

CHAPTER 9: DISCUSSION

This chapter integrates and reviews the main findings from the three research methods - site observations, questionnaire survey and interviews combined as triangulation, and also aims to contribute to an understanding of the data derived from each method. It provides answers to the research questions set out in Chapter 1, which form the structure for this discussion chapter. For ease of reference, each research question is repeated (in italics) before the section heading of the findings to which the question refers. The chapter highlights the most important and interesting findings from the research and demonstrates their interrelation with some of the relevant literature. The chapter also analyses the effects of age, gender and ethnicity on the issues covered by each heading.

Research Q1 – Who uses the recreational forests in Malaysia?

9.1 Typology of Recreational Forests Users

The typology of users in this section summarises and integrates the research findings from the site observations, questionnaire, and interviews. Where the results under discussion are not derived from all three methods, it is explicitly stated. For example, most (more than 50%) of the respondents in the questionnaire indicated that they had previously lived in a rural area. Although this study did not test the relationship between users brought up in a rural area and forest use, based on the qualitative findings, there is likelihood that many forest users feel an attachment to the recreational forests due to their childhood experiences in rural settings.

This study aims to give an overall picture of the types of people who generally use recreational forests in Malaysia and what they generally do in the forests. The more unusual users and their activities are not included in the typology but are referred to elsewhere, either in the chapters which present the results (Chapters 6, 7 and 8) or later in this chapter. To some extent, this section overlaps with other discussions in later sections. This is inevitable as it is necessary to knit and combine data to give a holistic view of users in the

typology. The typology of users is followed by a more detailed description of the users and their activities.

Table 9.1 Typology of recreational forest users

Type of users	Ethnicity	Age	Social preference	Time of arrival	Length of stay	Type of Activities
Students	Malays	19-25	Friends, and groups/club	Starting from morning (9.00 am - 11.00 am)	More than 4 hours	Swimming, barbecue/picnicking, taking photographs
Working adults	Chinese	26-35	Work colleagues/friends	Starting from morning (9.00 am onwards)	3 to 4 hours	Swimming and picnicking
Working families	Chinese	26-55	Parents, children and other family member(s)	Morning (9.00 am - 11.00 am)	1 to 2 hours	Exercising together, such as jogging
	Malays/Indians	26-55	Parents, children and other family member(s)	Morning and late afternoon (3.00 pm - 6.00 pm)	3 to 4 hours	Swimming and picnicking
Adult male professionals	Malays/Chinese	36-55	Alone	Early morning (6.00 am - 8.00 am)	3 to 4 hours	Bird watching and taking photographs of birds
Retirees	Indians/Chinese	Over 55	Friends/spouse	Early morning (6.00 am - 8.00 am)	Less than 30 minutes/ An hour	Exercising (jogging, brisk walking), strolling

The typology summarised in Table 9.1, is a synthesis of observations, questionnaire data and also interviews, showing that there are five broad types of recreational forest users: students, working adults, working families, adult male professionals, and retirees. To the author's knowledge, this is the first study highlighting a typology of recreational forest users in Selangor state, derived from both quantitative and qualitative results, based on ethnicity, age, social preference, time, length of stay and type of activities engaged in. This typology is different from Lee's (2001) in the sense that he categorised four types of forest and woodland users based on activities ("dog walkers", "day visitors", "forest enthusiasts" and "sport enthusiasts"). On the other hand, this study categorises type of users based on their employment status. Students were

mostly observed at Kanching Recreational Forest and retirees were mostly at Ampang Recreational Forest. This may relate to the physical characteristics of both recreational forests, such as in Kanching Recreational Forest, they could venture deeper into the forest. In general, the results indicated that few unemployed people use the recreational forests as frequently the typical user groups described in the typology. This may have been influenced by the entrance fee that needs to be paid by people who visit the recreational forests. This will be discussed in the last paragraph of this section.

Based on the observations and questionnaire results, the students are usually single, whether male and female, mostly from a Malay ethnic background, aged 19 to 25 years, and they like to visit the forest with friends or club members. This finding has similarities to the findings from the Bammel and Burrus-Bammel study (1982) which indicated that people in their late adolescence and early twenties socialise more closely with their peers as opposed to with their families. In the current study, most of them engaged in swimming and having barbecues or picnicking, as opposed to exercise-related activities such as jogging. For this younger user group, it is assumed that the recreational forest functions as a social medium to gather with friends and also as a place to escape from home or study. Those who visited as club groups liked to have barbecues and to take group photographs. Compared with other user groups they were less likely to take photographs of scenic views. Those who came in smaller groups (for example, about four people) preferred to buy food and drinks from stalls near the forest entrance rather than to bring their own food. In the recreational forest, this user group enjoyed informal club activities and playful activities with friends, such as laughing and teasing each other whilst swimming. Some young men enjoyed performing actions and showing off by jumping into the river. Others flirted with members of the opposite sex, away from their parents' control and study concerns. They arrived at any time during the day, from 9.00 am onwards, and they liked to stay for more than four hours.

According to the interviews, working Chinese adults, both males and females, aged from 26 to 35, like to visit either with friends or work colleagues. They visit from 9.00 am onwards and stay about three to four hours, engaging in

swimming and picnicking activities. They use the recreational forest to strengthen bonds with their friends or work colleagues, and to escape from work stress. This may infer that swimming is a cultural recreational activity by Malaysians who visit recreational forests.

Working families come from all three ethnic backgrounds. The adult family members are aged between 26 and 55 years. These groups consist of spouses, children and other family members. They like to visit either during the morning (9.00 am - 11.00 am), or in the late afternoon (3.00 pm - 6.00 pm). This group usually stays for about three to four hours. The activities preferred by Malays and Indians are swimming and picnicking. The women like to engage in sitting, observing or preparing food. Women in this study seem to enjoy entertaining their family's needs and to engage in passive activities (such as observing nature or family members) even in the recreational forests. This finding is consistent with Loukaitou-Sideris's (1995) and Kay's (1996) studies who found that women were confined to their domestic roles. This current study found that mothers and other female family members are dependent on their male relatives or husbands to bring them and their children to the recreational forests during weekends, and family visits are therefore constrained by the breadwinner's (usually the man) work pattern. This result is worth highlighting as none of the Western researchers mentioned this and this may also infer that Malaysian women, especially the Malays are bound by the men's roles as heads of their families. Abdullah et al. (2008) found that Malay women still hold on to their cultural values as mothers. There are also some Chinese working families who like to exercise together with their families in the morning (in the Ampang Recreational Forest). They usually exercise together for about an hour, chatting with each other while doing the exercise. Activities such as swimming, picnicking and exercising can strengthen family ties and family members can have quality time together by engaging in these recreational activities.

Adult male professionals with Malay and Chinese ethnic backgrounds aged 36 to 55, like to visit the forest by themselves. They prefer to visit in the very early morning and stay between three to four hours. The activity they usually like to do is mostly related to their hobbies which are bird watching and taking

photographs of birds. They choose to visit in the morning because many birds look for food in the morning. They also want solitude and to get away from their daily work routine. They are fascinated with the birds' movements and sounds, and being immersed in these activities has a psychologically restorative effect on them.

