Perai Tengah, 13.9% from Barat Daya, 8.1% from Seberang Perai Selatan and 7.5% from Seberang Perai Utara.

This study also listed out the respondents' profile with regard to the geographic and economic level information. Table 3 shows the detailed information of the respondents' profile.

**Table 3:** The respondents' profile

Respondents' profile		Total	Percentage (%)
Type of Housing/Building	Terrace/ Semi-D	513	19.9%
	Bungalow	202	7.8%
	Flat/ Apartment/ Condominium/ High rise building	1 867	72.3%
District	Seberang Perai Utara	194	7.5%
	Seberang Perai Tengah	855	33.1%
	Seberang Perai Selatan	209	8.1%
	Timur Laut	966	37.4%
	Barat Daya	358	13.9%
Education Level	Bachelor Degree/ Master/ PhD	519	20.1%
	Diploma/ Matriculation/ Form 6	1 164	45.1%
	Upper Secondary (Form 4-5)	377	14.6%
	Lower Secondary (Form 1-3)	434	16.8%
	Primary school (Standard 1-6)	80	3.1%
	Never been to school	8	0.3%
Income Level (Ringgit Malaysia)	>10,000/Month	21	0.8%
	7,501-10,000/Month	28	1.1%
	5,001-7,500/Month	565	21.9%
	3,001-5,000/Month	775	30.0%
	<3,000/Month	961	37.2%
	No Income/ Unemployed	232	9%
Are you a resident of Penang State?	Yes	2 117	82%
	No	465	18%

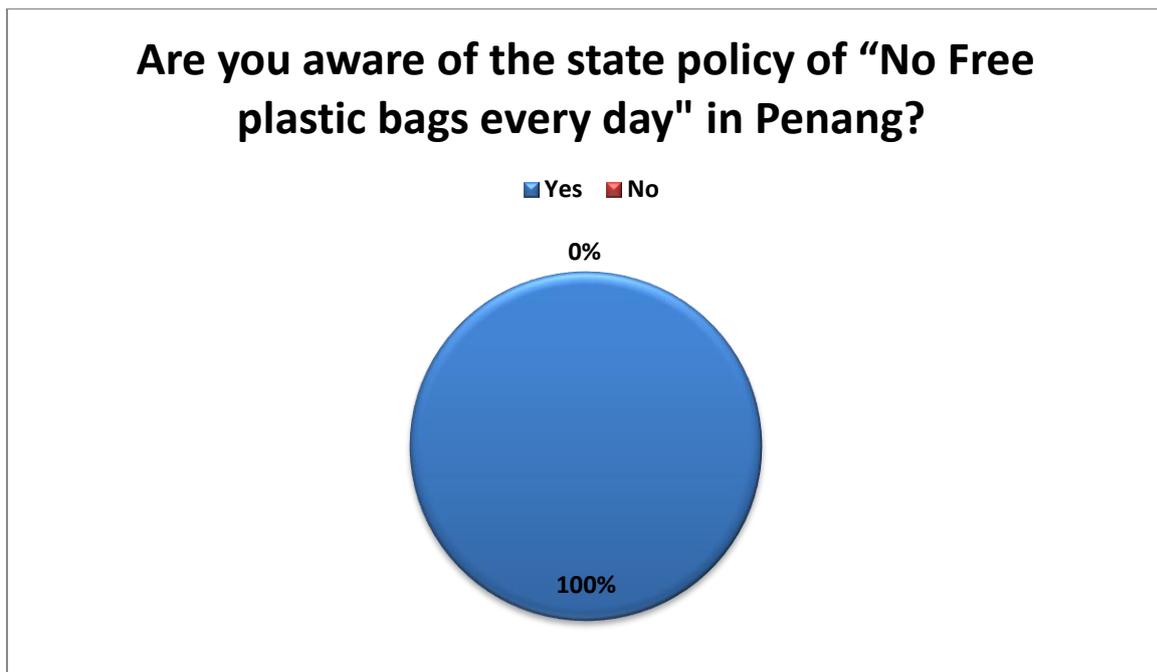
Source: Fieldwork (2017)

## 4.2 Public perception of “No Free Plastic Bag Every day in Penang”

This section is designed to identify the public perception of the state policy implementation in Penang “No Free Plastic Bag Every Day in Penang”. In order to achieve the study objective - to provide the policymakers a better understanding of the public views on the state policy of “No Free Plastic Bag Every Day in Penang” - it is very important to understand the public perception regarding the state policy.

