THE AWARENESS OF GREEN TECHNOLOGY IN CHINESE NEW VILLAGE

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A project report submitted in partial fulfilment of the requirements for the award of the degree of Bachelor (Hons) of Quantity Surveying

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DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UTAR or other institutions.

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APPROVAL FOR SUBMISSION

I certify that this project report entitled **"THE AWARENESS OF GREEN TECHNOLOGY IN CHINESE NEW VILLAGE"** was prepared by **WONG PEE TIEN**has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science (Hons.) Quantity Surveying at Universiti Tunku Abdul Rahman.

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ABSTRACT

Green technology becomes a latest trend in the world which may contribute to sustainable development. Rate of adoption and implementation of green technology is increasing due to the encouragement from the government. Beside the encouragement from the each government, there is international cooperation in sustainable development to reduce the impact of the human activities toward the environment. On the others word, the implementation of Green Technology is become a necessary culture not only in urban area but also rural area. This paper is aim to investigate the level of awareness and implementation of green technology in Chinese New Village. There are 100 questionnaire is distribute to the village in Gemas Bahru and 72 of the respondent was complete the questionnaire. The key finding of the questionnaire is to explore the resident background and furthermore figure out the level of implementation of green technology through the household appliances and daily activities. Throughout the discussion and interaction with the villager, it can discover their conceptual toward the green technology which may explain the level of the awareness and implementation. The result of the data showing that the level of awareness of Green Technology still have the opportunities to increase due to certain factor. The study had figure the grey area where the opportunities of increase the level of awareness and implementation of green culture and suggested that those stakeholder or related parties can investigate and continue by carry on to enhance the green culture in Gemas Bahru, Chinese New Village.

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LIST OF SYMBOLS / ABBREVIATIONS

c_p	specific heat capacity, J/(kg·K)
h	height, m
K_d	discharge coefficient
M	mass flow rate, kg/s
P	pressure, kPa
P_b	back pressure, kPa
R	mass flow rate ratio
T	temperature, K
v	specific volume, m^3
α	homogeneous void fraction
η	pressure ratio
ρ	density, kg/m^3
ω	compressible flow parameter
ID	inner diameter, m
MAP	maximum allowable pressure, kPa
MAWP	maximum allowable working pressure, kPa
OD	outer diameter, m
RV	relief valve

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CHAPTER 1

INTRODUCTION

1.1 Background

According to the United Nation report, approximate 1.5 billion people or a quarter of the world's population live without electricity. Other than that 80 percent of the rural Africa has no access to electricity (Eliza Najar, 2011). For those villages without current supply, most of them spend their income for kerosene lamps or change their batteries when they travelled to a larger town, most of these Chinese New Villages in Malaysia undergone such period before civilization and some of those villages still remains this situation until now. Technology have now developed to introduce solar cells, or as they are known these days, photovoltaic cellstovillages in Burkina Faso, Ethiopia, Tanzania and other neighboring nation (Eliza Najar, 2011). As a result, the light is now accessible and brighter with less pollution. This solar cells inventory can solve the problem by using kerosene lamps which may cause fires

and give protection to our earth. These types of technology inventory also known as Green Technology.

There are many interpretations for the word “Green Technology”, and most countries have come to their unique definition. According to KETTHA (Ministry of Energy, Green Technology and Water, Malaysia), Green Technology is the development and application of products, equipment and systems used to conserve the natural environment and resources, which minimize and reduces negative impacts in human activities (KETTHA, 2011). Green technology refers to products, equipment, or systems that meet the criteria of minimizing the degradation of the environment, zero or low green house gas (GHG) emission, green technology is safer to use and promotes healthy and improved environment for all forms of life, conserves the use of energy and natural resources, promotes and encourage the use of renewable resources (KETTHA, 2011).

1.2 Problem Statement

Green Technology or also known as ‘Green Tech’ becomes a new trend of lifestyle introduced to the world. Everyone was discussing about the green building, electric saving household appliances, reduce carbon dioxide emission to the environment, save and protect our earth. As a result, Green Tech gains increasing popularity and awakens the concern of the Government for each country. Top managements of the countries start to implement some actions to respond to Green Technology, for instance, introduce legal acts, taxation, set up council, incentive and

other actions should be taken. However, the level of the achievement for the implementation remains unclear. To be specific, residents in the city might get easier in responding back to the government but not to the resident slive in rural area due to many factors.

1.3 Research Objective

1.3.1 Aim

To explore level of awareness regarding Green Technology among Chinese New Village residents through collecting data through survey and continuesby producing a full set of analysis report.

1.3.2 Objective

- To investigate the level of application of Green Technology household appliances in Chinese New Village

- To promote the concept and advantages of Green Technology to Chinese New Village residents

- To identify the level of achievement for the implementation of the empire towards Green Technology in Chinese New Village

1.4 Significant of Study

Approximate 35,000 years Before Christ (B.C.), which also understands as Paleolithic / Palaeolithicera, human stried to survive by using resources from the environment. The relation between the environment and humans are as close as it was part of our life and responsible to taking care of the environment. Therefore, Green Technology becomes the new direction for the world by protecting the Earth. As usual, to apply 100% Green Technology in the construction industry is very difficult as a start, in controlling and maintaining the achievement brought within. Malaysia developed Putrajaya and Cyberjaya as pioneer townships to showcase the advances in Green Technology that are being build up that can be emulated by other cities (L.N. Gomez, 2011). This study is trying to investigate the relation between the effort put by the government and the awareness among the Chinese New Village residents toward the implementation by the government. It can provide a guideline for the government concerning which direction that would provide an easier way to make the Green Technology a success in those Chinese New Village. On the other hand, this study will also bring the benefit to the residents in the Chinese New Village by introducing the concept of Green Technology to them and the advantages by using Green Technology appliances. This will give the residents to have a better choice not only limit to buying household appliance but also, have the opportunity to construct their own houses in the future. Besides that, it can enhance the relationship between the government and Chinese New Village residents through the research. It will reduce the level of misunderstanding of the residents by saying the government ignored their existence but actually government paid high respect on them

1.5 Limitation of Research

Due to the range of the Green Technology are too wide and complicated to be interpreted for each field, hence, it limits to the study on the level of awareness through the application of the Green Technology household appliance in Chinese New Village. This research also studies in general towards Green Technology by picturing of it before contact with the Chinese New Village residents. On Chinese New Village side, the study may face problems in communication with the residents. The reason is the languages used are Chinese, Hakka, Hokkien, and others depended on the geographical location of the village which is not familiar by the researcher. In some cases, there are difficulty in translate the survey into the languages which is more recognizable. Besides that, the education level of the villagers are low due to many reasons and, which many cause difficulties in explaining the green technology before the survey can fully proceed. Attitude from the residents of the Chinese New Village likes to be bias to the stranger in the first place and also, become a disturbance to conduct the survey. Therefore, a well communication with the Chinese New Village community requires before the start of any survey possibly made.

1.6 Scope of Work

Generally, this study focuses on the awareness of the Chinese News Village community to the Green Technology. The keywords are ‘awareness’ and ‘Green Technology’, the word ‘awareness’ are abstract and subject to argue. Throughout the research, the awareness of the community for Chinese New Village will evaluate

through the concept of Green Technology in their mind and the application of Green Technology in their daily life. For Green Technology, the research will be done by separating into 2 parts; which is the application of Green Technology in foreign countries and local to provide some general information before conduct the survey. The applications include the policy, incentive, taxes, and professional bodies.

1.7 Work Division

This paper has been divided into several parts which are introduction, literature review, research methodology, results and discussion, and conclusion and recommendation. Introduction of this paper are to discuss about the background of Green Technology and problems faced. Then, it will continue with the aim and objective by conduct this research and finally, explains the limitation of the research as well as the scope of the research. For literature review, the thesis is conducted by study the history of the green technology, the implication of the foreign country and the local, the history of Chinese New Village, and the community culture in Chinese New Village that selected. In research methodology, the paper explains the several type of method to obtain the primary or secondary data. Then, detail description will be given for the method that use by the researcher in this paper. After conduct the survey, the data will be analysed and will be presented through the chart and graph to be place into the chapter of result and discussion. At the end of the paper, a conclusion will make and the recommendation is suggested can found in the chapter of conclusion and recommendation.

CHAPTER 2

LITERATURE REVIEW

2.1 History of Green Technology

Table 2.1: History of Green Technology

Year	Event
1960s	▪ Expression of the "Spaceship Earth" metaphor which means limited suppliers of energy, resource, land, and cause us to limit population growth and industry, conserve and recycle in order to avoid shortage (Thomas A. Easton , 2011)
1972	▪ United Nation Conference On The Human Environment - STOCKHOLM 1972 held in Stockholm, Sweden (United Nations, 1972)
1980s	▪ United Nation secretary general asked Gro Harlem Brundland, a former Prime Minister and Minister of Environment in Norway, to organize and chair the world commission on Environment and Development and produce a "global agenda for change" (Thomas A.

	Easton , 2011)
1990	▪ Talloiries Declaration sign by 300 universities in over 40 country ▪ Under UNESCO, 10 point of action plan has been listed for incorporating sustainability and environment literacy in teaching, research, operation and outreach at colleges and universities (Khalid Ahmed Mohamed, 2010)
1992	▪ United Nations Conference on Environment and Development (UNCED) known as Earth Summit held in Rio de Janerio, Brazil ▪ Agenda 21, the Rio Declaration on Environment and Development, and the Statement of principles for the Sustainable Management of Forests were adopted by more than 178 Governments (United Nations, n.d.) ▪ Framework convention on Climate change (Thomas A. Easton , 2011)
1997	▪ Kyoto Protocol, an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCC) was adopted in Kyoto, Japan (UNFCC, n.d.)
2000	▪ Cartagena Protocol on Biosafety (Thomas A. Easton , 2011)
2001	▪ Stockholm Convention on Persistent Organic Pollutants (POPs) (Thomas A. Easton , 2011)
2005	▪ Malaysia entered into enforced Kyoto Protocol whichinvolves 84 signatories and 192 parties. (UNFCC, n.d.)
2009	▪ United Nations Climate Change Conference 2009, Copenhagen -To reduce carbon emission up to 40% in terms of emission intensity of GDP (Gross Domestic Product) by 2020 compared with its 2005

	levels (KETTHA, n.d.) ・ The Ministry of Energy, Green Technology and Water was established in a cabinet reshuffle to replace the Ministry of Energy, Water and Communications. (KETTHA, n.d.) ・ The National Green Technology Policy was launched (KETTHA, n.d.)
2010	・ KeTTHA has launched the KeTTHA's Green Practices (KETTHA, n.d.) ・ International Greentech and Eco Products Exhibition and conference Malaysia (IGEM) 2010 (KETTHA, n.d.) ・ National Green Technology Council are establish and the first meeting was held at 26 January 2010 (KETTHA, n.d.)

2.2 Advantages and Disadvantages of Green Technology

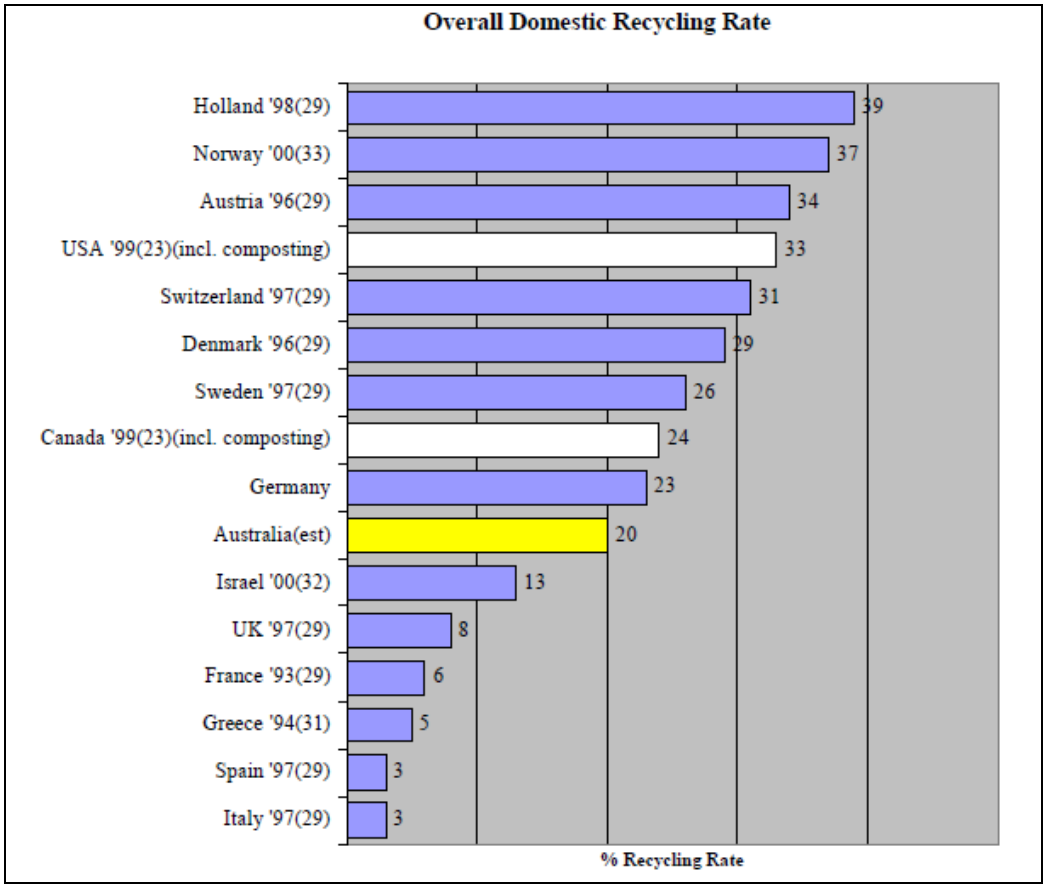
2.2.1 Advantages of Green Technology

Green Technology is a type of worldwide technology which may not required advanced technology skills to support it. It involves of those basic human living skills which are natural and friendly to the environment, the activities are common in our daily life and we practice Green Technology without realising, like energy consumption, water & waste management, building, transportation, and eco-products & services. By changing the daily activities to green feature activities, we can save the world; following are the benefit resulting from practicing the green technology.

2.2.1.1 Saving our natural resources

The resources in our planet are limited; that means the resources will be finished in the future. As a result, we as humans have the responsibility to protect it. According to the United Nations analysis on 2 May 2011, the current world population has grown to the approximate of 7 billion. This figure will increase to 9.3 billion in 2050 and achieved 10.1 billion in the next ninety years from now (United Nation, 2011). From common sense, we know that the increasing of the human population will increase the usage of the natural resources, and the natural resources are inversely proportional to the human population. In order to solve this problem, go green is one and only alternate solution to solve this problem. Green Technology is identifying the way we use the resources on Earth and try to avoid depleting as well as replenishing the thing we consume. The most common Green Technology practiced in all over the world is by recycling. Recycle is the most worldwide recognizable Green Technology and used to reduce the waste by collecting and reprocessing rubbish. Various types of raw material can be recycle and reuse like wood, plastic, paper, metal and glass. Some countries had well practiced recycle activities and had recycled raw materials up to 39%. Following table shows the percentage and the ranking for the highest overall domestic recycling rate.

Table 2.2: Overall Domestic Recycling Rate (Nolan.ltd, 2002)



2.2.1.2 Saving our energy

The energy in Earth is categorized into two main parts which is renewable and non-renewable. The renewable energy like wind, solar, geothermal, tidal, and hydroelectric is an alternative to fossil fuel or nuclear energy source. Those sources for non-renewable energy are limited and it will finish in future. Therefore, itdepends on fuel market price fluctuations result from increasing in demand, decreasing supply of manipulation of the market (Union of Concerned Cientists, 2005). The increasing of the energy pricing will give significant effect to the end user of each product. The introduction of Green Technology is to promote the improving energy efficiency, an

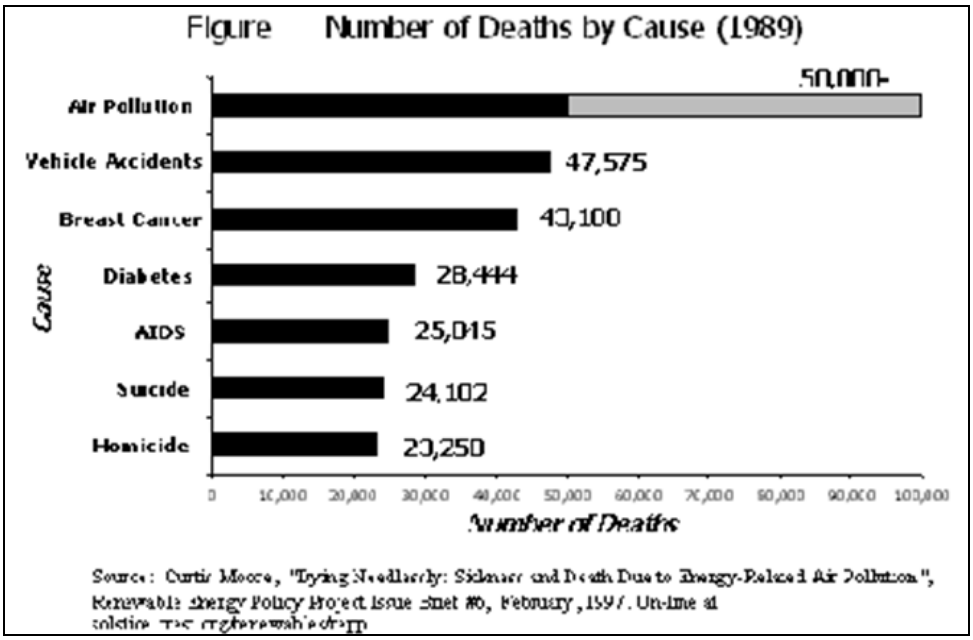
important strategy to reduce our dependence on fossil fuels, provide significant reductions in electricity usage, and save consumers money. The main reason of reduction in electric cost is the renewable energy is not a subject to control or supply interruptions from the macro economy. Furthermore the investment in Green Technology for developing clean energy is a support by the government to increase the competition and thus to reduce the demand for fossil fuels. Throughout these consequences, the electric supplier in Malaysia will increase which may reduce the level of monopolies by one supplier.

2.2.1.3 Saving our health

Due to the generated electricity using fuel, there are two-thirds of the annual U.S. emissions of Sulphur Dioxide which believed to be responsible for the largest share of the 50,000-100,000 deaths caused by air pollution in United States each year (Union of Concerned Cientists, 2005). Besides that, there are 30 percent of the Nitrogen Oxide emits to the atmosphere and combine with compounds in sunlight to form smog. That smog can cause human heart and respiratory problems and contribute to air pollution deaths. In year 1996, an analysis done by the Natural Resources Defence Council by the American Cancer Society and Harvard Medical School and state suggests that the small particles in air may cause heart and lung disease. The following figure shows the comparison between numbers of death by different causes, which shows the air pollution occupies the highest ranking compare to others. On the others word, the quality of the current air is become lower until the

level that the improvement is required. Green Technology which can reduce the containment air and saving our health.

Figure 2.1: Number of Deaths by Cause (1989) (Union of Concerned Cientists, 2005)



2.3 Application of Green Technology in Malaysia

Since Green Technology has become the world's trend in several fields, Malaysia government also tries their best to implement those technologies in our country. In order to implement the Green Technology in Malaysia, it is important to spread that Green Technology knowledge wide enough to the residents before further actions could be taken. Besides that, involvement of several parties towards Green Technology also plays the important role to increase the efficiency of the implementation of Green Technology. The involvement of several parties can investigate through following drivers.

2.3.1 Policy drivers

The policy introduced by the government is one of the drivers archive the implementation of the Green Technology in Malaysia. It shall be a driver that accelerates the nation economy and promote sustainable development through Green Technology which parallel to the National Green Technology Policy launch by the Dato' Sri Mohd Najib Tun Abdul Razak, Prime Minister of Malaysia in 24 July 2009 (KETTHA, n.d.). This policy is mainly focus on reducing local energy consumption, increasing innovation on Green Technology contribute to local economy, sustainable development environment, and public education and awareness of Green Technology.

In energy, Malaysia government realized that energy consumption is one of the globalisation issues. According to the record, Malaysia electric demand are keep on increasing from 22,273 GWh (Giga Watts Hours) in year 1991 increased to 60,299 GWh in year 2000 which is triple compare to year 1991. Electric energy consumption is increase subsequently to 71,159 GWh in year 2003 (Abul Quasem Al-Amin et. al., 2010). Exceeding in energy consumption may cause demand of the energy is much higher than the supply. As a result it will put negative impact to our country which is newly industrialized as one of the fast developing country. Besides the demand for electricity, government pay more concern to the security, reliability and cost effective of the electricity supply in Malaysia. This is because our government understood that our country is over reliance on such not renewable electric generate sources like fossil fuel and coal. In year 2000, Malaysia still mainly

rely on the natural gas as a source for power generation, 74.9%, 10.4% hydro,9.7% coal and 5% petroleum which show in the table 2.3 (Abul Quasem Al-Amin et. al., 2010).

Table 2.3: Type of Electrical Generation Data in Malaysia(Abul Quasem Al-Amin et. al., 2010)

Type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Steam stations	14,307	14,871	15,609	14,130	14,373	15,000	14,965	14,094	13,586	12,531
Diesel stations	1,585	1,368	1,554	1,538	2,009	2,134	1,600	2,093	1,995	2,209
Hydro stations	4,444	4,357	4,925	6,521	6,166	5,139	3,917	4,799	7,460	6,835
Gas turbines	7,999	11,290	13,491	17,725	23,715	30,138	37,871	38,879	38,874	44,444

Source: Department of Statistics Malaysia, 2003

As a result, government try to promote the efficiencies in the energy consumption and energy independent through this policy. This policy is a step forward to the government subsidy since 1 October 2008; Malaysian Government was giving subsidy to all eligible Tenaga Nasional Berhad (TNB)'s residential customers. For those electricity bills amounting to RM20 or less are eligible to receive this rebate and no need to pay for the bill in that particular month (TNB, n.d.). Besides that, the ministry of Energy, Green Technology and Water also implement the rebates programme for the housing appliance such as refrigerators, air conditioners and chillers since 7 July until end of 2011 to promote the policy launched (TNB, n.d.).

