

Recreational Forest Landscape Planning in Selangor, Malaysia

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Abstract: Recreational forest in Peninsular Malaysia has been established by the Forestry Department of Peninsular Malaysia for sustainable use since 1965. The purpose of the establishment is for preservation and conservation as well as wise use of natural resources. Until today, the numbers of recreational forest in Peninsular Malaysia had increased where it was reported that the total sites are 125 as for 2010. In Selangor itself, it was reported that 10 sites had been developed. Nevertheless, their landscape planning is based on *ad hoc* or *insitu* approach that is unsustainable attitude. Due to that, this study tries to comprehend a stakeholder perception towards recreational forest landscape planning related to planning implementation, development approach, facility development and criteria's that can pursue to sustainable planning approach. By understanding stakeholder perception, a more sustainable planning approach can be developed for the comfort of users and the environment in the future. Thus, objectives of the study was to analyze stakeholders' perception towards sustainable recreational forest landscape planning in order to benefited to future development in terms of environment, social and economy. Results shows that stakeholders' perception is still in line with the statement of landscape recreational forest planning was developed through *ad hoc* approaches that are unsustainable way. This is due to the fact that this site has been developed without landscape master plan, grounded on user demands and requirements. Therefore, a concrete actions need to be taken and landscape master plan should be prepared by the management to overcome the issue of unsustainable landscape development planning.

Key words: Landscape, planning, sustainable, recreational forest, perception.

Introduction

Recreational forest development in Peninsular Malaysia started in First Malaysia Plan (1966 – 1970). The aim of the establishment was to preserve, conserve and wise use of natural resources, especially the forest. Since the establishment, their landscape also changes where lots of man-made landscape elements were introduce such as bench, picnic table, shelter, walkways, office, changing rooms, toilets and others. The development was continued in the next five years Malaysia Plan (Table 1).

Table 1 Numbers of Recreational Forest in Peninsular Malaysia

Malaysia Plan	Years	Numbers of Recreational Forest That Have Been Developed
First	1966 – 1970	3
Second	1971 – 1975	1
Third	1976 – 1980	14
Fourth	1981 – 1985	28
Fifth	1986 – 1990	27
Sixth	1991 – 1995	22
Seventh	1996 – 2000	19
Eighth	2001 – 2005	7
Ninth	2006 – 2010	4
Total		125

Source: Peninsular Malaysia Forestry Department, 2007.

The more rapidly development of recreational forest started in the periods of Third Malaysia Plan (Table 1). The development has been further increase in Fourth Malaysia Plan (1981 – 1985) and the number of sites development in Fifth Malaysia Plan (1986 – 1990) is similar with the numbers in Fourth Malaysia Plan. Generally, the development of recreational forest continued in every development in the Malaysia plan. This is due to the increased of public awareness for outdoor recreational activity and environmental conservation. At the same time recreational forest development can fulfill public demand for outdoor activity such as picnicking, recreation and environmental appreciation. The fast development activity that has been faced by the country also contributed to the firm recreational forest development. Therefore, it's given some sort of pressure to the management to develop and planned the sites in sustainable way as well as to protect and conserve existing natural forest for human health.

Recreational forest landscape development in Peninsular Malaysia can be divided into three phases, based on man-made landscape development and recreational activity demand. The earlier phase (1966 – 1979), the development just provides a space for public's to do basic recreation activities such as picnicking, swimming, camping and observing forest environment. The numbers of man-made landscape elements (e.g. accommodations) were developed in small quantities.

The development of recreational forest landscape came into second phase (1980 – 1989) due to the increased demand from public's for suitable space to carry out outdoor activities such as jungle trekking, environmental appreciation, research and education purposes and other active activity like mountain climbing. Visitor's demand also has urged the Peninsular Malaysia Forestry Department to increase the number of man-made landscape elements in recreational forest area. Thus, the number has increased, but has been implemented through *ad hoc* approach without any detail development plan and assessment study (Chee, 1986).

The development of recreational forest landscape enters into third phase (1990 - till now) when the area has become ecotourism site and in time with the first Visit Malaysia Year campaign in 1990. Visit Malaysia Year has encouraged public to appreciate recreation and tourism. Therefore, it attracts more tourists to come to recreational forest areas (either local or international tourists). Starting from this situation, recreational forests have been recognized as "tourism groups area" and have received large numbers of tourist every year. This situation has encouraged the management to increase the number of man-made landscape elements such as accommodation (chalets) that allow people overnight in the area.

