

## **CHAPTER 5**

### **TACKLING ENVIRONMENTAL ISSUES**

#### **5.1 INTRODUCTION**

This chapter studies ways of tackling environmental issues, suggestions or actions taken by respondents to tackle them. Among others, recycling is highlighted as a way to treat unwanted items into reusable things. Items may also be repaired or resold as second hand items or donated to the needy groups in society.

#### **5.2 UNDERSTANDING ENVIRONMENTAL ISSUES**

Respondents were asked how they might tackle environmental issues (Q2.22, Appendix 2.1). It is found that some 39 per cent of them would prefer to clean up their own surrounding property (Table 5.1). This being one of the more popular actions, it is therefore not surprising that participation in environmental issues remains fairly low.

It is also found that about half of them would prefer environmentally friendly actions such as car pooling, ensuring that their vehicle do not emit black smoke, plant trees, or even bringing their own baskets to market (Table 5.1). Such actions are preferred because they bring almost immediate benefit to themselves and to the environment. Car pooling for example reduces their expenditure on transport as well as

traffic jams. Recycling seems to interest only some quarter of respondents as a measure of tackling environmental issues (Table 5.1).

**Table 5.1: Percentage of Respondents who Would Choose the Following Ways of Tackling Environmental Issues**

<b>Ways of Tackling Environmental Issues</b>		<b>Per Cent</b>
1	Environmental Friendly actions	47
2	Cleaning up	39
3	Recycling	23
4	Environmental Education	5
5	Report to Authority	4
7	Don't know	7
Total		709

The majority (96 per cent) also do not see reporting to the relevant authority as a way of solving environmental issues. It is important to explore the reasons for failure or unwillingness to report the authorities in tackling environmental issues. Unfortunately, information on this aspect was not collected in this data set.

Environmental education is not a popular way in solving environmental issues as only some 5 per cent selected the answer. This survey did not investigate the reasons for the low percentage who considered environmental education important in combating environmental issues. This may be because environmental knowledge is already high (see Chapter 3). Nevertheless, some 7 per cent of the respondents do not know what action they would take to tackle environmental issues.

### **5.3 PARTICIPATION IN ENVIRONMENTALLY FRIENDLY ACTIONS**

This section looks at the participation in environmentally friendly action such as car pooling, ensuring cars do not emit black smoke, bringing own basket to market, tree planting and reporting environmental problems to the authority (Q2.15 to Q2.19, Appendix 2.1).

#### **5.3.1 Car Pooling**

Every 6 out of 10 respondents reported that they would choose car pooling as way of tackling environmental issues (Table 5.2). Those who disagreed think that car pooling is not practical due to differences in working time and place.

Younger people are more likely to car pool. For example, some 71 per cent of those 31 years and below would choose car pooling (Table 5.2). Although car pooling is an economical means to travel and reduces air pollution, it does not appeal to the older cohorts. Only about 42 per cent of those above 50 years old are interested in car pooling. The difference is significant at the 5 per cent level.

Some 60 per cent of those who have secondary or tertiary education would choose car pooling (Table 5.2). On the other hand, only 36 per cent of those with primary education would choose this method. This difference is significant at the 5 per cent level.

Female respondents are more likely to car pool compared to male respondents (Table 5.2). The difference is however, not significant at the 5 per cent level.

Malays are more likely to choose car pooling to reduce air pollution compared to other ethnic groups (Table 5.2). However, the difference is not significant at the 5 per cent level.

**Table 5.2: Percentage of Respondents who would Choose Car Pooling by Selected Socio-Economic Variables**

Characteristics		Per Cent	Number of Cases
Gender	Male	58	308
	Female	63	401
Age Group*	≤30	71	300
	31-40	62	152
	41-50	56	114
	51+	42	142
Education level *	None & Primary	36	92
	Secondary	62	268
	Tertiary	67	347
Ethnic Group	Malay	71	112
	Chinese	60	521
	Indians & others	58	76
Type of Living quarters*	High cost	52	153
	Medium cost	63	374
	Low cost & Squatter houses	64	182
Total		61	709

\* Significant difference at  $\alpha = 0.05$

It is apparent that those from richer background are less likely to car pool compared to those from poorer background. For example, some 52 per cent of those staying in high cost houses would car pool compared to 64 per cent from those staying in low cost and squatter houses (Table 5.2). The difference is significant at the 5 per cent level.

