

CHAPTER 10: CONCLUSIONS

This research contributes in a number of ways to knowledge concerning the recreational use of forests and woodlands, including people's motives for their use, visitors' experience, attitudes towards these destinations, with regard to mixed methods literature. The integrative approach used in this study, which combines findings from observations, questionnaires and interviews, is infrequently used in social science research. Thus, the kind of mixed methods approach employed in this study has allowed the researcher to develop an intricate and holistic understanding of the phenomena of how people in general use and experience the recreational forests in the state of Selangor and in Malaysia.

10.1 Conclusions from the Quantitative and Qualitative Data

This section outlines important findings from the quantitative and qualitative results which were, previously discussed in Chapters 6, 7 and 8. Both types of data are handled separately to provide a clear distinction between their contributions to this study.

The quantitative data

As previous research indicated the quantitative data confirms that age impacts on the frequency of visit, length of stay, time of visit and users' social preferences during their visits (Ward Thompson et al., 2004). Ethnicity is also related to frequency of visit, length of stay and time of visit but does not seem to affect social preferences.

Chapter 6 revealed that there are significant variations in social preferences on the basis of gender ($p=0.017$) in the sense that women are more likely to visit the forest with children and other family members, compared to men who are keen to come alone. Chapter 6 also showed some variations in usage between the two recreational forests in this study. These variations occurred perhaps because of the different physical characteristics of the recreational forests, or to the design aspects of the recreational forests which this study does not cover. The most interesting finding concerns a motive involving regular childhood visits. Regular visitors (once a month or more) are more likely to have visited forests during

childhood, a finding which is consistent with Ward Thompson et al.'s (2004) study. There are also positive correlations between length of stay and some motives for forest use: "to explore the paths and trails", "to have adventures", "to have a picnic" and "to go jungle trekking"; and negative correlations with "to go running/jogging/take exercise" items. This helps the researcher to make a conclusion that respondents with the first-mentioned motives will stay longer compared to those who come for jogging or exercise purposes. Chapter 6 also revealed that motives for forest use differ between frequent users (daily or weekly) and infrequent users (monthly or occasionally), in the sense that frequent users are likely to visit the recreational forests to "experience the calm", "go walking", "go running/jogging/take exercise", "be myself" or do "volunteering work". On the other hand, infrequent users are more likely to "have a picnic", "bathe/go swimming" and "to take photographs". The impact of gender is seen on some forest use items. Male users are keener "to go jungle trekking", "to be myself" and "to be alone in the forest" compared to female users. There are also some other significant differences between male and female users in the sense that female users tend to feel afraid of seeing wild animals such as "snakes", "afraid of getting bitten by insects", and dislike "being in the middle of dense vegetation". In addition, the Kruskal-Wallis results showed that there are significant differences between the three ethnicities in terms of the motives for forest use items (such as "to be with my family members", "to bathe/go swimming", "to explore the path and trails" and "to view the scenery"). The results of this current study, also revealed forest users' expectations towards the recreational forests; they said that they would visit more often if there were more facilities such as seating, shelter areas, dustbins and toilets. However, when the two recreational forests were compared, the expectations of forest users differed slightly due to the differences in topography between the forests. For example, 90% of users at Kanching Recreational Forest expected to have "guardrails/railings provided at steep sections of pathway/trails" whereas only 77% were concerned about this aspect at Ampang Recreational Forest.

Chapter 7 described how the researcher explored underlying patterns in the questionnaire data by using factor analysis. The factor analysis produced seven

factors, namely: “Forest amenities”, “Restorative experience”, “Intergenerational values”, “Self-actualisation”, “Incivilities”, “Natural threats in the forest” and “Younger activity preference”. This factor analysis helped the researcher to explore the data more holistically and creatively, and to explain the factors that motivate people to use the recreational forests more comprehensively. In addition, the factor analysis enriched the quantitative results.