Due to the above scenario, some recreational forest sites have been handover to other parties to be managed and develop such as state tourism and local authority. In Selangor for example, Sungai Chongkak Recreational Forest and Templer Recreational Forest have been handover to Selangor Tourism Sdn. Bhd. and Selayang Municipal Council, respectively. Now, there are three parties involved in managing and developing the recreational forest landscape in Selangor which are the (i) state government (ii) local authority and (iii) private sector (Mohd Kher et al. 2009).

However, how stake holders perceive recreational forest landscape planning is still in question. Therefore, this study tries to comprehend a stakeholder perception towards recreational forest landscape planning related to planning implementation, development approach, facility development and criteria's that can pursue to sustainable planning approach. By understanding stakeholder perception, a more sustainable planning approach can be developed for the comfort of users and the environment in the future. Objectives of the study was to analyze stakeholders' perception towards sustainable recreational forest landscape planning in order to benefited to future development in terms of environment, social and economy. Stakeholders in this study are referred to the management staff, local resident and user.



Photo 1: The beauty of Malaysia's recreational forests landscape has attracted people to visit the site and required proper management planning to ensure their sustainability.

Methodology

This study used case study as research approach. Three recreational forests in Selangor have been selected as case study namely Sg. Chongkak Recreational Forest, Sg. Tekala Recreational Forest and Templer Recreational Forest (Figure 1). In order to understand stakeholder perception regarding sustainable landscape planning of the study sites, structured questionnaire has been used. Likert scales were used to measure respondent perception level by using the scales of “strongly agree = 3”, “agree = 2”, “not agree = 1”, “strongly needed = 3”, “needed = 2”, “not needed = 1”, “very good = 3”, “good = 2” and “not good = 1”. Three scales were used in order to avoid middle answer compared to five scales that can causes bias to the middle answer.

In selecting the respondent, simple random technique has been apply where respondents were selected based on ready availability on site (Rea & Parker 1997) and they all have the potential to be selected as respondent. Respondent have been meet face to face and were asked whether agree to become respondent or not. If he/she agreed, then the survey was continuing, otherwise, other respondent were selected.

In this study, 533 respondents have been successfully selected. According to stakeholders group, 360 respondents are users, 83 are management staffs and 90 respondents are local peoples. This figure is big enough and reliable for carry out statistical analysis. The data were analyse using computer via Statistical Programme Social Science (SPSS). The study was carried out in May till August 2009.