Although car pooling is an environmental friendly action in reducing air pollution, many people may actually choose it because of cost and comfort as a means of transport.

### 5.3.2 Ensuring that Vehicles do not Emit Black Smoke

Ensuring that cars do emit black smoke is another way of reducing air pollution. About nine out of ten respondents indicate that they would ensure their vehicles do not emit black smoke. This however may not be indicate environmental consciousness but rather compliance with the law and to maintain car performance.

**Table 5.3: Percentage of Respondents who would Ensure that their Vehicles do not Emit Black Smoke by Selected Socio-Economic Variables.**

Characteristics		Per cent	Number of Cases
Gender	Male	86	308
	Female	88	401
Age Group	≤30	86	300
	31-40	94	152
	41-50	88	114
	51+	83	142
Education level *	None & Primary	76	92
	Secondary	85	268
	Tertiary	92	347
Ethnic Group	Malay	84	112
	Chinese	88	521
	Indians & others	86	76
Type of living quarters	High cost	88	153
	Medium cost	88	374
	Low cost & Squatter houses	85	182
Total		87	709

\* Significant difference at  $\alpha = 0.05$

Female respondents seem to be more concerned that their vehicles would not emit black smoke compared to male respondents (Table 5.3). However, the difference is not significant at the 5 per cent level.

It is found that those from older ages are less likely to ensure that their vehicles would not emit black smoke compared to other age groups. For example, some 17 per cent of those above 50 years do not ensure that their vehicles do not emit black smoke compared to only 4 per cent of those in the age group of 31 to 40 years (Table 5.3). The difference is significant at the 5 per cent level.

About one quarter of those with primary education would not ensure that their vehicles do not emit black smoke. On the contrary, only 8 per cent of those with tertiary education would not ensure that their vehicles would not emit black smoke (Table 5.3). The difference is significant at the 5 per cent level. This shows that environmental awareness is lower among those with less education.

The Chinese seem to be more concerned that their vehicles are well maintained compared to other ethnic groups. However, the difference is not significant at the 5 per cent level.

Respondents from low cost and squatter houses seem to be less likely to ensure that their vehicles do not emit black smoke compared to those from other expensive living quarters (Table 5.3). The difference however is not significant at the 5 per cent level.

### 5.3.3 Bring Own Basket to Market

Bringing own basket to market would reduce the usage of plastic and other carry bags substantially. As plastic bags are not biodegradable, excessive use would cause great environmental problems to our planet.

Only about one out of every four persons would bring his/her own basket to market (Table 5.4). The low participation may be due to the fact that respondents are not used to bringing their own basket to market. Furthermore, plastic bags are cheap, easy and convenient and a basket is unnecessary if they only need to purchase a few items.

Some 38 per cent of female respondents reported that they would bring their basket to market compared to only 24 per cent of male respondents (Table 5.4). This may be due to the fact that more female respondents do marketing compared to male respondents. The difference is significant at the 5 per cent level.

Older people are more likely to bring their own basket to market compared to younger people. For example, some 46 per cent of those above 50 years would bring their own basket to market compared to 21 per cent of those from age group below 31 years (Table 5.4). The difference is significant at the 5 per cent level.

It is interesting to note that respondents with higher education are less likely to bring their basket to market compared to respondents with lower education. There are about 42 per cent of respondents with primary education who would bring their own basket to market compared to only about 26 per cent of those with tertiary education (Table 5.4). The difference is significant at the 5 per cent level.

**Table 5.4: Percentage of Respondents who would Bring Basket to Market by Selected Socio-Economic Variables**

Characteristics		Per Cent	Number of Cases
Gender*	Male	24	308
	Female	38	401
Age Group*	≤30	21	300
	31-40	34	152
	41-50	40	114
	51+	46	142
Education level *	None & Primary	42	92
	Secondary	36	268
	Tertiary	26	347
Ethnic Group	Malay	34	112
	Chinese	32	521
	Indians & others	34	76
Type of living quarters	High cost	39	153
	Medium cost	30	374
	Low cost & Squatter houses	31	182
Total		31	709

\* Significant difference at  $\alpha = 0.05$

There are more Malays who bring their basket to market compared to other ethnic groups. The difference is, however, not significant at the 5 per cent level.