In economy, this policy is to facilitate the growth of the Green Technology industry that was named as one of the key drivers that would contribute to the national economy once the policy is launching. This means that National Green Technology policy implement going green culture was not only for tree-huggers, it was for entrepreneurs, industrialists, inventors and consumers in a large amount. It is proven that the prospective of our Prime Minister of Malaysia is to enhance nation economic development through use of Green Technology which similar to the implementation by democrat Barrack Obama at United State to invest $150 billion over 10 years in a clean energy technology and create 5 million new green jobs (Christopher Dicker, 2008).

According to the several reports and studies done by the US based International Energy Agency, Malaysia having a poor ranking in the carbon emissions per capital. Carbon emission of Malaysia is increasing upon the time passing through. This situation is getting worst when the emission of Carbon Dioxide increases until 180.9million tonne in years 2008, which create 269.7% different between year 1990 and 2008. The changes are far more increased than the advance countries in Asia like Republic of China, 194.3%, Thailand, 192%, Taipei, 130.5%, and Singapore 53.9% (IEA, 2010). Therefore, government aspects by introducing this national Green Technology Policy will bring conserve and minimize impact on environment, as example, reducing the Green House Gasses (GHG) emission and continues with environment improvement quality throughout the exercise.

Socially, National Green Technology policies may improve the quality of life for all residents in Malaysia. The first step to be taken by the government is creating the awareness and adoption among the public through programmes. Public education and awareness are important in changing the efficiency of the implementation. In a word, successful plans will not success without supports from his men. Therefore, one step taken forward from the entire residents in Malaysia will create a huge difference. Widespread and the recognition towards the green product like household appliances, equipment and system are important for the household to determine the equipment chosen and the ability of adoption. The green product may become an alternative option to the households to archive the sustainable development. However, lack of the awareness or information concerning the green product will lead to lack of evaluated choices by the households to protect them through green products. Besides that, those relevant government sector and Non- Government Organisations (NGOs) also advise to give their effort in this field. For instance, Tenaga Nasional Berhad was modifying their web page to suit the Green Technology trend by advertising the alternative way to save the energy consumption, choosing a right household appliances and monthly energy cost saving (TNB, n.d.).

2.3.2 Legislation Drivers

The policy driver which mentioned before is a type of soft driver to urge the public to implement Green Technology. Although application of Green Technology is beneficial to many parties but there are also opportunities cost which will incur to

the user like high initial costing. Therefore, the legislation drivers are required to define the minimum requirement of Green Technology implementation.

In order to make the public in track with the Green Technology by using the energy efficient appliances government can regulate the appliances supplier to label the energy usage and costs of the appliances. The label shows the customer the detail of electric usage per year with the comparison of rates against others similar appliances on the market. This will indirectly increase the competition among the supplier which may lead to the discovery of the appliances with better feature at lower cost. The energy labelling for appliances in Malaysia has begun before 2002 where the request by Directorate General of Electricity and Gas (Jabatan Bekalan Elektrik dan Gas) to Standard and Research Institute Malaysia (SIRIM), initiating to form a group to develop "Energy Efficiency Standard" for three product, namely fans, refrigerators and air-conditioner. This has later on increased their scope to the performance of all households and similar electrical appliances. By September 2002, SIRIM has issued a draft for Energy Labeling for Electric fan (Faridah, 2003). The draft standard includes a label design, rules for label application, and criteria for categorizing fans based on energy performance testing. After certain procedure and adjustment, the labeling becomes a standard for all electrical appliances to state the output on the energy efficiency which has the similar function to Energy Guild label in United States and EnerGuide label in Canada (Mbotee, 2011).

Figure 2.2: Labels for Comparative Labelling (Faridah, 2003).

Besides the labelling, the rain water harvesting system has become an issue for the increasing in the water demand previously. In 28 March 2007, the Prime Minister Datuk Seri Abdullah Badawi announced that there would be mandatory for large buildings to install rain water harvesting system once finish drafted by the housing and Local Government Ministry (The star, 2007). In 23 May 2011, the issue of installation of rain water harvesting system in the entire new development of semi-D, bungalows and government was officially enforcement under the regulation in the

Uniform Building by-Laws (Ng Cheng Yee ,2011). This is a legal formwork to ensure that all developers to install the rain water harvesting system. Failure to obtain the rain water harvesting system in the building will never get approval for the plan.

Government also focuses on application of Green Technology in all energy utilization sectors and in demand side management programmes. For construction sector, adoption of Green Technology in the construction, management, maintenance and demolition of buildings is encouraged. A good example in building sector is adoption of Industrialized Building System (IBS) in Malaysia construction industry which can lead to less construction wastage by using the recycle able material like steel formwork. In the legal point of view, the Construction Industry Development Board, CIDB levy is impose to the developments which have the contract value more than RM 500,000.00 per contract and apply less than 50 percent of the IBS system (score) (CIDB, 2011). The CIDB levy imposes to the contractor at 0.125 percent of the contract sum which effective on 21 may 2003(CIDB, 2011).

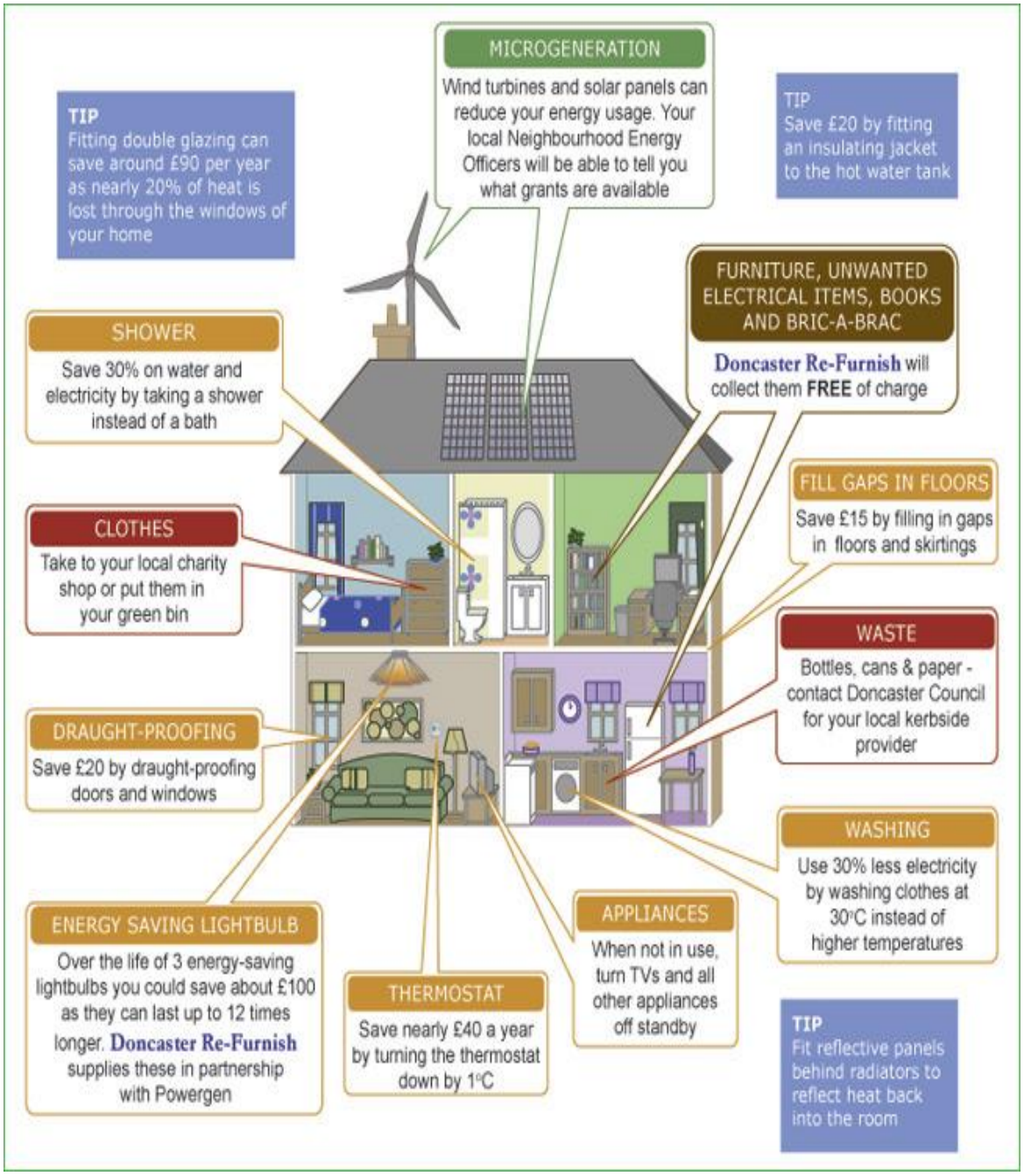
2.3.3 Cultural Drivers

Due to the fact that poor recognition, understanding, adoption of Green Technology by the residents, the demand for such investment is limited. Since the increasing in education level and the living style of Malaysian, it causes the growth in customers demand in likely to encourage of development in Green Technology appliances and furthermore, include the green feature into the future developments. The culture of adoption of Green Technology is an important key driver to shift the public

traditional living lifestyle to a sustainable living lifestyle. It was true that suggestion by the Dobson in the research by saying that the government should plays his roles as a catalyst in growing the green technology culture by provision of fiscal incentives.

Unfortunately, buying green technology household appliances is a straight forward effect resulting from its benefit. It can be proven through the cost of the electric bill before and after using the green technology product especially for the high electric consuming appliances. On the other hand, adoption of Green Technology was very wide, not only limit to buying those advance technology appliances but it includes overall view that can contribute to environment friendly activities. This is because the daily activities of the public having big relation to the environment. Therefore, the daily activities like participating in the recycle activities, separating types of the wastage, reducing usage of plastic bag and decomposing the food wastage to become a fertilizer also consider as implementation of Green Technology in different ways which also encourage by the government. Since this type of Green Technology implementation which not an investment or an advanced technology is required but a high commitment from the public to implement it; comparing whether to buy Green technology this is more difficult for a government ensure their people to involve in such green technology activities. Following are the figure that shows the daily activities which consider a part of green technology.

Figure 2.3: Daily activity in Green Technologies (Mbotee, 2011)



2.3.4 Business Drivers

The business has become one of the key drivers to make Green Technology a success. On the other side of perspective, Green Technology is a new opportunity for the business to invest for the unlimited profit return. According to our Dato' Sri Najib Tun Razak, the current Prime Minister during opening remarks Green Technology and Climate Change Council, Green Technology is a blue ocean strategy as it transcends across all sectors of the economy. It provides vast opportunities for government and business to innovate and grow as well as developing new parts of competitiveness (KETTHA, n.d.). Besides that, the market demand of the Green Technology household appliances increased progressively which clearly mention by Tan Chee Hon, Group Product Manager of Panasonic's profesionnal AV solution team, Business System Marketing Department (energy-efficient innorvation, 2010).

Panasonic, one of our Malaysia household appliance supplier which is famous in 19 century, the group president, Fumio Ohtsubo overviewed the world trend and renew the company mission to become Malaysia's 1st green household apliances supplier during their 100 year anniversary, which focuses on the environment with clear goal and measurement. Those commitment of the Panasonic company was accidently happened to coincide with the point of view of our prime minister. This step has become a benchmark for all the similar type of industry to start their green journey to contribute to better environment.

Under encouragement of the government, there are several types of energy which considered as saving appliances and electronics appliance are available in the

market. The most common type of household appliances is air-conditioner, washing machine, refrigerator, florescence light, and others which contributed by all the investors. Refrigerator is the most electric energy consumes household appliances in our house which located at equatorial latitudes. Following are the graph shows the electric energy consumes for each household appliance with the cost in dollar. The refrigerator is the household appliances that compulsory in every house which having a high electric consumption and probably switch on all the time.

Figure 2.4: Energy uses in residential sector (Faridah, 2003)

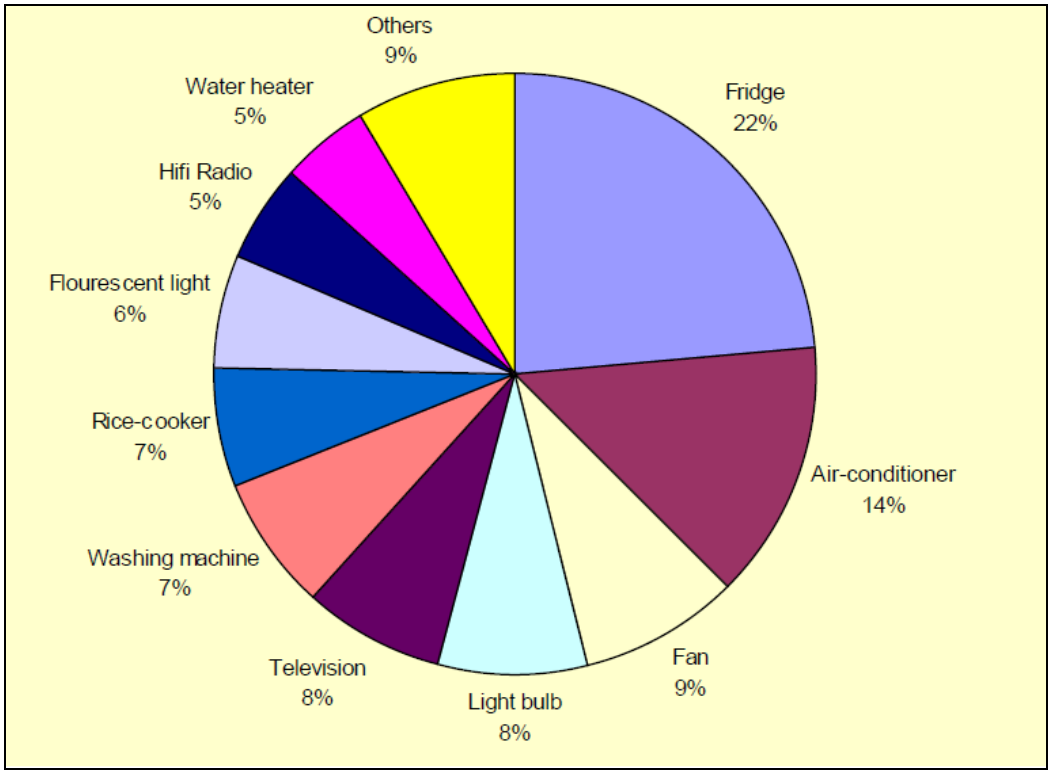
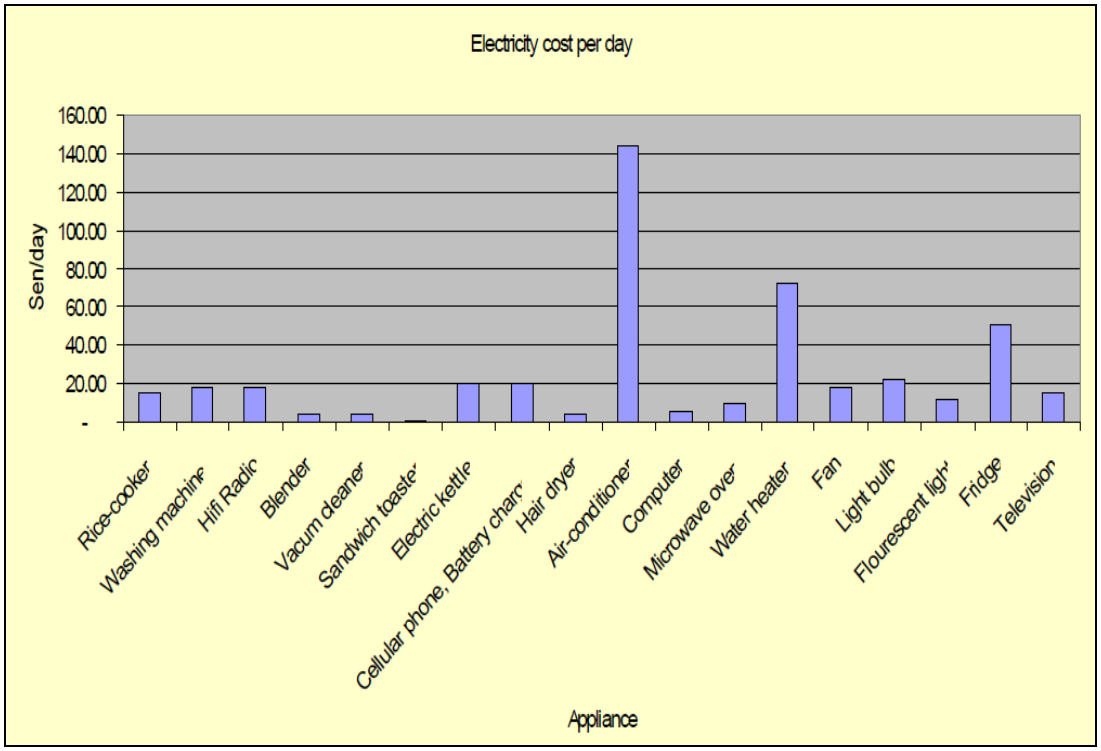


Figure 2.5: Electricity use at peak hour for several appliances based on percentages of usage (Faridah, 2003)



According to the graph above, the electric consuming for the air-conditioner cost approximate RM 1.40 per day and consequences for 30 days. The cost to maintain the air-conditioner is estimated to be RM 42.00 per month, and it will continuously increased due to the decreasing in the efficiency of the machine. As a result, those problems became business opportunities for businessman to invest in such intelligent technology to reduce electric consuming. Nowadays, there are several types of intelligent household appliances in the market which has the device sensor to help in reducing the energy consumption by making adjustments automatically when needed. This was proven by the inverted technology which can save up to 40 percent less electric usage or 70 percent water usage compare to the ordinary model (energy-efficient innorvation, 2010). Those effort by the investor can

be see through by the increasing of the people beginning to understand green technologies and how their work.

Figure 2.6: Basic operating principle of inverter (Renesas Electronic Corporation, n.d.)

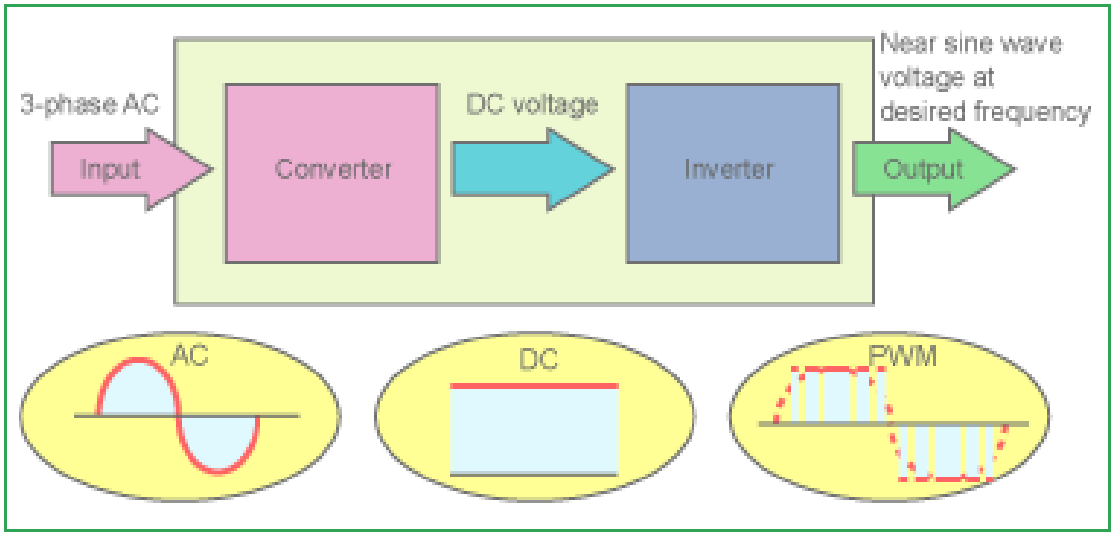
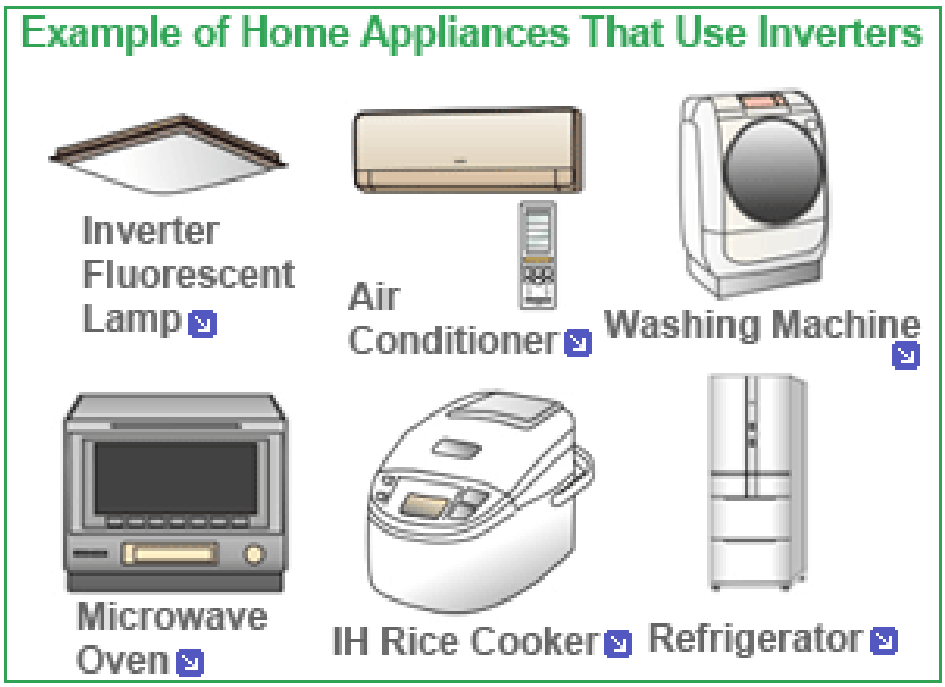


Figure 2.7: Example of home appliance that use inverters (Renesas Electronic Corporation, n.d.).



2.4 Green Technology Challenges

Implementation of Green Technology in public is a hard job, few challenges have faced during the process, for instance, Green Technology faces price challenge. In general, the pricing for Green Technology product had already make a barrier to consumer, they think those Green Technology products are expensive compared to the ordinary product, even though the products are costly in the initial cost but save in life cycle costing. Under the circumstance, consumers may think that Green Technology is just an extra expense just to get a high technology product. Besides that, maintenance fee for Green Technology product is higher., the user will feel that they need to spend more to maintain the product due to the high technology is required and the accessories of the appliances is monopolise by the supplier, which may cause cost increasing.

