A Baseline Survey on Fraser's Hill: Environmental Citizenship

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Thiagarajan Nadeson

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HSBC

In collaboration with
Acknowledgement

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1) Local community of Fraser’s Hill
2) Fraser’s Hill Sustainable Heritage (FRESH)
3) Fraser’s Hill Development Coorporation
4) Raub Local Council
5) All the hotels, retailers and restaurant owners in Fraser’s Hill

WWF-Malaysia’s sincere thanks to the project executants, Ms. Carell Cheong, Ms. Leow Hoay Hoay, Ms. Pri Hansini Chaskar and Ms. Priya Peranchis Josip, who were volunteers from Universiti Malaya in co-developing the survey instrument and Pn. Khalipah Md. Jidin of Universiti Malaya in processing the survey data as well as En. Anuar Jaafar of WWF-Malaysia who has assisted in formatting the report.

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Sustainability has been regarded as increasingly important term especially with possibly and potential natural catastrophic that strongly linked to human activities that affecting the health of the environment. Human means all of us thus we have to burden the responsibility of conserving the nature which will eventually lead to sustainable earth.

With this in mind, the project was design to escalate the importance of reviewing the local community lifestyle and if needed to set a direction that is environmentally friendly. Lifestyle that influences the waste management, wise use of water, energy conservation has been activities that if properly carried out on daily basis and form part of everyday habit no matter where we are, it will be a great thing to make a positive difference to support the conservation of the environment.

WWF-Malaysia, through its Community Environmental Education project in Fraser’s Hill has strive to demonstrate that the local community can be mobilize towards local area conservation by embarking on lifestyle changes amongst others. The local community has demonstrated certain degree of commitment and change in their daily practices which could be a positive sign and starting point to only become better if further assistance and support provided.

This survey will form as a good baseline data for further evaluation to be conducted with regards to the lifestyle of the local community in conservation activities.

With FRESH formed as a legal entity represented by mainly local resident members it is our hope that the lifestyle mentioned and demonstrated through the result of the survey will be championed by them for a continuity of these good practices.

WWF-Malaysia would like to express its deepest appreciation and thanks for the generous contribution by the HSBC Bank for the financial, in-kind and moral support for the project that runs for 3 years in Fraser’s Hill. We hope their contribution for such purpose will continue only for WWF-Malaysia but also for other organization that has the objective towards conservation of the environment.

WWF-Malaysia is very grateful to the local government such as Fraser’s Hill Development Corporation, Raub Local Council, Department of Wildlife and National Park, Pahang, Forestry Department, Pahang, Royal Malaysian Police, Fraser’s Hill for the support and advice throughout their 3 years duration of the project.
Lastly, we hope the demonstration of raising the level of environmental citizenship through the participation of local community, government and private organization stakeholders could be emulated by FRESH with a greater success. This survey could be used as a base to gauge the extend of changes thereafter.

Dr Dionysius Sharma
Executive Director/CEO
WWF-Malaysia
Executive Summary

WWF-Malaysia has its presence in Fraser’s Hill since 1989 primarily to carry-out scientific and conservation projects that are related to flora, fauna, environmental education, water and land-use planning. Until recently, in 2004, WWF-Malaysia has embarked in a community conservation project that warrants direct engagement with the local residents and stakeholders such as Fraser’s Hill Development Corporation, Majlis Daerah Raub (Fraser’s Hill Branch), Fraser’s Hill Police Force, local organizations such as Rukun Tetangga, Persatuan Belia and political parties, resorts and hoteliers, retailers and restaurant owners.

This community project was generously funded by HSBC Bank Malaysia Berhad for three years from 2004 to 2006. Throughout these three years various activities that involved the local community and the stakeholders were carried out in collaboration with Fraser’s Hill Environmentally Sustainable Heritage (F.R.E.S.H). F.R.E.S.H is a local community establishment with the objective of organizing and providing support for the natural environmental conservation in Fraser’s Hill.

This survey has provided us with results on how well WWF-Malaysia in collaboration with F.R.E.S.H has performed in their conservation efforts in Fraser’s Hill for the past three years. As such, the survey was designed with the following objective:

(i) to explore the established identity of F.R.E.S.H among the Fraser’s Hill residents;
(ii) to explore how F.R.E.S.H has mobilised the residents of Fraser’s Hill;
(iii) to determine the existing level of environmental citizenship among the Fraser’s Hill community
(iv) to gather opinions and suggestions on ways to conserve the environment in Fraser’s Hill by various parties such as hotels, local authorities, employers and the individual.
The results of the survey indicate that the residents' awareness of environmental issues was found to be only 39.4%. However, the interest level to invest their time for conservation was 74%. The green lifestyle initiatives by F.R.E.S.H in the form of separating garbage, recycling, water and energy conservation has appeared to influence the residents as F.R.E.S.H. has become a part of their daily routine. However, action that requires little effort such as recycling and turning off the lights when it’s not in use has been more common than actions that require more effort.

The residents (63.5%) were also found to believe that their personal action would help in conservation. The areas of concern among the Fraser’s Hill residents include trees being chopped down and new areas being cleared and when plants and animals decrease in number.

Overall, it can be concluded from the results that the environmental citizenship level is similar to other available reports, where while the environmental knowledge on environmental issues are quite in evidence, the conservation actions however are rather only at the superficial level. As such, if the level of conservation efforts by the Fraser’s Hill residents' were to be raised further, the residents' have to be further engaged on a continued basis in conservation related activities that has impact on not only changing their behaviours but also their underlying attitudes as well.
PART 1

INTRODUCTION
ENVIRONMENTAL CITIZENSHIP

Each and everyday we are all making decisions that affect the environment around us. In a family, the members may ponder upon whether to buy a new refrigerator, another member of the community may be thinking of buying a car, while a student in a hostel may be considering getting an aerosol of mosquito spray for the night. When one person makes a decision it may be so nondescript. However, when these types of decisions are made by millions all over the world the effect upon the environment is tremendous. By looking around our world it is clear that changes have taken place and sadly for the worst. Therefore environmental citizenship is vital.

There are various terms used when studies about environmental citizenship are conducted. Words such as environmental literacy, environmental attitude, environmental knowledge, and ecological or environmental behaviour come into play.

Definitions
First some definitions will be dealt with to set the background for the present study to investigate the environmental appreciation of the Fraser’s Hill residents.

What does environmental literacy mean?
The Earth is a set of interacting natural and social systems. An environmentally literate person must understand the relationship of the parts of a system and the interdependence of human and environmental systems. (Minnesota's Environmental Literacy Scope and Sequence)
Citizenship

... is both dynamic and political, and can be described as entailing a bundle of rights, responsibilities and practices that define membership in a political community. Citizenship emerges out of relationships between citizens and with institutions – including government – over time and in a variety of social, economic and political spaces. MacGregor, S., Pardoe, S., Dobson, A., & Bell, D. (2005).

Environmental citizenship

... is about the active participation of citizens in moving towards sustainability. It challenges conventional notions of citizenship to reflect the nature of environmental problems. It is an important part of the shift towards governance (rather than just government) in environmental policy and politics. MacGregor, S., Pardoe, S., Dobson, A., & Bell, D. (2005).