The retirees are usually from Indian or Chinese ethnic backgrounds, aged 55 and above, and like to visit the forest either with their spouses or with friends. They like to visit in the early morning to engage in exercise activities such as jogging and brisk walking, or just strolling. They take advantage of the fresh air and cool forest ambiance in the early morning, which they believe is good for their well-being. In these recreational forests, for this user group, fresh air and the cool forest ambiance were seen as integral to the health-giving and restorative effects of forest visits. This finding is consistent with the *Shinrin-yoku* concept in Japan or "forest bathing", and a study by Tsunetsugu et al. (2007) revealed that participants who walked in forests demonstrated significantly increased levels of feeling "comfortable", "calm" and "refreshed". The participants also experienced a relaxed physiological state compared to those who did the same activities in the city area. In this current study, when a retiree is accompanied by a friend or spouse, he/she feels more secure because if an incident occurs, someone is there to help, and he/she also has someone to talk to. However, there is also a small minority of older individuals who like to visit the forest alone when their friends or spouses are not available to accompany them.

This typology summarises the range of day-trip activities engaged in by users, based on phase of life stages. Broadly speaking, the types of activities engaged in by users have some similarities to those identified by Lee (2001) (picnicking), and Ward Thompson et al. (2004) (looking at views and bird watching). However, there are also important differences relating to the nature of Malaysian forest users' times of forest visits and employment status. Other differences are that the recreational forests were mostly used by employed users, whereas this type of user did not feature so prominently in Lee (2001) and Ward Thompson et al. (2004) studies. This suggests that the recreational forests in Malaysia are mainly used by more prosperous people, and not so much by unemployed or less

well-off people. This means that the recreational forests are not planned for all types of users in the sense that the unemployed and poorer people are excluded. This may also infer that the spatial planning of recreational forests is not distributed equally among low-income residential areas. This finding may also indicate that some people, especially the unemployed or poorer people cannot afford to travel far from home or to pay the entrance fee to the recreational forest. However, from the senior forest officers' perspective, the purpose of having an entrance fee is that people would feel responsible for the recreational forest surroundings; if they pay the entrance fee they are more likely to look after the forest. A distinct difference from Western culture (as outlined in Lee, 2001 and Ward Thompson et al., 2004) is that dog walking is not a popular activity in Malaysian recreational forests, public parks or other recreational parks, reflecting both Islamic beliefs and sensitivity to other races as well as respect towards Muslim recreational forest users. Muslims must ensure that their bodies and clothes are free from any impurities if they are to perform prayers. They must obey a strict regulation which stipulates that if they touch a dog, especially the dog's saliva, they must rigorously cleanse their clothes or the part of their body that touched dog (Banderker, n.d.). Hence, the best option is just to avoid making any contact with dogs.

Research Q2 - What are the underlying factors that motivate people to use recreational forests?

9.2 Factors that Motivate People to Use Recreational Forests

Discussions in this section are based on selected factor analysis (especially these factors: forest amenities, intergenerational values and self-actualisation experience) and on the observations, questionnaires and interview results related to the underlying factors that motivated people to use the recreational forests.

Forest amenities

"Playing in the water at waterfall and swim". (Chinese man, married, 33 yrs., Kanching Forest)

Forest amenities were one of the factors that motivated people to visit and use the recreational forests. It was found that more than 90% of the respondents

agreed that water elements, such as streams and waterfalls, were important features and were the main attractions in both recreational forests. The observations suggested that swimming/bathing was the most popular activity in both recreational forests because of these water elements. The clean and cool quality of the water attracted users to swim with friends or family members. The quantitative results revealed that those who like to “bathe/go swimming” were more likely to be infrequent visitors. This activity is not mentioned in most Western researches such as in Lee (2001) and Ward Thompson et al. (2004), perhaps due to the different physical characteristics of the woodlands and the climate factors at the places where their studies were carried out. Water has multiple functions and profound meanings in the recreational forests. The waterfalls in Kanching Recreational Forest have an important scenic value which attracts people to go and visit them. They provide an adventurous and physically challenging environment with which people enjoy interacting. The water itself affords opportunities for bathing and swimming which connect many users with an inherited or acquired cultural heritage of Malaysia being a forest nation. It is assumed that water features also contribute to the restorative components of users’ experience in the forest, for example, the sounds from the river in the Ampang Forest and from the waterfalls in the Kanching Forest produced a calming and relaxing effect on users.

The water elements had personal meanings for some users who saw the water as a metaphor for their lives. This aligns with the Gustafson (2001) study about the meanings of various types of places to people. One of the dimensions of place meaning described by Gustafson is “others-environment”, and in this study, some interviewees mentioned their meaning in relation to forest elements such as water and plants. For example, an interviewee associated the river flow in the Ampang Recreational Forest with his own personal life; he sometimes faced obstacles in life but he needed to face them and move on, just like how the river water is always flowing. Some of the interviews revealed a kind of spiritual relationship between forest users and forest elements such as the water. This may be related to the symbolic meanings of water in certain religions or cultures. For example, water functions as a purifying element in both the Islamic and Hindu religions. Malays are Muslims therefore, they are required to pray

five times a day, and they must perform ablutions (to physically themselves from any dirt) before each prayer as a form of spiritual purification. Water is also highly respected by Indian people. In ancient Indian culture, water had a high status in a social and religious context. For example, Indian followers of the Hindu religion believe that bathing in the Ganges and Yamuna rivers could purify an individual's from sin (Sharma, 2010). On the other hand, in the Chinese culture, water has a symbolic meaning, because according to Jim and Chen (2009) water brings luck and is a symbol of wealth. Water also has a positive role in Fengshui (which literally means 'wind and water') (Lianfen, 1993). This study revealed that rivers and waterfalls are a crucial part of the recreational forest experience. These elements gave positive personal meaning, including spiritual meanings, to some of the interviewees (Chiesura, 2004). These elements are valued by the three ethnic groups in Malaysia and also play an integral role in the restorative experience of forest users.

In summary, users were motivated to visit the recreational forests to fulfil their innate need to contact or be attached to natural elements such as water or plants. Forest amenities play an important role in attracting people to use the recreational forests. By doing activities or being in recreational forests, the forest users felt restored and experienced positive feelings such as being refreshed. Natural elements also gave personal meanings to some of the users who felt attached to forest elements such as water, and it is assumed that culture also played a role.

Being away

"... to get away from the city lifestyle. Because we worked in KL [Kuala Lumpur], very hectic So forest is just you ... can get away from those things".
(Chinese man, single, 33 yrs., Kanching Forest)

The physical environment of the recreational forest also plays an important role in enabling urban people to get away or escape. It was found that forest users visited the recreational forests both as a means of "being away-from" (getting away from everyday places) and "being away-to" (visiting a particular destination) (Hammit, 2000). On the whole, interviewees at Kanching

Recreational Forest placed more importance on the forest's "being away-to" benefits compared to the interviewees at Ampang Recreational Forest. This was probably because the Kanching Forest is situated in a more remote semi-rural area and has distinctive and spectacular topography. In contrast, Ampang Recreational Forest is located in peri-urban area and the accessible areas are flatter and not so varied. The topography of the Kanching Recreational Forest is characteristic of forest settings in rural village areas, with hills and green mountains and functions as a day-trip destination for certain users who are non-locals. For example, a man perceived the Kanching Recreational Forest as a retreat for him and family because he used to visit other recreational forests during childhood with his parents. Compared to the male interviewees, female interviewees at Kanching Forest talked more about "being away-from" their mundane housework chores. In this scenario, the female respondents felt happy when they could get away from their homes for a while. However, some male respondents were more likely to want to: "be myself" and "to be alone in the forest". The quantitative results (Mann-Whitney) suggested that significantly more male users liked "to be alone in the forest" compared to female users, though overall the percentage of solitary users was rather low: 13% of male users compared to 2% of female users. This finding is worth highlighting because it is aligned with Hammitt's (2000) statement that the "being away-from" concept is associated with a desire for privacy. However, he did not study gender in relation to the concept. Hence the "being away from" concept was important for men in the recreational forests who had a greater need for solitude than women. The men liked to spend time on their own, immersing themselves in activities related to their hobbies such as bird watching or with nature elements such as forest trees. The recreational forests can also function as a day-trip destination and a low-budget option for urbanites who want to be away without having to travel to more remote destinations.