Other than that, public awareness about Green Technology is low. Public less trusted on Green Technology product due to their traditional ways in thinking. They don't border the benefit from Green Technology product and the subsequence effect on the ordinary appliances to the environment. In addition, the education sector put less effort on increasing awareness of Green Technology in the new generation as well as the old generation. For the people who spend their whole life in rural area has lower education background and narrow point of view due to many factors. They may not accept new technology introduced to them. They trust more to the old style of product that familiar to them. They don't want to try new technology and product and refuse to learn new technology because they think green technology is difficult and inconvenient to them.

2.5 Chinese New Village in Malaysia

For half of the century, establishing Chinese New Villages become part of the unforgettable experience and memory for the Malaysia especially for the senior citizens. Although it was a difficult time for the Chinese villagers to build up their home under tide control of the emergency decree, but the spirit behind the difficulties is meaningful and proven through the time passing.

2.5.1 Establish of Chinese New Village

Table 2.4: History of establish of Chinese New Villages (林延辉&宋婉, 2002)

Date	Event
18 June 1948	British colonial government issued an emergency decree a state of emergency the Malay Peninsula, resulting in numerous rural areas people were killed in vain, to arrest, their homes were burned, face deportation.
27 February 1949	MCA set up, and strive to cancel the planned expulsion of Chinese rural areas
28 May 1949	Through MCA's efforts, the British changed tactics and the promulgation of new regulations, the implementation of "Brigg's plan," lived in the forest round the edge of the rural residents migrate to the Government's established base- Sun. Centralized control by the police, the Communist Party of Malaysia to cut off supply offers to achieve military objectives,

	hundreds and thousands of Chinese elders were forced to live in rural areas, gill nets, iron under career. Lost the right to freedom of movement for more than 10 years, MCA fully assist the villagers to rebuild their homes
31 July 1960	State of emergency declared has come to an end, removing the access check and restore the villagers' right to freedom
In 1970 years	Countries have set up Village Affairs, as department leaders by the MCA minister, comprehensive, coordinated Village development, the Village in the social, economic, cultural and education aspects of the Government's concern and care.
In 1980 years	Minister based on Local Government Act1976there are421ChineseVillagewere placed in municipal and county councils within the administrative jurisdiction, in order to systematically deal with the basic facilities within the Village and administration, and gradually improve the Village's infrastructure and environment
In 1990 years	Village city government initiatives, and promote the Village's social development, to some of today's modern achievements from Village

Since 1793, Chinese started their journey migrating in a large scale from their original country, China to Malaysia **(**林延辉&宋婉, 2002). The major immigrants were from Fujian Province and GuangDong with the reason of escape from the MunChu government oppression and also to seek for better economy condition (Voon Phin Keong, 2007). In the initial stage, most of the immigrants came to

Malaysia as an indentured labour for the human resources demands of the mining and rubber industry in Malaysia. Chinese hardworking spirit and entrepreneurial spirit continues to find and develop new career was consolidated the position of the Chinese in the point of view of colonial rulers in Malaysia. In the year 1794, Penang colonial rulers recognized the importance of Chinese in the country development and considered Chinese as the "most valuable immigrants" (Voon Phin Keong, 2007). In the early day, there are no Chinese New Village in Malaysia but the villages are namely based on the location name or the name of the local resident's races like Hakka Village, Hokkien Village, Hainan village and others.

In 1914, the First World War (World War I) had indirectly cause most of the Chinese in Malaysia unemployed. Part of the Chinese migrants to Malaysia in early time returned to their original country, China. The other Chinese involved themselves into the agriculture field. The involvement played an important role to resolve the shortage of the food in Malaysia during that time. On the other word, it also explains why nowadays the majority of the Chinese New Village communities depend on the agriculture as their basic income. After the First World War, the number of people involved in the agriculture was unstable due to the price of the raw material like rubber is low. This situation has changed in the year 1934 to 1938, there are approximate 190'000 Chinese women migrant to Malaysia and work in several field like rubber, tea, mining, construction and others. Part of them married with the local residents and caused the number of agriculture workers increased significantly to 150'000 in years 1940.

There is a further increase in the involvement in agriculture during the Second World War (World War II). The number achieved 400’000 people in year 1945 which are 3 times higher than the origin. The reason is:

1. the price of the raw material is low,
2. the shortage of food supply and cause the it price fluctuate,
3. the recommendation and support from Japanese government in agriculture field,
4. bias by the Japanese army toward Chinese and force part of the Chinese migrant to the jungle,
5. increasing population due to migrant

During this period, there are several politic parties like Malayan People’s Anti-Japanese Army (MPAJA) to confront with the Japanese army due to the unfair treatment by the Japanese to local Chinese. In additional, part of the residents joined the activities rose by the MPAJA and also supported the party in term of supplying food, medical equipment, information and others. As a result, the relation between the Japanese government and local resident got worse, yet the spirit of the Chinese in Malaysia was become stronger and stronger in order to survive.

After the Second World War, part of the Chinese was moved back to the city area to continue their life in city but there are some of the Chinese residents who think that agriculture can bring profit to them and refuse to move to the city area. That is why 300’000 people still involve in agriculture in years 1948. The MPAJA was become the legal politic party to serve the people. Then, there are difference in

opinion by the MPAJA and the British Government in terms of getting out from the fate of rule by the British government which disagreed by the British. In the early 1948, MPAJA gave up the way that achieve their goal by using the political way but return to the jungle through the weapon forces.

In 18 Jun 1948, British government announced the implementation of the emergency status in Malaysia. British government has sent colonial military to deal with the MPAJA and at the same time, they analyse the problem occurred from the illegal Chinese migrant. The main target in analysis is Chinese agriculture residents who lived in the border of the jungle because they are accused to supply food and medical to MPAJA. After few wars with the MPAJA, the British colonial military suffered increasing number of casualties without eliminates the MPAJA army. This results the British colonial military try to release their anger on the local Chinese residents by burning off houses, destroying farm, detained for questioning, punishments, hold the residents for custody, killing and others. The relationship between the government and the local residents became worse. It indirectly causes the unrelated Chinese residents gave up their origin career but to agree and join the MPAJA for the communist strike. Therefore, British government forced the army to come out from the woods with a policy to send those illegal migrants back to their origin country. In December of 1948, the colonial military started to expel those residents in the villages or border of the jungle back to their origin country in the squatter of Kajang, Selangor. There are 300 Chinese residents are expelled. In between the period from year 1949 to 1952, approximate 40’000 people are arrested with 26’000 Chinese and 2’000 Indian are expelled.

In order to solve that problem, some of the intellectual grouped together and form the politic party to recommend the British government in this issue. In May 1949, British accepts the recommendations from the related party and transfer the resident to new living locations which call Chinese New Village. British government understood that the military forces toward the communist are not enough. The only way to wipe out the communist is to break the relation between the local resident who supply the food, medical and information to them. As a result, British government was successfully transferring the local resident to form twenty Chinese New Villages under the assistance of Malaysia Chinese Association. Following are the table show the number's of resident who transfer into Chinese New Village under the Brigg's Plan.

Table 2.5: Stages of the Chinese New Village resettlement and population (Lim & Fong, 2005)

Date	The numbers of people migrating to Chinese New Villages
March 1950	18'500
October 1950	68'875
End of 1950	78'000
June 1951	110'000
October 1951	334'000
June 1952	470'509
End of 1954	573'000

Table 2.6: Period of establishment of the Chinese New Villages (Lim & Fong, 2005)

Periods of establishment of the New Villages		
Year established	Number of New Villages	Percentage of total (%)
Before 1900	7	2
1900–1947	41	9
1948–1952	351	78
1953–1960	31	7
After 1960	14	3
Not known	6	1
Total	**450**	**100**

Source: New Villages Master Plan Survey, 2002-2003.

Until December of 1952, almost all the local residents were transferred into the Chinese New Villages completely. The entire residents lived together in appointed area and the Chinese New Villages were fenced. All the entries and exists were checked by security forces assisted by the home guard. Those entrances were limited to 6a.m. to 6p.m.Every residents of the village have to show theircertificate issue by the home guard toverify their identity before enter to the villages. Besides that, the entireresident has the tide control from the British government like the place for agriculture, the time to go out and come back from working, the amount of food supply by imposed the communal cooking.All resident of the Chinese New Village requires to queuing for their ratio of cooked rice at the central cooking area. Cooked rice is distributed to the recorded household member only to prevent the villager supplied food to communist.This situationcontinued until declaration of the end of the emergency in Malaysia. However, the culture and spirit among the villages of the Chinese New Village was establish andextend until today in each of the Chinese New Village separate in Malaysia.

2.5.2 Population of the Chinese New Village

According to our Ministry of Housing and Local Government's report, there were 452 New Village in our country and 48 of them is establish before 1948 while 14 of the Chinese New Village is establish after 1960. The rest of the Chinese New Village were established during 1948-1952. The amount of the Chinese New Village in Malaysia was change to 450because two New Villages were no longer existence, they are UluBendol New Village who located previously on Malay Reserved Land was shifted out and the PasirPutih in Ipoh is corporate with the Ipoh City Council.

Table 2.7: Number of New Villages, 1954, 1970, 1985 and 2002 (Lim & Fong, 2005)

Numbers of the New Villages, 1954, 1970, 1985 and 2002

State	1954	1970	1985	2002
Perlis	1	-	1	1
Kedah	44	35	33	33
Pulau Pinang	8	8	9	9
Perak	129	150	135	134
Selangor	49	42	42	42
WP Kuala Lumpur		4	3	3
Negeri Sembilan	39	41	44	43
Melaka	17	20	19	19
Johor	94	92	84	84
Pahang	77	48	55	55
Terengganu	4	3	3	3
Kelantan	18	22	24	24
Total	**480**	**465**	**452**	**450**

Sources: 1954 - Sandhu (1964)
1970, 1985 and 2002 figures from the Ministry of Housing and Local Government.

Table 2.8: Populations of the New Villages (Lim & Fong, 2005)

Populations of the New Villages

Year	Population	Average annual growth rate
1954	572,917	
1970	1,023,035	4.2 (1954-1970)
1985	1,650,000	3.2 (1970-1985)
1995	1,680,595	0.2 (1985-1995)
2002	1,256,067	-4.1 (1995-2002)

Sources: 1954 figure from Sandhu (1964);
1970, 1995 & 2002 figures from the Ministry of Housing and Local Government;
1985 figure from Fifth Malaysia Plan.

Table 2.9: Population of the New Villages by state, 1954, 1995, 2002 (Lim & Fong, 2005)

Populations of the New Villages by state, 1954, 1995 and 2002

State	Population			Annual growth rate %*	
	1954	1995	2002	1954-1995	1995-2002
Perlis	682	2,075	622	2.8	−15.8
Kedah	22,522	43,525	42,265	1.6	−0.4
Pulau Pinang	10,717	27,526	17,462	2.3	−6.3
Perak	206,900	495,420	294,871	2.2	−7.1
Selangor	97,346	305,266	269,012	2.8	−1.8
WP Kuala Lumpur	–	85,000	49,352	–	−7.5
Negeri Sembilan	30,294	79,569	75,780	2.4	−0.7
Melaka	9,555	24,029	24,366	2.3	0.2
Johor	130,613	435,557	322,141	3.0	−4.2
Pahang	50,233	133,957	115,076	2.4	−2.1
Terengganu	1,495	1,480	2,280	−0.02	6.4
Kelantan	12,560	47,191	42,840	3.3	−1.4
Overall	**572,917**	**1,680,595**	**1,256,067**	**2.7**	**−4.1**

Sources: 1954 - Sandhu (1964);
1995 - Ministry of Housing and Local Government;
2002 - New Villages Master Plan Survey, 2002-2003.
**Computed.*

The Majority ethnics in Chinese New Villages is formed by Chinese 86%, then continueswith Malay 9%, Indians 4% and others 1% in year 1954. In year 2002, the ethnic composition undergoes some changes and forms a new set of data. The Chinese occupies 82%, Malays 13%, 4% Indian, and 1% others. Although

Chineseoccupied the highest percentages in the most of Malaysia's Chinese New Village population, but there are 24 New Village that have population of Chinese in the Village is less that 25 percent. Not just the case, there are 4 villages having the majority residents of Thai, one village is mostly Indians, and the other 20 villages have the majority of Malay.

Table 2.10: Ethnic composition of the New Village populations by state, 2000

(Lim & Fong, 2005)

Ethnic composition of the New Village populations by state, 2000

State	Percentage (%) Malays	Chinese	Indians	others
Perlis	0	93	7	0
Kedah	15	68	5	11
Pulau Pinang	2	95	3	0
Perak	8	86	5	1
Selangor	3	91	5	0
WP Kuala Lumpur	11	80	6	3
Negeri Sembilan	10	86	4	0
Melaka	20	78	2	0
Johor	18	78	4	0
Pahang	3	92	5	0
Terengganu	8	92	1	0
Kelantan	91	9	0	0
Total	**13**	**82**	**4**	**1**

Source: Housing and Population Census, 2000, Department of Statistics.
**Others refer to communities such as Thais, Orang Asli, and other ethnic groups.*

Table 2.11:The New Villages by Chinese propostion (Lim & Fong, 2005)

The New Villages by Chinese proportion, 2002

State	No. of New Villages with Chinese Ethnicity (Survey 2002) 0%	Less than 25%	25-49%	51-74%	75-100%	Total New Villages
Perlis	0	0	0	0	1	1
Kedah	1	4	2	7	19	33
Pulau Pinang	0	0	0	0	9	9
Perak	5	9	3	17	100	134
Selangor	0	0	1	5	36	42
WP Kuala Lumpur	0	0	0	0	3	3
Negeri Sembilan	3	0	3	1	36	43
Melaka	0	0	1	3	15	19
Johor	1	1	4	16	62	84
Pahang	0	1	1	2	51	55
Terengganu	0	0	0	0	3	3
Kelantan	14	7	0	1	2	24
Total	**24**	**22**	**15**	**52**	**337**	**450**
% of total villages	5	5	3	12	75	100

Source: New Villages Master Plan

Table 2.12: Population densities and the New Village house, 1995 and 2002 (Lim & Fong, 2005)

Population densities and the New Village houses, 1995 and 2002

State	1995 Population	1995 Number of houses	1995 Density/ house	2002 Population	2002 Number of houses	2002 Density/ house
Perlis	2,075	259	8	622	136	5
Kedah	43,525	6,163	7	42,265	5,288	8
Pulau Pinang	27,526	3,102	9	17,462	3,301	5
Perak	495,420	9,359	10	294,871	45,997	6
Selangor	305,266	24,600	12	269,012	29,012	9
WP Kuala Lumpur	85,000	5,291	16	49,352	3,500	14
Negeri Sembilan	79,569	9,018	9	75,780	9,265	8
Melaka	24,029	2,684	9	24,366	6,026	4
Johor	435,557	42,798	10	322,141	51,905	6
Pahang	133,957	15,752	9	115,076	15,609	7
Terengganu	1,480	316	5	2,280	368	6
Kelantan	47,191	6,478	7	42,840	5,689	8
Total	**1,680,595**	**16,5820**	**10**	**1,256,067**	**176,096**	**7**

Sources: 1995 - Ministry of Housing and Local Government
2003 - New Villages Master Plan Survey, 2002-2003.

2.5.3 Economic activities of Chinese New Villages

Before resettlement, most of the resident of the Chinese New Village are farmers. They migrant from China and involve in the agriculture field due to historical background in Malaysia. During the resettlement, they are grouped together and stayed within the appoint area but their career never changes. After 50 years, the major occupation for the villagers are still remains as a farmer due to the geographical factor, education level, facilities problem and others factor. Following are the table show the major economic activities of Chinese New Village.

Table 2.13: Major economic activities of the New Villages, 2002(Lim & Fong, 2005)

Main economic activities of the New Villages, 2002

Main activity	No. of villages	%
Agriculture*	280	62.2
Other agricultural activities	24	5.3
Industries	35	7.8
Services	17	3.8
Construction	21	4.7
Wholesale and retail/trading	22	4.9
Others	27	6.0
Dependent on remittances	2	0.4
Rental of factory sites	1	0.2
No main activity	21	4.7
Total	**450**	**100.0**

**Agriculture includes activities such as rubber, oil palm, padi and vegetable cultivation.*
Source: New Villages Master Plan Survey, 2002–2003.

Table 2.14: Percentage breakdown of employment in the New Villages by sector and state, 2002 (Lim & Fong, 2005)

Percentage breakdown of employment in the New Villages by sector and State, 2002, (according to self-perceived data)

	Sector (highest percentages in bold)						
	Agric.	Mining	Manuf.	Cons.	WR	HR	Services
Perlis	**79.8**	0.0	5.6	2.2	11.2	1.1	0.0
Kedah	**38.2**	0.7	21.8	10.3	14.9	3.5	10.6
Pulau Pinang	**31.2**	0.0	30.4	19.1	10.7	1.5	6.9
Perak	**45.1**	0.5	12.7	24.8	7.7	2.6	6.7
Selangor	**22.6**	0.1	21.4	19.7	11.9	11.2	13.1
WP Kuala Lumpur	**4.9**	0.0	**36.0**	15.8	10.1	7.9	25.2
Negeri Sembilan	**59.6**	0.0	8.4	15.4	6.4	4.7	5.6
Melaka	**31.7**	0.2	20.7	12.9	6.2	4.3	23.9
Johor	**46.5**	0.1	17.7	9.1	9.9	3.4	13.3
Pahang	**69.3**	0.2	4.5	12.2	6.3	2.5	5.0
Terengganu	**44.0**	0.0	4.8	12.1	24.5	4.9	9.7
Kelantan	**70.4**	0.0	2.1	9.0	6.8	0.6	11.2
Total	**47.4**	**0.3**	**13.9**	**16.2**	**8.8**	**3.8**	**9.6**

Agric. = agriculture
Manuf = manufacturing
Cons. = construction
WR = wholesale and retail trade
HR = hotels and restaurants

Source: New Villages Master Plan Survey, 2002–2003.

2.5.4 Development of Chinese New Village

Along the period from resettlement until today in 2011, Malaysian government spent lots of effort to maintain Chinese New Village which is a root of the Chinese social, economic, culture and religion. In the early stage, under the Briggs's Plan, each of the family was given RM 200.00for their cooperation in resettlement for rebuilding their homes. Out of RM200.00 there are RM 50.00 for destroying their old house, RM50.00 for the cost of rebuilt the new housing, RM40.00 per month living allowance for 2 month, and RM20.00 for village facilities. This is the early stage for the local government to subsidy or compensate for the

villager and also part of the strategic in resolving the communist problem in Malaysia. After that, there are no special development funding provided until the year 1970 although the facilities of the village is poor. The implementation of the New Economic policy by the government to restructure Malaysian society and eradicate poverty was allocating some of the development fund for the New Village development. Since 1970, the development of Chinese New Village gained the attraction of government. There are several development funding allocated to Chinese New Village through Malaysia Plan as show in following table.

Table 2.15: Allocation for the development of the New Villages under various 5-years plan (Lim & Fong, 2005)

Allocations for the development of the New Villages under various 5-year plans

Malaysia Plan	Allocation (RM)
Second Malaysia Plan (1971–1975)	12,000,000
Third Malaysia Plan (1976–1980)	19,000,000
Fourth Malaysia Plan (1981–1985)	25,000,000
Fifth Malaysia Plan (1986–1990)	3,000,000
Sixth Malaysia Plan (1991–1995)	21,600,000
Seventh Malaysia Plan (1996–2000)	33,000,000
Eighth Malaysia Plan (2001–2005)	107,590,000*

* Additional fund of RM183.59 million was allocated from allocations of other units within the ministry thus making a total of RM291.18 million for the Eighth Malaysia Plan

Source: Village Development Division, Local Government Department.

Table 2.16: allocations for development projects in the New Villages, 2000-2005(June) (Lim & Fong, 2005)

Allocations for development projects in the New Villages, 2000–2005 (June)

	Number of projects	Allocation (RM)*	% of total allocation
Roads	3,183	89,415,640.00	28
Drains	2,771	85,693,494.00	27
Buildings	908	73,614,125.00	23
Basketball/ badminton courts	498	15,818,485.00	5
Parks & recreations areas	446	12,330,130.00	4
Others	472	43,239,061.00	14
Total	**8,278**	***320,110,935.00**	**100**

*This figure does not include another RM6.44 million allocation for 2005.

Source: Ministry of Housing and Local Government.

2.6 Gemas Baharu

Figure 2.8:Location of Gemas

Figure 2.9: Gemas Bahru

Gemas Baharu also known as Tai Khong is a Chinese New Village which located between the Kampung Sri Gemas and BatuAnam. Gemas Baharu is a Chinese New Village that located near Johor-Negeri Sembilan border, just 1km near the original town centre of Gemas. Gemas Baharu is officially under Segamat district

and belongs to state of Johor. Once the historic bridge which once destroyed to stop the Japanese army invasion during the World War II was located there.

Figure 2.10: The historial destroyed bridge

The latitude and longitude of the village are 2’34’60 N and 102’37’60 E. According to the president of the village community, there are approximate 170 houses and occupied by 200~300 resident in the village. Almost 95% of the residents are Chinese and the remaining 5% for Malay and Indian.

2.6.1 Background of Gemas Baharu

According to the eldest resident in the village, Gemas Baharu was established during the period ruling of British. During the emergency decree under the Brigg’s Plan, they set up the Chinese New Village for the ‘Black Area’in fifties. It’s mainly to gather the population of the nearby villages and to prevent the villagers who aid the Communist Party. Finally, the village is the achievement purpose of eradication of the Communist Party. Due to the geographical factor, some of the residents stayed

inside the jungle which is far from the main road initially. However, they are forced by the British government to move from their house to Gemas Baharu under the Brigg's Plan. During that period of time, the whole village is surrounded by the wire mesh and tide control by the British army force. Besides that, the residents are limited on the outing time and the food consuming which state before. That is a critical time and bad memories for the Gemas Baharu resident.