Environmental Education

Environmental education is a process that aims to develop an environmentally literate citizenry that can compete in our global economy; has the skills, knowledge, and inclinations to make well informed choices; and exercises the rights and responsibilities of members of a community.” (National Project for Excellence in Environmental Education, 2004)
Environmental Attitudes

Acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection. (UNESCO, 1978)

Environmental Knowledge

A variety of experience in, and the acquiring of a basic understanding of the environment and its associated problems. (UNESCO, 1978)

The Scope of Environmental Citizenship

Citizenship is normally attached to individuals. While citizenship has usually been associated with public actions and active participation in worthy causes, environmental citizenship is believed to have transcended the boundaries that the concept of citizenship once held. Environmental citizenship has expanded to include future generations and ecosystems.

Environmental citizenship can be public where campaigns to save susceptible ecosystems, it can also be private as switching off lights for the reduction of energy consumption and carrying our own paper bags to the supermarket for grocery shopping.

No global boundaries can be put around environmental problems, which need the cooperation of global citizens. We are living in a global
community and environmental citizenship makes us members of a common journey facing problems of global proportions. Our responsibilities extend beyond our individual nations (the traditional idea of citizenship) and have an impact on the planet.

Environmental citizenship exudes concern for future generations by taking care of the present. The ideal understanding is that environmental citizenship is demonstrated clearly when one takes an interest in nature which is unable to protect themselves.

How one acts and thinks can mirror environmental citizenship in action? Environmental citizenship includes being responsible for environmentally unsustainable actions by realising how individual actions can have an impact and being able to get involved and contribute towards collective actions aimed at achieving greater sustainability.

Individual citizens can take action for the benefit of the environment, but they cannot act fully on their own. This is because sometimes the scale of the environmental issue at hand may be enormous. Therefore, government and institutions must also play their role. This kind of symbiosis can produce a commitment for the common good for all in sustainable development. The institutions can play their part in promoting environmental citizenship by organising programmes and partnerships.

Environmental citizenship depends to a certain extent upon pro-environmental behaviour enabled by institutional support and infrastructure. An example would be the placing of recycling bins which are very accessible to citizens, rather than having to make a long drive to the bins. If the bins are everywhere, the sorting of wastes would become routine.
Results of Environmental Citizenship and Environmental Literacy Surveys

The Pennsylvania Environmental Readiness for the 21st Century Survey (2003) Report was the first of its kind in the USA. It addressed the environmental literacy recommendation in the Report of the Pennsylvania 21st Century Environment Commission. Additionally, it made numerous comparisons between Pennsylvania citizens and United States citizens as a whole and begins to probe some of the public's environmental attitudes and behaviours. The findings showed that,

1. While Pennsylvanians personally take primary responsibility for solving the state's environmental problems and have positive attitudes toward the environment, they like the nation as a whole, currently have a poor grasp of both environmental knowledge and environmental issues. Lack of basic environmental knowledge by commonwealth citizens will inhibit progress in environmental stewardship.

2. The majority of Pennsylvanians frequently recycle and buy recycled products. Nearly three out of four (71%) respondents reported that they have developed a frequent pattern of recycling. To a lesser degree (52%) respondents said that they frequently buy products in recycled or recyclable packaging.

3. The majority of Pennsylvania residents (61%) never use mass transit or car pooling instead of driving alone. Seventeen percent (17%) frequently take advantage of public transportation or car pooling. There is a significant association between where individuals live and their reported use of mass transit and car pooling.
In the 2004 survey of citizens' knowledge, attitudes and behaviours in relation to the environment in Kentucky USA, it was concluded that even though Kentuckians understand the scientific facts of environmental issues, they do not connect those facts with their own actions and behaviours. This may be why Kentuckians believe that air and water pollution come from factories rather than from the every day actions of all of us.

A similar survey conducted in Minnesota (2004) revealed that a connection exists between Minnesotans' environmental knowledge and their self-reported attitudes and behaviours. However, if a higher level of environmental behaviours is to be promoted, what factors are required to move citizens from a medium level to the high level of behaviours? Is it the acquisition of knowledge or more affective (attitudinal) education (or experiences) that are required to promote more positive environmental behaviours? Continued research is required on the effects of knowledge and attitudes on these behaviours in the creation of an environmentally literate population as these are important considerations when planning environmental educational programs.

Although WWF-Malaysia has embarked on few conservation projects in Fraser's Hill since 1989, as listed below, only in 2004 (Engaging People in Sustainability), was a project that fully focused on community environmental education was engaged.

a) Fraser's Hill Development (1989)
b) Conservation Status of Plant of Fraser's Hill (1992)
c) Promoting Conservation Awareness and Environmental Education / Highland Forest, Fraser's Hill (1994)

f) FWWL Intervention 5: Education in the Field, Fraser’s Hill (Fraser’s Hill Nature Education Centre) (2000)

g) FWWL Forests For Water, Water For Life: Model Field Projects (Intervention 2: Water Catchment Management / Fraser’s Hill Catchment Area) (2001)

h) Study on the Development of Hill Stations (2001)


j) Study for the Sustainable Development of the Highlands of Peninsular Malaysia (2002)


Through this community project it was hoped that an increase in awareness, enhanced knowledge, improved skills and renewed attitudes towards the environmental issues could mould positive behaviour among the local communities.

The next chapter will discuss the methodology of the study.
PART 2
METHODOLOGY
DESIGN OF STUDY

Introduction
The Community Environmental Education project is the first of its kind conducted by WWF-Malaysia in Fraser’s Hill. This is a strong indication that WWF-Malaysia will be focusing on community based conservation as part of its biodiversity conservation in Fraser’s Hill. Thus, establishing a baseline on the level of environmental citizenship is important for a scientific social science study. This baseline could be a good starting point for comparison for future activities introduced for the local community as to how successfully the level of environmental citizenship could be raised. Based on such comparisons, various conclusions and recommendations could be obtained for further action on biodiversity conservation in Fraser’s Hill.

Objectives of the Study
The main objectives of the study were,

(v) To explore the established identity of F.R.E.S.H. among the Fraser’s Hill residents;
(vi) To explore how F.R.E.S.H. has mobilised the residents of Fraser’s Hill;
(vii) To determine the existing level of environmental citizenship among the Fraser’s Hill community
(viii) To gather opinions and suggestions on ways to conserve the environment in Fraser’s Hill by various parties such as hotels, local authorities, employers and the individual.
The Instrument
The survey questionnaire was formulated based on the National Survey Instrument organised by WWF-Malaysia in collaboration with Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Department of Environment, Curriculum Development Centre, Teacher Education Division, Education Planning & Research Division and the Global Environment Centre. Besides these institutions, three members of WWW-Malaysia staff who were involved in the instrument development process were Carell Cheong, Leow Hoay-Hoay and Thiagarajan Nadeson. The process was further assisted by Pri Hansini Chaskar and Priya Peranchis Josip, who were volunteers from Universiti Malaya and finally edited by Associate Professor Dr. Esther Sarojini Daniel.