Health benefits

Many people visit the recreational forests to carry out activities related to their health, such as jogging and brisk walking, and Ampang Recreational Forest is particularly popular for health-related activities. Evidence from the literature confirms that engaging in physical activities has the potential to combat obesity

and stress (for example, Nielsen et al., 2007; Michimi & Wimberley, 2012). There are two possible explanations for the emphasis on health in Ampang Recreational Forest: location and topography. Ampang Recreational Forest is located closer to Kuala Lumpur City (8 km from Kuala Lumpur). It is surrounded by residential areas (within 250m of the forest entrance) and is easier to access compared to Kanching Recreational Forest, which is further away. As demonstrated by Nielsen et al. (2007) in Denmark and Coombes et al. (2010) in England, proximity (less than 300m) to local green spaces is an important factor in promoting green space use in terms of users' health and well-being. Another reason for people using the Ampang Recreational Forest for health related activities is that the accessible areas in Ampang Recreational Forest are flatter compared to Kanching Recreational Forest's steeper slopes, making Ampang Recreational Forest more suited to jogging and walking as exercise activities. The recreational forest users in this study believed that doing physical activity in the recreational forests could enhance their well-being because of the forest ambiance, with its greenery and fresh air in the mornings, in stark contrast to other urban areas. About 88% of the respondents visited the recreational forests "to go walking" and 71% of the respondents came to the recreational forests "to go running/jogging/take exercise). About 95 % of the respondents agreed that their reason for visiting the forest was "to get fresh air". This resembles the concept of "green exercise" which is widely practised in the United Kingdom (Pretty et al., 2005a, 2005b). It was observed that many older adults liked to carry out exercising activities. This age group also enjoyed just strolling in the Ampang Recreational Forest. The literature confirms that walking in natural environments and forests can be experienced in a variety of ways, many of which can be loosely described as restorative experience, including regulating emotions (Edensor, 2000), experiencing a form of "romantic walking" (Solnit, 2001) and reducing blood pressure (Ulrich et al., 1991; Agyemang et al., 2007). All of these restorative experiences are important for people's health (Van den Berg et al., 2003; Tsunetsugu et al., 2007). Thus, it is assumed that the characteristics of the recreational forests allow people to feel psychologically restored, such as feeling calm, comfortable, peaceful or refreshed:

“Forest for me is full of nature environment. It’s natural. When being in the natural surroundings, peaceful. Forest is full of green trees, peace, natural and peaceful”. (Malay woman, single, 19 yrs., Kanching Forest)

Other possible explanations may relate to the biophilia hypothesis (Kahn, 1997; Hartig et al., 2011) which holds that users visit recreational forests because of their innate need to attach to nature where they can get benefits such as being away and being refreshed.

Intergenerational and self-actualisation experience

The results of the factor analysis in this study revealed that recreational forests were valued for “Intergenerational” and “Self-actualisation” experiences. Ward Thompson et al. (2004, 2005) discussed the importance of childhood experience in woodland use in later life in the United Kingdom. Some interesting findings in this study that are similar to those from Ward Thompson et al. (2004, 2005) were that several male respondents visited the recreational forests as a family tradition; for example, their parents used to bring them to the recreational forests when they were children. When they themselves became parents, they felt that they were responsible for keeping up the tradition. They felt proud of it and wanted to bring their children too. To some forest users who were married with children, it was important that their past forest experience was passed on to their children and that it would continue to be shared in future. This common intergenerational family experience can strengthen bonding among family members, including bonding between grandchildren and grandparents. This kind of value is diminishing nowadays as an effect of modern lifestyles; parents are busy with work commitments and have less time to bring their children to visit their grandparents.

As Aziz and Yussooff said:

“The processes of modernisation, development and migration, directly or indirectly, have impacted the size, functions and structure of the family unit, which subsequently impacted the family intergenerational relationships and communication. Malaysian families are also faced with this situation” (Aziz & Yussooff, 2012, p. 184).

This may result in a generation gap between grandchildren and their grandparents. Thus recreational forests offer an opportunity for extended families to get together and share an experience in a way which is becoming increasingly rare in Malaysian society. Respondents aged 36 and above were more likely to value “Intergenerational” experience compared to younger age groups, because these older age groups were generally married and had children, and they could appreciate the importance of “Intergenerational” experience.

“Self-actualisation” was also important to some of the respondents. For example, 49% of the respondents liked to visit the forest “to be myself”. Despite feeling anxious about being alone in the recreational forest, some male respondents saw the forest as a place “to be myself”, where they would have time for reflection about their lives or other matters, or to clear their minds. The quantitative results indicated that respondents who came for “Self-actualisation” were more likely to be regular (daily) users. Respondents at Ampang Recreational Forest came for “Self-actualisation” more than the respondents at Kanching Recreational Forest did. This may relate to the qualities of Ampang Recreational Forest which is connected to wider forest areas (the Klang Gates Quartz) than the Kanching Recreational Forest and thus has richer flora and fauna compared to Kanching Recreational Forest. This may also be due to the fact that despite being closer to Kuala Lumpur, Ampang Recreational Forest is less developed (for example, it has fewer amenities) compared to Kanching Recreational Forest.

Forest qualities

“Fresher, fresher! The water is cooler, lately the weather is hot but here don’t feel hot”. (Chinese woman, married, 48 yrs., Kanching Forest)

Forest qualities were one of the factors that attract users to visit the recreational forests. Users came for the forest ambiance which they described as “natural environment”, “green environment”, “cool ambiance”, “fresh air”, “shades”, “tranquillity”, “nature sounds” and “nice view”. The quantitative results indicated that more than 90% of the respondents came “to get fresh air”, “to experience the calm and to enjoy the sights, smell and sounds of nature”. It

shows the importance of forest qualities that create the tranquil and refreshing forest ambiance.

Interviewees also valued the forest's ecological function and the ecosystem services it provides. They appreciated the forest because it provides natural resources such as water and habitats for wildlife. Users visited the Kanching Recreational Forest because of the clean and cool water that made them feel refreshed. Water elements and shade from trees create a microclimate that gives cooling effects to the forest ambiance. Malaysia is a tropical country with high temperatures and humidity throughout the year; hence, the climate factor is important in influencing recreational forest use. The shade provided by forests helped users to feel comfortable and cool during hot days. A recent study in Tel Aviv, Israel, indicated that a dense tree canopy effectively reduces ambient thermal comfort temperatures to 18 degrees in the summer season in green open urban spaces (Cohen et al., 2012). The recreational forests also provide opportunities for users to connect to nature by coming into contact with wild animals and birds. For men, interacting with the forests by bird watching, taking photographs of birds or going fishing makes them feel closer to nature and these activities have a therapeutic effect on them. It is worth mentioning that some of the male interviewees at the Kanching Recreational Forest were fascinated to see monkeys carrying their young along with them.