2.6.2 Economic Activities and Income Level

The main economic activity in Gemas Baharu is agriculture. The main reason is the geographical location of Gemas Baharu is located at the rural area with fertile land. It was far from the city central and having plenty of oil palm plantations opposite the village and continues with the rubber estate behind it. According to the president of the village community, more than 90% of the residents in the village are engaged in agriculture. Remain residents run their own family business from generation to generation. The businesses run by the resident are aim for the resident basic need for their life like hardware shop, coffee shop, mamak stall, restaurant, rubber collected shop, cell phone shop, grocery shop and market. According to one of the grocery shop keeper, their grocery shop was operated for 3 generation since his grandfather to fulfil the basic need of the resident in the village.

Figure 2.11: First generation house in Gemas Bahru

Figure 2.12: Grocery shop in Gemas Bahru

Figure 2.13: Hardware shop in Gemas Bahru

Figure 2.14: Rubber collecting trading shop

As mention before, agriculture are the main economic activities for the resident of Gemas Baharu. Therefore, their income level is fully based on the price of the raw material like palm oil and rubber except those who operates their own business. According to one of the rubber tapper in the village, they can harvest average 80-100kg of rubber per person within a day depend on fertilize of the land, age of the tree, and weather. Every day, the rubber tapper will wake up in 2am in the morning and arrive rubber estate about 3am to start their work. They are tapping the rubber tree under the gloomy touch light on their head until 4am in the morning.

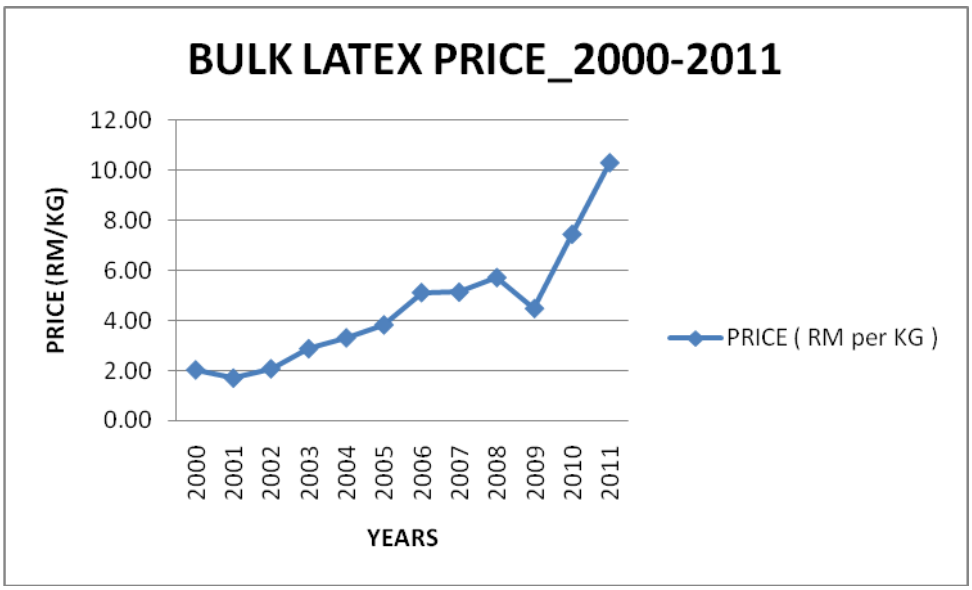
Then, they will start to collect the rubber into the barrel at the motorcycle and sent to the rubber collected shop. After that, the money earn from the rubber are required to share with the rubber estate owner as agreed. Base on the graph below, their salary are estimated around RM2000.00with 22days working days in year 2000. After that, the price of the rubber is decreasing below than RM1.70 per kilogram in the following year. In years 2005, the rubber price increased significantly from RM3.82 to RM5.11 per kilogram. Therefore, the salaries of the rubber tapper rose to RM4500.00 per month. The price of rubber increased continuously in the year 2010 and achieves RM7.43 per kilogram. As a result, most of the residents in Gemas Baharu shifted their career to rubber tapper to gain the interesting income and fulfill the market's requirement. Following are table of the price for bulk latex from Malaysian Rubber Board.

Table 2.17: Bulk Latex Price For Years 2000-2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
JAN	1.91	1.75	1.60	2.30	3.14	3.04	4.66	4.87	5.70	3.85	6.57	9.97
FEB	2.15	1.83	1.75	2.55	3.48	3.38	5.49	5.73	6.07	4.06	7.02	10.60
MAC	2.28	1.76	1.89	2.85	3.51	3.51	5.52	5.69	5.91	4.38	7.34	9.87
APR	2.25	1.73	1.96	2.80	3.45	3.50	5.42	5.53	5.85	4.25	7.56	10.45
MAY	2.31	1.73	1.94	2.69	3.57	3.54	5.88	5.25	6.10	4.14	7.02	9.43
JUN	2.11	1.79	2.24	2.84	3.51	3.77	6.52	4.89	6.89	3.87	7.10	9.23
JULY	1.95	1.74	2.31	2.75	3.30	4.13	6.27	4.44	6.92	3.91	6.94	8.66
AUG	1.91	1.69	2.15	2.76	3.13	3.96	5.08	4.67	6.14	4.61	6.91	
SEP	1.90	1.66	2.34	2.92	3.21	4.13	4.02	4.97	6.27	4.73	7.12	

OCT	1.90	1.61	2.23	3.27	3.31	4.32	4.45	5.00	4.58	4.84	7.64	
NOV	1.84	1.62	2.16	3.53	3.17	4.12	3.93	5.33	4.48	5.16	8.44	
DEC	1.81	1.50	2.17	3.27	2.93	4.27	3.95	5.32	3.35	5.87	9.44	
AVE	2.03	1.70	2.07	2.87	3.31	3.82	5.11	5.13	5.71	4.48	7.43	9.78

Figure 2.15:Bulk Latex Price Graph



As mention before, Gemas Baharu is located in rural area and most of the economic activities are limited in agriculture. Therefore, most of the teenagers are shift to the nearest town like Johor Bahru or Singapore to develop for their future. As a result, part of the income of the residents in the Chinese New Village came from their family members who work at other field.

2.6.3 Facilities in Gemas Baharu

2.6.3.1 Education

Most elder residents in Gemas Baharu have lower level encountered in education. For the young generations, most of them completed their primary school in SJK(C)Tah Kong and only a small proportion of them\ proceed their study until university level. Generally, there is only one primary school inside Gemas Baharu call SJK(C) Tah Kong. It was located at Jalan Colonies and formed by a 2 storey building. There is approximate 450student study in this school which is part of the residents in Gemas Baharu. After the primary student finished their study in SJK(C)Tah Kong, they will be transferred to the nearest secondary school in Gemas.

Figure 2.16: Tah Kong primary school in Gemas Bahru

Other than that, there are one Tadika (kindergarten) located in Gemas Baharu which located beside the main road, using building of Rumah Tetangga as classroom. It was Tadika Perpaduan. It is a tadika which using Malay as the language. Therefore, most of the students here are Malay or Indians. Beside Tadika Perpaduan, there are 2

more tadikas located near Gemas Baharu which is Tadika Ceria and Tadika Sinar. There are located at the nearby garden which develops recently.

Figure 2.17:Tabika perpaduan in Gemas Bahru

2.6.3.2 Multipurpose Hall

Figure 2.18: Multipurpose hall in Gemas Bahru

There is one multi-purpose hall in the village. To be accurate, the village community will organize meetings inside the hall. It will be the place for the community to gather and discuss problems faced in the village, the upcoming event

and furthermore, a place to built up relationship among them. Besides that, the hall also acts as an information centre to give information about the latest news in the village to the villagers from time to time. According to the resident in the Gemas Baharu, there will be some activities for the senior citizen in Gemas Baharu held at the hall every morning 8 o'clock. There are verity activities and suitable for the entire villager such as aerobatic dance, Tai-Qi, social dance and others. Sometimes, they also held wedding dinners inside the hall. The entire Gemas Bahru villager will have a jolly time for it.

2.6.3.3 Sport

Figure 2.19: Basketball court in Gemas Bahru

Opposite the multi-function hall there have a basketball court, which always being used by the teenagers, they usually played in the afternoon or after school. Besides that, they also have a football field, often used for some open air event such as wedding dinner, birthday party or so on. This field is planned for build up a petrol station as the beginning, but after the residents fought the issue with the local government, they have the authority to turn it to a football field. Beside this football

field are sport facilities, built for residents to have a healthy cultural. Next to the sport facility is a playground, usually used by residents for building up relationship between families. They also brought their pets to walk around this garden in the afternoon or after dinner time.

2.6.3.4 Health and Security

Figure 2.20: Clinic in Gemas Bahru

In the village, government set up a Government Clinic to provide basic health services, located along the resident houses. Residents are preferred visiting this clinic than the private clinics due to the cost factor. The fees they charged in the government clinic are same with the other government clinics, which is RM 1 only. Besides that, the location of the clinic is nearer to the residents'houses,they no need to go too far for a medical check-up.

The crime rate for Segamat is considered low compared to the city area. However, there is a police station beside that main road of Gemas Baharu, the task

for the police in Gemas Baharu is to maintain the low criminal rate happened in Gemas Baharu, by increasing the efficiency to protect the residents, the police station provides accommodation for the police and their families to stay there and increase their performance.

Figure 2.21: Police station in Gemas Bahru

2.6.3.5 Market

Figure 2.22: Market in Gemas Bahru

There is a market behind of the residents' house. It was 3 feet opened air building with roof and constructed by the local government. It is also special located at the boundary of the village to avoid any disturbance to the resident. Besides that, this is easier for the suppliers to send the good to the market and clean up that place by the workers. It is a general place for the housewives to gather for chit chatting and bargaining the price every morning. In other word, the market is the place where the information gathered and spread faster than the multi-purpose hall.

2.6.3.6 Old Folk Home

There are an old folk home in Gemas Baharu which converts the residential house for commercial use. There are some senior citizens who stay here because their children are too busy workingin the cities and nobody can take care of them. As a result, this old folk home are set up to serve the elders in order to give them hope, caring, and the feel at home. This was also contributed to the population lead to the elder age range for the population in Gemas Bahru.

2.6.4 Food

Figure 2.23: Restaurant in Gemas Bahru

At the main road of the village, they are many food stalls, mamak stall, Chinese restaurant, sate, Malay food stall and etc. Most of the food stalls sold the delicacies at a low price compared to cities; they also give best services to the residents. Most of the stalls are opened and operated by the residents; they know the taste of eachresident very well, they also have variety of kampung foods that we can't find at city. The most ingredients used are plant and processed by the residents themselves. That's why the food is organic and healthier.

2.6.5 Social, Cultural, and Religious

Figure 2.24: Chinese temple ”Kai Tian Gong” in Gemas Bahru

Gemas Baharu is a Chinese New Village that has the high proportion of senior citizen stayed in the village and most of them are Chinese. Therefore, the main religion they practices is Buddhist.”Kai Tian Gong” is the only religion temple located in the centre of Gemas Baharu. Many followers often went for the temple to pray and cause temple busy the whole year. This temple too, always held competition, such as singing competition, dancing and so on at the hall opposite to the temple, which also belongs to the temple community. This will attract the entire potential residents to participate in the competition and some of the resident will act as a helper in the competition organization. As a result, the religion in Gemas Baharu plays important role in ensuring the relation among the villagers. Besides that, the temple also provides free preschool services for the poor family as a charity in the morning. The main source of the expenses for the preschool comes from the donation by whole resident of Gemas Baharu and also Gemas.

Other than that, they are still remaining the typical Chinese culture like having breakfast at the Chinese coffee shop in the early of the morning, senior citizens will gathered at the coffee shop and having breakfast together and discussing topics like economic, politic, food, healthy, fundamental science, travel memories, latest new in the villages and others. It can be the most probably happening in every morning until 10 o'clock in the morning. After that, they will bebacking home to do their usual house cleanings. Some of the residents will prepare lunch for the children who study in SJK(C) Tah Kong who will bebacking home at 1pm. During that time, they may take a bath and watch movie during that time while waiting for their grand children to come back. After they settled down with their grandchildren around 3pm, they will go for high tea at the coffee shop again and continue their discussion until evening. Around 5pm, most residents will go to their garden to water plants or feed chicken, duck and goose. Some of them will go for fishing or play mahjong at the nearby houses. For women, it's the time for them to prepare delicious dinner for the family. After dinner, the whole family members will visit to their friend house, before 8pm, all residents will back to their own houses and prepare to sleep. During that time, most of the houses will switch off their lights and the road will consequences dark. Only small proportion will continues with night activities like singing and dancing in the senior citizen centre, having supper at the mamak stall or out to the nearest super market - GMart to buy some basic daily goods. That is the lifestyle for the residents in Gemas Baharu according to one of the resident.

2.6.6 Problem occur in Gemas Bahru

Gemas Bahru is a small Chinese New village located at the border between Negeri Sembilan and Johor state and it considered as a rural village. Although there are many facilities is provided by the government but there are still some problems occurred within the village.

As mention before, Gemas Bahru is a Chinese New Village that located at the rural area and the working opportunities will be lower compare to the city centre. This reason was result in the rural-urban migration happen especially to the teenager who seek for the higher salary. In additional, the location of the village is near to Johor Bahru and also Singapore which has the high demand on the human resource. Others than that, the factor that contribute to such consequences is the development Johor Bahru City Centre was increase the working pools required in Johor Bahru. This rural-urban migration was indirectly causing the village from lack of teenager to stay in the village and the culture of this Chinese New Village may extinct in future.

There are frequent floor in Gemas Bahru and cause the difficulty to the villager also the problem occurring. During the flood time, all the economic activities are pending for the water to tides. Besides that, all the household appliances included all the cabinet are broken and cause significant lose to the villager. The villagers have to replace all the appliance in the houses may become a heavy burden for them.

Figure 2.25: Scene after flood in Gemas Bahru

The flood was cause on cost involvement in replacement of the household appliances and also thier income. Most of the plant and vegetable in front of the house was wilt and lead certain lose to the household or the plantation owner. After flood in Gemas Bahru, the entire villagers are required to clean-up all the mud that sticks on the wall, floor and others place. During this period, the entire village will spread smell and the level of health in the village is worrying by all parties. If this situation is not handling properly this may cause plague happen within the village. Following is the survey done by the researcher and show Johor is most serious in flood compare to others state.

Table 2.18: Percentage of the New Villages that experienced flooding in 2001 and 2002

	The New Villages that were flooded 10 times and more in 2001 and 2002	
State	Flooded 10 times and more in 2001	Flooded 10 times and more in 2002
Kedah	1	1
Perak	8	6
Selangor	4	4
Negeri Sembilan	1	1
Johor	9	7
Pahang	1	0
Total	**24**	**19**

Source: New Villages Master Plan Survey, 2002–2003.

Table 2.19: The New Villages that were flooded 10 times and more in 2001 and 2002

Percentages of the New Villages that experienced flooding in 2001 and 2002

State	Experienced Flooding No.	Experienced Flooding %	2001 (Floods) Serious	2001 (Floods) Normal	2002 (Floods) Serious	2002 (Floods) Normal
Perlis		0.0	n.a.	n.a.	n.a.	n.a.
Kedah	11	33.3	27.3	63.6	18.2	63.6
Pulau Pinang	6	66.7	66.7	66.7	50.0	33.3
Perak	68	50.7	70.6	69.1	73.5	73.5
Selangor	26	61.9	57.7	80.8	42.3	69.2
WP Kuala Lumpur	0	0.0	n.a.	n.a.	n.a.	n.a.
Negeri Sembilan	19	44.2	52.6	57.9	52.6	52.6
Melaka	5	26.3	40.0	40.0	60.0	60.0
Johor	52	61.9	75.0	76.9	55.8	69.2
Pahang	33	60.0	48.5	51.5	21.2	33.3
Terengganu	1	33.3	-	-	-	-
Kelantan	12	50.0	41.7	41.7	8.3	8.3
Mean %			**60.9**	**66.1**	**49.8**	**59.2**
Number	**233**	**51.8**	**142**	**154**	**116**	**138**

Note: Some villages experienced both serious and normal floods.
n.a. = not available.
Source: New Villages Master Plan Survey, 2002–2003.

Table 2.20: Reasons given by the villages for flooding, 2002

Reasons given by the New Villages for flooding, 2002

State	River overflow	Drainage system	Insufficient river reserves	Other reasons*
Kedah	0	0	0	0
Perak	0	0	0	2
Selangor	6	7	0	4
Negeri Sembilan	0	1	0	0
Melaka	0	1	0	0
Johor	6	8	0	2
Pahang	13	8	6	5
Terengganu	0	0	0	0
Kelantan	12	2	1	7
Total	**37**	**27**	**7**	**20**
% of 233 villages that experienced flooding	15.9	11.6	3.0	8.6

Source: New Villages Master Plan Survey, 2002–2003.

Other than that, there are power and water supply shortage in Gemas Bahru during Chinese New Year. According the local villager, the problem is caused by the increasing of the electric and water usage in large quantity. The main reason behind

is the relative who stay outside came back to Gemas Bahru to celebrate the festival, and this caused the increasing of the population and increases the usage of the utility as well. The President of the Gemas Bahru community explained further toward this problem. He says the water shortage which cause by the increasing of usage and also the water tank that supplies water to Gemas Bahru is small which cause the shortage of water happens when the usage is increased. Then, he add on by saying that this problem was solved by the state government by divert the water supply directly from Batu Enam to Gemas Bahru.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Method of Data Collection

Generally, there are 2 major types to gather information for the research, and in some cases, information is available and need to be extracted. However, some information are required the researcher to discover, collect, and categorized. Based on the information collected, data are categorized as:

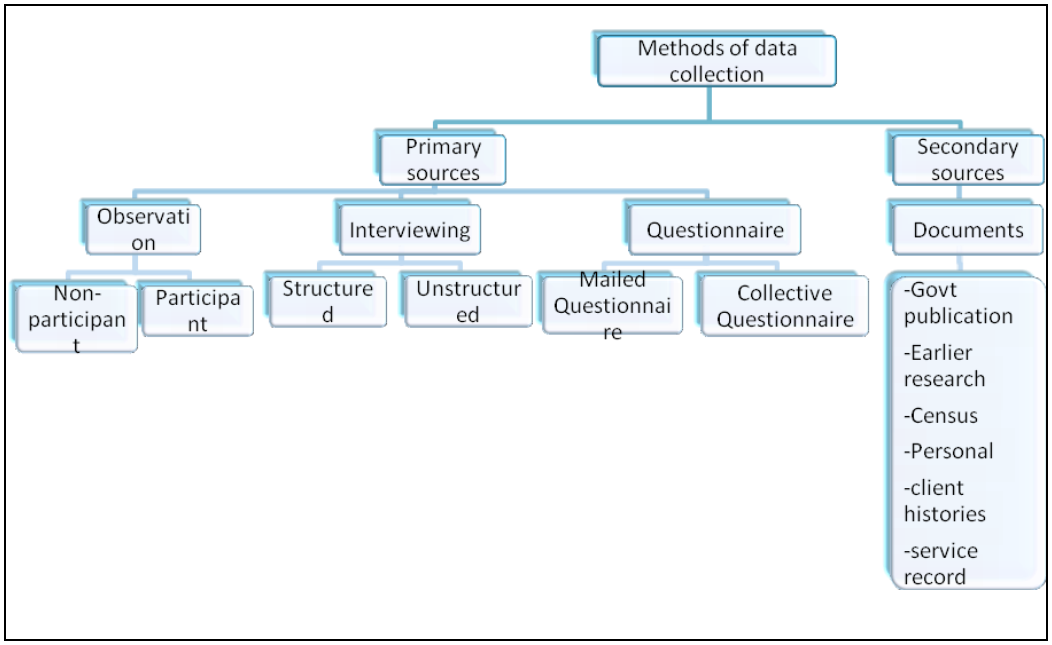
- Primary data;
- Secondary data. (Ranjit Kumar, 2005)

The primary data is the information gathered from the primary sources which is providing first-hand information. The example of the primary data is finding out the first hand attitudes of the community towards health service, evaluating social programmes, the satisfaction level of employment in their organization. There are several methods to obtain the primary data, and these depend on the purpose of the study, the resources available and the skills of the researcher. As a result, the researcher has to be clear in mind what the limitation is and the problem faced

impose. The awareness of the researcher towards the important of understanding demographic characteristic of the study population may help in deciding a method of data collection. Furthermore, the data collected may be more accurate compare to others. Other than that,

Secondary data are those second hand data which had been processed by others. For example, use of census data to obtain information on the age – sex structure of a population from the government website, the use of hospital records to find out the awareness of healthy on certain area, collection of data from source such as articles, magazines, journals, books and others. Following show the method of data collection by using diagram.

Figure 3.1: Method of Data Collection



3.1.1 Primary sources

Observation is one of the methods from the primary source. It is a purposeful, systematic and selective way of observes and listens to an interaction and

phenomenon as it takes place. Most probably using this type of method is because the situations where the accurate and full information cannot be elicited by questioning due to the attitude of the respondents are not co-operative. Other than that, the reason of using this observation method is because the respondents are unaware of the answer or difficult for them to detach themselves from the interaction. Observation is generally used to collect such data that emphasis on the behaviour rather than in perceptions of individual. There are 2 types of observation which is participant observation and non participant observation. The main difference of both methods is, whether the researcher is involved during observation (Ranjit Kumar, 2005). During this Final Year Project, researcher used the participant observation to stay in the targeted Chinese New Village to experience the Chinese New Village lifestyle and studied the level of Green Technology application culture by the local community.

Interview is the second method within the primary source. This method is commonly used by the researcher in collecting information from people. The target informant can be an individual or in group with a specific purpose in mind. The classification of the interview depends on the flexibility of the interview. The first type of interview is unstructured interview where the interviewer has the freedom to formulate question as they come to mind related to the topic investigate. The level of flexibility maximum for the researcher includes the entire question to be asked, the term of wording to be use, and the way to explain the question to respondents. There are several unstructured interview; for example in-depth interviewing, focus group interviewing, narratives and oral histories. The second type is structured interview where there are rigid in term of the interview structure. Interviewer is required to

prepare an interview schedule (list of question) to be asked before the interview. During the interview, the researcher will strictly follows the question set before and ask the respondent using the same wording as well as order of question as specified in the interview. The interview can be made through many medias like face to face, by telephone or others electronic media (Ranjit Kumar, 2005). In order to complete the Final Year Project, investigator was using both types of interview method oral histories from the unstructured interview and structured interviews. In order to recognize the culture, living lifestyle and the historical background of Gemas Bahru, the researcher collected data through having discussions with the Gemas Bahru Villages residents. It was highly flexible for the question asked and also the location for interview like in the village houses or coffee shop beside the road. Besides that, the researcher also conduct a structured interviews through the committee's president after interview the villages. The question is set before interview with the president. The main purpose of the structure interview with the committee resident is to collect the formal information like population of the village, the majority source of income from the villages, the level of income for the villager, formality of the Gemas Bahru and other required details.