From this study, it was found that all 2,582 respondents were aware of the state policy of “No Free Plastic Bag Every Day in Penang,” proving that the state policy, starting from the year 2011, has been successfully implemented in all districts of Penang. Chart 1 illustrates the detailed information of the respondents’ answer.

**Chart 1:** Respondents’ answer



From this study, all 2,582 respondents from online surveys, wet markets, shopping malls, MBPP roadshow and MPSP roadshow had been asked whether they choose to bring their own shopping bags instead of buying plastic bags. The majority or 65% of them preferred to bring their own shopping bags. Meanwhile, 25% of them chose to only buy plastic bags and another 10% admitted that they sometimes brought their own shopping bags.

A huge proportion of the respondents brought their own shopping bags. This is an indication that the objective of the state policy has been achieved. The state government successfully encouraged consumers to bring their own shopping bags while shopping. Such awareness could result in the reduction of plastic bag consumption. Chart 2 illustrates the detailed information of the respondents' answer.

**Chart 2:** Respondents' answer



This study listed the respondents' gender, profession, and income level as these variables may influence the public perception of the state policy. It is believed that there is a relationship between individual's gender, profession, income level and their daily lifestyle (*Sarah Teichman, 2015*). The SPSS analysis was summarised in Table 4, showing detailed information of the relationship between the respondents' gender, profession, income level and their decision to use their own shopping bags instead of buying plastic bags.

**Table 4:** Relationship between the respondent's gender, profession, income level and their choice of using their own shopping bags instead of buying plastic bags.

<b>People who bring their own shopping bags= 1678 people from 2582 respondents</b>				
<b>Characters</b>		<b>Frequency</b>	<b>Total</b>	<b>% from Total</b>
Gender	Male	718	1 452	49.4%
	Female	960	1 130	85.0%
Profession:	Professional	398	601	66.2%
	Skilled worker	110	431	25.5%
	Unskilled worker	97	225	43.1%
	Businessman/women	157	353	44.5%
	Self-employed	215	253	85.0%
	Housewife	90	93	96.8%
	Student	250	256	97.7%
	Unemployed	51	55	92.7%
	Retired	310	315	98.4%
Income Level (Ringgit Malaysia):	>10000/Month	11	21	52.4%
	7501-10000/Month	21	28	75.0%
	5001-7500/Month	169	565	29.9%
	3001-5000/Month	572	775	73.8%
	<3000/Month	676	961	70.3%
	No Income/Unemployed	229	232	98.7%

From Table 4, the results showed that a higher proportion (85%) of female respondents tend to use their own shopping bags as opposed to the male respondents (49.4%). It is common that women bring their personal handbags on a daily basis. Whereas, the use of handbags is less common among men. Therefore, it is unsurprising that most women in this survey carried their own shopping bags in their daily life.

This study also showed that 98.4% of the respondents from the retired society tend to use their own shopping bags rather than buying plastic bags, followed by students (97.7%), housewives (96.8%), unemployed groups (92.7%), self-employed society (85.0%), professional groups (66.2%), business society (44.5%), unskilled workers (43.1%) and skilled workers (25.5%). Therefore, it can be concluded that the majority of the retired society in Penang are aware of this policy and most of them practiced it compared to the other professions. Although this policy has influenced people from various backgrounds and professions, the usage of shopping bags is still low among business society, unskilled workers and skilled workers. Future effort to encourage such practice needs to be focused on these groups of people.

In this study, the majority of the people with no monthly income tend to use their own shopping bags compared to other groups (98.7%). Therefore, it is believed that the income level is one of the main factors influencing the society to follow and practice an environmental policy.

In short, it can be concluded from this study that people's gender, monthly income level, and profession are the main factors prompting them to use their own shopping bags instead of buying plastic bags.

This public survey is crucial to the understanding of the level of public knowledge on the use of the 20 cents, from each plastic bags sold, towards eradicating poverty in Penang. The majority or 73% of the respondents were not aware of the information. Meanwhile, the other 27% of the respondents are well informed regarding the information. Chart 3 illustrates the detailed information of the respondents' answer.

**Chart 3:** Respondents' answer



Even though all respondents in this study were aware of the state policy of "No Free Plastic Bag Every Day in Penang", 73% of the respondents were not aware of that the 20 cents from each plastic bags sold will be distributed to eradicate poverty in Penang. However, 18% of the respondents in this study are not residents of Penang and might be less informed about the use of the 20 cents collected.

Nevertheless, the contribution of plastic bags charges towards Agenda Ekonomi Saksama (AES) or Equitable Economic Agenda needs to be emphasized so that people from all walks of life can be informed. This result will also become a reference and foundation for the future state policy. Ensuring all future policy implementation in Penang to reach the people of Penang of various backgrounds is imperative.