The final survey instrument administered which comprised of 22 items was divided into 6 sections based upon the type of questions prepared. Section A collected Demographic Data, Section B consisted of Multiple Choice Questions, Section C required Yes or No answers, Section D required respondents to Tick the answer, Section E consisted of Likert Scale questions and Section F has Open Ended questions. (Please refer to Appendix 1 for the survey instrument)

The items of the survey were identified as in the following categories,

(i) items that are related to the identity of F.R.E.S.H.;
(ii) items that are related to how F.R.E.S.H. mobilises conservation efforts;
(iii) items that are related to awareness of the environment;
(iv) items that are related to the attitudes towards the environment
(v) items that are related to the needed action for environmental conservation.
These categories were verified separately by two other researchers. The identification of categories are shown in Table 2.5

Table 2.1: The categorization of the questionnaire items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
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<tbody>
<tr>
<td>12</td>
<td>Action</td>
</tr>
<tr>
<td>13</td>
<td>Action</td>
</tr>
<tr>
<td>14</td>
<td>Attitude</td>
</tr>
<tr>
<td>15</td>
<td>Attitude</td>
</tr>
<tr>
<td>16</td>
<td>Identity of F.R.E.S.H.</td>
</tr>
<tr>
<td>17</td>
<td>Identity of F.R.E.S.H.</td>
</tr>
<tr>
<td>18</td>
<td>Mobilisation by F.R.E.S.H.</td>
</tr>
<tr>
<td>19 (a–e)</td>
<td>Attitude</td>
</tr>
<tr>
<td>20 (a–d)</td>
<td>Identity of F.R.E.S.H.</td>
</tr>
<tr>
<td>21 (a–k)</td>
<td>Action</td>
</tr>
<tr>
<td>22 (a–e)</td>
<td>Identity of F.R.E.S.H.</td>
</tr>
<tr>
<td>23 (a–e)</td>
<td>Mobilisation by F.R.E.S.H.</td>
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<td>25−28</td>
<td>Awareness</td>
</tr>
</tbody>
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The Sample Description
The survey was conducted among three target groups identified as making up the majority of the population in Fraser's Hill. The survey was administered by 9 local residents. 4 persons were assigned to distribute the instruments to the hotel target group namely the Fraser's Pine Resort, the Fraser's Silverpark Resort, the Shahzan Inn and the Ye Olde Smokehouse. While the rest of the survey forms were distributed to the other two target groups who are the local residents and local retailers. Although these three groups were the main targets, as they represented groups that could have a direct impact on the Fraser's Hill environment, the study did not intend to investigate this three groups separately.
In total the sample consisted of 104 respondents. Tables 2.1 to 2.3 give the demographics of the sample.

**Table 2.2: Gender of respondents**

<table>
<thead>
<tr>
<th>Gender</th>
<th>No. (%)</th>
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<tbody>
<tr>
<td>Male</td>
<td>57 (54.8)</td>
</tr>
<tr>
<td>Female</td>
<td>47 (45.2)</td>
</tr>
</tbody>
</table>

Table 2.1 shows that the majority of the respondents were male (54.8%) and 45.2% female.

**Table 2.3: Ethnicity**

<table>
<thead>
<tr>
<th>Race</th>
<th>No. (%)</th>
</tr>
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<tr>
<td>Malay</td>
<td>71 (68.3)</td>
</tr>
<tr>
<td>Chinese</td>
<td>15 (14.4)</td>
</tr>
<tr>
<td>Indian</td>
<td>17 (16.3)</td>
</tr>
<tr>
<td>Others</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>

As can be seem in Table 2.2, the majority of the respondents were Malay (68.3%). Indian respondents made up 16.3% and Chinese respondents 14.4%.

**Table 2.4: Residence Status**

<table>
<thead>
<tr>
<th>Residence</th>
<th>No. (%)</th>
</tr>
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<tbody>
<tr>
<td>Resident</td>
<td>89 (85.6)</td>
</tr>
<tr>
<td>Non-resident</td>
<td>15 (14.4)</td>
</tr>
</tbody>
</table>

Table 2.3 shows that 89.6% of the respondents were residents of Fraser’s Hill.
One more aspect related to the sample involved in the study was factors that contributed to their awareness of the environment. The elements that were selected as influences by the respondents are given in Table 2.4.

**Table 2.5: Influencing factors in enhancing awareness**

<table>
<thead>
<tr>
<th>Influencing Factor</th>
<th>No. (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents and Family</td>
<td>60 (57.7)</td>
</tr>
<tr>
<td>Friends</td>
<td>71 (68.3)</td>
</tr>
<tr>
<td>Culture</td>
<td>44 (42.3)</td>
</tr>
<tr>
<td>Religion</td>
<td>59 (58.7)</td>
</tr>
<tr>
<td>Teachers and other educators</td>
<td>38 (36.5)</td>
</tr>
</tbody>
</table>

*The respondents can choose more than one

Friends seem to have the most influence upon the respondents when it comes to enhancing environmental awareness. Religion, parents and family have also influenced more than 55% of the respondents. What is perhaps discouraging is that the respondents have placed teachers and other educators as the factor with the least influence. Cultural influence has been placed in between the above factors stated. Further study may reveal more insight into this.

**Analysis**

Simple descriptive statistics (using the SPSS software version 11) were used to analyse the respondents’ survey responses for each item.

In the following sections, the results of the survey will be discussed as follows, (i) Part 3 will discuss the establishment of the identity of F.R.E.S.H., (ii) Part 4 will discuss how F.R.E.S.H. mobilises the residents for action, (iii) Part 5 will discuss the existing level of environmental citizenship among Fraser’s Hill residents and (v) Part 6 will conclude the research report.
PART 3

FRASER'S HILL:
IDENTITY OF F.R.E.S.H

Today more than ever, society needs high-quality environmental oriented programmes that succeed in moving values and changing behaviours in the direction of sustainability and environmental conservation.

Fraser's Hill Environmentally Sustainable Heritage or F.R.E.S.H, is a local community interest group formally established on 22nd August, 2005. WWF - M in working closely with F.R.E.S.H, is responsible for proving technical support such as in the administrative and conservation related activities. F.R.E.S.H. plans various activities and campaigns for Fraser's Hill residents. Just how successful has F.R.E.S.H been in establishing its' identity? Figure 3.1 gives some idea as to how well established is F.R.E.S.H.'s identity among Fraser's Hill residents.

![Graph showing percentage of residents who have heard of F.R.E.S.H and those who have been assisted in conservation](image)

**Figure 3.1:** Familiarity of Fraser's Hill residents with F.R.E.S.H.
It is obvious that F.R.E.S.H. has achieved its' objectives as more than 90% of the respondents have indicated that the identity of F.R.E.S.H is well established in relation to conservation efforts in Fraser's Hill.

The respondents also seem familiar with the objectives of F.R.E.S.H. (Figure 3.2).

![Bar Chart]

Legend:
- A: Educate the public about environmental issues
- B: A group devoted to conservation
- C: Conduct environmental programmes for the public
- D: Distribute fresh fruits and vegetables

**Figure 3.2:** Fraser's Hill residents knowledge about the objectives of F.R.E.S.H.
The results in Figure 3.2 definitely points to the fact that the identity of F.R.E.S.H. is well related to environmental issues. Only 1.9 percent or 2 of the respondents linked F.R.E.S.H. with the distribution of fruits and vegetables. Otherwise, more than 79% of the respondents associate F.R.E.S.H. with environmental protection. F.R.E.S.H. has a number of on-going conservation programmes in Fraser's Hill. How much of these efforts are known by the residents? Figure 3.3 gives a good indication.

![Bar chart showing percentage of residents' knowledge of F.R.E.S.H.'s efforts]

Legend:  
A: The launching of F.R.E.S.H.  
B: Ecology and biodiversity training programme  
C: Sustainable lifestyle training programme  
D: Sustainable development training programme  
E: 5R and waste management training programme  
F: Recycling programmes  
G: Water and energy saving competitions  
H: Ground breaking ceremony to upgrade Bishop's trail

**Figure 3.3:** Knowledge of Fraser's Hill Residents about F.R.E.S.H.'s efforts
While the residents are extremely familiar with the recycling programmes (80.8%), moderately familiar with the water and energy saving competitions (63.5%) and the 5R and waste management training programmes (63.5%), very few residents are familiar with the training programmes organised by F.R.E.S.H. (ecology and biodiversity training programme – 31.7%; sustainable lifestyle training programmes – 42.3%; sustainable development training programmes – 23.1%).