Survey is one of the methods for data analysis. A series of question is prepared by the research to aim for collecting relevant data for his investigation. This survey can be conducted through hard copy or interview, which means the questions were read by the researcher and further explain to the respondents. In general, 2 types of question can be found in the survey of a research. There are open-end question and close-end question. The open-end question is questions which the respondents required to write down the answers in his/ her way of explanations. If

the open-end question is through interviewing, the interview may required recorded answer of the respondent in full or in the summary description of respondent answer. In that case, the open-ended question is easier for the researcher to obtain the accurate information. For example the income statement in the survey is in the exact figure, by so, the mean and median of the data can obtain accurately. However, there are some difficulties for the researcher to conclude the data because the answer given by the respondent is explained in several forms, especially for the question that obtains opinion from the respondents. For the closed-ended question, the respondents are given multiple choices in range for their answers. The type of survey have the opposite characteristics compared to the open-end question, where the figure obtain is not as accurate as others but the answer obtain is easier to summarise. In order to achieve the aim of the Final Year Project, 100 sets of survey were distributed to 170 residents in the selected Chinese New Village, Gemas Bahru. Among 100 set of survey, there are 72 sets are completed by the Chinese New Village residents, which is approximate 30% of the Gemas Bahru residents. The survey explores the level of awareness and adoption of Green Technology appliance in their life. Besides that, the survey also shows the economic capacity (affordability to own a Green Technology appliances) of each housing and the effect using Green Technology appliances (bills electric) and other relevant issued to the Final Year Project aim.

3.1.2 Secondary sources

As mentioned before, the secondary data is a method that collects data has already been collected and process by others. Researcher is required to extract the required information for their research usage and inserts the sources of the data as

references. Although the data obtain from the secondary sources are easier to compare than the primary, but there are some risks may occurred while using data from the secondary sources. Following are the problems when using data from secondary sources:

- Validity and reliability of the information used
- Personal bias of the author are likely to exhibit less rigorousness and objectivity than one would expect in research report
- Avaibility of the required data is usually assumed by the researcher before the beginning of the research

There are many sources that are explained as secondary source, and it categorisedinto 4 major sources. Following are the lists and examples of the secondary sources:

- Government or Semi government publication for members' usageno matter public and interest group. The examples of these sources are census, vital statistic registration, labour force surveys, health reports, economic forecast and demographic information.
- Previous researches in topics studied by others can provide some useful information for the researcher.
- Personal records from people that wrote historical and personal records that may provide with the required information.
- Mass media reports published in newspapers, magazines and other Publication Medias may become part of the secondary resources. (Ranjit Kumar, 2005)

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Background

In general, the survey is divided into 4 main topics and contained 20 questions for the respondents targeted in Chinese new Villages, there are 72 respondents responded to the survey. The topics included are demographic information, awareness and understanding about Green Technology, home appliances audit, implementation and the way forwards Green Technology in Chinese New Village.

4.2 Demographic information

Demographic information is the first topic in the survey. The aim for this section is to investigate the background of the respondents and their daily lifestyle, the background of each respondent is important for the researcher to understand the level

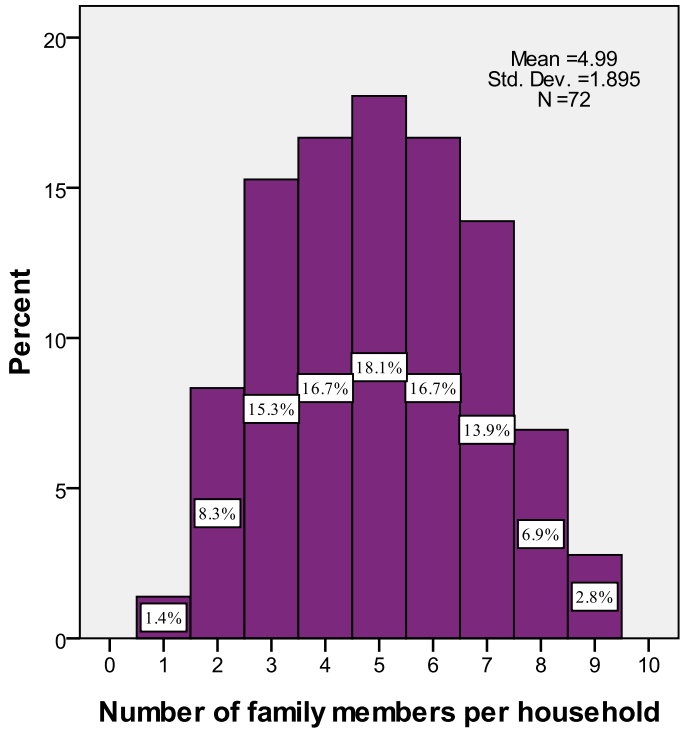
of understanding of Green Technology and further on with level of implementation of the Green Technology. The survey is to investigate from the prospective of the density of each house, the age range of each house, the total and sources of villager income and the amount of the utility bills per month.

Table 4.1: Number of family per household

Number of family members per household

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.4	1.4	1.4
	2	6	8.3	8.3	9.7
	3	11	15.3	15.3	25.0
	4	12	16.7	16.7	41.7
	5	13	18.1	18.1	59.7
	6	12	16.7	16.7	76.4
	7	10	13.9	13.9	90.3
	8	5	6.9	6.9	97.2
	Others	2	2.8	2.8	100.0
	Total	72	100.0	100.0	

Figure 4.1: Number of family per household



The graph above shows the number of family member per household in Gemas Bahru. In general, Gemas Bahru has the majority of 5 number of family member per household with the percentages of 18.1. Then it was follow by 4 and 6 numbers of family members per household with the percentage of 16.7 which only have 1.4 percent different with the first rankings. The lowest percentage in the graph show above is one family member per household which is 1 person out of 72 respondents with 1.4 percent. The trend of the number of family member in every household is increasing from the beginning and reduce when the number of the family member become increased. The shape of the graph is in the bell curve like a normal distribution.

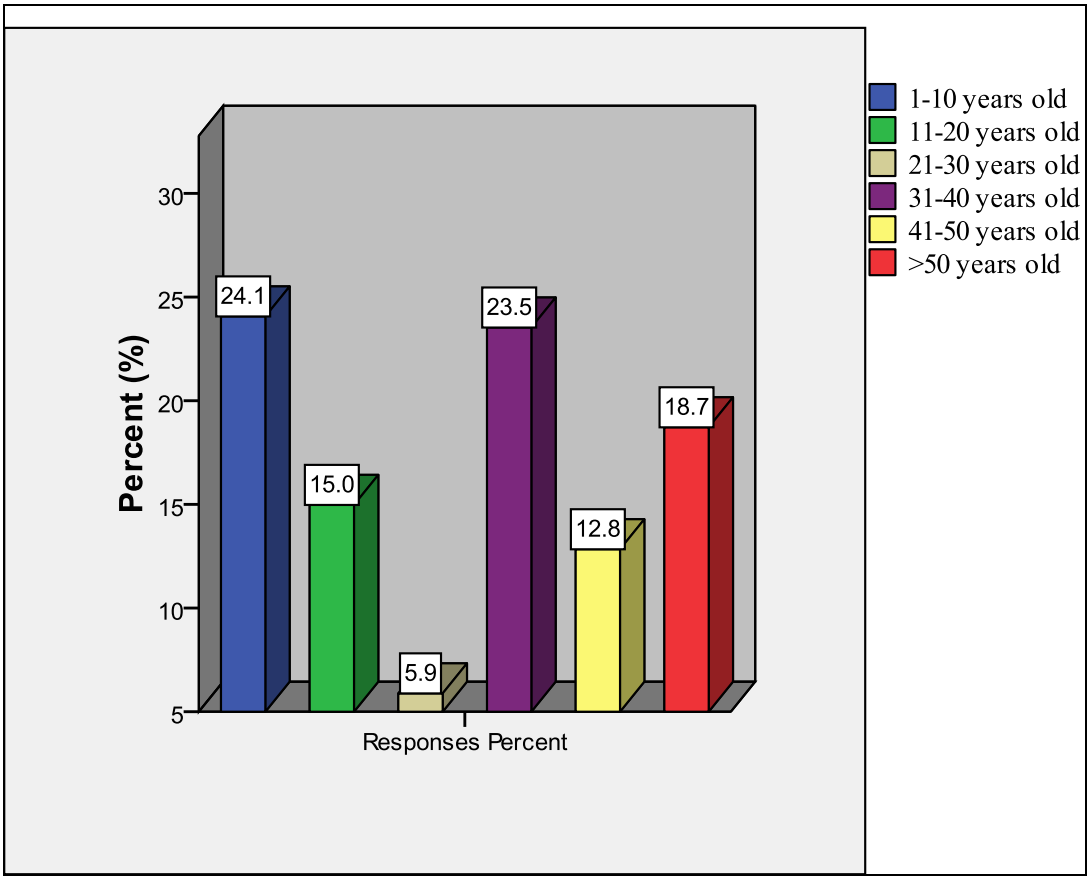
Table 4.2: The age range of the family members

Age Frequencies

		Responses		
		N	Percent	Percent of Cases
Age[a]	1-10 years old	45	24.1%	62.5%
	11-20 years old	28	15.0%	38.9%
	21-30 years old	11	5.9%	15.3%
	31-40 years old	44	23.5%	61.1%
	41-50 years old	24	12.8%	33.3%
	>50 years old	35	18.7%	48.6%
Total		187	100.0%	259.7%

a. Dichotomy group tabulated at value 1.

Figure 4.2: The age range of the family members



The table above shows the age range of the family members in Gemas Bahru. Out of 72 respondents, the age range of 1-10 was occupy the highest percentage which is 24.1% compare to the second is with the age range of 31-40 only 23.5 percent. The difference between the first and second is 0.6 percent. The senior citizens which having the age range more than 50 years old has occupies 18.7 percent in Gemas Bahru. It plays a significant role in the village population which contribute to the name of Gemas Bahru with old folk village. The population which having the age range of 21-30 is the least percentage in Gemas Bahru which is 15%. The trend of the age range fluctuate uncertainty. Within the analysis, we found that the majority of the resident in Gemas Bahru is formed by the senior citizen and their grandchildren. The main reason of this situation is the effect of the rural-urban

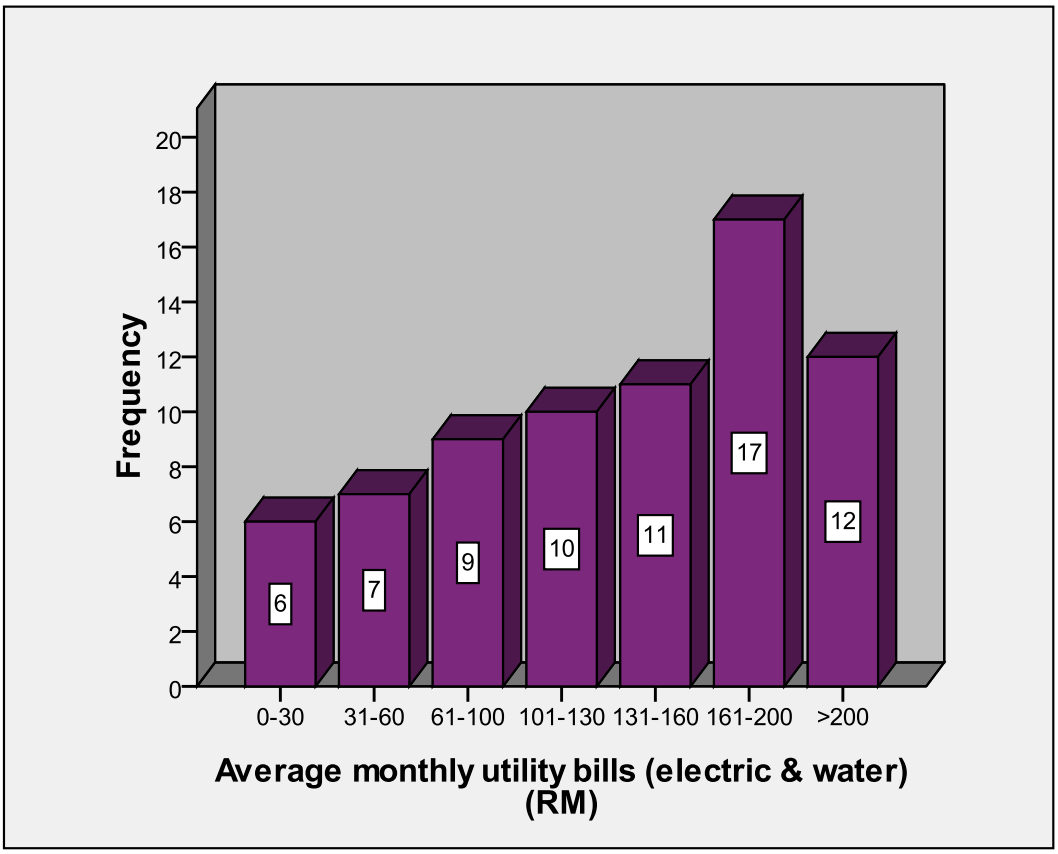
migrant where most of the young adult is migrate to the urban area like Singapore, Johor Bahru, or Kuala Lumpur and left their parent with their children.

Table 4.3: Average monthly utility bills (electric and water)

Average monthly utility bills (electric & water) (RM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-30	6	8.3	8.3	8.3
	31-60	7	9.7	9.7	18.1
	61-100	9	12.5	12.5	30.6
	101-130	10	13.9	13.9	44.4
	131-160	11	15.3	15.3	59.7
	161-200	17	23.6	23.6	83.3
	>200	12	16.7	16.7	100.0
	Total	72	100.0	100.0	

Figure 4.3: Average monthly utility bills (electric and water)



The graph above shows the average monthly utility bills for the villagers in Gemas Bahru, according to the 72 respondents. The villagers in Gemas Bahru has the majority utility bills at the high side which the range of RM161to RM200, it reflects to the lifestyle of most respondents. There are 17 respondents which is 23.6 percent of the respondents paid the electric bills and water bill at this range. Ranking as the second in the graph is 16.7 percentages which is contributed by the respondents who pay the utility fees is more than RM 200 per month. The trend of the graph is increasing from the initial which paying the utility fees at the range of RM0 to RM30 until the maximum at the point of the utility fees is RM 161 to RM 200 and decreasing at the end of the graph. In general, this analysis shown that the electricity used by the residents in Gemas Bahru is on the high side which may cause by the

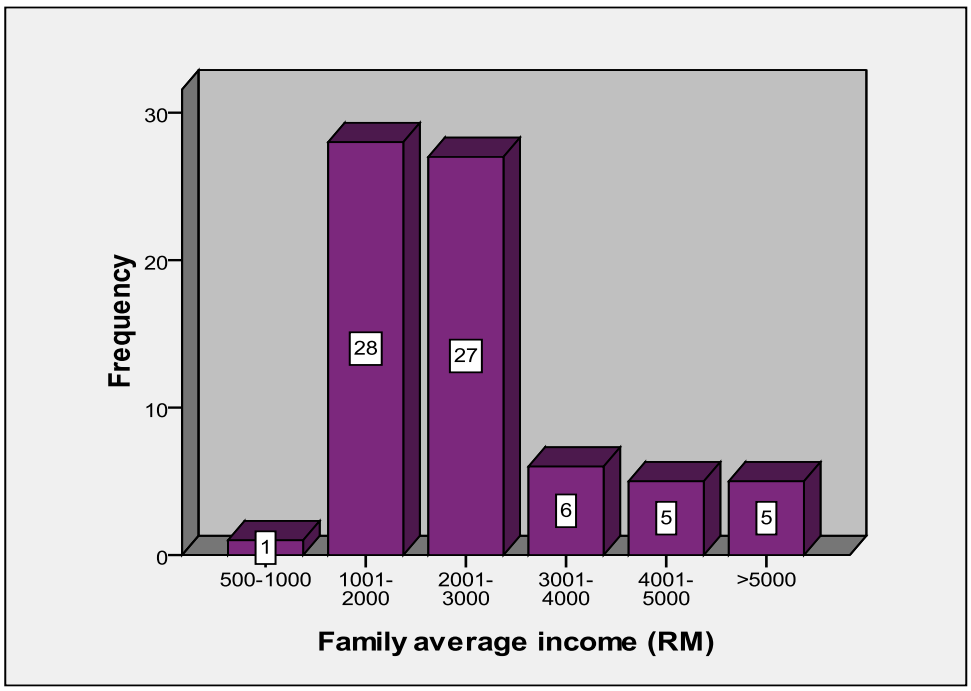
large amount of the family members in the house. Besides that, it also can explain by saying that the location of the Chinese New Village is located in Malaysia, on top of equator where having high temperature in the whole year. Therefore, the electricity used for cooling is relative high compare to other country. On the other hand, the resident of Gemas Bahru is not familiar with the Green Technology product due to their geographical factor which the advance technology is not accepted by them.

Table 4.4: Family average income

Family average income (RM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	500-1000	1	1.4	1.4	1.4
	1001-2000	28	38.9	38.9	40.3
	2001-3000	27	37.5	37.5	77.8
	3001-4000	6	8.3	8.3	86.1
	4001-5000	5	6.9	6.9	93.1
	>5000	5	6.9	6.9	100.0
	Total	72	100.0	100.0	

Figure 4.4: Family average income



The graph shows the average income in each family in Gemas Bahru, according to the 72 respondents. From the graph above, the majority of the villagers received approximate RM 1'000 to RM 3'000 per month. There are 28 respondents which equals to 38.9 percent for the family who receive RM1'001 – RM 2'000 income per month. Yet, the second ranking of the graph is 37.5 percent of the overall which receive the monthly income in the range of RM 2'001 to RM 3000. There are 76.4 percent of the respondents are included in these 2 categories and the difference between the second and the third in the graph is 19.8 percent which is very huge. This clearly shows that the village income is considered in the middle range. If their income is calculate in terms of per hour rate it would be an amazing case. This is because most of the villagers work as a rubber tapper which only required work for 4 hour per day compared to the workers in urban area who required works for 8 hours with the same salary with them. Besides that, some of the family income is generate

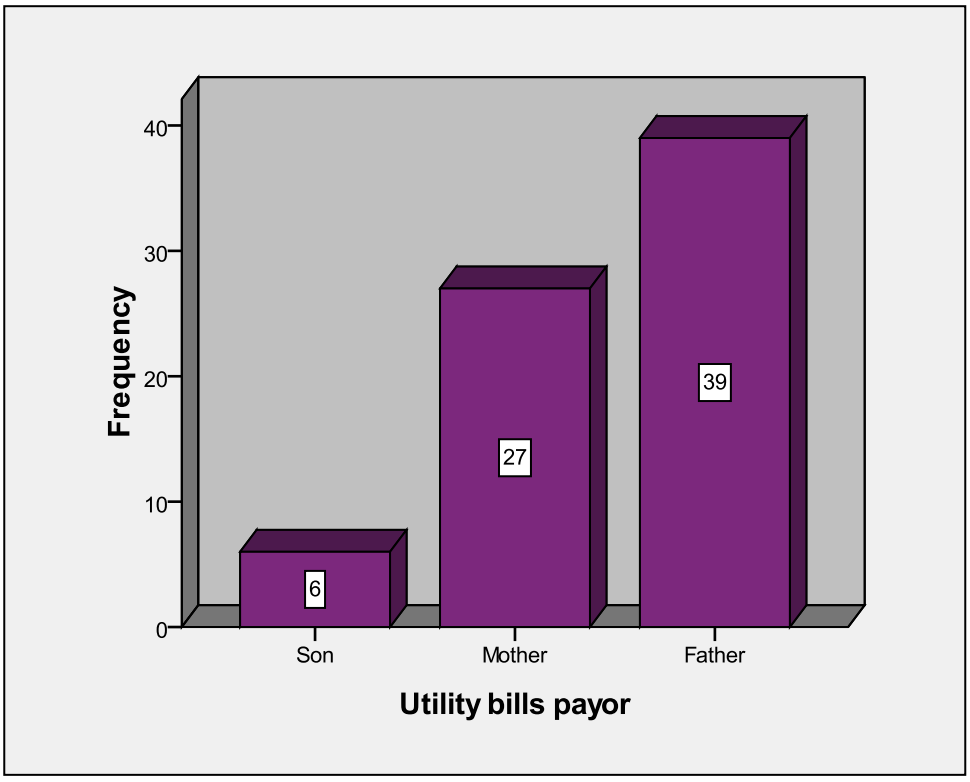
from their children who work at Singapore which may effected by the current currency value.