It is found that those living in high cost houses are more likely to bring their own basket to market compared to those living in other types of living quarters. (Table 5.4). The difference is however not significant at the 5 per cent level.

### 5.3.4 Report Environmental Problems to Authority

Reporting environmental problems to the authority may be one of the most effective ways in preserving the environment. For example, if open burning is sighted and this is reported to the relevant authority, it can be stopped immediately and action can be taken against the culprit. However, reporting environmental problems to the authority is the least likely action taken to tackle environmental issues. Only one out of every five persons report would report such incidences to the relevant authority (Table 5.5).

**Table 5.5: Percentage of Respondents who would Report to the Authority by Selected Socio-Economic Variables**

Characteristics		Per Cent	Number of Cases
Gender	Male	19	308
	Female	17	401
Age Group	≤30	19	300
	31-40	18	152
	41-50	18 *	114
	51+	16	142
Education level *	None & Primary	10	92
	Secondary	14	268
	Tertiary	23	347
Ethnic Group*	Malay	27	112
	Chinese	16	521
	Indians & others	20	76
Type of living quarters	High cost	16	153
	Medium cost	21	374
	Low cost & Squatter houses	14	182
Total		18	709

\* Significant difference at  $\alpha = 0.05$

More male than female respondents would report environmental problems to the authority (Table 5.5). The difference however is not significant at the 5 per cent level.

Respondents from the age group 31 years and below are most likely to report to the authority compared to the other age groups (Table 5.5). Nevertheless, the difference is not significant at the 5 per cent level.

About one out of every five persons with tertiary education would report environmental problems to the authority compared to less than 10 per cent of those with none or primary (Table 5.5). The difference is significant at the 5 per cent level.

Malays are observed to be more concerned about taking such issues with the authority compared to other ethnic groups. About one out of every four of them would report environmental problems to the relevant authority (Table 5.5). The difference is, however, not significant at the 5 per cent level.

Those staying in the medium cost houses are more likely to report environmental problems to authority compared to others from other types of living quarter (Table 5.5). The difference is however not significant at the 5 per cent level.

#### **5.2.5 Tree Planting**

Tree planting would help improve the environment by increasing the oxygen level in the air and at the same time reducing air pollution. Nearly all the respondents agree that tree planting is important in improving the environment (Table 5.6).

**Table 5.6: Percentage of Respondents who would Plant Trees by Selected Socio-Economic Variables**

Characteristics		Per Cent	Number of Cases
Gender	Male	98	308
	Female	98	401
Age Group	≤30	99	300
	31-40	97	152
	41-50	98	114
	51+	96	142
Education level *	None & Primary	94	92
	Secondary	98	268
	Tertiary	99	347
Ethnic Group	Malay	98	112
	Chinese	98	521
	Indians & others	97	76
Type of living quarters	High cost	97	153
	Medium cost	98	374
	Low cost & Squatter houses	98	182
Total		98	709

\* Significant difference at  $\alpha = 0.05$

There is no significant difference across gender, age groups, ethnic groups and types of living quarter at the 5 per cent level. However, there is some across educational groups. Respondents with higher education believe that tree planting is important to improve the environment is significantly different at the 5 per cent level from those with less education.

## **5.4 REDUCTION, REUSE AND RECYCLING**

Common household wastes that are recyclable are paper, plastic, aluminium cans, tin/steel cans and glass bottles. It is very encouraging that 98 per cent of total respondents perceived that recycling should be encouraged.

However, it is necessary to evaluate how committed this people are when they answer in the affirmative. Among others, knowledge on the nearest location of recycling center, sending items for recycling, volunteering at recycling center and purchasing used and recyclable goods would reinforce their own personal commitment of good environmental practices.

### **5.4.1 Knowledge of the Nearest Recycling Center**

About 77 per cent of the respondents do not know the location of the nearest recycling center (Table 5.7). Such a center is located in S17 itself at Jalan 17/12, Petaling Jaya. since 1996. About 3 per cent know of recycling center outside S17.