**Point to Note**

When the result above (recycling programmes – 80.8% of the respondents have knowledge of it) is compared with the results in Figures 5.4 (a) and (b) are compared, it could be that Fraser’s Hill residents show a high indication of recycling culture because of the influence of F.R.E.S.H.

When the results about the water and energy saving competitions (63.5% of the respondents know about it) as well as the 5R and waste management training programmes (63.5% of the respondents have knowledge about it) are compared to the results in Figure 5.5, it is also indicative of the possible positive influence of F.R.E.S.H. upon the residents of Fraser’s Hill as turning of taps and switching off lights appear routine.

The launching ceremony of F.R.E.S.H. (80.8%) and the ground breaking ceremony of Bishop’s Trail (76.9%) seems well known. These two ceremonies most probably added to the enhancing F.R.E.S.H.’s identity among the residents.

Part 4 will discuss about how F.R.E.S.H. has managed to mobilise the Fraser’s Hill community for environmental conservation efforts.
PART 4

FRASER'S HILL: MOBILISING THE COMMUNITY BY F.R.E.S.H

The Millennium Ecosystem Assessment has concluded that man has polluted or over exploited two-thirds of the ecological systems on which life depends. This prompts a host of questions such as how can environmental or ecological citizenship be promoted? What is the role of the state or private organisations in all this? In this report F.R.E.S.H as a private organisation has initiated various programmes. How have these programmes influenced the Fraser's Hill residents towards conservation?

This report will first look at the awareness created by F.R.E.S.H. (Figure 4.1).

![Bar Chart]

**Figure 4.1:** Environmental Awareness of Fraser's Hill residents and F.R.E.S.H.
Figure 4.1 leaves no doubt that F.R.E.S.H. has been extremely successful in creating and raising awareness among Fraser’s Hill residents towards environmental issues.

How have the programmes organised by F.R.E.S.H fared in mobilising Fraser’s Hill residents for conservation efforts? Figure 4.2 indicates the level of effectiveness of F.R.E.S.H.’s efforts at mobilisation such that residents will make the attempt to get out and participate in the environmental programmes.

From Figure 4.2, it can be seen that very few residents participated in the ecology and biodiversity training programme (25%), only 27.9% of the respondents participated in the sustainable lifestyle training programme, a mere 12.5% participated in the sustainable development training programmes, and 52.9% took part in the 5R and waste management training programmes.

The launching ceremony of F.R.E.S.H. attracted participation of 50% of the respondents and the ground breaking ceremony of Bishop’s Trail attracted 60.6% participation (Figure 4.2). However, the level of this participation cannot be described from the survey. It could be that the respondents only attended the two ceremonies or it could be involvement at a higher level. Further investigation needs to be done.
Legend:  
A: The launching of F.R.E.S.H.  
B: Ecology and biodiversity training programme  
D: Sustainable lifestyle training programme  
C: Sustainable development training programme  
D: 5R and waste management training programme  
E: Recycling programmes  
F: Water and energy saving competitions  
G: Ground breaking ceremony to upgrade Bishop’s trail  

Figure 4.2: Participation of Fraser’s Hill Residents about F.R.E.S.H.’s efforts

In relation to the discussion above through an open-ended question, the respondents identified what activities by F.R.E.S.H. will attract their participation namely,

(i) competitions (such as drawing etc.)
(ii) recycling
(iii) conservation programmes
(iv) organise gotong-royong
Point to Note

When the result (recycling programmes - 74% of the respondents participate) is compared with the results in Figures 4.4 (a) and (b) are compared, it could be that Fraser’s Hill residents show a higher involvement in the recycling culture because of the influence of F.R.E.S.H.

When the results (water and energy saving competitions - 42.3%) are compared to the results in Figure 4.5, it is also indicative of the possible positive influence of F.R.E.S.H. upon the residents of Fraser’s Hill as turning of taps and switching off lights apparently have become routine.

Part 5 will discuss the environmental citizenship level among the Fraser’s Hill community for environmental conservation efforts.
PART 5

FRASER’S HILL:
EXISTING LEVEL OF ENVIRONMENTAL CITIZENSHIP

Environmental citizenship is about the active participation of citizens in moving towards sustainability. It challenges conventional notions of citizenship to reflect the nature of environmental problems. It is an important part of the shift towards governance (rather than just government) in environmental policy and politics. Although environmental citizenship is not a new concept; it has been written about and set out in policy documents (Public Space, 2005).

This chapter will discuss the existing level of environmental citizenship of Fraser’s Hill residents under three sections, namely (i) environmental awareness, (ii) environmental attitudes and (iii) environmental action.

Awareness of the Fraser’s Hill Environment

Environmental awareness is when groups or individuals acquire an awareness and sensitivity to the total environment and its allied problems (UNESCO, 1978).

In 1996, the Department of Environment declared that general public awareness of the environment is the ultimate solution to numerous pollution problems (Shafari Che Hashim, 1996). The large increase in the number of queries on environmental information received by the Department of Environment, as well as the increase in the number of talks on environment given to various institutes and agencies, apparently showed the increase in environmental awareness among the public. However, in a report by the Ministry of Science, Technology and Environment to the United Nations Framework Convention on Climatic
Change in 2000, one important point raised was that in spite of the heightened awareness because of the haze and El-Nino Phenomenon of 1997 and 1998, many Malaysians lack understanding of the delicate interrelationships between man, and all species of animals and plants.

The United Nations Economic and Social Commission for Asia and the Pacific (2003) has stated that the environmental awareness is still in its preliminary stage in Malaysia. A recent study (Lim, 2005) showed that general knowledge about the environment was high and that the main sources of environmental knowledge are the television and the newspapers. However, understanding of environmental issues and recognition of environmental problems was only at the surface level. The findings also indicated that the awareness and sensitivity towards environmental issues were low.

Malaysia desires to achieve the status of a developed country by the year 2020. This will mean there is a need for rapid economic growth. This growth must be guided by the principles of sustainable development. The extent to which sustainable development is achieved will ultimately depend upon the knowledge and awareness of the environment of the people.

In 2003, a paper presented at the Workshop on Knowledge Creation for Environment and Development, Vilvorde Kursuscenter, Copenhagen, (Murtedza Mohamed, Gabriel T. Noweg, Lau Seng & Mustafa a. Rahman, 2002 - Sluse programme, Universiti Malaysia Sarawak) among other things, highlighted that the Malaysian highlands and limestone hills were being poorly monitored. Clearing of uplands for housing, resorts, roads and other developments has led to massive soil erosion in some places and general loss of biodiversity. Fraser's Hill is the focus of the present study. As being one of the favourite hill station tourism spots at the Malaysian highlands, it will be interesting and pertinent to know how does the Fraser's Hill community fare in the level of awareness.
Table 5.1 shows the level of awareness about environmental issues in Fraser's Hill among the residents.