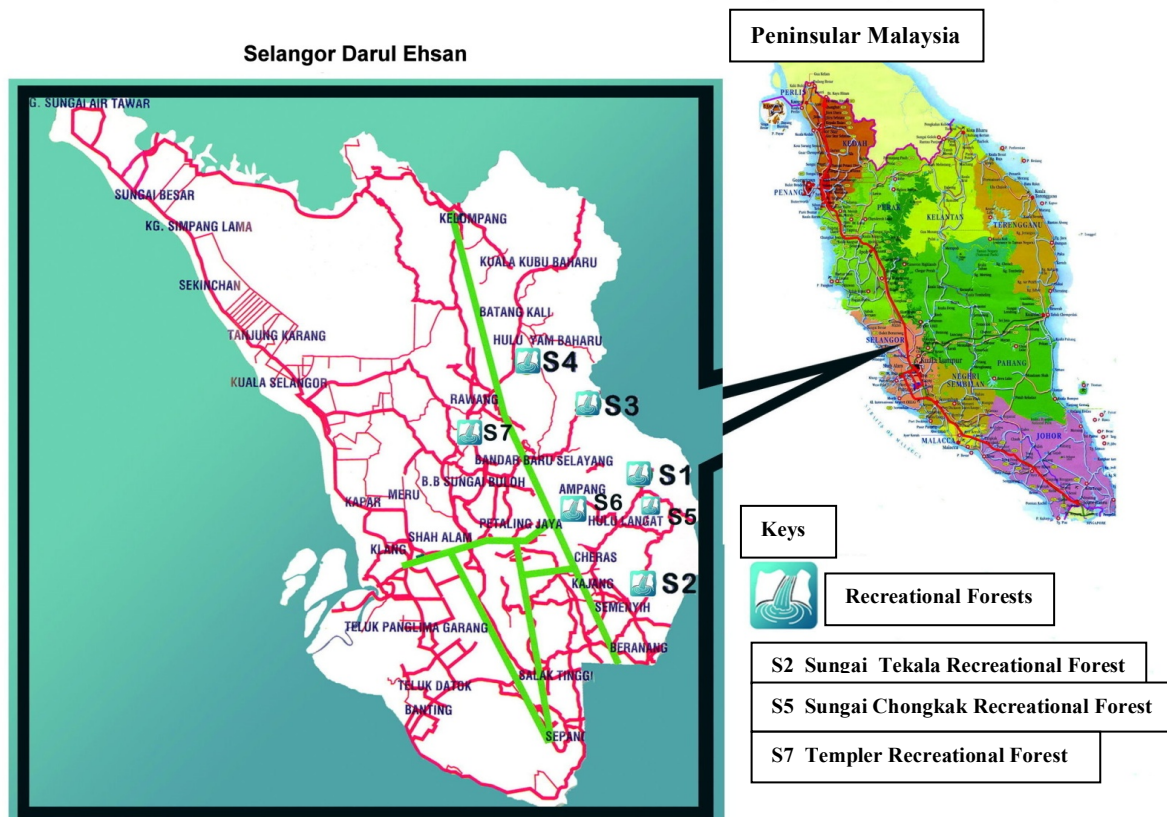


Figure 1: Location map of study sites

Results and Discussion

In this section, results and discussion have been focus on the topics related to landscape planning which is approach, infrastructure/accommodation development, designs, abandonment syndrome and respondents satisfaction towards recreational forest landscape development. KP is refered as management staff, PHR as user of recreational forest and PS as local resident.

Results in Table 2 shows that more than half of the respondents perceived that study sites have been developed according to detail recreational forest landscape planning plan (KP - 75.0%, PHR - 78.9%, PS - 64.4%). However, this result has contra with what has been mentioned by the park officers' during the interview where each of them has mentioned that there are no landscape development planning plan have been prepared and referred too. This perception occured because nearly all landscapes are judged and enjoyed according to the degree that they clearly exhibit care (Nassauer 1997). Furthermore, the setting of man-made landscape elements in the study sites is according to layout plan that make their setting look like followed detail landscape master plan. Whatever respondents perceived towards landscape setting of the study sites, the most important things are the management must prepare landscape master plan based on the need to maintain sufficient areas of productive, protective and amenity forests while recognising at the same time the sustained efforts to promote economic activities in the form of secondary and tertiary processing, trading, and marketing are equally vital. The management should realize that landscape planning are the programme of work for nature conservation and landscape management as well as the contents of the landscape planning support other agencies and planning authorities to realise environmentally friendly and resource-sparing development (Haaren et al., 2008).

Table 2 also shows that more than half of KP (53.2%) and PHR (63.3%) perceived that study sites have been developed followed to certain development guidelines such as Ecotourism Guidelines. While, more than half of PS (57.8%) has contra perception due to they still perceived that most of the development that have been implemented did not produced Environmental Impact Assessment (EIA) or Soscial Impact Assessment (SIA) reports (Badaruddin 2008). Author believe that the differences in perception towards this item can be eliminate if the management had landscape master plan and the development information had been given to the public. Only awareness and high commitment among government, policy makers, policy implementers and the society can make it happen.

Landscape development of recreational forest in Peninsular Malaysia strongly depend on government allotment (KP - 93.8%, PS - 80.0%, PHR - 88.1%) (Table 2). This is due to the fact that recreational forests establishment is not for profits. This result is in line with the park officer's statement that the government allocation is very important for planning development and management of their site. In addition, efficient budget is very important for infrastructures and research development that can ensured recreational forest sustainability in future (Badaruddin 2008).

Table 2 Perception toward Recreational Forest Landscape Development Planning

Items	Yes		No	
	Total	%	Total	%
Have overall development planning plan				
*KP (N=80)	60	75.0	20	25.0
PS (N=90)	58	64.4	32	35.6
PHR (N=360)	284	78.9	76	21.1
According to certain guidelines				
*KP (N=77)	41	53.2	36	46.8
PS (N=90)	38	42.2	52	57.8
PHR (N=360)	228	63.3	132	36.7
Depends on government allotment				
*KP (N=81)	76	93.8	4	4.9
PS (N=90)	72	80.0	18	20.0
PHR (N=360)	317	88.1	43	11.9

Note: *Some respondents did not answered, KP – Management staffs, PS – Local people, PHR – User of recreational forest



Photo 2: Nearly all recreational forest landscapes are judged and enjoyed according to the degree that they clearly exhibit care.