**Chart 4:** Respondents' answer



Chart 4 illustrates the respondents' reasons for not bringing their own shopping bags but choosing to buy plastic bags. In this study, there were 646 people who tend to buy plastic bags rather than to bring their own shopping bags. The majority or 64% of the 646 people who tend to buy plastic bags always forgot to bring their own shopping bags. Next, 28% of them admitted that plastic bags were the best carrier to carry variety of goods (especially groceries and fresh products).

This analysis showed that the majority of Penang society was able to understand the importance of using their own shopping bags rather than buying more plastic bags. However, the state government needs to put more effort to encourage them to practice and implement what they understood, especially on avoiding plastic bag usage in their daily life.

Meanwhile, the other two groups of the respondents are still buying plastic bags because many others were also doing the same (5%) and the charge of 20 cents for each plastic bag was not a big deal for them (2%). However, there was also a minority group of the respondents who had no reason to use their own shopping bags. This might be due to the availability and convenience of plastic bags.

This part of the analysis pointed out that awareness programs are still necessary in order to make sure the people of Penang realise and change their lifestyle for a better and sustainable future of Penang.

#### **4.3 Public concerns on environmental issues in Penang**

This section is designed to evaluate public concerns on the environmental issues in Penang, especially on plastic waste and pollution. During the survey, respondents were asked whether they agree that by reducing the usage of plastic bags, Penang will be able to reduce its' waste issues and problems.

67% of the 2,582 respondents strongly agreed with the statement. Meanwhile, 18% of the respondents agreed with the statement and 9% of the respondents did not agree with the statement. Another 6% of the respondents were unable to relate whether there is a relationship between the usage of plastic bag and its' impacts to the waste issues and problems in Penang.

**Chart 5: Respondents' answer**

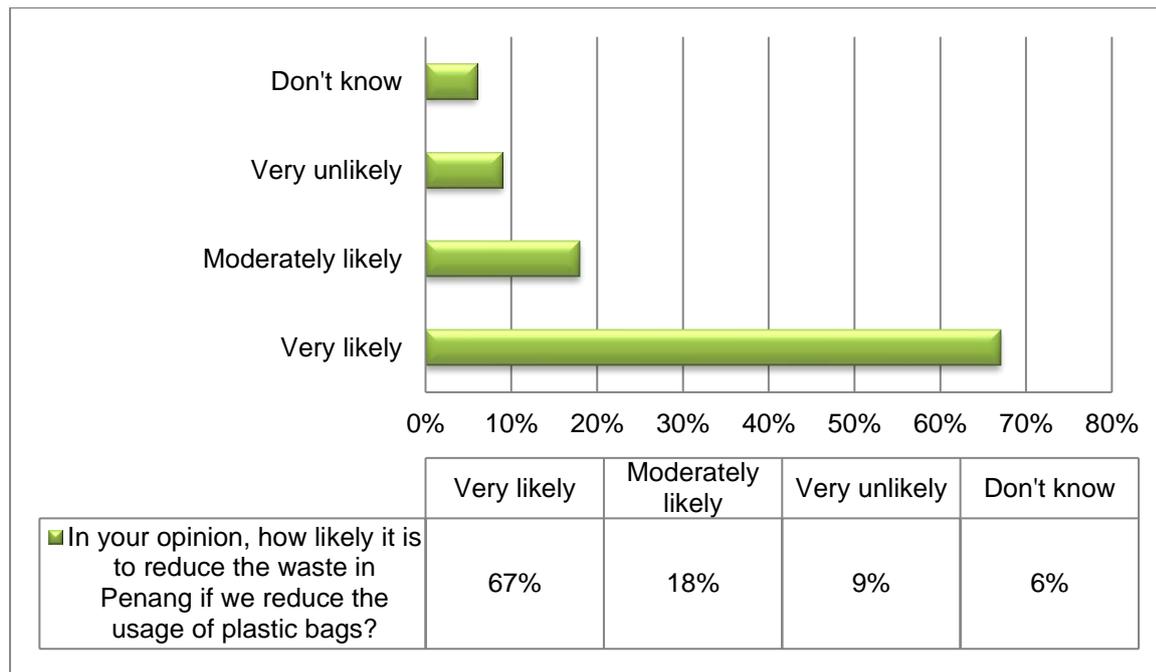
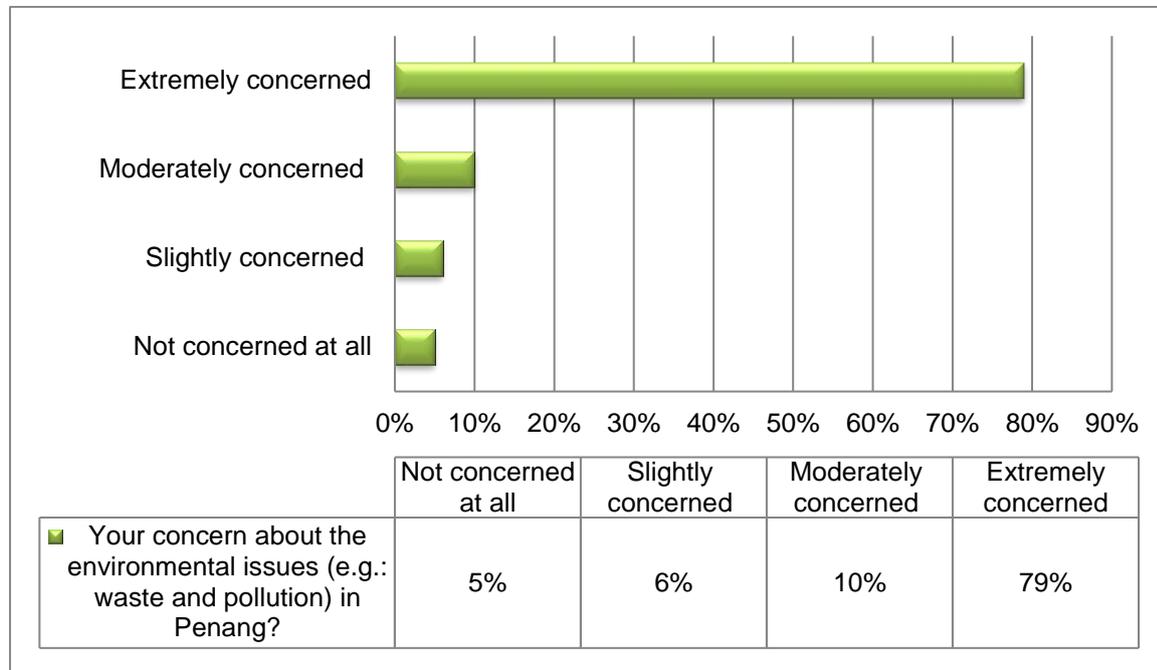