**Table 5.1: Awareness among Fraser's Hill Residents**

<table>
<thead>
<tr>
<th>Question</th>
<th>Statements (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interested in spending time to conserve Fraser's Hill environment</td>
<td>I do know</td>
</tr>
<tr>
<td></td>
<td>1 Disagree 1 Uncertain</td>
</tr>
<tr>
<td>Am aware of the environmental issues in Fraser's Hill</td>
<td>I do not know</td>
</tr>
<tr>
<td></td>
<td>6.7 Disagree 1.9 Uncertain</td>
</tr>
<tr>
<td>Am aware of illegal activities in Fraser's Hill</td>
<td>I do not know</td>
</tr>
<tr>
<td></td>
<td>8.7 Disagree 3.8 Uncertain</td>
</tr>
<tr>
<td>Would your personal actions help in the protection of Fraser's Hill?</td>
<td>I do not know</td>
</tr>
<tr>
<td></td>
<td>1.9 Disagree 1.9 Uncertain</td>
</tr>
</tbody>
</table>

The Fraser's Hill community have the interest (74%) and an awareness that their personal actions do help in the protection of Fraser's Hill (63.5%). However, they are less certain and even ignorant about environmental issues related to Fraser's Hill (32.7% - 39.4%).
Attitudes of Fraser’s Hill Residents

One of the important aspects of environmental citizenship is joint action with organizations for ecologically sound behaviour.

"The scope of environmental citizenship includes taking responsibilities for environmentally unsustainable actions by reducing individual impact and participating in collective actions aimed at achieving greater sustainability".

(Mac Gregor, Pardoe, Dobson & Bell, 2005).

Figure 5.1 below shows the attitudes of Fraser’s Hill residents towards becoming a member of an environmental organization.

Legend
A: It is my responsibility
B: Want to meet my friends
C: Occupy my free time
D: Interested in joining an NGO

**Figure 5.1:** Why Fraser's Hill Residents become members of a local NGO
From the above results it can be stated that Fraser's Hill local community members indicate a rather low to moderate level of citizenship in terms of attitude. Only 44.2% have indicated they are willing to take responsibility individually and only 3.8% have indicated responsibility via collective action with NGOs'. The rest would join community conservation activities for personal reasons. What these personal reasons are may require further study.

Another indicator of positive attitudes in environmental citizenship is in the way of thinking. Figure 5.2 shows the apprehension of Fraser's Hill residents when the ecological environment undergoes change which is viewed as a threat to conservation. For every negative event put forward, more than 78% - 89% hint at great concern.

Legend:  
A: I get worried when trees are chopped down  
B: I get worried when animals and plants decrease in number  
C: I get worried when dumpsites become larger  
D: I get worried when new areas get cleared  
E: I get worried when I see visitors or locals pluck plants

Figure 5.2: Fraser's Hill Residents Concern
The Fraser’s Hill community members in their answers have demonstrated that they possess excellent attitudes and thinking. The members seem to be very conscious and actually think seriously about happenings around them that bring destruction to their environment (Figure 5.2).

*Environmental citizenship can be considered a mode of thinking and acting in which individuals embrace the project of sustainability.* (Mac Gregor, Pardoe, Dobson & Bell, 2005).

The results indicate that there seems to be environmental consciousness and concern of the Fraser’s Hill environment when certain happenings such as new areas are cleared and trees get chopped down (Figure 5.2). Although this prevailing attitude is correct, however, when comparing this attitude with the results in Figure 5.1, it appears that the community members may be less forthcoming in taking action as only 44.2% of the respondents say it is their responsibility to join a environmental organisation.

**Actions of Fraser's Hill Residents**
The common saying that action speaks louder than words could not be more true when it comes to taking action for the sake of the environment.

"The scope of environmental citizenship includes taking responsibilities for environmentally unsustainable actions by reducing individual impact and participating in collective actions aimed at achieving greater sustainability". (Mac Gregor, Pardoe, Dobson & Bell, 2005).
Several actions of the Fraser's Hill residents investigated in this study will be discussed. These actions include recycling and other daily activities which have an effect on the environment.

Figure 5.3 indicates the responses given by the Fraser's Hill residents concerning what they do with their household items so as to preserve the environment.

*Ideally, environmental citizenship entails the adoption of values and commitments and the performance of actions that are consistent with these.* (Mac Gregor, Pardoe, Dobson & Bell, 2005).

![Bar graph showing percentage of residents who separate garbage and recycle household items.]

**Figure 5.3:** Fraser's Hill Residents Actions Concerning Household Items

Over 70% of the residents have stated that they separate garbage and recycle household items. This can be considered commendable.

Figures 5.4 (a) and 5.4 (b) indicates in more detail what Fraser's Hill residents do with their household wastes.
Legend  
A: Recycle  
B: Throw in dumpsite  
C: Burn  
D: Throw at the rubbish collection site

**Figure 5.4 (a):** What Fraser's Hill Residents do with their household wastes

In Figure 5.4 (a), only 58.7% of the residents say that they recycle household wastes. This appears to contradict the 70.2% who separate garbage and the 76.9% who have indicated they recycle household items in Figure 5.3.
Figure 5.4 (b): What Fraser's Hill Residents do with Aluminium cans, bottles and paper

In Figure 5.4 (b) only 44.2% say that they recycle aluminium cans, bottle and paper. Whereas in Figure 5.3, 76.9% have indicated that they recycle such wastes. Once again there appears a contradiction. Therefore it is uncertain whether the participants are motivated to conserve the environment in thought only or in both thought and action.

The recycling efforts of the Fraser's Hill community could be due to the efforts of F.R.E.S.H. (please refer to Figure 3.3). The 5R and waste training programme and the recycling programmes may have been effective in creating a recycling culture among the residents.
Figure 5.5 shows other actions that are done by Fraser's Hill residents that demonstrate their conservation efforts.

![Bar Chart]

**Legend**
A: turn of tap  
B: switch off lights etc.

**Figure 5.5**: Fraser's Hill Residents' routine actions

Most of the Fraser's Hill community members do not leave the taps running (66.3%) while brushing their teeth, and conserve electricity (74%). These actions can be considered as actions that require minimum effort, although they are important in water and energy conservation. However, after some time these actions can become simple reflex routine actions. Once again if we compare the results in Figure 5.5 with Figure 3.3 (water
and energy saving competitions), there is a possibility that the conservation initiatives of F.R.E.S.H. may have borne fruit. Further studies may give more insight.

As a contrast Figure 5.6 indicates how Fraser's Hill residents fare in actions that demand more effort.

![Bar graph showing the percentage of respondents' answers for different actions.]

Legend
A: bring along own grocery bags
B: bring along own containers
C: make own garden compost

**Figure 5.6:** Fraser's Hill Residents actions with more effort

Actions such as bringing own containers (2.9%) and bags (14.4%) or making one's own compost (17.3%) which require more effort and thought are not done by the majority of the Fraser's Hill respondents.
Figure 5.7 shows other actions that are done by about 35% - 58% of the Fraser's Hill residents.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>45.2</td>
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<tr>
<td>35.6</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>57.7</td>
<td></td>
<td></td>
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<tr>
<td>57.7</td>
<td></td>
<td></td>
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</tbody>
</table>

Legend
A: use recycled paper
B: minimise the use of plastics
C: reduce household wastes
D: avoid pesticides

**Figure 5.7:** Other conservation actions among Fraser's Hill Residents

Fraser's Hill community members do seem to make the effort to use recycled paper (45.2%), minimise use of plastics (35.6%), reduce household garbage (57.7%) and avoid pesticides (57.7%).

Overall, it can be said that Fraser's Hill residents do demonstrate a favourable environmental citizenship level in terms of their attitudes,
although it can be better. However, a further study would be needed to investigate in more depth as to what are the actual daily actions that are carried out in order to minimise use of plastics, reduce household wastes and the alternatives used for pesticides.