In terms of planning approach, results have shown that 25 - 50% respondents perceived that landscape development of study sites were carried out base on *ad hoc* or *insitu* planning approaches (Table 3). This result has close related with Chee (1986) statement where he argued that the development of recreational forest in Peninsular Malaysia was implemented through *ad hoc* approach and without overall development plan. In addition, it's also related with users' perception on the condition of infrastructures in recreational forests that has been perceived by them as under their satisfaction (Roshanim dan Fazidah 2008). But, majority KP (71.6%) and more than half of PHR (68.6%) as well as less than half PS (44.4%) mentioned that landscape development planning of recreational forest is based on master plan (this result is in line with analysis on Table 2). Based on this result, the management must take serious action to transform their development strategy by developing overall landscape master plan. Otherwise the issue of *ad hoc* or *insitu* development will be continued even though the parks had been established for more than 47 years in Peninsular Malaysia.

Table 3 Landscape Recreational Forest Development Planning Approach

Stake Holders'	Development Planning Approach						Total N
	Via Master Plan		<i>Adhoc/Insitu</i>		Others		
	N	%	N	%	N	%	
*KP	58	71.6	20	24.7	3	3.7	81
PS	40	44.4	43	47.8	7	7.8	90
PHR	247	68.6	107	29.7	6	1.7	360

Note: * Some respondents did not answered (2 respondents), KP – Management staff, PS – Local people, PHR – User of recreational forest

On the other hand, more than ninety percent's PS and PHR (PS - 97.7%; PHR - 96.7%) perceived that man-made landscape elements is not harmonize and unsuitable with existing environment especially in terms of designs (Table 4). This is because most of the tourism site in Malaysia has significant problem with their developments where the "code of design" of landscape and architectural quality were absence (Noorizan, 1995). This situation also portrays that the development of accommodation and facility as well as other man-made landscape elements in recreational forest site influence people perception towards the landscapes (Manmohan, 1990). Analysis also showed that majority KP (79.0%) and PHR (91.7%) as well as more than half PS (58.9%) perceived that accommodation and facility development in recreational forest depends on ecotourism concept itself and required a good and detail planning plan. Therefore, recreational forest landscape development should be planned carefully and accordance to ecotourism norms as well as did not implemented via *ad hoc* approach (Badaruddin dan Nikmatul Adha 2007). Their accommodations development also needs to be develop according to existing environment characteristics (Roshanim & Fazidah 2008). The ignorance of this aspect by the management will cause to abandon syndrome of recreational forest sites in future.

Table 4 Infrastructure and Accommodation Development

Items	Strongly agree		Agree		Not agree	
	Number	%	Number	%	Number	%
Man-made landscape elements do not harmony and unsuitable with forest environment						
*KP (N=81)	2	2.5	18	22.2	61	75.3
PS (N=90)	31	34.4	57	63.3	2	2.2
PHR (N=360)	35	38.9	52	57.8	3	3.3
Accommodation development depends on ecotourism concept and required good planning						
*KP (N=81)	20	24.7	44	54.3	17	21.0
PS (N=90)	87	24.2	125	34.7	148	41.1
PHR (N=360)	68	18.9	262	72.8	30	8.3

Note: * Some respondents di not answered(1 respondent), KP – Management staff, PS – Local people, PHR – User of recreational forest

Looking at the conservation strategy that have been implemented for recreational forest, analysis in Table 5 show that more than eighty percent respondents (KP - 80.3%; PS - 97.8%; PHR - 94.5%) perceived that if the management fails to prepare recreational forest landscape master plan, conservation efforts will receive negative impacts and cannot satisfy publics. This is because the successfulness of development of landscape recreational forest is through strategic development approach that follows planning and management strategy in order to achieve function and role of recreational forest (Morgan 1996). Thus, without landscape planning plan can causes to difficulty in implementing sustainable recreational forest development itself. In addition, more than ninety percent PS (91.1%) and PHR (90.0%) as well as more than half KP (61.0%) perceived that accommodation development that base on international or modern style can causes visual destruction and not ecofriendly as well as can cause to the failure of recreational forest conservation too (Table 5). Therefore, this study urged related parties to be more sensitive when wanted to develop recreational forest in order to ensure their development can be accepted by the public's and more conserving the existing forest environment (Wan Sabri 1987).