Table 4.5: The utility payer

Utility bills payor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Father	39	54.2	54.2	54.2
	Mother	27	37.5	37.5	91.7
	Son	6	8.3	8.3	100.0
	Total	72	100.0	100.0	

Figure 4.5: The utility payer



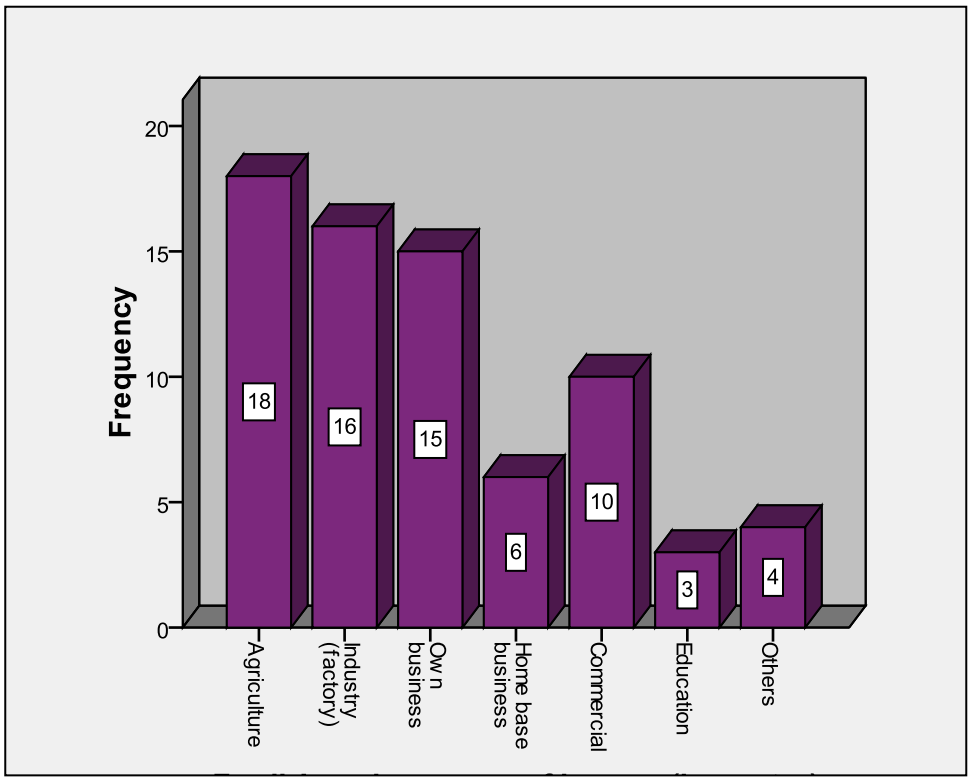
The graph shows the utility payers in a family in Gemas Bahru. According to the graph, there are 6 groups are provided for the respondents to select for the utility payer but there are only 3 group is selected. The group selected is father, mother, and son. The selection of father as a utility payer is the highest among all the group which has 54.2 percent compare to mother, 37.5percent and the son, 8.3 percent. In others word, the utility bills for this villages is mainly paid by the father as a householder, and also, as the tradition says, the root of a family.

Table 4.6: Family's major source of income (by sector)

Family's major source of income (by sector)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture	18	25.0	25.0	25.0
	Industry (factory)	16	22.2	22.2	47.2
	Own business	15	20.8	20.8	68.1
	Home base business	6	8.3	8.3	76.4
	Commercial	10	13.9	13.9	90.3
	Education	3	4.2	4.2	94.4
	Others	4	5.6	5.6	100.0
	Total	72	100.0	100.0	

Figure 4.6: Family's major source of income (by sector)



The graph shows the family's major source of income through different sectors in Gemas Bahru. In Gemas Bahru, the major source of income came from agriculture sector which occupies 25 percent of the total sum. There are 18 respondents work in the agriculture sector like rubber tapper, farmer, and others. The second ranking for the income sources is the industry sector with the percentage of 22.2. Most of the Gemas Bahru villagers involved in the industry (factory) sector work nearby plywood factory. After that, the third major source of income for the respondent is the villagers who run their own business with the percentage of 20.8. It involves the business like hardware shop, cafeteria, grocery, pre-school and others small basic business. Since there is a primary school located in the village and surrounded by few pre-schools, there are 3 respondents having their major sources income from the education line which is the lowest in overall.

4.3 Awareness and understanding about Green Technology

For this section, the survey is targeted in investigating the level of understanding and awareness of the villagers towards Green Technology. There are several questions asked to confirm the level of understanding or concepts of the respondents in Green Technologies field. The questions include the topic of the understanding of Green Technology, the sources of this knowledge, purchasing and the willingness of purchasing Green Technology appliances, opinion on the Green Tech appliance pricing, and reason of changing Green Technology appliance in future.

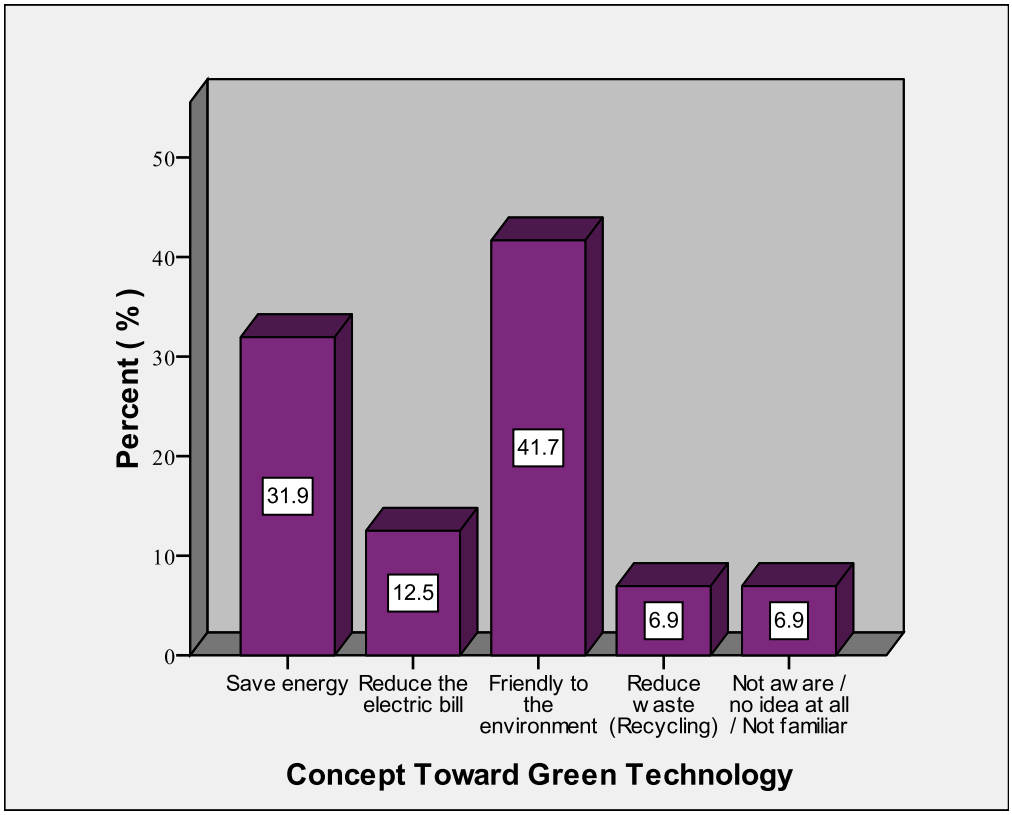
Table 4.7: The understanding toward Green Technology

$Question_7 Frequencies

		Responses		
		N	Percent	Percent of Cases
Understanding Toward Green Technology[a]	Save energy	23	31.9%	31.9%
	Reduce the electric bill	9	12.5%	12.5%
	Friendly to the environment	30	41.7%	41.7%
	Reduce waste (Recycling)	5	6.9%	6.9%
	Not aware / no idea at all / Not familiar	5	6.9%	6.9%
Total		72	100.0%	100.0%

a. Dichotomy group tabulated at value 1.

Figure 4.7: The understanding toward Green Technology



The table shows the understanding towards Green Technology in the Chinese Village. From the table showed, there are 41.7 percent of the respondents who have the opinion that the Green Technology is the technology which is friendly to the environment. It was the highest among the available facts is because they understand that the advance technology had been developed recently and yet supported by the government should be mainly to save the environment due to the global warming problem become a hot issue in all over the world. Then, there are 23 respondent selected the Green Technology means help in saving energy. The difference between the first and second is only 7 respondents which is approximate 10 percent. Both of these opinions occupied around 73.6 percent of the overall. This data shows that the villagers have the basic understanding that Green Technology help saves energy. On the other word, the local communities are facing the problem of the high

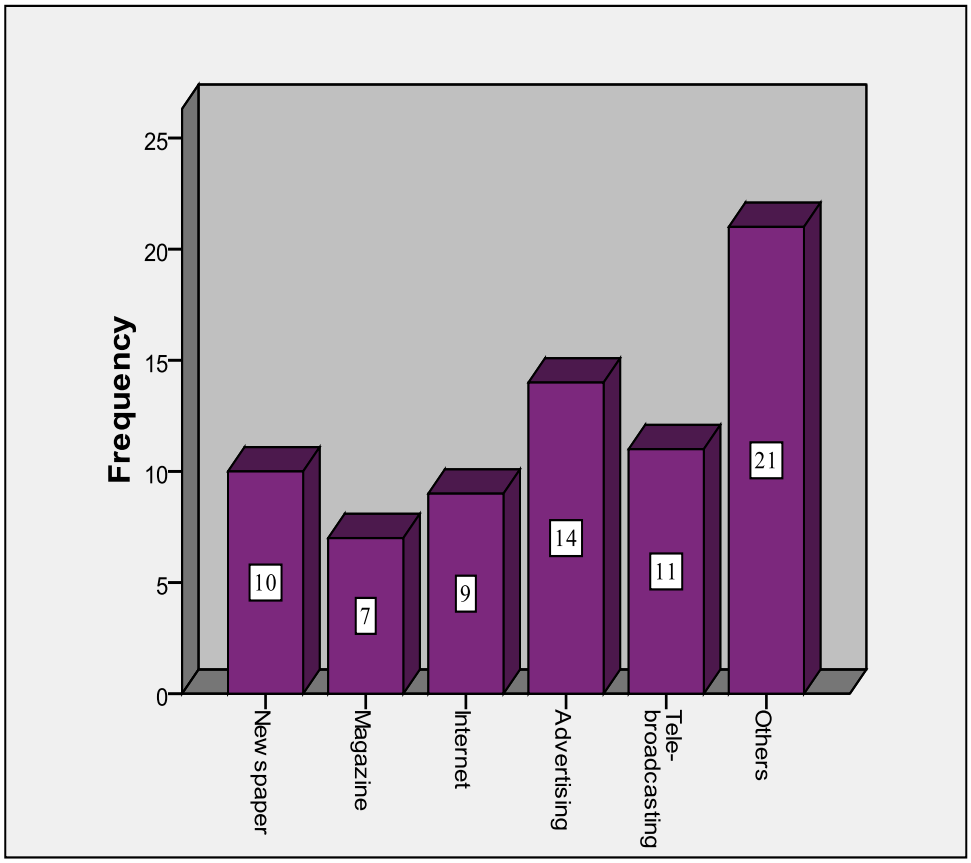
consumption of energy and started to seek for solutions in solving such problem. There are 5 percent of the respondent is no familiar or not aware of the Green Technology at all in Gemas Bahru which is a small portion of the overall.

Table 4.8: The source to know about Green Technology

Source to know about Green Technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Newspaper	10	13.9	13.9	13.9
	Magazine	7	9.7	9.7	23.6
	Internet	9	12.5	12.5	36.1
	Advertising	14	19.4	19.4	55.6
	Tele-broadcasting	11	15.3	15.3	70.8
	Others	21	29.2	29.2	100.0
	Total	72	100.0	100.0	

Figure 4.8: The source to know about Green Technology



The graph above shows the sources where the respondents to get to know about Green Technology in Gemas Bahru. From the graph shown, there are 5 sources provided for the respondents to select for the source of getting the Green Technology information. There are newspaper, magazine, internet, advertising, tele-broadcasting and others. In generally, there are about 30 percent which is 21 of the respondents are included in the categories of others sources in getting the Green Technology information. Most of the respondents in this group gave feedback by saying that they received information through the verbal communication between the villager, seller, supplier and contractor, and promoter in supermarket. This is proven that the spirit of the Chinese New Village is maintained until today where the verbal communication is emphasised the most and they share anything including Green Technology

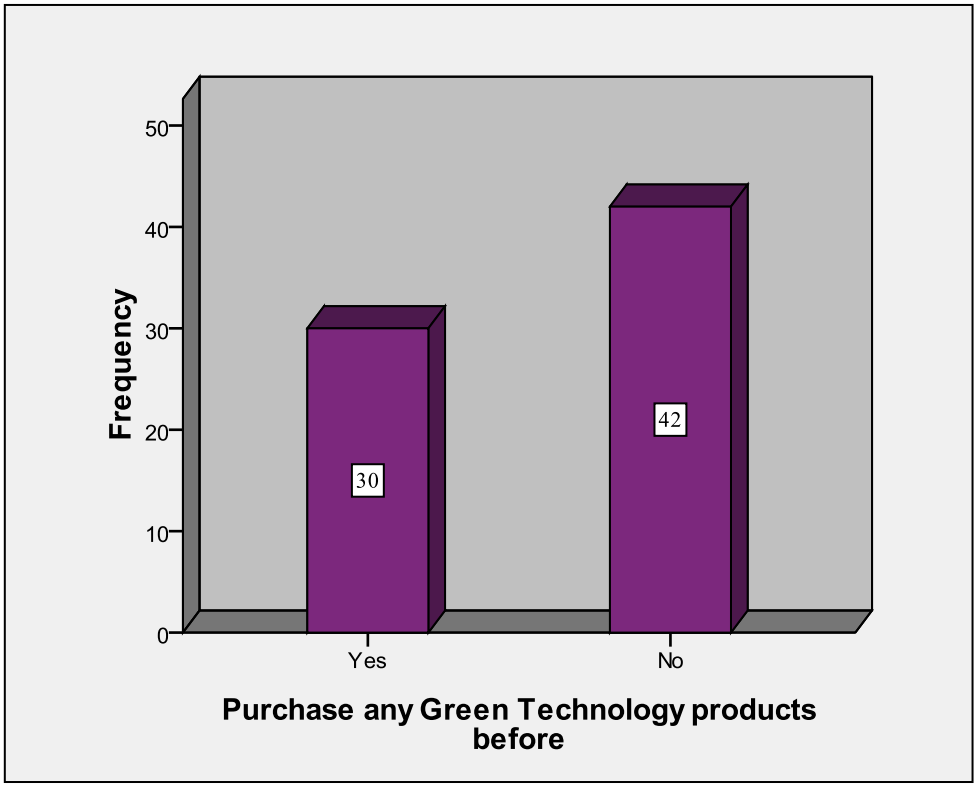
information. Besides that, the advertising is the second medium to pass the Green Technology information to the villagers. The advertising occupied 19.4 percent which is 11 respondents. From the survey, we found that there are least villagers getting the Green Technology information through the magazine which is only 9.7 percent with 7 person of respondent. The main reason magazine is the lowest source of information spread is due to the location of the village is far away from the urban area and lack of demand and wholesaler which may cause the supplier refuse to send the latest magazine to Gemas Bahru.

Table 4.9: Purchase any Green Technology products before

Purchase any Green Technology products before

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	30	41.7	41.7	41.7
	No	42	58.3	58.3	100.0
	Total	72	100.0	100.0	

Figure 4.9: Purchase any Green Technology products before



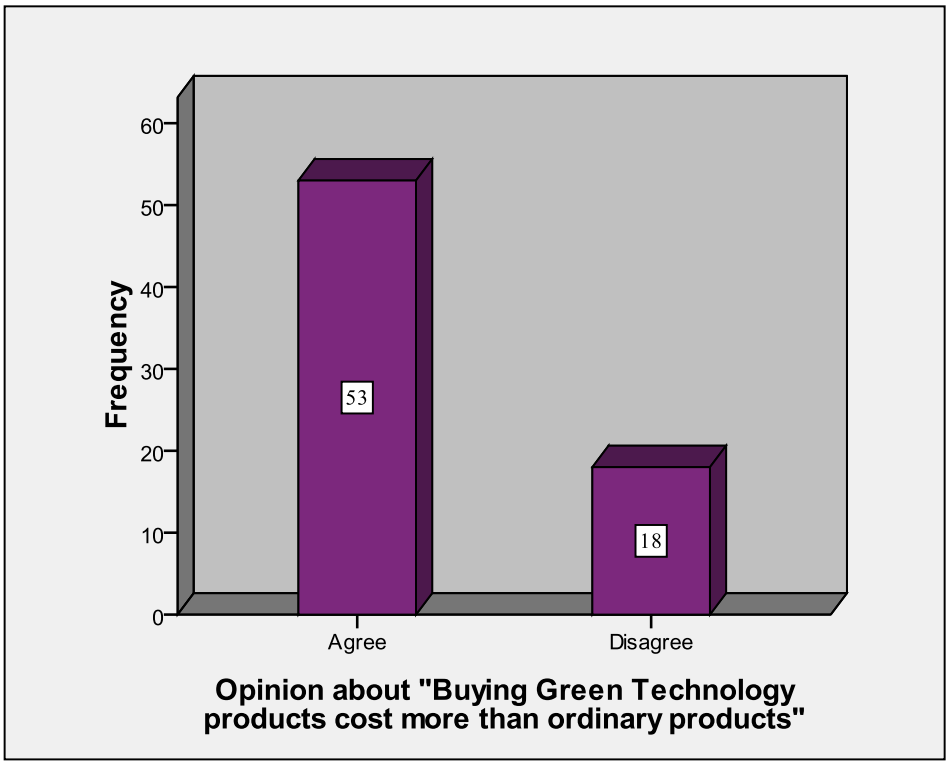
The graph explains about whether the respondents ever purchase any Green Technology products before. Although there are 93.1 percent of the respondents understand the Green Technology in many different concepts, but the survey shows that the level of application of Green Technology in their daily life is 41.7 percent which is 30 of the respondents. There are 42 people who never purchase for the Green Technology appliances before. This situation may relate to the attitude of the local resident due to their age and education level. Most of the villagers grown at Gemas Bahru stayed there for long time which never contacted with latest technology. Therefore, parts of the elders in the village refuse to implement the latest technology but continue with their traditional method.

Table 4.10: Opinion about "buying Green Technology products cost more than ordinary products"

Opinion about "Buying Green Technology products cost more than ordinary products"

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	53	73.6	74.6	74.6
	Disagree	18	25.0	25.4	100.0
	Total	71	98.6	100.0	
Missing	3	1	1.4		
Total		72	100.0		

Figure 4.10: Opinion about "buying Green Technology products cost more than ordinary products"



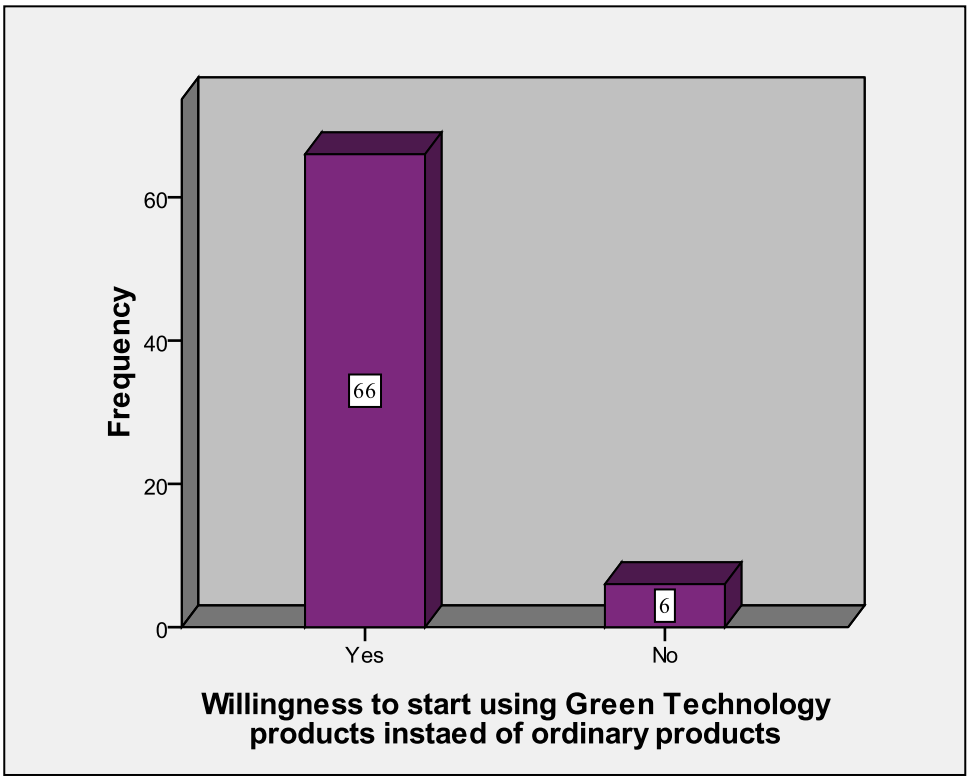
The graph applied above is responded to the question what is the respondents' opinion about "Buying Green Technology products cost more than ordinary products". In general, the pricing of household appliances with the Green Technology feature is an interesting factor to be investigated for smart consumers before buying any product in the market. According to the graph, there are 53 respondents which is 73.6 percent agreed with the statement saying the household appliances with Green Technology feature is more expensive than the ordinary appliances. On the other hand, there are 25 percent respondents disagree with the statement by saying that the household appliance with the Green Technology feature has the same or lower price compared to the ordinary product. There are only one respondent refuse to choose any answer from the survey and create an empty space in the analysis with the percentage of 1.4. The respondent in his opinion, says that he never purchase for any household appliances with Green Technology feature and does not know what the actual pricing compare to the ordinary appliances is.