The qualitative data

The qualitative data (Chapter 8) helped the researcher by complementing the quantitative data, highlighting differences between the two recreational forests, and also helped to explore in depth the interviewees’ use and experience of the forest environments, especially how forest use relates to childhood experience. The interview data show that familiarity and childhood memories may influence the user’s experience in the recreational forests. There are differences related to childhood memories in Western research (such as Ward Thompson et al., 2004, 2005) where the findings were related to childhood experience and play in forests or woodlands nearby. This research however shows that in the Malaysian context the childhood activities relate to the Malaysian culture, especially to Malay village culture, in such activities as picking fruits and fishing, for example. This is a really interesting and unexpected finding that should be highlighted, namely that culture plays a role in determining Malaysian experience of the recreational forests, especially in relation to Malay users. Another aspect that is seldom mentioned in studies from Western countries, such as in the United Kingdom, is that of streams or rivers. This also shows that the physical characteristics of the sites, including their waterfalls and rivers, very much influence users’ activities. Therefore, swimming is the most well-known and popular activity engaged in by users at both recreational forests in this study. Elements in the recreational forests, such as green trees and streams, also have personal meanings for the users, giving them hope to continue facing the hurdles of daily life, and the researcher assumes that the users feel attached to those elements.

10.2 Policy Implications and Research Contributions

The findings from this research have particular relevance for the understanding of the importance of recreational forests to Malaysians, especially for those who live in urban settings. In particular, this study contributes to the understanding and tackling of wider current issues such as planning, climate, health, culture and socially related problems.

The quantitative data revealed that there are two types of users: frequent (daily or weekly) and infrequent (monthly or occasionally) who visit the forest for different motives of forest use and have different lengths of stay. Their expectations towards the recreational forests may also therefore differ. Forest management can enhance forest experience of these user groups by including them in future planning or design of the recreational forests. Empirical findings also show that age, gender and ethnicity impact on how visitors use the recreational forests. It is important to consider these diverse recreational needs in future planning and management of recreational forest for sustainable forest use.

Employed users outnumbered unemployed or deprived people who visit these recreational forests, inferring that recreational forests in Selangor are not spatially and equally distributed among low-income areas. Future recreational forests should be planned or distributed equally, especially in areas where people from lower income groups live so that they can have forest experiences as well as other income groups. In addition, equitable spatial planning in future could have a positive impact on quality of life and mortality. Locating future recreational forests proximate to where low-income groups live could encourage them to use recreational forests more frequently.

Women were most worried about incivilities and about crime and natural threats such as from wild monkeys and snakes. Therefore, this group may not fully use and experience the recreational forests. The recreational forest management or forestry department should address these issues (such as by introducing more patrol staff, and including female members of staff) in order for women to experience the benefits of the recreational forests to their full potential without having to feel fearful or insecure.

Forest users seek a place to escape to during weekends where they can experience cooling effects or “thermal comfort”, and the recreational forest is the best place to go. Forest qualities such as fresh air, clean water and tranquillity attract people to visit and use the recreational forests. Thus, the recreational forests in Malaysia are likely to have an increasingly important role in helping to mitigate the impact of climate change. It is important to conserve and develop the qualities offered by the forests so that existing or potential users can continue to visit and experience them. If the existing recreational forests are to be developed in future, such qualities need to be taken into consideration. Furthermore, recreational forests serve as venues for day-trip activities and are low-budget places compare to further or more commercial destinations.

It has also been demonstrated that the restorative experience in recreational forests is related to other dimensions of the recreational forest experience. These are the cultural dimension (related to childhood experience and intergenerational values), and social and health values which are important for users. The findings from the interview results enrich knowledge about the importance of forest characteristics and qualities by showing how they relate to users’ feelings while in the recreational forests and in contact with nature. However, the findings from this study need further future research.

The forest is also important as a restorative destination. Stress and mental illness are a big problem globally, including in Malaysia. A study by Pretty et al. (2005) demonstrated that doing exercise in rural pleasant environments (“Complex landscapes with various habitats and mosaics, with trees, water, and blue sky and clouds”, p. 332) has greater positive effects than doing exercise alone in gyms or in unpleasant environments. The pleasant qualities mentioned by Pretty et al. (2005) can be found in the recreational forests. Thus, the recreational forests are potential places for people exercise in order to release daily or work stress. In addition, the recreational forests can be a destination for people who suffer from stress, to help them to feel calm and relaxed while enjoying the natural elements. This study has implications for economic and public health benefits; fitter and emotionally (Pretty et al., 2005) more content Malaysians will cost the economy less and help to contribute more to the country.