Other Actions
As in the discussion above, action is an important word in environmental conservation. Through open-ended questions in the questionnaire many opinions and suggestions were obtained from the respondents. These suggestions are related to what actions can be done in order to conserve the environment in Fraser’s Hill.

What can individual citizens do?
The Fraser’s Hill respondents identified the following actions that can bring about conservation in Fraser’s Hill namely,

(i) clean up all wastes such as empty bottles, tins and plastics;
(ii) have gotong-royong;
(iii) recycle;
(iv) carry out conservation programmes;
(v) reduce the use of plastics, paper and electricity
(vi) plant more endangered plant species, and
(vii) do not carry out open burning

What can local authorities do?
Respondents of the survey suggest the following,

(i) enforce fines;
(ii) have a systematic waste disposal system;
(iii) have regular monitoring;
(iv) make sure that enough waste disposal sites are available, and
(v) have more recycling centres
What can employers do?
The respondents feel that employers should,
(i) organise workshops, seminars and talks for their employees, and
(ii) organise more gotong-royong sessions

What can hotels do?
(i) have recycling activities;
(ii) create attractive landscapes;
(iii) reduce the use of plastics, plastics and electricity; and
(iv) organise gotong-royong

Some main ideas that emerge from the suggestions given above are recycling, reducing the use of plastics, paper and electricity, and organising communal activities (gotong-royong) to help keep the environment clean. These ideas are similar to the ones that have been identified through the survey. Therefore, F.R.E.S.H. in many ways have been effective in inculcating environmental awareness among Fraser's Hill residents.

Part 6 will summarize the findings and conclusion.
PART 6

FRASER’S HILL:
CONCLUSION AND RECOMMENDATIONS

The Environmental Appreciation Study in Fraser’s Hill is the first of its kind. In Malaysia. The objectives were to explore the established identity of Fraser’s Hill Environmentally Sustainable Heritage or F.R.E.S.H. and how F.R.E.S.H. has mobilised the residents of Fraser’s Hill in conservation effort. In addition the existing level of environmental citizenship among the Fraser’s Hill community was also investigated.

Summary of Findings
The study found that the majority of respondents had knowledge about the conservation efforts of F.R.E.S.H. The respondents easily identified the objectives of F.R.E.S.H as well as the mobilisation activities carried out by F.R.E.S.H among residents for conservation action for Fraser’s Hill. However, the participation of the majority of residents were related to recycling, water and energy conservation and certain programmes such as the sustainable lifestyle training programme, sustainable development training programme and the 5R and waste management training programme.

The most common conservation actions taken in the residents’ daily lives are separating garbage and recycling. Furthermore, water and energy conservation was also found to be part of Fraser’s Hill residents daily routine. These activities are closely related to the efforts of F.R.E.S.H. Therefore, the initiatives by F.R.E.S.H. could have had an effect on the Fraser’s Hill residents. However, in this study, activities such as recycling, turning off taps while brushing the teeth and conserving electricity by switching off lights and fans, are considered as routine and actions that
require little effort. The suggestions put forward by the residents also mainly touched upon recycling and joint activities such as gotong-royong.

Tasks that require more effort such as taking along own grocery bags while shopping, bringing along own containers for buying food and the making of one's own garden compost were not common actions among the residents.

**Conclusion and Recommendations**
The results of the Fraser’s Hill survey are not very different from other international surveys. The Pennsylvania Environmental survey also showed that the majority of respondents (71%) have developed a frequent pattern of recycling. Whereas 61% never use public transport or car pooling which requires a little more effort. The survey in Kentucky (2004) also revealed that even though the respondents may have more scientific understanding of environmental issues, it does not mean that this knowledge can be translated into positive environmental action.

The Fraser’s Hill study has shown that the environmental citizenship level is similar to other reports, in that most of the citizens have knowledge about environmental issues. However most of the everyday conservation action is only at the superficial level.

F.R.E.S.H.'s objectives at increasing environmental citizenship seems to have borne fruit in that it has managed to mobilise the Fraser’s Hill residents to be involved in conservation activities such as recycling as well as water and energy conservation. These activities are a start, although they can be considered as activities that only need minimum effort on the part of the residents.

If we are really to make progress towards achieving objectives of sustainable development, it is not enough just to change our behaviours,
as these can revert. We need to change our underlying attitudes as well. Perhaps, with the continued promotion of WWF-Malaysia programmes that will bring about positive influence among the population especially in the carrying out of tasks that require more effort on the part of the residents, environmental citizenship could be raised significantly to a higher level of responsibility.

As such, while establishing and providing some technical advise on how F.R.E.S.H could take a lead in spearheading the existing conservation activities such as recycling, water and energy conservation, WWF-Malaysia is determined to embark on more hands-on activities from 2007 to 2010. WWF-Malaysia believes that continuous efforts to increase further residents' environmental knowledge and accelerate the attitudinal changes must be planned and executed. This includes mobilising the local community to organise and participate in several activities which is expected to further increase the level of existing environmental citizenship. These activities are listed below.

**Year 2007**

(a) Conducting a workshop on *Environmental Legislation* for FRESH members
(b) Convening a formal meeting between FRESH and government stakeholders, FHDC and MDR to establish working relationship
(c) Conducting a Biodiversity Expedition with participation of FRESH members, university lecturers, the Forestry Department, the Department of Wildlife and National Parks, WWF-Malaysia and other relevant stakeholders
(d) Compiling a list of wildlife species in Fraser’s Hill not included in the Protection of Wildlife Act 1972 of Malaysia in collaboration with
Department of Wildlife and National Parks and other environmental NGOs
(e) Convening one non-formal follow up meeting between FRESH and government stakeholders FHDC and MDR
(f) Organizing a series of meetings with the Forestry Department, the Department of Wildlife and the Land Office to draw up 3 maps of Fraser's Hill identifying the Bird Sanctuary, the Wildlife Reserve and the Forest Reserve using GIS technology
(g) Organizing a study visit to 1 Protected Area sites (Endau-Rompin State Park, managed by Forestry Department) for FRESH, FHDC, MDR, WWF-Malaysia and local police representatives

Year 2008

(a) Convening a formal meeting between FRESH and government stakeholders, the Forestry Department and the Department of Wildlife and National Parks, to highlight effective communication practices between government agencies and FRESH
(b) Conducting the Level One Training Program on *Conducting Environmental Awareness Programs in Fraser's Hill* (related to eco-tourism) for FRESH members
(c) Organizing a follow up workshop on *Environmental Legislation and Roles and Responsibilities of Government Agencies*
(d) Organizing a study visit to one Protected Area sites (Krau Wildlife Reserve, managed by Department of Wildlife and National Parks) for FRESH, FHDC, MDR, WWF-Malaysia and local police representatives
(e) Collaborating with Dr Ruth Kiew from the Forest Research Institute of Malaysia (FRIM) to replant native pine trees (*Dacrydium*
comosum) at the peak of Pine Tree Hill (reached through Pine Tree Trail which is the longest trail in Fraser’s Hill – 6 km)

(f) Convening a non-formal follow up meeting between FRESH and government stakeholders, the Forestry Department and the Department of Wildlife and National Parks to review effective communication practices among between FRESH and government agencies

Year 2009

(a) Convening One Formal meeting between FRESH and all relevant government agencies (FHDC, MDR, the Forestry Department and the Department of Wildlife and National Parks) to consolidate working relationships and networks between the parties