Female respondents are more likely to know about the S17 recycling center compared to male respondents: 22 per cent of female compared to 17 per cent of male respondents (Table 5.7). The difference in knowledge among male and female respondents is not significant at the 5 per cent level.

**Table 5.7: Percentage of Respondents who Know the Location of the Nearest Recycling Center by Selected Socio-Economic Variables**

Characteristics		Do not know	S17	Outside S17	n
Gender	Male	80	17	3	308
	Female	75	22	3	401
Age Group	≤30	79	17	4	300
	31-40	75	23	2	152
	41-50	74	25	1	114
	51+	78	20	2	142
Education Level	None and Primary	86	12	2	92
	Secondary	75	23	2	268
	Tertiary	76	20	4	347
Ethnic Group*	Malay	83	9	8	112
	Chinese	73	25	2	521
	Indians and others	92	7	1	76
Type of living quarters	High cost	80	16	3	153
	Medium cost	72	25	2	374
	Low cost & Squatter houses	84	13	4	182
Total		77	20	3	709

\* Significant difference at  $\alpha = 0.05$

n number of cases

Respondents above 30 years are more likely to be aware of the S17 recycling center compared to those of younger ages. For example, 25 per cent of the respondents age 41 to 50 years know the existence of S17 recycling center compared to 17 per cent of those below 31 years (Table 5.7). However, the difference is not significant at the 5 per cent level.

There are more Chinese (25 per cent) households who know about the S17 recycling center compared to other ethnic groups (Table 5.7). Only 2 per cent of them report knowing of recycling center located outside S17. On the contrary, some 9 per cent of Malays report that they know of the S17 recycling center, while 8 per cent know of the

existing recycling center situated elsewhere. The difference across ethnic groups is significant at the 5 per cent level.

It is interesting to note that more respondents with secondary education know about the existence of the S17 recycling center compared to those with tertiary education or primary education or below. For example, some 24 per cent of those with secondary education know the about the S17 recycling center compared to 20 per cent of those with tertiary education and 12 per cent for those with no or primary education. The difference is, however, not significant at the 5 per cent level.

More respondents from the middle cost houses know about the S17 recycling center compared to those from other types of living quarters (Table 5.7). The difference is significant at the 5 per cent level.

#### **5.4.2 Participation in Recycling**

Participation of respondents in recycling activities is measured by whether they send items for recycling and volunteer at such centers.

Some 35 per cent of total respondents have sent items for recycling (Table 5.8). Only 6 per cent of total respondents have volunteered at recycling centers.

##### **Sending Things for Recycling**

About 39 per cent of female respondents compared to 30 per cent of male respondents have sent items for recycling (Table 5.8). This may be the due to the fact

that females are more likely to be the one in charge of household chores and cleanliness.

The difference is significant at the 5 per cent level of confidence.

It seems that younger people are more likely to send things for recycling compared to older people. For example, 38 per cent of those below 31 years have sent things for recycling compared to 29 per cent of those above 50 years old (Table 5.8). The difference is, however, not significant at the 5 per cent level.

**Table 5.8: Percentage of Respondents who Send Household Items for Recycling by Selected Socio-Economic Variables**

Characteristics		Per Cent	n
Gender*	Male	30	308
	Female	39	401
Age Group	≤30	38	300
	31-40	32	152
	41-50	40	114
	51+	29	142
Education Level*	None & Primary	28	92
	Secondary	31	268
	Tertiary	40	347
Ethnic Group*	Malay	27	112
	Chinese	38	521
	Indians & Others	25	76
Type of living quarters	High cost	36	153
	Medium cost	35	374
	Low cost & Squatter houses	35	182
Total		35	709

\* Significant difference at  $\alpha = 0.05$

n number of cases

Education increases a person's awareness to participate in recycling programmes. About 40 per cent of those with tertiary education have send things for recycling

compared to only about 28 per cent of those with no or primary education (Table 5.8). The difference is significant at the 5 per cent level.

There are more Chinese who send their things for recycling compared to other ethnic groups (Table 5.8). This may be due to the fact that more of them know about the recycling center in the midst of their housing estate. The difference is significant at the 5 per cent level.