Chart 5 shows a positive public response for the environmental-based state policy. The main objective of the implementation of “No Free Plastic Bag Every Day in Penang” is to reduce and avoid the plastic waste to Pulau Burung landfill. From this study, the majority of the society was able to relate the impact of plastic bag to the environment. This showed a very good momentum for Penang in achieving a cleaner, greener, and sustainable Penang by the year 2030. However, there was still a small group of people who were unsure about the impact of plastic bag usage to the environment (15% from 2,582 respondents or 387 people). Therefore, Penang state government should continue to conduct extensive environmental awareness programs to the entire society of Penang.

Referring to the state mission, “Cleaner Greener Penang”, 2,582 respondents have been asked about their level of concern on the environmental issues in Penang, especially on waste and pollution issues. Chart 6 illustrates the results which aligned with the results from previous public surveys from Penang Green Council for waste segregation in 2015 and climate change in 2016. The majority or 79% of the respondents were extremely concerned about the environmental issues in Penang,

demonstrating that the Penang society is truly aware of their environment and surroundings.

**Chart 6:** Respondents' answer



This study referred to the respondents' gender, profession and income level as these variables may influence the public's concern on environmental issues in Penang. According to Sarah Teichman (2015), it is believed that there is a relationship between individual's gender, profession and income level towards their habits and lifestyle. The results from the SPSS analysis was summarized in Table 5, showing the detailed information on the relationship between the respondents' gender, profession, income level and their concern on the environmental issues in Penang, especially on waste and pollution issues.

**Table 5:** Relationship between respondent's gender, profession, income level and their concern on environmental issues

<b>People who were extremely concerned about the environmental issues in Penang= 2240 people from 2582 respondents</b>				
<b>Characters</b>		<b>Frequency</b>	<b>Total</b>	<b>% from Total</b>
Gender	Male	1 119	1 452	77.1%
	Female	1 121	1 130	99.2%
Profession:	Professional	538	601	89.5%
	Skilled worker	333	431	77.3%
	Unskilled worker	214	225	95.1%
	Businessman/women	297	353	84.1%
	Self-employed	213	253	84.2%
	Housewife	82	93	88.2%
	Student	221	256	86.3%
	Unemployed	43	55	78.2%
	Retired	299	315	94.9%
Income Level (Ringgit Malaysia):	>10000/Month	9	21	42.8%
	7501-10000/Month	15	28	53.6%
	5001-7500/Month	499	565	88.3%
	3001-5000/Month	741	775	95.6%
	<3000/Month	854	961	88.9%
	No Income/Unemployed	122	232	52.6%

From Table 5, the results showed that 99.2% of female respondents were extremely concerned about the environmental issues in Penang while 77.1% of the male respondents did. However, the percentage difference between the male and female respondents was not too big. Therefore, it can be said that gender is not the main factor that influences the society to be concerned about the environmental issues in Penang.