Many urbanites nowadays have diseases related to sedentary lifestyles, such as coronary heart disease or obesity, as well as other types of diseases such as mental illness due to daily stress levels. Previous research indicated that forests or green spaces can give restorative effects (Kaplan, 1995; Kaplan & Kaplan, 1989; Berman, 2008) and help to reduce diseases such as obesity by providing opportunities for people to do physical exercise (Coombes et al., 2010). It should be noted that this study found that forest users are attracted to visit the recreational forests because of the forest qualities such as the “fresh air”, and the “shady”, “cool” and “green” surroundings, as well as the opportunity to swim in cool clean water, all of which offer an enhanced restorative effect to them. The contribution to restoration by coolness and shade, and bathing and swimming which this study highlights has rarely been touched on in previous restoration research. This study has also confirmed the existing research which showed that people are attracted to visit recreational forests because of restorative experience values such as being away, and fascination. This study has implications for health related policies through which the Malaysian government encourages Malaysians to live healthy lifestyles by engaging in exercise or other recreational activities. Recreational forests have the potential to be places that encourage people, especially elderly people, to have that kind of lifestyle. Furthermore, the “romantic walking” or “green exercise” concepts which people identify with in the United Kingdom, and the “Shinrin-yoku”/“forest bathing” concept in Japan, can also be adapted to fit a Malaysian context. Thus, health related programmes should be encouraged in the recreational forests to foster a healthy lifestyle.

This research may also influence policies related to cultural aspects. The study demonstrated that cultural village heritage is important to Malay forest users and other users who are familiar with forest or rural settings which they had experienced during childhood. The traditional village lifestyle is mainly familiar to people with a Malay ethnic background. However, some Malaysians of Chinese origin who have lived in villages in a few states, such as in Kelantan and Terengganu, have assimilated the Malay village culture into their lifestyles. Similar to other developing countries, Malaysia also has a rural migration issue. Nowadays, many people from rural areas migrate to urban areas to look for better job opportunities in order to have a better quality of life (Aziz & Yussooff,

2012). There is a possibility that village culture will no longer be experienced by younger generations and will one day disappear completely. This has implications for future recreational forest use as this research has confirmed that the people who use forest or woodlands regularly in later life are most likely to be those who visited forests regularly when they were children. Thus, there is a need for educational programmes to introduce children to the recreational forest. For example, the State Forestry Department can introduce programmes to kindergartens or school children in collaboration with other agencies such as Non-Government Organisations or other environmental associations.

The social aspects of forest visit are very important to forest users who generally like to visit the recreational forests with their spouses, immediate family or extended family or friends. This research demonstrated that the recreational forests are used by the three main ethnic groups in Malaysia (Malays, Chinese and Indians), as well as other ethnicities. Recreational forests can be places that encourage social integration and social cohesion amongst various ethnicities in line with the '1Malaysia' concept. Introduced in 2009 by the current Prime Minister of Malaysia (Datuk Seri Najib Tun Razak) which promotes the idea of being one nation despite being multi-ethnic and multicultural. This study demonstrated that the recreational forests have the potential to be "social forests", thus, also contributing to the idea of a diverse but coherent national identity. However, this study found that fewer unemployed or poorer people use the recreational forests, compared to more prosperous users. This may influence future planning of recreational forests which need to consider all types of users, especially low-income groups. This is to ensure equal opportunities for all Malaysians to have the freedom to enjoy benefits from the recreational forest.

Forest amenities such as rivers or waterfalls are the main attractions in Malaysian recreational forests, and are integral to enhancing the recreational experience of users in the recreational forests. Basic, well-maintained infrastructural facilities such as toilets are also a necessity for the users to make their forest visit comfortable. In addition, the facilities provided must cater for all users' needs and demands and also consider the age, ethnicity and religious belief of the users. Muslim people have special requirements and this research

has highlighted the importance of prayer rooms for them. This is one of the first studies to identify the need for a prayer room as part of the facilities that are routinely provided in the recreational forest.

10.3 Future Research

This study focused on mapping out and exploring the area of enquiry related to the use and experience of the recreational forests by Malaysians, and also on exploring users' attitudes towards the recreational forests. It also highlighted differences between these findings (Chapter 9) and previous research, and indicated the potential for further investigation by individual detailed studies. This study also explored in depth the phenomenon of how childhood and culture affect the use and experience of recreational forests. The directions for further research suggested below are based on the researcher's personal interests; there are also other research topics that can be expanded from this research.