Regardless of the type of living quarters, only some one third of the respondents send items for recycling.

### **Being a Volunteer at a Recycling Center**

The percentage who have volunteered is pretty small. Only some 6 per cent of respondents have ever volunteered at a recycling center (Table 5.9).

There is no difference in the participation of male and female respondents as volunteers at recycling center (Table 5.9). However, it is shown that those below 31 years are more likely to have volunteered at a recycling center compared to those older ages (Table 5.9). The difference across age group is significant at the 5 per cent level.

Those with higher education are more likely to volunteer at recycling center compared to those with lower education: 8 per cent of those with tertiary education compared to one per cent of those with none or primary education (Table 5.9). The difference is significant at the 5 per cent level.

Chinese are more likely to have volunteered at a recycling center compared to others. The difference is however not significant at the 5 per cent level.

**Table 5.9: Percentage of Respondents who have been a Volunteer at a Recycling Center by Selected Socio-Economic Variables**

Characteristics		Per Cent	n
Gender	Male	6	308
	Female	6	401
Age Group*	≤30	9	300
	31-40	3	152
	41-50	4	114
	51+	4	142
Education Level*	None & Primary	1	92
	Secondary	5	268
	Tertiary	8	347
Ethnic Group	Malay	4	112
	Chinese	6	521
	Indians & Others	3	76
Type of living quarters	High cost	4	153
	Medium cost	5	374
	Low cost & Squatter houses	8	182
Total		6	709

\* Significant difference at  $\alpha = 0.05$

n number of cases

It is not surprising that those from poorer background are more likely to volunteer at recycling centers compared to richer people. Some 8 per cent of those staying at low cost and squatter houses volunteer at recycling centers compared to some 4 per cent of those staying in high cost houses (Table 5.9). The difference is significant at the 5 per cent level.

Less than half (47 per cent) of total respondents expressed that they would consciously choose recyclable items when doing marketing (Table 5.11). This means for every two persons, one who would consciously choose recyclable items..

**Table 5.11: Percentage of Respondents who Purchase Recyclable Items by Selected Socio-Economic Variables**

Characteristics		Percentage	n
Gender	Male	44	308
	Female	43	401
Age Group	≤30	54	300
	31-40	45	152
	41-50	38	114
	51+	25	142
Education Level*	None & Primary	21	92
	Secondary	40	268
	Tertiary	48	347
Ethnic Group	Malay	51	112
	Chinese	43	521
	Indians & Others	36	76
Type of living quarters	High cost	51	153
	Medium cost	48	374
	Low cost & Squatter houses	52	182
Total		43	709

\* Significant difference at  $\alpha = 0.05$ .

n number of cases

There is no significant difference between male and female respondents in the purchase of recyclable items. However, in terms of age, younger people are more conscious in choosing recyclable items compared to older people: about 54 per cent of those below 31 years would buy recyclable goods compared to about 25 per cent of those

above 50 years (Table 5.11). The difference is, however, not significant at the 5 per cent level.

Education increases the knowledge on environmental issues especially in identifying recyclable items. Those with tertiary education are 2 times more likely to buy recyclable items compared to those with no or primary education (Table 5.11). The difference is significant at the 5 per cent level.

Malays seems to be more concerned about purchasing recyclable goods compared to other ethnic groups. More than half of them would choose recyclable goods compared to only about 36 per cent of those from other ethnic groups. However the difference in attitude toward purchase of recyclable goods is not significant at the 5 per cent level.

Those from rich background who are staying in high cost houses are more likely to choose recyclable goods compared to those staying in low cost and squatter houses (Table 5.11). The difference is, however, not significant at the 5 per cent level.

### **5.3 CONCLUSION**

The majority of respondents think that environmentally friendly action and cleaning up of their surrounding areas would assist in tackling the environmental issues. However, it is found that their participation in environmentally friendly actions especially in recycling is not encouraging and still remains at a low rate. Therefore, some effective policies and programmes that would 'persuade' people to participate in carrying out

environmental programmes is much needed. As currently, many do not know about such environmental issues but do not feel a sense of responsibility.