This study showed that 95.1% of the respondents from the unskilled workers were extremely concerned about the environmental issues in Penang, followed by the retired society (94.9%), professional groups (89.5%), housewives (88.2%), students (86.3%), self-employed society (84.2%), business society (84.1%), unemployed groups (78.2%) and skilled workers (77.3%). Therefore, it can be concluded that the majority of the unskilled workers in Penang truly worried about environmental changes in Penang compared to the other professions. However, the number of people from other professions that were concerned about environmental issues in Penang was

very high in this study, proving that the majority of the people of Penang were aware and concerned about environmental aspects of Penang regardless of their profession.

Generally speaking, the society is aware and concerned about the environmental issues of Penang. In this study, respondents with monthly income below RM 7,500 were more concerned with any environmental issues in Penang compared to the other. However, people with high income (above RM7,501) and unemployed groups did not show extreme concern for the environment. Environmental education targeting these groups of people need to be enhanced.

From the findings, this study illustrates the relationship between the society's environmental concern and their practice to bring their own shopping bags rather than to use or buy plastic bags in their daily life. Table 6 shows the detailed information of the relationship between the society's concerns and their practice to bring their own shopping bags in their daily life.

**Table 6:** Relationship between society concerns and their practice to bring their own shopping bags rather than to use or buy the plastic bags in their daily life.

Characters		Total	Extremely concerned about the environmental issues in Penang (concerned individuals)	Bring their own shopping bags (practicing individuals)
Gender	Male*	1 452	77.1%	49.4%
	Female*	1 130	99.2%	85.0%
Profession	Professional*	601	89.5%	66.2%
	Skilled worker*	431	77.3%	25.5%
	Unskilled worker*	225	95.1%	43.1%
	Businessman/women*	353	84.1%	44.5%
	Self-employed**	253	84.2%	85.0%
	Housewife**	93	88.2%	96.8%
	Student**	256	86.3%	97.7%
	Unemployed**	55	78.2%	92.7%
	Retired**	315	94.9%	98.4%
Income Level (Ringgit Malaysia)	>10000/Month**	21	42.8%	52.4%
	7501-10000/Month**	28	53.6%	75.0%
	5001-7500/Month*	565	88.3%	29.9%
	3001-5000/Month*	775	95.6%	73.8%
	<3000/Month*	961	88.9%	70.3%
	No Income/ Unemployed**	232	52.6%	98.7%

\*: Practising individuals are more than concerned individuals

\*\* : Concerned individuals are more than practising individuals

Table 6 showed that the majority of respondents are concerned individuals. However, their level of concern has not been translated into behavioural change. This result showed that for the future state policy or implementation, the state government need to focus on how to influence more people to become practicing individuals (for this study, practicing individuals are those who bring their own shopping bags and not buy or use plastic bags).

From the analysis, there were also groups of people who had more practicing individuals than concerned individuals: self-employed society, housewives, students, unemployed group, retired society, people who earned between RM7,501 to RM10,000 per month, people who earned more than RM10,000 per month as their income, and people who have no income. For the self-employed society, there were

84.2% concerned individuals and 85.0% practicing individuals. For the housewives, there were 88.2% concerned individuals and 96.8% practicing individuals. For the students, there were 86.3% concerned individuals and 97.7% practicing individuals. For the unemployed group, there were 78.2% concerned individuals and 92.7% practicing individuals. For the retired society, there were 94.9% concerned individuals and 98.4% practicing individuals.

This result showed that environmental concern and awareness were not the ultimate reason for the self-employed society, housewives, students, unemployed group and retired society to practice the use of shopping bags. They did so due to other reasons. In conclusion, some people in Penang were practicing the environmental-friendly lifestyle without any environmental-friendly intention. With regard to the results, a number of awareness programs to generate more concerned individuals and a number of environmental programs that can increase practicing individuals should be planned and executed in the future.

# PUBLIC SURVEY

KAJI SELIDIK AWAM / 民意调查 / பொது ஆய்வு

13 November - 22 December 2017

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