(b) Designing, producing and disseminating Public Awareness materials (brochures) on Roles and Responsibilities of Government Agencies by FRESH

(c) Developing a set of Operational Procedures for Effective Communication with relevant Government Agencies by FRESH

(d) Convening a non-formal follow up meeting between FRESH and all relevant government agencies

(g) Conducting Level Two Training Program on Conducting Environmental Awareness Programs in Fraser’s Hill (related to eco-tourism) for FRESH members

Finally, it is the hope of WWF-Malaysia in accordance with Principle 10 of the Rio Declaration, to continue to encourage public awareness and participation in activities related to the environment so as to develop environmental citizenship to a higher level.
**Rio Declaration, Principle 10**

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level...
REFERENCES


Survey of Kentuckians Environmental Knowledge, Attitudes and Behaviors (2004). Survey Conducted by the Kentucky Environmental Education Council and the University of Kentucky Survey Research Center


ENVIRONMENTAL APPRECIATION STUDY IN FRASER'S HILL
YEAR 2005/6

SEGALA MAKLUMAT YANG DIBERI ADALAH RAHSIA DAN HANYA AKAN
DIGUNAKAN BAGI TUJUAN KAJIAN.
ALL INFORMATION GIVEN WILL BE KEPT CONFIDENTIAL AND WILL ONLY BE
USED FOR THE PURPOSE OF THIS STUDY.

SOSIO DEMOGRAFI / SOCIO DEMOGRAPHY
SECTION A

SILA PENUHKAN SEMUA BAHAGIAN DI BAWAH.
PLEASE FILL IN THE SPACE BELOW.

1. **Nama penuh** /Full name: (Optional)

2. **Untuk soalan 1-7, pilih hanya satu jawapan / For Questions 1-7, choose only one answer.**
   - **Jantina / Gender:** Lelaki / Male □ Perempuan / Female □

3. **Umur / Age:**
   - 10 - 20 tahun / years □ 21 - 30 tahun / years □
   - 31 - 40 tahun / years □ 41 - 50 tahun / years □
   - 51 - 60 tahun / years □ Lebih daripada 60 tahun / More than 60 years □
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<table>
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<td>More than 2 years</td>
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<td>Lebih daripada 4 tahun/</td>
<td>Lebih daripada 6 tahun/</td>
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<td>More than 4 years</td>
<td>More than 6 years</td>
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|   | Pekerjaan / Occupation: |   |
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|   | Warganegara / Nationality: |   |
|   |   |   |

|   | Negeri / State: |   |
|   |   |   |
12 Telefon Pejabat/Office Phone: (Optional)

13 No. Fax / Fax No: (Optional)

SECTION B

Bagi soalan 14-15, sila bulatkan hanya satu jawapan. For questions 14-15, please circle one answer.

14. Apakah yang anda lakukan dengan bahan buangan rumah? What do you do with your household wastes?
   a. Saya mengasingkannya bagi tujuan kitar semula.
      I separate them for recycling purposes.
   b. Saya akan membuang bahan buangan itu ke tempat pembuangan sampah. I throw them at the rubbish dumpsite.
   c. Saya akan membakarnya. I burn them.
   d. Saya akan membuangnya ke dalam tong sampah untuk dikutip oleh lori Majlis Daerah Raub.
      I will throw it at the rubbish collection site to be taken away by Raub District Council lorry.

15. Apakah yang anda lakukan dengan tin aluminium, botol gelas dan kertas? What do you do with aluminium cans, glass bottles, and papers?
   a. Saya akan membuangnya. I dispose them.
   b. Saya akan kitar semula. I recycle them.
   c. Saya akan menjualnya. I will sell them.
   d. Saya tidak akan membuat apa-apa dengannya. I will not do anything with them.
Sila jawab sama ada soalan 16 atau 17 sahaja. Please answer either question 16 or 17 only.

16. Kawasan perumahan anda telah memutuskan untuk menubuhkan persatuan komuniti pencinta alam. Mengapa anda berminat untuk menyertainya? Your neighborhood has decided to set up an environmental community organization. Why would you be interested in joining it?

a. **Ia adalah tanggungjawab saya.** It is my responsibility.

b. **Saya ingin berjumpa rakan-rakan untuk aktiviti (cth. pemeliharaan, hal-hal alam sekitar, kitar semula, dll.)** I want to meet friends for activities (e.g. conservation, environmental issues, recycling, etc).

c. **Untuk mengisi masa lapang saya.** To occupy my free time.

d. **Saya berminat menyertai Badan Bukan Kerajaan.** My interest to join NGOs.

17. Kawasan perumahan anda telah memutuskan untuk menubuhkan persatuan komuniti pencinta alam. Mengapa anda TIDAK berminat untuk menyertainya? Your neighborhood has decided to set up an environmental community organization. Why would you NOT join it?

a. **Tiada waktu lapang / sibuk dengan hal-hal lain.** No time / busy with other matters.

b. **Bukan tanggungjawab saya.** Not my responsibility.

c. **Aktiviti tidak menarik / membosankan.** Activities not interesting / boring.

d. **Tidak ada rakan-rakan untuk menemani saya.** No friends to accompany me.
SECTION C

Sila BULATKAN satu jawapan untuk setiap soalan. Please CIRCLE one answer for each question.

18. **Pernahkah anda dengar tentang F.R.E.S.H. (Fraser’s Hill Environmentally Sustainable Heritage)** Have you heard about F.R.E.S.H. (Fraser’s Hill Environmentally Sustainable Heritage)

19. **Pada pendapat anda, adakah F.R.E.S.H membantu dalam memelihara alam sekitar setakat ini?** In your opinion, has F.R.E.S.H. helped protect the environment so far?

20. **Adakah program-program yang dianjurkan oleh F.R.E.S.H telah meningkatkan kesedaran anda terhadap isu-isu alam sekitar di Bukit Fraser?** Have the programs organized by F.R.E.S.H. help increase your awareness on environmental issues in Fraser’s Hill?

21. **Saya bimbang apabila aktiviti-aktiviti berikut dijalankan di Bukit Fraser: I get worried when the following activities happened in Fraser’s Hill**

   a. **Penebangan pokok berlaku.** Chopping down trees takes place.

   b. **Tumbuhan dan binatang semakin berkurangan.** The plants and animals become lesser in quantity.

   c. **Tapak pembuangan sampah semakin luas.** The dumpsite becomes larger.
d. Terdapat kawasan baru yang dibersihkan untuk tujuan pembangunan. There are new areas of land cleared for development.

Ya/Yes Tidak/No

c. Saya lihat penduduk tempatan atau pengunjung memetik tumbuhan daripada habitat semulajadinya. I see locals or visitors pick / pluck plants from its natural habitat.

Ya/Yes Tidak/No
SECTION D

Sila tandakan (√) di ruang yang disediakan. Anda boleh menjawab lebih dari satu soalan. Please tick (√) in the brackets provided. You may choose more than one answer.

22. Objektif F.R.E.S.H ialah…The objective/s of F.R.E.S.H. is/are to …
   a. Mendidik orang ramai tentang isu-isu alam sekitar di Bukit Fraser. Educate the public about environment issues in Fraser’s Hill.
   b. Mengedarkan buah-buahan dan sayur-sayuran segar pada orang ramai. Distribute fresh fruits and vegetables to the public.
   c. Berkerjasama dalam kumpulan untuk melindungi alam sekitar. Work as a group to protect the environment.
   d. Mengelolakan/menjalankan projek/program berhubung dengan alam sekitar untuk orang ramai. Conduct/carry out projects/programs regarding on the environment for the public.