Going back to Kaplan's (1995) definition of restorative environments, it is clear that for some forest users, the animals (wild monkeys) provided a source of fascination, which contributes to the restorative impact of the forests. The contribution made by the presence of wild animals to the restorative experience has rarely been discussed in the literature; perhaps because some wild animals are not seen as giving one a restorative effect, especially from the women's point of view (this aspect is described in more detail below).

Proximity

"Near, near! I just live here, at the nearby flats". (Malay man, married, 40s, Ampang Forest)

Another factor that influences the use of the recreational forests is proximity. Ampang Recreational Forest is located close to low-cost residential areas and it is easy for the residents to access on foot. The questionnaire and interview results showed that nearby residents were more likely to use the Ampang Recreational Forest compared to Kanching Recreational Forest. This may also reflect the fact that they lived in flats with no green compound, and the nearest green area they can use for recreational purposes is the recreational forest. Another reason may be that the residential areas surrounding the Kanching Recreational Forest are medium and high-cost housing, compared to the low-cost housing near the Ampang Recreational Forest. The author assumes that there is a possible trend of recreational behaviour among low and high income groups where low incomes groups will regularly use nearby green spaces, compared to high income groups who have more choices such as going to private recreational areas or faraway destinations. Another possible explanation is that some of the users were familiar with the Ampang Recreational Forest because they either lived in the nearby flats or in traditional houses near the forest. As Brody et al. (2004) confirmed in their study about watersheds in the United States, familiarity was associated with proximity. They found that respondents who lived closer to the watersheds were more familiar with them, compared to those who lived far away. This finding indicates that proximity is very important in the sense that it encourages local residents to use recreational forests, and especially those with low-incomes. Ward Thompson et al. (2005) also found that proximity of woodlands was important for regular users (who visit weekly) in Scotland.

Facilities and Maintenance Aspect

In terms of visitor infrastructure, basic facilities such as toilets were the most important to all users, especially women. Women tended to use toilets more for changing before and after swimming and attending to their babies or children. The importance of the toilets may also reflect the nature of Malay women from rural areas; they are said to be shyer than urban women (Lie, 2000). Malaysian people in general dislike exposing themselves in public whilst changing clothes. This may reflect the moral code of Malaysian people, especially Muslims, who have strict ideas about appropriate behaviour in public places. For example, it is

considered inappropriate to expose certain parts of the body in public, and even non-Muslim members of Malaysian society tend to respect these rules. A number of users complained that sometimes the toilets could not be used because they had been vandalised or there was no water supply, which caused difficulties to users in both forests:

“There are no facilities, toilets; Toilet cannot be used, leaking”. (Malay, married, 39 yrs., Ampang Forest)

Another facility that is worth discussing is the prayer room. About 80% of the respondents considered important the availability of basic facilities (such as toilets, shelters and prayer room) to be important to them. As mentioned earlier, Muslims need to pray five times a day and the prayer room provided in the recreational forests makes it convenient for Malay and other Muslim users to visit the recreational forests without having to leave the area in order to pray. From the researcher’s observations, many people used the prayer room in the Kanching Recreational Forest, and continued with their activities when they had finished their prayers. The need for toilet facilities and prayer rooms for Muslims (and therefore, most Malays) is a special requirement which is rarely discussed in existing research on woodland and forest use.

Many users (about 80% of the respondents) agreed that they would come more often if the recreational areas were kept in better and tidier condition. This relates to the maintenance aspect of the recreational forests. Many users liked to see the recreational forest areas kept tidy and free from rubbish and dried leaves. This may also reflect a lack of understanding of the ecological function of leaf litter, suggesting a need for more education of forest users. As one interviewee said:

“.... The cleanliness is important, everywhere, the cleanliness is important! Maintain the areas, well, don’t let the leaves too much, look at the front areas they are thicker [the dried leaves]”. (Malay women, married, 50s, Ampang Forest)

This emphasis on cleanliness reflects its importance in Malaysian culture. For example, if someone visits a Malaysian friend’s house, he/she needs to take off

his/her shoes to avoid bringing in any impurities or dirt from the outside into the house. In Malaysia, cleanliness is related to religious beliefs. Physical (body) and spiritual (mind and soul) cleanliness are important concepts in the Islamic and Hindu religions. The cleanliness concept is also part of traditional medicine, namely Ayurveda, which emphasises healthy living.

Research Q3 - How do personal differences (age, gender and ethnicity) impact on forest use?

9.3 Activities in the Recreational Forests

“Playing in the water at waterfall and swim”. (Chinese man, married, 33 yrs., Kanching Forest)

The results from the observations and interviews suggested that overall, swimming/bathing was the most popular activity preferred by most of the Malay forest users. As previously explained in Chapter 8, swimming/bathing are important aspects of traditional Malaysian village life, which many Malays experienced when they were children. However, surprisingly the results from the questionnaire survey indicated that the Chinese visitors were actually more likely to visit for swimming/bathing purposes compared to Malay and Indian forest users. This questionnaire finding was backed up by a personal observation during the interviews when the researcher observed several groups of Chinese visitors bathing in the waterfall area in the Kanching Recreational Forest. A possible explanation for this is the effect of acculturation or assimilation among the Chinese forest users. Large numbers of Chinese people migrated from China to Malaya (former name of Malaysia) for economic reasons to work in tin mines in Perak and Selangor during British rule (Abu Bakar, 2005) from the 19th to early 20th century. It seems possible that Malaysians today have assimilated some aspects of the Malay culture into their lifestyles. There was evidence from Tan (1991) confirming that some Muslim Chinese known as “Yunnanese”, who had emigrated from China and who lived in rural areas in Kuala Terengganu, experienced acculturation and assimilation; they spoke the Malay language and adopted a Malay identity. The impact of acculturation on recreation can also be supported by the findings of Walker et al. (2001). They examined the

motivations of American Chinese and Euro-North American outdoor recreationists in Canadian national parks using the Recreation Experience Preference (REP) and Social Interdependence (SI) scales. They also examined the effect of individual self-construal (for example, as “Independent: meaning “to feel independence” and “to be free to make your own choices”; and “Interdependent: meaning belonging, attention and sensitivity to others”). They found that Chinese recreationists were more likely to rate “Social Interdependence” (Items loading onto “Social Interdependence”: “attention to others, group membership, respect for/sensitivity to others, group autonomy and humble/modest”) as important, compared with Euro-North Americans. Their further analysis confirmed that the Chinese respondents’ acculturation directly affected independent self-construal, meaning that “the more acculturated a Chinese respondent was, the more independent he or she also was” (p. 275). Their findings indicated that as Chinese became more acculturated in their recreation motives, that is, “Autonomy/Independence” and “Group Autonomy” increased in importance. Their results stressed the importance of acculturation and they suggested future research should investigate the effect of acculturation across cultures. Another possible explanation is based on the biophilia hypothesis, which suggests that people are emotionally motivated to make contact with plants, animals and natural landscapes (Wilson, 1984; Kahn, 1997; Grinde & Patil, 2009; Hartig et al., 2011). In this study, the water elements can evoke positive feelings in the forest users. However, the author believes that culture and religion may also play a role in how the three ethnic groups connect with the water elements and this will be explained in the next paragraph.