It would be interesting to build up a more detailed understanding of childhood forest usage and experience in general, including that of Malays and other ethnic groups, tourists, newly arrived immigrants, children and young people. There is a dearth of research related to childhood experience in forests in Malaysia. Future research could focus on understanding how childhood experience of forest settings can influence the use of recreational forests by people with different cultural backgrounds, and how they value the recreational forests. It would also be worth studying the attitudes of local residents towards the recreational forests, including the ways in which children use their local recreational forests.

The culture of visiting older family members seems to be declining nowadays amongst urban dwellers because of people's work or daily commitments (such as family commitments). Urban children are no longer exposed to forest environments and have little experience of swimming or bathing in a river because in general, there is water supply in almost every village in Malaysia. This may influence recreational forest use in Malaysia in the future. If modern children are not used to forest environments, it may result in an underutilisation of recreational forests by future younger generations. Research related to how

Malaysian children engage with forest environments has potential for further study.

As this study demonstrated, there were seven underlying factors which influence visitors' use of the recreational forests – “Forest amenities”, “Restorative experience”, “Intergenerational values”, “Self-actualisation”, “Incivilities”, “Natural Threats in the Forest” and “Younger activity preference”. One of the factors “Intergenerational values”, calls for further study in the Malaysian context, especially amongst different ethnic groups. This is due to the current situation of there being a wider generation gap between the younger generation and older family members. The recreational forests can be a potential space for grandchildren and grandfathers/grandmothers to spend quality time together and strengthen their bonds. Forest managements can encourage programmes related to this issue.

This study demonstrated the users' feelings and experience related to the qualities of the recreational forests such as fresh air and cool ambiance. It would be interesting to the feelings and emotions of teenagers, and the meanings they attach to forests, especially those aspects that are related to forest elements such as plants and trees, water and wild life. This study demonstrated that users who used to visit the recreational forests when they were children or at a younger age, tend to visit again when they are older. Research involving children and young people would help to throw more light on the role of the forest for this potential user group as well as contribute to the continued use of the forest in future.

10.4 Limitations of the Study

The results and analysis of this study need to be viewed in view of some limitations faced by the researcher. First, this study only looked at Malay, Chinese and Indians forest users and other ethnic groups were not included. Thus, whilst the findings from the study may be generalised to Malay, Chinese and Indian members of the Malaysian population, they do not necessarily address the experience of other ethnic groups. Second, the survey was done outside the school holidays and the results and issues might differ if the research was conducted during the school holiday season. Third, because of time constraints, interviewees were not distributed equally according to the three

ethnicities. Thus, there are some limitations in interpreting data about age group and ethnicity. In addition, there is a need for quantitative and larger-scale research to explore and support the resulting relationships put forth in this study.

10.5 Concluding Comments

In brief, this explorative research demonstrates creative ways in combining research methods as well as analysing and representing research findings. It fills gaps in the literature in terms of the significance of cultural village values and childhood experiences in recreational forest use and experience, particularly in a Malaysian and Asian context. This study adds to the existing knowledge and understanding of how the three main ethnic groups in Malaysia (Malays, Chinese and Indians) use and experience recreational forests. The findings have both similarities and differences with previous research in Western countries and add new knowledge to the literature related to topics mentioned in the Discussion Chapter (Chapter 9) including local woodland use, restorative environments and childhood experience (See the fourth research question). It confirms that a number of concepts from Western countries are transferable to the Malaysian context of recreational forests was highlighted in the Chapter 9 and previous sections. However, the study also highlights important differences in recreational forest use in a tropical context in the southern hemisphere. It also demonstrates the influence of Malay village culture on the recreational behaviour of Malays, Chinese and Indian users, and values hold by the Malays such as the intergenerational value aspect.

This research offers insight into the use of two recreational forests in Selangor state, together with user attitudes and experiences. It provides insight into the effects of age, gender and ethnicity on interactions with the forest, and shows how forest qualities and ambiance such as fresh air, shade, green environment and cool water contribute to those interactions. In addition, the study delves into the impact of cultural and childhood aspects of Malay traditional village life on Malaysian recreational behaviour. This study also demonstrates the values of Malaysian people related to the use and experience of the recreational forests, together with current issues such as health, social and cultural aspects which have implications for the state government, policy makers and forestry

departments to enhance future use of recreational forests and to protect this resource for future generations.