23. Apa yang anda lakukan dalam kehidupan harian untuk memelihara alam sekitar? What do you do in your daily life to preserve the environment?
   a. Saya membawa beg sendiri apabila membeli-barangan keperluan harian. I bring my grocery bag while shopping.
   b. Saya membawa bekas saya sendiri apabila membeli makanan di gerai/restoran. I bring my own container when I buy food from stalls/restaurants.
c. Saya mengasingkan sampah seisi rumah (cth. plastik, kertas, kaca, tin aluminium dll). I separate my household garbage (e.g. plastic, paper, glass bottles, and aluminum cans, etc).

d. Saya menutup paip air semasa memberus gigi. I turn off the tap while I am brushing my teeth.

e. Saya menggunakan kertas yang telah dikitar semula. I use recycled papers.

f. Saya meminimumkan penggunaan beg plastik dengan menggunakan beg kertas. I minimize the usage of plastic bags by compensating it with paper bags.

g. Saya membuat kompos dengan bahan buangan organik seisi rumah. I make my own compost with my household organic waste.

h. Saya mengitar semula barang seisi rumah (cth bekas plastik, beg plastik, botol kaca, tin aluminium dll.) I recycle my household items (e.g. plastic container, plastic bags, glass bottles, aluminum cans, etc.).

i. Saya memadamkan lampu dan perkakas elektrik ketika tidak menggunakankannya. I turn off the lights and other electrical appliances when not in use.

j. Saya cuba mengurangkan sampah seisi rumah saya. I try to reduce my household garbage.

k. Saya mengelakkan penggunaan racun serangga yang mengandungi bahan kimia di laman saya. I avoid using chemical pesticides in my garden.
24. Pernahkah anda dengar tentang projek-projek berikut yang dianjurkan F.R.E.S.H. dengan kerjasama WWF-Malaysia? Have you heard about the following projects by F.R.E.S.H. in collaboration with WWF-Malaysia?


b. Program-program latihan. Training programs.


   ii. Gaya Hidup Lestari. Sustainable lifestyle.


   iv. 5R (fikir semula, kurangkan, guna semula, baiki, kitar semula) dan pengurusan pembuangan sampah. 5 R (rethink, reduce, reuse, repair, recycle) and waste management.

c. Kitar semula dan program belian balik barang kitar semula. Recycling and buy back program.

d. Pertandingan Jimat Air dan Tenaga. Water and energy saving competition.

e. Upacara pecah tanah untuk menaiktarafkan Bishop Trail. Ground-breaking ceremony to upgrade Bishop Trail.
25. Antara projek-projek berikut yang dianjurkan oleh F.R.E.S.H. dengan kerjasama WWF-Malaysia, yang manakah anda telah terlibat memberi sumbangan? Which of the following projects conducted by F.R.E.S.H in collaboration with WWF-Malaysia have you participated in/contributed towards?

a. **Pelancaran F.R.E.S.H. sebagai persatuan komuniti tempatan.** Launching of F.R.E.S.H as a local community group.

b. **Program-program latihan.** Training programs.
   i. **Ekologi dan Biodiversiti.** Ecology and biodiversity

   ii. **Gaya Hidup Lestari.** Sustainable lifestyle.

   iii. **Pembangunan Lestari.** Sustainable development.

   iv. **5R (fikir semula, kurangkan, guna semula, baiki, kitar semula) dan pengurusan pembuangan sampah.** 5 R (rethink, reduce, reuse, repair, recycle) and waste management.

c. **Kitar semula dan program belian balik barangan kitar semula.** Recycling and buy back program.

d. **Pertandingan Jimat Air dan Tenaga.** Water and energy saving competition.

e. **Upacara pecah tanah untuk menaiktaraikan Bishop Trail.** Ground-breaking ceremony to upgrade Bishop Trail.
26. Apa/siapa yang mempengaruhi anda dalam kesedaran terhadap alam sekitar?  
What/who would affect you the most on being aware of the environment?

a. **Ibubapa dan kelurga.** Parents and family.  
   (.....)

b. **Rakan-rakan.** Friends.  
   (.....)

c. **Kebudayaan.** Culture.  
   (.....)

d. **Agama.** Religion.  
   (.....)

e. **Guru-guru sekolah/pensyarah/pengajar.** School teachers/lecturers/educators.  
   (.....)

f. **Lain-lain (sila nyatakan).** Others (please specify):  


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**SECTION E**

Untuk soalan 27 hingga 30, sila tandakan jawapan yang sesuai dengan sewajarnya. For questions 25 to 28, please tick the relevant answers accordingly.

1 – Saya **tidak tahu** I do not know

2 – Tidak setuju Disagree

3 – Kurang pasti Uncertain

4 – Setuju Agree
27. Saya berminat untuk meluangkan masa ke arah pemeliharaan alam sekitar di Bukit Fraser. I am interested in spending time to conserve the environment of Fraser's Hill.

28. Saya peka terhadap isu-isu alam sekitar di Bukit Fraser. I am aware of the environment issues in Fraser’s Hill.

29. Saya peka tentang aktiviti haram berkenaan alam sekitar di Bukit Fraser (cth memiliki spesis flora dan fauna yang terancam). I am aware of illegal activities with regards to the environment in Fraser’s Hill (e.g. possession endangered species of flora and fauna).

30. Adakah anda rasa tindakan peribadi anda dalam memelihara alam sekitar di Bukit Fraser akan membantu dalam jangka masa panjang? Do you think that your personal actions in protecting the environment in Fraser's Hill will help in the long run?

**SECTION F**

Sila tulis pendapat atau cadangan anda dengan jelas. Please write your opinion or suggestion clearly.

31. Apakah jenis aktiviti yang dapat dianjur oleh F.R.E.S.H. yang akan menarik minat dan penglibatan anda? What kind of activities F.R.E.S.H. can organize to garner your interest and participation?

32. Pada fikiran anda, apakah yang anda boleh lakukan untuk memelihara alam sekitar Bukit Fraser? What do you think you can do to protect Fraser’s Hill environment?
33. Pada fikiran anda, apakah yang pihak hotel boleh lakukan untuk memelihara alam sekitar Bukit Fraser? What do you think the hotels can do to protect Fraser’s Hill environment?

34. Pada fikiran anda, apakah yang majikan anda boleh lakukan untuk memelihara alam sekitar Bukit Fraser? What do you think your employer can do to protect Fraser’s Hill environment?

35. Pada fikiran anda, apakah yang pihak berkuasa tempatan boleh lakukan untuk memelihara alam sekitar Bukit Fraser? What do you think your local authorities can do to protect Fraser’s Hill environment?
WWF-Malaysia, the national conservation trust, is committed to safeguarding our country’s natural resources and unique wildlife for all Malaysians. Since 1972, WWF-Malaysia has worked on important conservation projects, from saving endangered species such as tigers and turtles, to protecting our highland forests, rivers and seas.

WWF-Malaysia is able to leverage upon conservation expertise worldwide as part of WWF, the global conservation organisation that has almost 5 million supporters and activities in more than 90 countries.

WWF’s mission is to stop the degradation of the natural environment and to build a future in which humans live in harmony with nature, by:
- Conserving the world’s biological diversity
- Ensuring that the use of renewable natural resources is sustainable
- Promoting the reduction of pollution and wasteful exploitation consumption

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