Swimming/bathing is not generally associated with regular recreational forest use in other recreational forests or woodland settings. For example, Chavez and Olson (2009) found that having picnics/barbecues was the main activity for Latinos in the National Forests in Los Angeles, and several authors have highlighted that walking (with or without a dog) is popular in the United Kingdom (Lee, 2001; Thompson et al., 2004; Tzoulas & James, 2010). The interviews in this study highlighted the role of Malaysian village culture in influencing forest users’ recreational choices and experience. Many of the interviewees mentioned their experience of swimming in a river when they were

children. Malay people are usually familiar with village or forest environments. Thus, it seems very likely that the swimming/bathing activity is influenced by Malay village culture, in which swimming and bathing in rivers are common activities. This was supported by the questionnaire results which indicated that more than half of the respondents at both forests had previously lived in rural areas. Even Malay people who have not themselves lived in villages may have had the experience of visiting elderly relatives who still pursue a traditional way of life (see the author's personal account in the acknowledgement). As mentioned in Chapter 1, religious beliefs may also be related to a desire to bathe or swim; for example, followers of the Hindu faith believe that bathing in a river can symbolically cleanse their sins. Followers of the Islamic religion use water as ablutions to cleanse his/her body from any impurities.

In general, male and female visitors at both recreational forests engaged in a broad range of activities including jogging, jungle trekking, observing their surroundings or simply relaxing. However, there are gendered preferences for the types of activity at both recreational forests. Several male users liked bird watching and taking photos of birds, mostly at the Ampang Recreational Forest. Most married women with children preferred engaging in social activity together with their own families or extended families. They liked to entertain their children or family members by preparing food or taking care of their other needs. It is said that by nature, women are more into "nurturance" activities (Cillessen & Bruyn, 2008). The finding is also consistent with Virden and Walker's (1999) study which found that female respondents preferred places where they could be with close friends and family, compared to male respondents. Compared to the male visitors to the recreational forest, women users were also found to feel more afraid of natural threats (such as fear of snakes or wild monkeys) and of crime and incivilities. The negative response to nature probably developed during evolution of the human species (Ulrich, 1993) which relates back to the biophilia hypothesis. Women are also wary of the social stigma which they feel would stick to them if they visit the recreational forests alone. These issues will be explained more detail in a later section of the discussion.

Younger group's activity preference

The younger age group (aged 19 to 25) consisted mostly of students. Both male and female members of this age group liked to come to the forest occasionally (35%) with their friends (60%) or with other club members (5%) such as with a religious club. According to the results of the factor analysis, they liked “to take photographs, to bathe/go swimming”, “to play and to have a picnic” and preferred a forest “that has stalls that sell food and drinks”. Gender did not appear to have an impact on the types of activity engaged in by this age group. This group was also observed engaging in chatting, resting and sitting activities. This age group mainly occupied the waterfall areas at Level 4 in the Kancking Recreational Forest; in fact, they seemed to have exclusive use of this area. Here, they were engaged in swimming together with their friends or other users in the same age range, laughing, shouting or pushing each other into the river. Those who came with other club members liked having barbeques, taking each other's photograph and also going swimming. The club members group usually brought food from home, while other smaller groups liked buying food or drinks from stalls located at the entrance to the Kancking Recreational Forest, and having impromptu picnics. For this age group, the recreational forest environment created a space that gave users the freedom to react spontaneously, be themselves and express themselves in their actions or emotions without having to worry about their study commitments or being observed by their parents. The many levels of waterfalls in the Kancking Recreational Forest attracted this age group to visit and use them. This younger age group behaved differently in the forest compared to families and married couples; the younger group was more free-spirited and able to express their freedom while engaging in the recreational activities mentioned earlier.

Other age groups' activity preference

The questionnaire results indicated that there were correlations among the five motives for forest use and age groups “having a picnic”, “running/jogging/taking exercise”, “teach my children”, “explore the path and trails” and “to meet my friends”. The younger age group (19 to 25 years) liked to have a picnic, to explore the path and trails and to meet their friends. The working Chinese adults (aged 26 to 35) also liked swimming and having a picnic (Table 9.1). On the

other hand, the older groups liked to go running/jogging/take exercise and to teach their children. This means that older users (usually retirees) were more concerned about their health compared to younger users who were more concerned with socialising or bonding with their families. This result is consistent with Roberts' (2006) study when he indicated that satisfactory health is important for well-being in later life. Table 9.1 shows that the retirees also liked to have a stroll. The older groups also perceived that recreational forests have the potential to be an educational medium when their children are exposed to the natural elements in the recreational forests, such as different fish species and various types of plants and trees. This has important implications because childhood forest interactions are important in influencing positive attitudes towards woodlands (O'Brian, 2006) in later life stages. On the other hand, adult male professionals (36 to 55 years) were likely to engage in activities related to their hobbies, such as bird watching and taking photographs of birds. Thus, this study provides clear evidence confirming that different life stages affect many aspects of forest use and perception (Ward Thompson et al., 2004).

9.4 Recreational Patterns of Forests Use

“Weekends. Because we are working. Weekends will be the best time because you can enjoy the whole day activity”. (Chinese man, single, 33 yrs., Kanching Forest)

The site observations, questionnaire surveys and results from the semi-structured interviews showed that people visited the recreational forests more during weekends compared to weekdays. This reflects the reality for many who are employed forest users, which is that weekends are the only days available for leisure activities and being away from work or daily routines. The forests give these users the opportunity to spend leisure time with their family members or friends.

Another interesting finding that marks a departure from the findings of European research (Lee, 2001), is that respondents at both forests preferred to visit in the morning as opposed to the afternoon, and the most popular time for visiting the recreational forests was between 9.00 am and 11.00 am. More than 90% of users

surveyed indicated that their motive for forest use was “to get fresh air”, a finding which is reflected in Ward Thompson et al.’s (2004) study. The interview results also revealed the importance of “fresh air” and the perceived availability of “much oxygen” in the morning, which influenced the time that users choose to visit the forest. In general, the Malaysian climate is hot and humid throughout the year, and the temperature is hotter in the afternoon than during the morning and late afternoon. These temperature patterns clearly influence the pattern of visits to the recreational forests. Furthermore, 80% of respondents aged 56 and above are more likely to visit in the very early morning (6.00 am to 8.00 am) compared to younger age groups. This finding is based on the empirical results which showed that there is an association between time of visit and age. Therefore, the time of visit is related to the type of activity, so that people who engage in health related activities such as jogging, brisk walking or meditating prefer to come in the very early morning (6.00 am to 8.00 am). In Malaysia, the timing of forest visits seems to be closely linked to daily weather and temperature patterns and forest visits are used as a way of mitigating the impact of hot weather.