Table 4.11: Willingness to start using green technology products instead of ordinary products

Willingness to start using Green Technology products instaed of ordinary products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	66	91.7	91.7	91.7
	No	6	8.3	8.3	100.0
	Total	72	100.0	100.0	

Figure 4.11: Willingness to start using green technology products instead of ordinary products



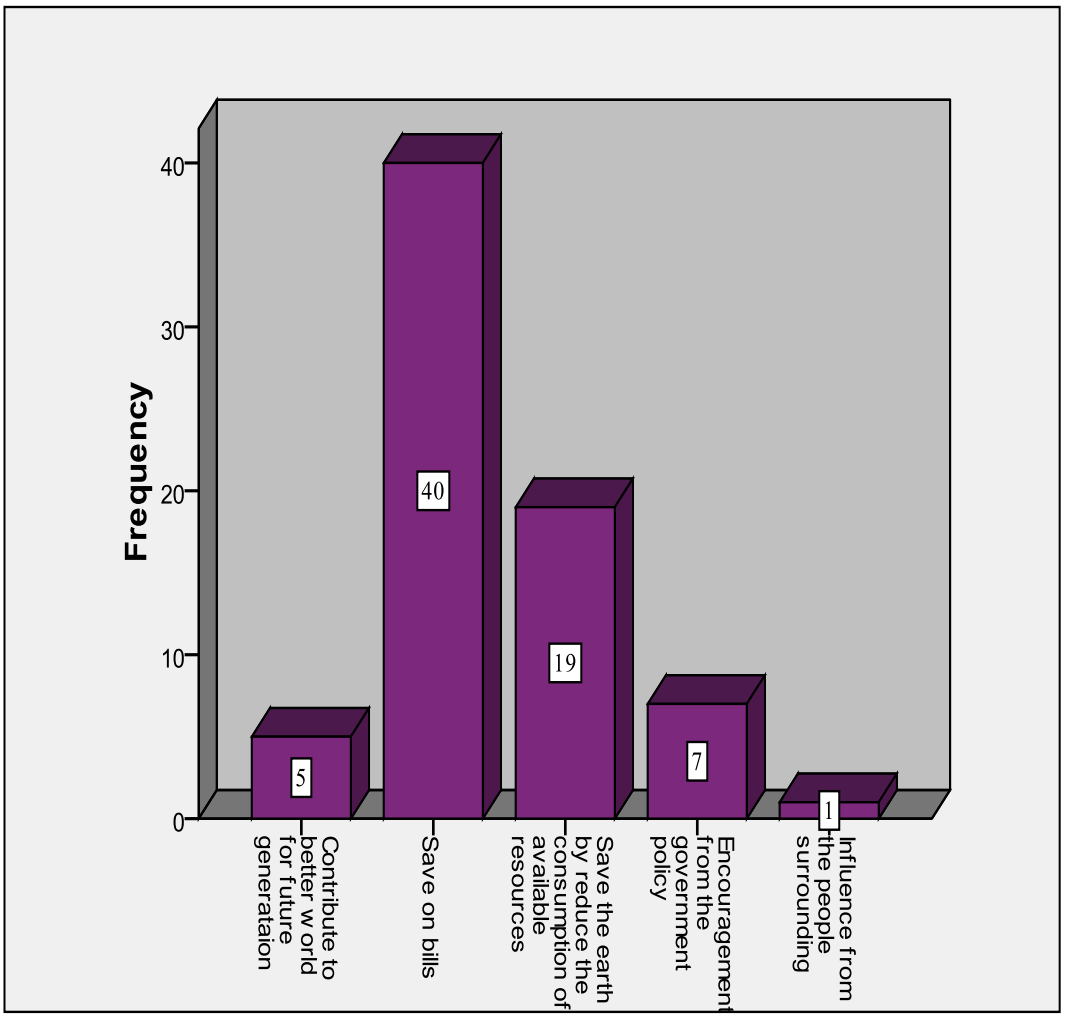
The graph above is responded to the question the respondents' willingness to start using Green Technology products instead of ordinary products. Almost majority of the villagers are willing to start using the Green Technology product. There are 66 respondents, 91.7 percent is willing to start using the Green Technology products. However, there are 6 respondents, 8.3 percent is not willing to start to use the Green Technology products in their daily life due to the factor like their conservative thought which feel uncomfortable in trying the strange technology and the pricing of the Green Technology because they scared they paid more for something that not worth on it.

Table 4.12: Reason to change to Green Technology Product

Reason to change to Green Technology Products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Contribute to better world for future generataion	5	6.9	6.9	6.9
	Save on bills	40	55.6	55.6	62.5
	Save the earth by reduce the consumption of available resources	19	26.4	26.4	88.9
	Encouragement from the government policy	7	9.7	9.7	98.6
	Influence from the people surrounding	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

Figure 4.12: Reason to change to Green Technology Product



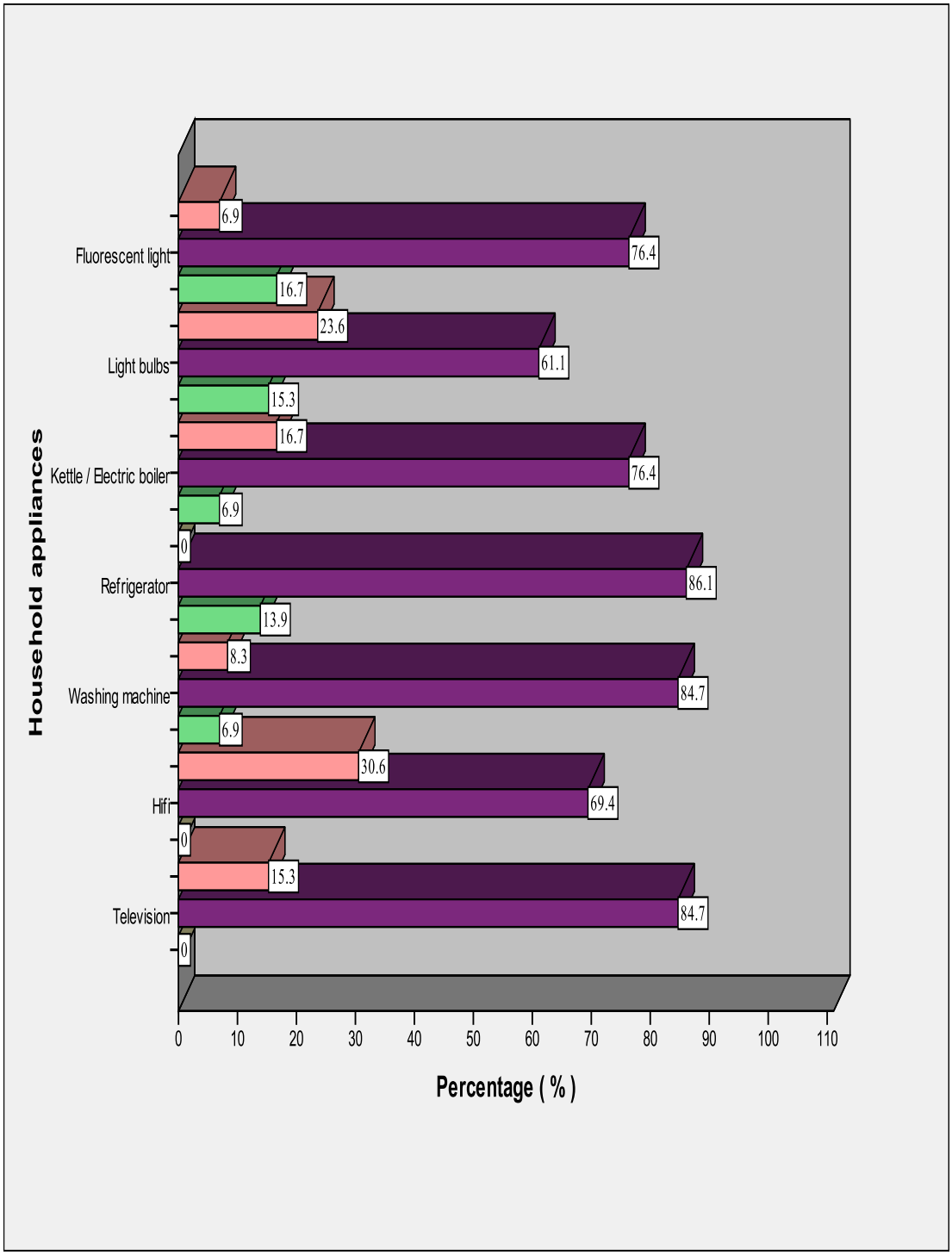
The graph above shows reasons to change to Green Technology products, answered by the respondents. There are 5 main reasons given to the respondents to select for the reasons of the respondents to change to use the Green Technology product in the future. Among all the reason, save on bills has the highest frequency for the reason of the respondents changed to the Green Technology product in the future. There are 55.6 percent which is more than half of the respondent select for this reason. Besides that, there are 19 people, 26.4 percent respondent will change to Green Technology product due to the Green Technology will save the Earth by reducing energy consumption. This again proves that the local villagers are facing

the problem in high consumption of the electricity. Then, it was continue with the encouragement from the government policy, 9.7percent, contribution to better world for future generation,6.9 percent, and influence from the people surrounding, 1.4 percent.

4.4 Home appliances audit

In this section, the respondents are asked to list all the household appliances in their house and clearly state which type of appliances with Green Technology feature. Generally, the usage of the household appliance and the adoption of the Green Technology product can probably expect the level of implementation of the Green Technology in Gemas Bahru.

Figure 4.13: Household appliances of Gemas Bahru resident



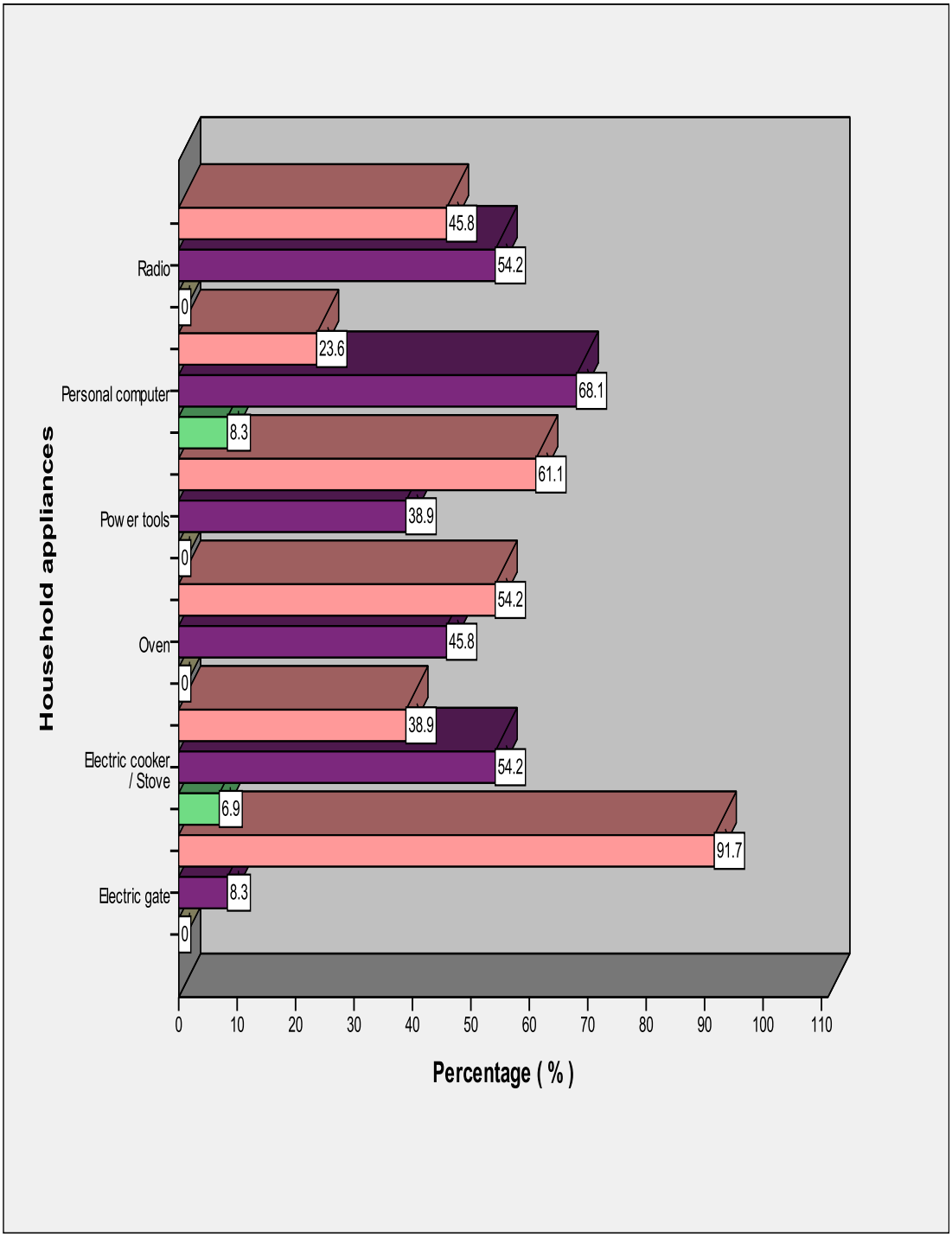
Agenda:

Does not own such appliances

Own the appliances without green feature

Own the appliances with green feature

Figure 4.14: Household appliances of Gemas Bahru resident



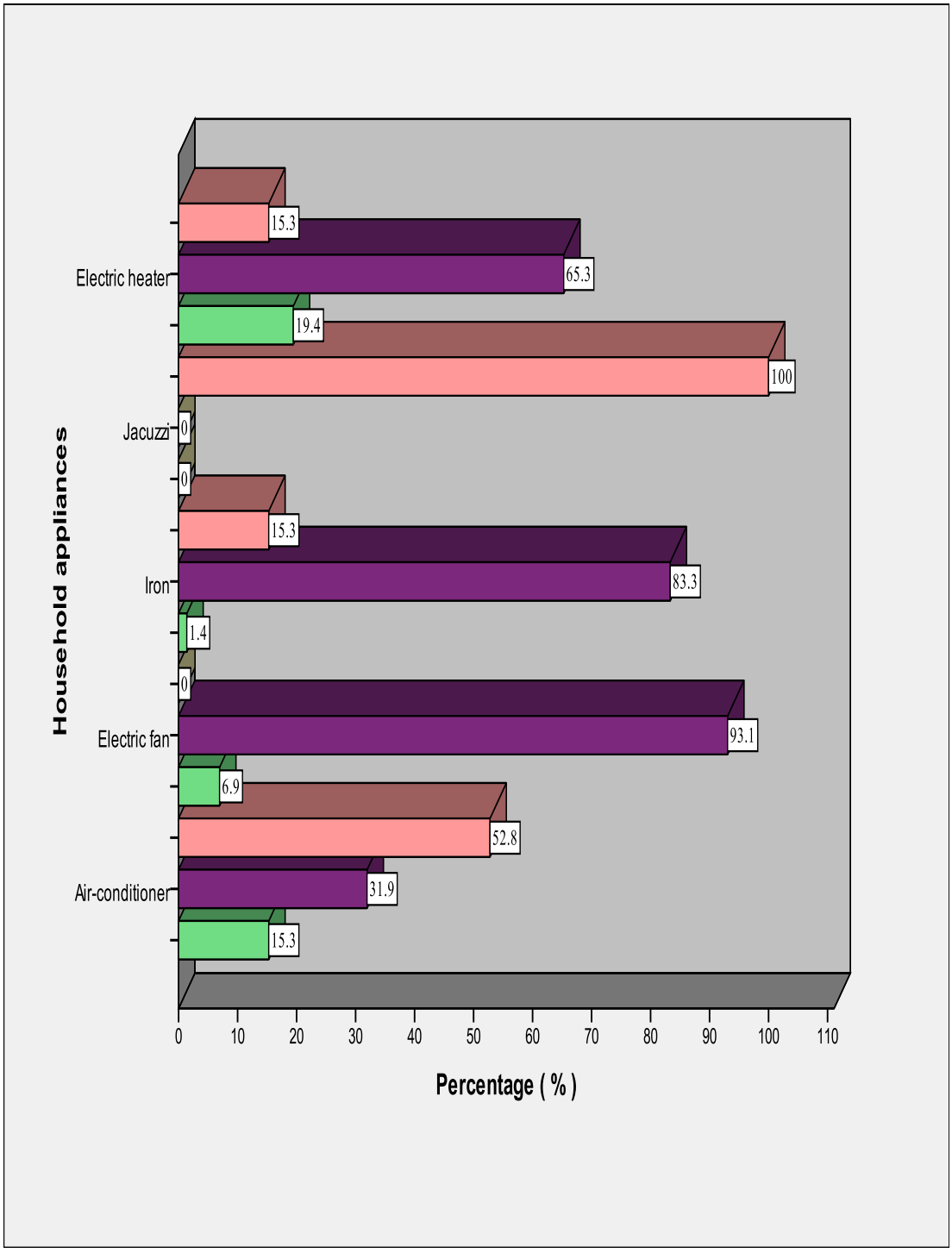
Agenda:

Does not own such appliances

Own the appliances without green feature

Own the appliances with green feature

Figure 4.15: Household appliances of Gemas Bahru resident



Agenda:

Does not own such appliances

Own the appliances without green feature

Own the appliances with green feature

According to the graphs above show the appliances that implement by the resident in Gemas Bahru. In generally there are 16 appliances is provided for the respondent to respond for it and there are 3 selection which is no such appliances in house, have such electrical appliances but no green feature on it, and have such electrical appliances with green feature for each appliances.

Among the electrical appliances, refrigerator and the electrical fan is the most popular in respondent house with the 100 percentage of having by the villager. In other word, there is at least one refrigerator and electrical fan could be found in each house in Gemas Bahru. Out of 72 refrigerator from the respondent, there are only 10 refrigerator is having green feature which is only 13.9 percent. For the electrical fan, there are only 5 percent of the respondent having the green feature electrical fan. There are 93.1 percent of the respondent having the fluorescent light inside their house where 76.4 percent of the respondent still having the light bulk in their house. The light bulk purchase and used by the resident are generally separated into 2 type which is the modern and the traditional type. In fluorescent light, there are only 12 person from the 67 respondent was used the green feature fluorescent light. For the light bulk, there are 11 respondent was used the green feature light bulk and all of them was used the modern energy save light bulb. For washing machine, there are 91.7 percent of the respondent is own a washing machine in their house and only 6.9 percent of the resident is currently using the green product. The main reason given by the resident is the source of provided such green feature electrical appliances are lack of promotion and advertisement in the whole sale shop. The promotion and recommendation of the green product from the promoter was playing an important role. It was indirectly influence the green product purchasing rate. Among all the

appliances, electric heater having the highest green feature rate which is 20.8percent, 15 respondents out of 61 respondents.

There are 83.3 percent of the respondents own a kettle in their home and only 5 respondents are using the green feature kettle. There are 84.7 percent of the respondents own an iron in their house and one respondent is using the green feature iron. Other than that, there are 55 respondents own a personal computer and only 6 respondents or 8.3 percent is using the personal computer with green feature. For electric cooker, there are only 44 respondents own these electrical appliances. In the other word, there are 28 respondents still using the traditional cooker like gas cooker or even using the charcoal cooker. For air conditioner, there are 34 respondents own air-conditioner and 11 out of 34 respondents are using the green feature air-conditioner. This is a high percentage of green feature implementation, not just explain by saying that the air-conditioner is general with the energy saving feature due to the high consuming in electricity. From the survey, some of the electric appliances owned by the villagers are not green featured at all. For example, 50 respondents owned Hi-Fi, 61 respondents owned television, 39 respondents owned radio, 28 respondents owned power tools, 33 respondents owned oven, and 6 respondents own electric gate. Among the entire respondents, Jacuzzi is the only electric appliance which is not owned by any villagers.

From the analysis, we found that the performance of implementation of Green Technology in purchasing green feature appliances in Gemas Bahru is relatively poor. Although there are 91.7 percent of the respondents are willing to purchase or own a green product but the level of implementation of the green product is significant low.

Part of the reason is they refuse to waste a lot of money in replacing the electrical appliances used by them which are still in function, the reason may due to their education level which cannot accept, understand or practise such high advance technology, it can see through the data where the high advance electrical appliances owned by the respondents are low, example 69.4 percent for Hi-Fi, 38.9 percent for power tools, 45.8 percent for oven, 8.3 percent for electric gate, 0 percent for Jacuzzi, 47.2 percent for air-conditioner, 76.4 percent for personal computer. Other than that, the misunderstood concept of the green product, such as the high expenses pricing which this might lead to the reduction of usage rate. The goodwill of the company who discover green product also plays an important role, it determines the level of the reliable of the purchaser toward their latest product which never try before.

4.5 Implementation & the way forward of Green Technology in Chinese New Villages

This is the last section of the survey which is used to investigate the level of implementation of the Green Technology in the respondents' daily life rather than purchasing the Green Technology product. Green Technology is involved in very wide sector and it was closely related to our daily life. Therefore, the implementation of Green Technology of respondents in daily life is important to figure out. Besides that, throughout this survey, we can understand the level of the success of the policy that carries by the government in this few years. The questions under this section included the level of releasing of nearby recycle centre, level of participation in recycle campaign activities, practising waste classification in own house,

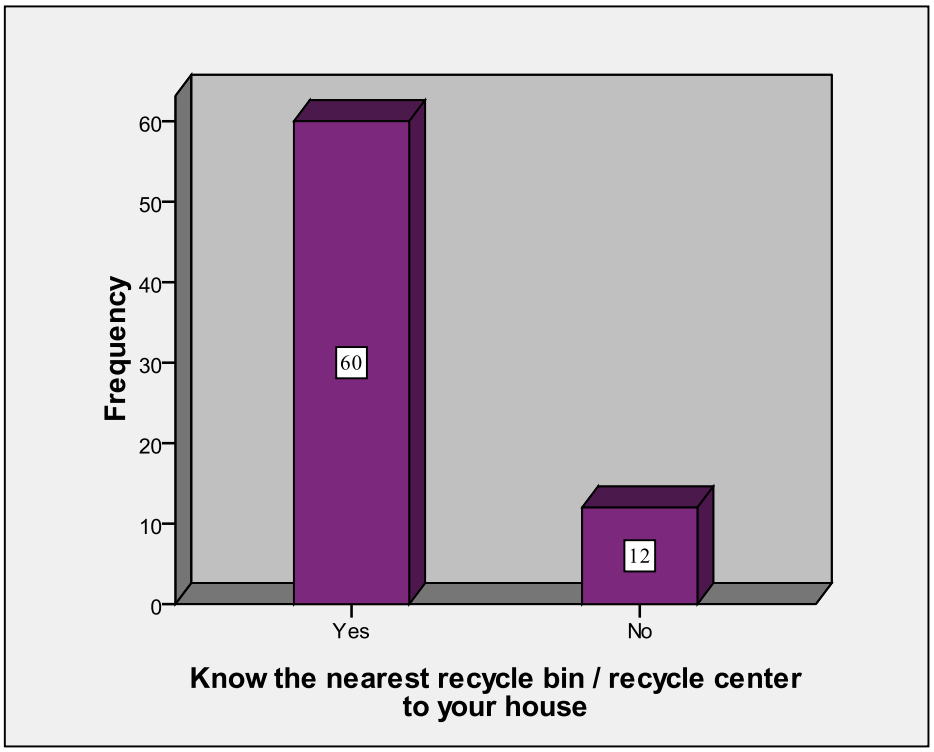
involvement in the no plastic day in every Saturday, practising reproduction of waste food, the criteria consider during purchasing household appliances, and the future plan for increase the level of implementation of Green Technology.