Social preferences of recreational forest users

“Oh! I have to go with my family, my husband will not allow me go [come] alone. The world nowadays is more dangerous than good”. (Malay woman, married, 52 yrs., Ampang Forest)

This study shows that age and gender play important roles in people’s social preferences in connection with recreational forest use. In terms of social preferences, about 40% of the respondents preferred to visit with their spouses, children and other family members, and about 30% liked to do so with friends. In particular, 59% of young respondents aged 19 to 25 years preferred to visit the recreational forests with friends. There is a possibility that they felt comfortable being with friends, as Woolley and Amin (1999) found in their study of Pakistani teenagers in Sheffield, United Kingdom. For younger users, having companions and doing activities together such as picnicking and swimming can have positive effects, such as experiencing feelings of excitement and enjoyment. In contrast, older respondents aged 26 to 55 years liked to visit

with their spouses, children and other family members. Lee (2001) also found that people aged between 31 to 40 years who use forests and woodlands in United Kingdom normally have young children. In the current study respondents aged 56 years and above also liked to come with friends and enjoyed spending time chatting while doing recreational activities together. However, there was also a small minority of respondents who liked to visit alone. Although there are no statistical associations between ethnicity and social preferences, it is worth mentioning that several Chinese interviewees at Kanching Forest emphasised that they experienced feelings of togetherness and bonding when they carried out activities together with friends or work colleagues. The findings from the questionnaires and interviews mentioned above clearly show that social bonding is important for forest users to enhance their recreational forest use and experience.

The combination of questionnaires and interviews indicated that the social patterns of forest visits are also a gendered issue, with more male respondents asserting that they wanted to be alone in the forests and female respondents preferring to spend time together with their spouses, children and other family members. There are a number of possible explanations from the interview results for the female respondents' social preferences: firstly, that they felt personally secure and comfortable when accompanied by their husbands, children and other family members; secondly, that female respondents' recreational forest activity was constrained by their husband's work patterns; and thirdly, that the women did not want to be seen on their own in the forest because they did not like the social stigma that is attached to being alone in a public space that is, going to the forest alone might be seen as immoral behaviour or as a sign of mental illness. The fear of social stigma is rarely discussed in the Malaysian context. However, the interviews suggested that a woman may come to the recreational forest alone if she has a purpose and is familiar with the surrounding environment. For example, there was a female interviewee who came to the Ampang Recreational Forest alone to go jogging, because she felt secure and was familiar with the forest and other regular forest users; and forest staff knew her. In addition, she was also familiar with the forest environment from her childhood, and recalled swimming alone in a river in front of her grandfather's house. In this sense,

familiarity is a combination of former experience with forest environments and the proximity of the recreational forest to her house (she lived in the flats nearby). People who visited with children or their extended families mostly preferred to come by car compared to other modes of transport such as by bus or motorcycle.

Research Q4 - What is the nature of Malaysian recreational forest users' experience?

9.5 Perceived Restorative Experience

"I like to watch animals, feel excited, nothing else!". (Malay man, married, 40s', Ampang Forest)

More than 70% of the questionnaire respondents felt peaceful, joyful and alive and they remembered childhood memories of play while in the recreational forests. Interviewees at both forests felt "refreshed", "enjoyment", "peaceful", "relaxing", "calm", "tranquil", "recharged", "happy", "fun" and "absence of worry" while being in the recreational forests. Previous research demonstrated that people derive restorative effects from being in natural environments (for example, Kaplan & Kaplan, 1989; Ulrich et al, 1991; Laumann et al., 2001; Hartig, 2003; Korpela et al, 2010). Findings from this study are consistent with the previous research mentioned. However, some aspects of this study's findings that are related to the forest ambiance and to fascination are worth highlighting.

Fascination is one of the four key characteristics (being away, extent, fascination and compatibility) of restorative environments (Kaplan & Kaplan, 1989). When they were in the recreational forests, users felt fascinated by the wildlife such as birds, wild monkeys (only the male respondents felt fascinated by the monkeys), and the scenery of the waterfalls. Trees provided cooling effects by lowering air temperatures (Armson et al., 2012) which contributed to forest users' thermal comfort and the colour green made people feel relaxed and calm (Kaplan & Peterson, 1993). An interesting finding was that respondents aged 56 years and above emphasised the restorative benefits of forest environments more than did the younger age groups. This was because many people aged more than 55 years

liked to visit the forest for exercising or strolling to take an advantage of the fresh air in the morning. They felt restored when they had walked or exercised in the recreational forests and believed they would become healthier when they frequently engage in health related activities. These activities enhanced their emotional well-being and self-experience (Korpela et al., 2001) in the recreational forests. Another possible explanation for why older people appreciated the restorative effects more than did the younger age groups is that people aged 65 and above have a tendency to reflect upon the workings of the natural world (the power, complexity and order in the natural environment) (Jorgensen & Anthopoulou, 2007a). For example, one male interviewee associated the forest trees with human life; everyone will die one day but they will be replaced (younger generation), just as trees die and are replaced by younger trees.

The results from the factor analysis and interviews results confirmed that restorative experience in the recreational forest is also influenced by forest amenities such as the river or waterfalls. This means that forest qualities and amenities really contribute to users' restorative experiences. Forest managers can enhance the restorative experience by providing opportunities for visitors to interact with water by making efforts to conserve the water resource and other forest qualities (such as cool ambiance and tranquillity) so that the recreational forests can be used for all types of users and for future generations.

9.6 Childhood and Earlier Stage of Life Experience related to Forest Environments

“I am familiar with forest environment, when I was small, along with friends, we secretly went for swimming in the river, if my parents know about it, I will get spank from them. When I was small in my village.... I collected fire wood, sometimes I followed my parents and sometimes I went alone. The forest was thick and I don't feel fear because the forest was near to my house”. (Indian man, married, 43 yrs., Kanching Forest)

This study confirms previous findings by Ward Thompson et al. (2004; 2005) and Milligan and Bingley (2007) about the importance of childhood experience

related to visiting woodlands or wooded areas at later stages of life. Ward Thompson et al. (2005) stated that the frequency of childhood visits to woodlands was the best predictor of how often respondents visited woodlands at a later stage in life. The results of the interviews conducted for this study also demonstrated that the interviewees at both recreational forests used to visit the recreational forests when they were younger, that is, as children or teenagers. Several male interviewees at Kanching Recreational Forest revealed that visiting the recreational forests was like revisiting childhood, because the forest surroundings were similar to the recreational forests they used to visit when they were children; and one man used to come with his parents when he was a child. Most of the interviewees had positive experiences in forest environments when they were children. However, an ambivalent experience was mentioned by one Malay female interviewee at Ampang Recreational Forest when she described her journey in childhood, walking alone along a road covered by a dense overarching tree canopy.

The results from the questionnaire showed the same findings as Ward Thompson (2005); overall, more than 60% of the respondents at both forests who had visited to the recreational forests at least twice had visited forests regularly when they were children. There are significant relationships between ongoing regular visits and “regular childhood visits” at the Kanching Recreational Forest. Malay respondents were more familiar with the forest environments compared to the Chinese respondents because Malay people are generally more familiar with Malaysian village or rural environments which usually contain rivers, waterfalls, forests, green hills and mountains. In contrast, Chinese people are generally more familiar with urban environments. When asked about the forest environment experience, most of the Malay interviewees mentioned their previous experience either in forest or village environments when they were children or when they were even younger, whereas this was not mentioned by the Chinese and Indian interviewees. Childhood experiences are therefore important in Malaysia in determining the future of recreational forests visits, in the sense that people who regularly visit forests when they are children will visit forests more often at later age stages of the life course (Ward Thompson et al., 2004). These Malaysian recreational forest users valued their memories of the

forest. As Jorgensen and Anthopoulos (2007) stated, woodlands can evoke memories of childhood play for elderly users.

9.7 Cultural Significance related to Forest Experience

“We like to go to the forest because we only play, just play! We played hide and seek...Sometimes we climbed up trees. There were girls and boys. Because in the forest, there was like a pool but there were many fishes, we were fishing. Actually it was natural pond, ... the water was cool and can swim, ...”. (Malay woman, Married, 33 yrs., Kanching Forest)

This study has shows the importance of cultural village heritage amongst Malay interviewees who remembered their forest experience in villages and the activities in which they engaged while in the forest when they were younger. Male interviewees associated themselves with the activities they engaged in with their fathers while female interviewees related to a wide circle of siblings or family members. This demonstrates that “... families are the first site in which masculinities are constructed” (Heward, 1996, p. 37). The first role models for the sons are the fathers. Fathers take an active part in shaping their sons’ ideas of masculinity (Heward, 1996). For example, several male interviewees remembered following their fathers to the forest to collect firewood or to find forest plants and another remembered following their parents who worked on a farm. This evidence regarding the acquisition of male identity is still relevant in Malay culture; many fathers teach their sons to acquire a masculine identity and survival skills in the forest by engaging in activities together. In the recreational forests context, fathers and sons still benefit from engaging in recreational activities such as learning survival skills and having quality time together, strengthening the relationship between them. On the other hand, female interviewees associated their experience with wider social groups such as friends or relatives. For example, a Malay female interviewee mentioned the hill and waterfall in her village, and having picnics near the waterfall with her friends when she was in primary school. Another mentioned eating and cooking in the forest with her aunts after looking for forest fruits. This also shows that physical features such as rivers or forests can trigger these important memories.

9.8 Natural Threats and Incivilities in the Recreational Forests

The factor analysis results indicated that respondents at the Kanching Recreational Forest were more likely to express concern about natural threats in the forest compared to those at the Ampang Recreational Forest, whereas respondents at the Ampang Recreational Forest were more likely to be anxious about incivilities. This is influenced by the site characteristics of both recreational forests. The accessible areas in Kanching Recreational Forest are steeper than in the Ampang Recreational Forest, and users are therefore more exposed to natural threats. There are many steps that users need to climb, and natural trails that users have to walk along, in order to visit the various levels of the waterfall areas. On the other hand, in Ampang Recreational Forest, the accessible areas consist of a more flat and linear space along the road and river. These areas in Ampang Recreational Forest are bordered by thick forest and users tended to anticipate crime occurring as it is perceived as a place in which people can hide.

Female respondents were more likely to feel afraid of natural threats such as encountering snakes, having an accident, getting bitten by insects, falling down and getting lost. The questionnaire results also demonstrated that both male and female respondents felt afraid of crime; the male respondents saw the forest as a place where people could hide and female respondents disliked being in the middle of dense vegetation:

“Perhaps the thick forest on the top, bushes, place that people don’t go because fear of danger ...”. (Malay woman, single, 19 yrs., Kanching Forest)

This finding parallels the findings of Virden and Walker (1999) and Kong et al. (1997) who also found that female forest users were afraid of various aspects of nature, including wildlife such as snakes. According to the biophilia hypothesis, these feelings may also relate to innate responses to natural threats. It is interesting to note that the interviews revealed that most of the female users at both recreational forests felt afraid of the aggressive behaviour of wild monkeys: *“Afraid when seeing many monkeys”. (Indian woman, married, 25-30 yrs., Kanching Forest)*

Some women were afraid that the monkeys would hurt their children. Women were also afraid of their own species, particularly of men, and concerned about potential physical and sexual violence (Virden & Walker, 1999; Jorgensen & Anthopoulou, 2007a). The interview results also demonstrated that age played a role in people's feelings about natural threats. For example, an Indian retiree mentioned that he did not like to swim in the river because he felt afraid of accidents such as being hurt by sharp pebbles in the river. He also felt vulnerable because of his health condition as he was suffering from several diseases. Another older Chinese man at Ampang Recreational Forest was afraid of getting involved in a road traffic accident due to the presence of vehicles passing by.

As a result of their heightened fears in relation to natural threats and potential criminal behaviour, women at the recreational forests wanted patrol staff to be around for safety and surveillance purposes. As other researchers have found, "... persons who may feel more threatened in a natural environment may favour greater presence by managers" (Virden & Walker, 1999, p. 235) as well as the presence of more visitors and more staff (Burgess, 1995). In addition, women users at the recreational forests were also wary of the social stigma they might attract by being alone in the recreational forests; they were afraid that they would be seen as women who were looking for a partners, or perceived as people with mental problems.

The questionnaire results demonstrated that age also affected responses to items related to incivilities. Older respondents were more likely to perceive the recreational forests as a place where vandalism occurs and to feel more isolated in the forest, compared to younger respondents. The interviews confirmed that older interviewees were more concerned about vandalism issues, which annoyed them such as broken playing facilities or broken toilets. This finding is similar to the findings of Ward Thompson et al. (2004) who found that retired people were annoyed by vandalism and litter in woodland areas in Scotland.

Research Q5 - What are the similarities and differences between recreational forest use in Malaysia and woodland and forest use elsewhere?

9.9 The Similarities and Differences between Recreational Forests Use in Malaysia and Woodland and Forest Use Elsewhere

This section is a summary of all the four research questions above. It highlights important results that point to whether Malaysians' use of and experience in recreational forests are similar to or different from Western findings. It also discusses needs and expectations towards the recreational forests. The researcher highlights findings which are related to relevant literature, and offers links to theoretical understanding for future consideration. The impact of age, gender and ethnicity in related topics is also discussed. Important findings which have some similarities and differences with previous research are presented below:

- There were distinct differences in activities between the two recreational forests in respect of activities carried out: the interviews and site observations showed that activities in Ampang Recreational Forest tended to focus more on health and well-being benefits and included tai-chi, jogging, meditation, and urban park activities such as strolling and cycling. In contrast, Kanjing Recreational Forest was more conducive to exploratory activities such as climbing hills and jungle trekking. The differences in activities occurred because of the differences in topography between the two recreational forests. As the publicly accessible parts of Ampang Recreational Forest have more level areas than in Kanjing Recreational Forest, it is more attractive to joggers.
- The typology of users in the recreational forests, based on social preferences, employment status (such as student, employed and retired), age and type of activity has some similarities with the typologies put forward in previous research (Lee, 2001). "Students" (19-25) are seldom discussed in previous research related to green space uses. The swimming activity is also seldom discussed in Western research on forests and woodlands.
- Usage patterns are in general consistent with previous studies (for example, Ward Thompson et al., 2005) in that people use the recreational forests that are accessible and close to their homes. Results related to activities in the

recreational forests are influenced by the recreational forests' characteristics such as their topography and the landscape elements they contain, such as stream and pools. As Grahn (1991) stated the activity carried out on a site is strongly related to specific characteristics of that site.