Table 4.13: Realize the location of the nearest recycle bins as well as recycle centre

Know the nearest recycle bin / recycle center to your house

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	60	83.3	83.3	83.3
	No	12	16.7	16.7	100.0
	Total	72	100.0	100.0	

Figure 4.16: Realize the location of the nearest recycle bins as well as recycle centre



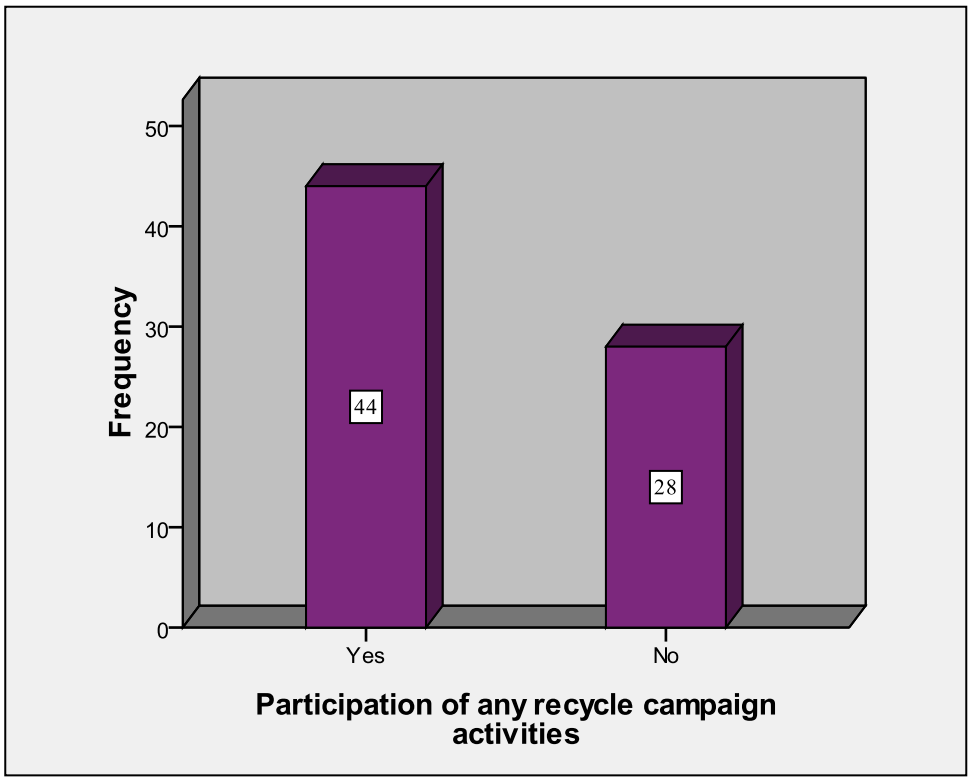
The graph explains do the respondents know the nearest recycle bin/ recycle centre to their house. According to the graph above, there are 60 respondents realised the nearest recycle bin as well as recycle centre from their house. This is also equivalent to 83.3 percent of the respondent which consider as a high proportion on this side. This data was shown the 3-R campaign (Reduce, Recycle, and Reused) was a success in terms of the implementation of the villagers. On the other word, the commitment of the villagers in the government policy is very high among Gemas Bahru villagers. However, there are only 16.7 percent respondents not realised the location of the nearest recycle centre to their house due to the location and distance where they live.

Table 4.14: Participation of recycle campaign activities

Participation of any recycle campaign activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	44	61.1	61.1	61.1
	No	28	38.9	38.9	100.0
	Total	72	100.0	100.0	

Figure 4.17: Participation of recycle campaign activities



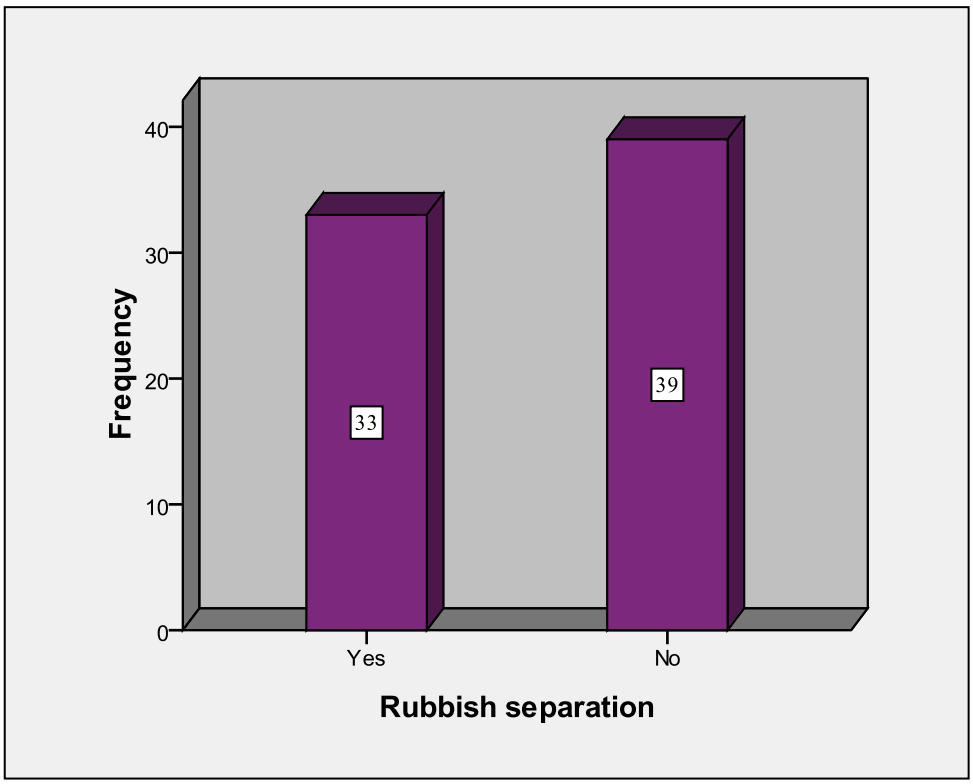
The graph above shows the participation of any recycle campaign activities in Gemas Bahru. From the graph above, there are 44 respondents, which is 61.1 percent of the respondents had participated at least once for the recycle campaign activities compare to the 38.9 percent of respondent who never participate for any recycle campaign activities. It shows the unawareness of the activities launched by the government or private sectors are quite high. The sectors authorized could have advertised more or informed them through verbal communication in order to increase the participation of the villagers in any recycle campaign activities in the future.

Table 4.15: Practising separation of rubbish

Rubbish separation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	45.8	45.8	45.8
	No	39	54.2	54.2	100.0
	Total	72	100.0	100.0	

Figure 4.18: Practising separation of rubbish



The graph is responded to the rubbish separation understandings in this Chinese Village. In general, there are 33 out of 72 respondents which is 45.8 percent of the overall is practising rubbish separation in their daily life. The materials to be

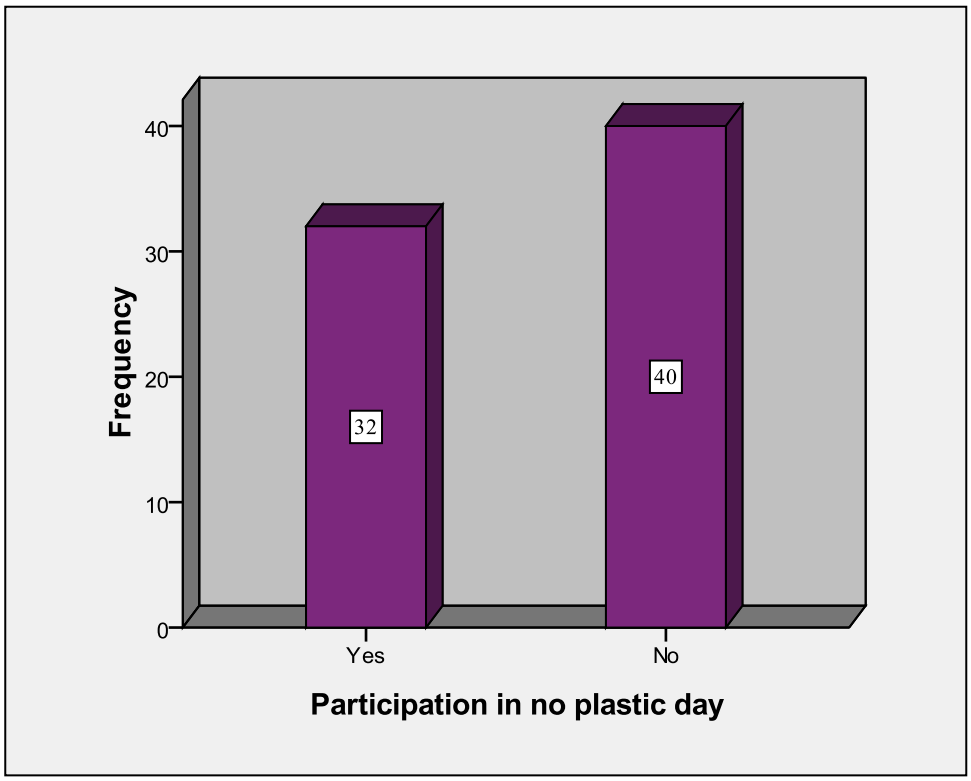
separated are the materials which can be use for recycle use like paper, plastic, metal and glass. There are 54.2 percent of the respondent does not practise rubbish separation in their daily life because of their further understanding in the benefits of rubbish separation. If we could change another way to explain to them, for the recycled goods we can sell them or reused them in different purpose, we can get a little profit return. The respondents especially those who are elder would understand the condition, and in return, the awareness in rubbish separation would increased.

Table 4.16: Participate in no plastic day

Participation in no plastic day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	32	44.4	44.4	44.4
	No	40	55.6	55.6	100.0
	Total	72	100.0	100.0	

Figure 4.19: Participate in no plastic day



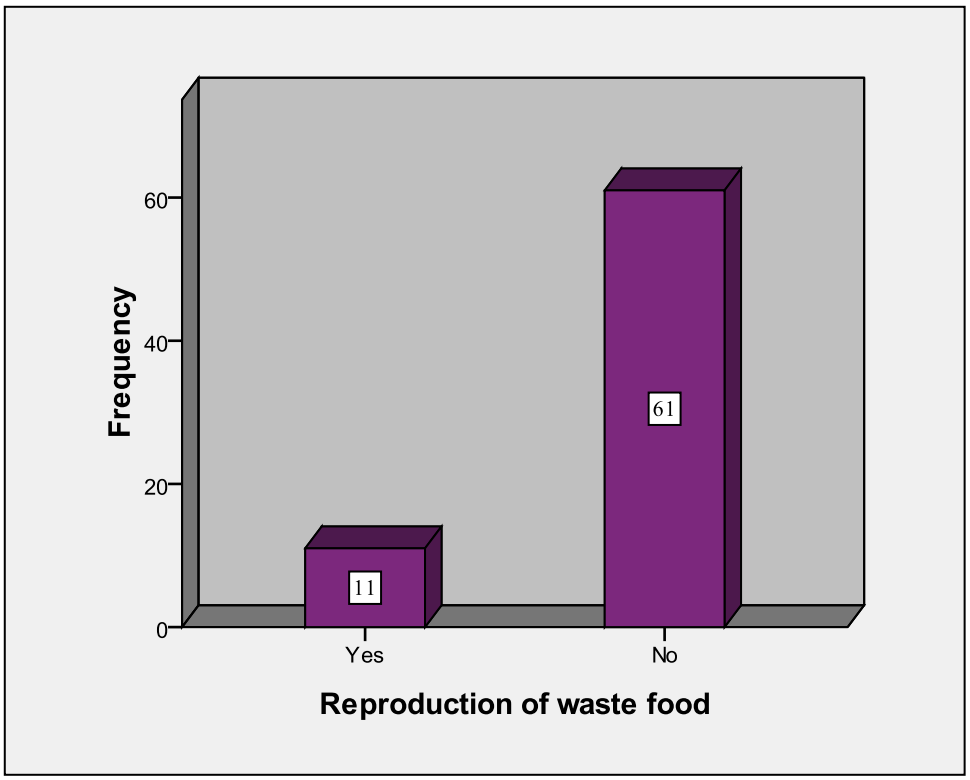
The graph shows the participation in no plastic day in Gemas Bahru. In the graph, we could see that there are only 44.4 percent of respondents will participate in the government policy, no plastic day which encourage the purchasers to bring their own recycle bags during their shopping. However, there are 40 respondents, 55.6 percent of the respondent does not participate the no plastic day. The awareness in reducing the usage of plastic bag is not as expected, as for some rural areas, they will think of using plastic bag as a subsidy for purchasing recycle plastic bags. Also, they are still not used to bring the recycle bag, they rather pay another RM 0.20 (depends on the supermarket/ hypermarket policy) than carrying the recycle bag and forgot where they have placed it. The government should increase the awareness in rural areas if they want to succeed in the implementation of Green Technology.

Table 4.17: Practising reproduction of waste food

Reproduction of waste food

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	11	15.3	15.3	15.3
	No	61	84.7	84.7	100.0
	Total	72	100.0	100.0	

Figure 4.20: Practising reproduction of waste food



The graph above shows the reproduction of waste food in Gemas Bahru, answered by the respondents. According to the graph above shown, the majority of the respondents do no practise for the reproduction of waste food. The difference

between both answers is significant. There are 61 respondents, 84.7 percent does not practise for the reproduction of waste food and only 11 respondents, 15.3 percent who practise for the waste food reproduction. In order word, most of the villagers in Gemas Bahru are no practising for such waste food reproduction culture because most of the waste food will use to feed their animals like chicken, cat, dog and others. In the meantime, they don't understand what reproduction of waste food is, from this point, we could understands that, the government had spent the least effort in informing the public what reproduction of waste food is and what is the benefit.

Table 4.18: Factor to be consider during purchase for electric appliances

	Level of Importance				
	Least	Less	Average	More	Most
Durability	1.4	2.8	15.3	34.7	45.8
Cost/Maintenance Fee	0.0	6.9	30.6	40.3	22.2
Aesthetic (Design)	8.3	0.0	61.1	22.2	8.3
User Friendly	6.9	8.3	15.3	30.6	38.9
Multi-functionality	0.0	1.4	22.2	37.5	38.9

From the table, there are 5 factor provided to the respondents to select for the factor to be consider during purchasing for the household appliances. There are 45.8 percent of the respondent had the opinion that the durability is the most important to be consider. There is 1.4 percent of the respondent feel that the durability not an important factor to be considers. In life cycle costing, most of the respondents, 40.3 percent had the opinion that it was a second important in factor to be consider. There are no respondent feel that the maintenances fee is the least importance for

consideration. The majority of the respondents, 61.1 percent had the opinion that the aesthetic of the household appliances is an average factor to be considered. For the factor of user friendly, there are 38.9 percent of the respondents had the opinion that it was a most important factor to be considered. There are 6.9 percent of respondent feel that the user friendly is the factor that least important to them. For the multi-functionality factor, the highest rank is 38.9 respondents had the opinion that it was a most important factor to be considered and no respondent feel that multi-functionality is a least important factor to be considered.

Among 5 factor, durability, maintenance fees, aesthetic ,user friendly, and multi-functionality, the respondent find that the most important factor to be consider before purchasing for a electrical appliances is durability. The main reason for this situation is to avoid purchase for the same household appliances frequently due to the durability problem. The last factor that least considers by the respondent is the aesthetic value of the household appliances. According to the respondent, the appliances they required was those more practical rather than those had the high aesthetic value. They are not willing to spend more to increase the aesthetic value where it was not useful in the conceptual thinking.

Table 4.19: Priority of activities to save the earth

Methods	Priority Level				
	Last	Fourth	Third	Second	First
Purchasing Green Technology product	20.8	15.3	25.0	23.6	15.3
Reduce the usage of high energy product	8.3	19.4	12.5	34.7	25.0
Recycle and Reuse waste	0.0	19.4	20.8	26.4	33.3
Recommend the green products to other people	29.2	11.1	38.9	2.8	18.1
Attend talk and campaign about Green Technology	41.7	34.7	2.8	12.5	8.3

Under the phase of "Saving the Earth is a Responsibility of all Human Nature in this planet", the respondents were required to choose for the priority of the activities given. The activities given are purchasing Green Technology, reduce the usage of high energy product, recycle and reuse waste, recommend the green products to people and attend talk and campaign about green technology. Among the activities, the respondents had the opinion that the recycle and reuse of the waste is the most important activities to do in order to save the Earth. There are 33.3 percent of the respondents choose as a first priority and 26.4 percent of respondent was select as second priority. The main reason of this situation is due to the conceptual thinking of the villager, they feel that recycle and reused is a type of saving virtue where should be practiced by human. This can be related to their historical background from the poor community and their own experience which may form this saving virtue. On the other hand, there are 41.7percent of the respondent had the opinion that attending talk and campaign about Green Technology was the last priority

compare to others. The reason behind this is due to their education level is low with most of the respondent is illiteracy and they were no understood or no idea toward such talk given to them in the language which not favored to them. It was a difficult task to conduct the talk or campaign in several languages which can suit to the local communities. In additional, the respondent more favored to self participate in those activities is required high commitment compare to attend the talk which is an empty talk in the respondent point of view.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

From the study and the primary data collected, the awareness and implementation of the Green Technology is relatively low. The maximum implementation of the green product is just approximate 20 percent of the total respondents. This data show the level of the implementation by purchasing Green Technology is still in the infant stage which a lot of opportunities to improve can be make. For the level of implementation of the Green Technology in the daily activities have the better result compare to the purchasing the green product. In general there are 40 percent of the respondents are implemented in the Green Technology during their daily activities, where the majority of 60 percent is no implemented in the Green Technology.

The study concludes the lack of awareness of the villagers which may lead by their education level and their attitude toward the strangers and acceptation in new technology. These has direct and indirectly influenced the villagers to accept the latest technology which may new for them. Other than that, the low level in education of the resident may cause them difficulties to start in implementation although they are willing to start to implementation of Green Technology. Besides that, the misunderstanding or confused in point of view in the appliances pricing and the high technical skill required to operating the Green Technology appliances may become part of the barriers for them to implement in Green Technology.

The study suggested that the low level of awareness and implementation of Green Technology was not the default from the villagers but this is a matter which must be shared from all related parties. The media should spread the Green Technology information more frequent to increase the awareness for the entire society from urban and also rural area. Besides that, the government can organise a department to handle and improve the level of awareness and implementation of Green Technology in rural area especially in Chinese New Village. In additional, government can give subsidy or award to those who implement high level of Green Technology in their sector. In the education sector, they can make sure that the knowledge of the impact of the human activities to the environment and the way to solve this problem is compulsory and make sure the entire student is master the knowledge which may increase the awareness of Green Technology.

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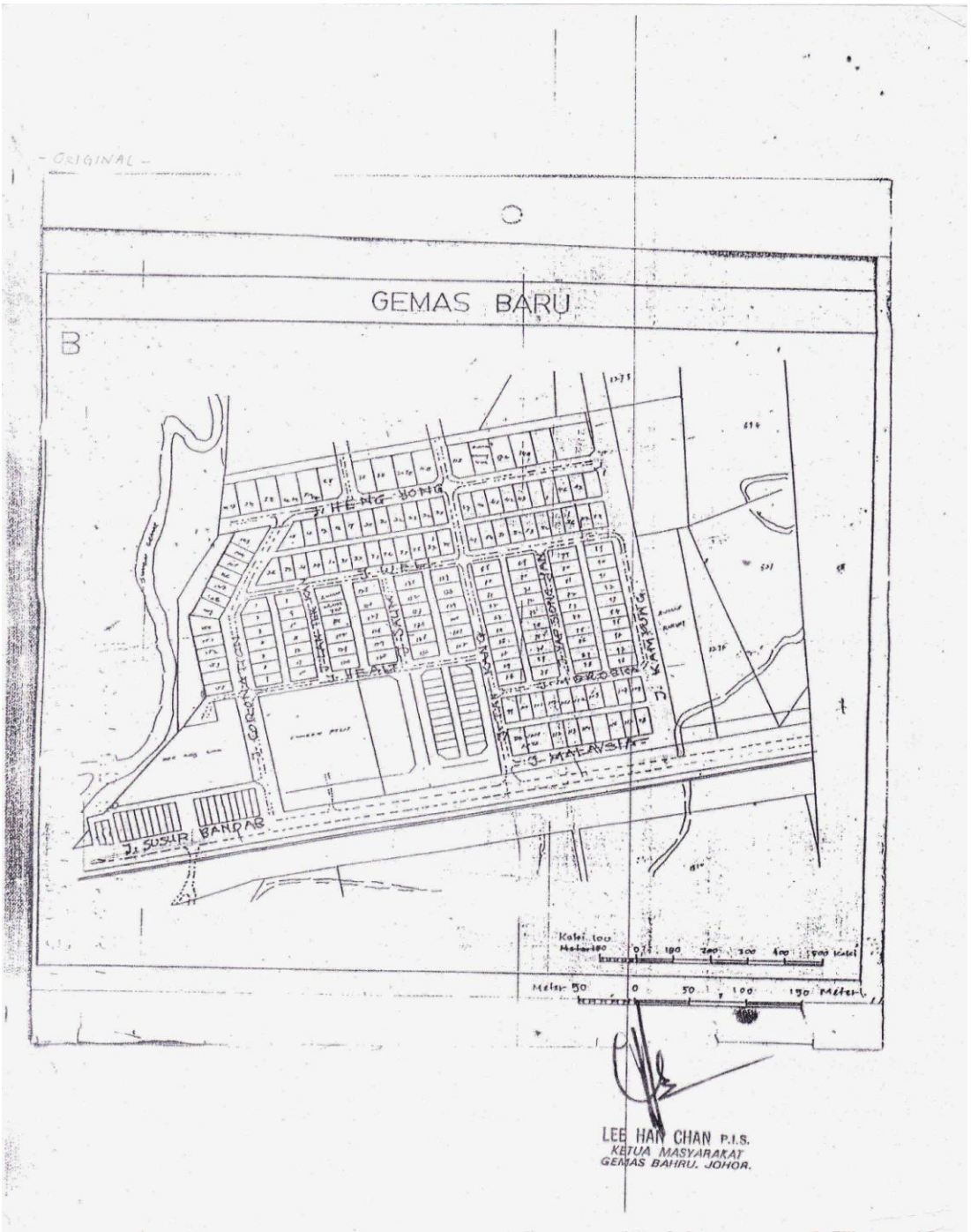
APPENDICES

APPENDIX A: Gemas Bahru map



APPENDIX B: Sample of Questionnaire

APPENDIX C: Gemas Bahru








APPENDIX D: Gemas Bahru