- There are significant associations between length of visits and ethnicity, and between length of stay and age. Users aged 19 to 25 years stayed the longest (more than four hours), while users aged 56 years and more stayed about an hour.
- The timing of forest users' visits is worth mentioning. In Malaysia the time that people visit the recreational forest is dictated by the daily cycle of temperatures, whereas in Western countries, it is more dependent on weather and seasonal factors. The marked difference from Western research is that forest users at both recreational forests liked to visit in the morning (and sometimes in the very early morning) compared to the afternoon or late afternoon. There are significant associations between time of visit and age, and time of visit and ethnicity.
- In terms of social preferences and age, visitors aged 26 to 55 years liked to visit the forest with their spouses, children and family members(s), and Regan and Horn (2005) classified people aged 26 to 45 as "people settling down in terms of careers and/or family life" (p. 60). This finding is quite similar to the findings of Gathright et al. (2007) who indicated that people in their 30s and 40s were more likely to come with their family, and with Lee's (2001) study which indicated that people aged 30s and 40s who use forests and woodlands in the United Kingdom normally have young children.
- This study gives a detailed explanation of the swimming activity in Malaysian recreational forests. Swimming is a popular activity chosen by most visitors, which differs from Western countries, and especially in the United Kingdom where walking or dog walking is the most popular activity (Lee, 2001; Tzoulas & James, 2010). Cultural backgrounds, especially of childhood experience related to village or rural environments, are also worth mentioning and this also influenced visitors' choice in engaging in swimming activities. This link between swimming and cultural village heritage has seldom been discussed in other literature in Western countries or in Malaysia. For some Chinese people,

there is a sense of assimilation with Malay culture, or recreational activity behaviour related to swimming, but this needs to be further investigated.

- Malays are bound by certain norms in engaging in any kind of recreational or sports activities. Islamic beliefs may therefore influence Malays in terms of engaging in recreational activities and behaviour, especially the women. Malay women are expected to abide by certain rules when engaging in recreational activities, such as wearing appropriate clothing and not mixing with members of the opposite sex. Culture also plays a role in women's participation in recreational activities. For some Malay women who have been traditionally brought up "..., one could say that Malay women are, on the one hand, socialised to be shy, to keep to the domestic sphere, never to mix with men outside the close family, and always to be accompanied in public" (Lie, 2000, p.33).
- Most people have positive feelings and experiences while in the recreational forests. Health benefits, social engagement, restoration and connecting with nature are important motivators for people to visit the recreational forests. This is similar to Korpela et al.'s (2010) findings where they stated that green spaces such as waterside environments in Finland were favourite places to visit for health related outdoor activities. This research demonstrates that forest amenities and social bonding are important factors in restorative experiences. Forest amenities and qualities are also important in enhancing restorative experience and the use of the recreational forests.
- Forest qualities, such as clean and cool water, shade, fresh and green ambiances play an important role in people's decision to use the recreational forests, but these aspects have rarely been highlighted in the literature. The recreational forests provide an opportunity for people to come into contact with nature and the interviewees suggested conserving natural resources such as clean water, the waterfalls, and the forest ambience so that future generations would also be able to experience the natural forest ambience. Whilst previous literature included studies on the generic restorative qualities (being away, extent, fascination and compatibility) of natural green spaces (for example, Kaplan, 1995; Hammitt, 2000; Berto et al., 2010) few researches highlighted the specific components of the characteristics of the physical environments (such as wildlife, water or shade and temperature) which give rise to the natural restorative effect, with some recent exceptions (Grahn & Stigsdotter, 2010; Nordh et al., 2009). This

recreational forest study is a contribution towards a new direction in restorative studies.

- Childhood experiences were important for users, especially the Malays. Malays who had experience of forests or rural environments during childhood were more likely to be recreational forest users as adults. Childhood experience was a medium of learning and cementing the relationship between father and son, and played an important role in constructing masculinity in male users. For women, childhood experience was a medium for strengthening social bonding among friends or family members (such as with aunts). It should also be highlighted the intergenerational values and self-actualisation experiences seemed important to some visitors, especially to men.
- Maintenance and safety issues were common at both recreational forests and safety issues were more important to women, as highlighted by Burgess (1998) and Kong et al. (1997) as well as by older users. Malaysian women are afraid of crime and social stigma whereas older men feel vulnerable and fear having an accident, as was also found in previous research (for example, Jorgensen & Anthopoulos, 2007a). However, it is interesting to note that wild monkeys also contributed most to women's fearfulness in the recreational forests, an issue which is seldom highlighted in the literature related to the use of green space. The forest management needs to address these safety issues, especially in relation to women, so that they can fully utilise the recreational forests. Problems related to maintenance were important to most of the interviewees who complained about the cleanliness of the forest areas, and the broken and vandalised facilities. These maintenance issues can deter forest users from fully experiencing the forest environments, and have a potential impact on the future use of recreational forests. However, the management also needs to educate people about the ecological function of forests so that users would understand the benefit of leaf litter in the recreational forests and do not expect the recreational forest areas to be maintained in the same way as urban parks.

9.10 Conclusion

This chapter discussed the quantitative (questionnaire surveys) and the qualitative results (interviews and observations), triangulated with related

previous studies. Both the empirical and qualitative findings were described in descriptive forms to make them easier for the reader.

This chapter informed readers about a typology of five types of recreational forest users based on employment status: students, working adults, working families, adult male professionals and retirees. The typology clearly showed that the recreational forests are mostly visited by employed users rather than unemployed people. This may infer that there is an unequal distribution of the recreational forests between more prosperous and low-income areas, and that residents of these low-income areas have to travel to the forests from further away. Users visit the recreational forests mostly during weekends to carry out leisure activities and experience the feeling of being away from daily routines. Swimming is the most popular activity in the recreational forests, an activity that is rarely mentioned by studies on forest and woodland uses in Western countries, possibly due to different physical forest characteristics and climates. There are some factors that motivate people to use the recreational forests, such as forest amenities (such as water elements), physical environments (such as green ambiance) and forest qualities that (such as clean water). As research in Western countries indicated, people use the recreational forests for health benefits. This holds true especially for users of Ampang Recreational Forest as they liked - jogging or walking briskly in the early morning to get the maximum benefits of fresh air and oxygen. Cleanliness is the most important factor that users expect from the management of the recreational forests. This may have been influenced by Malaysian culture. This chapter also discussed the experience gained by users: intergenerational and self-actualisation and perceived restorative experience. The role of childhood and earlier stages of life experience was also mentioned, as was the cultural significance of forest use. Malay users and this aspect require further investigation. This chapter also discussed perceptions of natural threats and incivilities which deter female and some older users from fully experiencing the benefits offered by the recreational forests. It also highlighted constraints placed on women because of their social roles as mothers and wives. The transcendent experiences (either positive or negative feelings, or mixed feelings) gained by users may also be connected with the biophilia

hypothesis which maintains that people are innately interested in natural and other living things such as plants.

This chapter showed that age, gender and ethnicity play significant roles in recreational activities and use patterns in the recreational forests in Selangor state. In terms of age, younger age groups (aged 19 to 25) behave differently in the recreational forests compared to families and married couples. They are mostly students who like to come with friends and occupy certain areas such as waterfall areas (in Kanching Recreational Forest) for themselves. They mostly like to swim and picnic. On the other hand, users aged 26 to 55 years like to visit with their spouses, children and other family members which are consistent with the Western findings. As Western research suggests, Malaysian women like to visit the forest with family and close friends which infers that they feel safe and comfortable when they are with company. For the Malay women, this may be due to their traditional way of being brought up. Women users also feel afraid of natural threats, incivilities and crime. They also dislike coming alone due to the social stigma that attaches to lone women in the forest. Although no direct question was asked in the interviews, this method of data collection strongly suggests that being in the recreational forests can evoke childhood memories for some users. This study also found that Malay village culture influences Malay users to engage in the swimming activity which they experienced when they were children.

How can recreational forest managements address the issues discussed in this chapter? This question will be answered in the next chapter. Chapter 10 will describe the policy implications, the limitations of the study, the need for future research, and give concluding comments as to the significance and contribution of this study.