Table 5 Perception towards Recreational Forest Conservation in Their Development

Items	Strongly agree		Agree		Not agree	
	Jumlah	%	Jumlah	%	Jumlah	%
Failed to prepared detail landscape development plan gives an impacts on recreational forest conservation						
*KP (N=81)	23	28.4	42	51.9	16	19.8
PS (N=90)	28	31.1	60	66.7	2	2.2
PHR (N=360)	200	55.6	140	38.9	20	5.6
Accommodation development that base on international or modern style causes to visual reduction and not ecofriendly as well as causes to conservation effort failed						
*KP (N=81)	24	29.3	26	31.7	32	39.0
PS (N=90)	31	34.4	51	56.7	8	8.9
PHR (N=360)	175	48.6	149	41.4	36	10.0

Note: * Some respondents did not answered. KP – Management staff, PS – Local people, PHR – User of recreational forest



Photo 3: The design of human made landscape elements in recreational forest should apply ecofriendly and harmonize designs with surrounding environment as well as with local design enhancement.

In terms of design planning, more than majority of KP (81.4%) and more than half of PHR (62.5%) perceived that the designs should apply ecofriendly and harmonize designs with surrounding environment. However, half of PS (51.1%) perceived with local design enhancement (Table 6). Both designs actually fulfill and follow sustainable landscape characteristics due to it portrays unique approach in relationship with environment (Schenaidner 1981; Rykwert 1972). However, the most important things for related parties to take into account is they should implement sustainable landscape principles and standard requirements in serious ways especially in planning, implementation, management and landscape maintenance in order to achieve recreational forest sustainability (Beamiss 1987; Riry Zaimora 2006).

The development planning of recreational forest landscape should followed several criteria's to avoid abandonment syndrome. In this study, results show that more than half KP (75.9%) as well as majority PS (84.5%) and PHR (88.9%) perceived that trees cutting for construction area should be at 10 - 15% of overall site area (Table 7). This is in line with Fischer (1991) recommendation that trees cutting for protected area should be at 10 - 15% only for construction purposes.

Table 6 Types of Accommodation Design in Recreational Forest

Items / Stake Holders'	*KP		PS		*PHR	
	Total	(%)	Total	(%)	Total	(%)
Modern	2	2.5	3	3.3	21	5.8
Ecofriendly/harmony	6	81.4	28	31.2	225	62.5
Local	0	0.0	46	51.1	79	21.9
Contemporary	3	3.7	3	3.3	11	3.2
Combination	10	12.4	10	11.1	14	6.6
Total	81	100.0	90	100.0	350	100.0

Note: * Some respondents did not answered. KP – Management staff, PS – Local people, PHR – User of recreational forest

In term of structural construction, majority of the respondents (KP - 97.5%; PS - 83.8%; PHR - 93.0%) perceived that the structure should be built at area more than 30° slop and not at the flooding risk as well as landslide areas (Table 7). This perception is in line with the standards for avoiding structural from environmental danger such as erosion or heavy winds (Schwanke 1997). While, majority PS (93.3%) and PHR (90.6%) as well as more than half KP (78.1%) perceived that building construction (e.g. chalet) should not use air conditioner to coldness the internal buildings (Table 7). This matter is in line with Pearson and David (1994) suggestion where they encourage the use of natural wind as coldness tool for ecotourism site. At the same time, majority PS (88.9%) and more than half KP (71.6%) as well as half PHR (50.0%) has an agreement on the use of sun energy as alternative source for energy in recreational forest site (Table 7). This is due to the fact that previous study has shown the used of sun energy can protect and reducing huge impacts on environmental (McKercher 1993).

For structural elements development, almost all respondents (KP - 100.0%; PS - 94.5%; PHR - 96.3%) perceived that the form or design of structural elements (e.g. bench, bridge, and building) should portray local design and enhancing surrounding environment (Table 7). This is due to the fact that local designs are more appropriate with existing environment and can strengthen the architecture of the area itself (Walter 1987).

Furthermore, almost all respondents (KP - 100.0%; PS 96.7%; PHR - 98.0%) also agreed that the structural/building designs should also portray vernacular design (Table 7). This is because combination between local and vernacular form and design strongly needed for creating a good relationship with the environment (Schmid 1983).

In term of construction materials aspect, majority respondents (KP - 92.7%; PS - 91.1%; PHR - 95.0%) perceived that the materials used must be local materials (e.g. wood, bamboo, paddy hay, *nypha* leaves and others) (Table 7). Lippsmiller (1997) and Schmid (1983) encourage the use of local materials for construction works in protected area for sustainability purposes. On the other hand, majority respondents (KP - 84.1%; PS - 96.7%; PHR - 98.3%) also agreed that color application on structural in recreational forest should apply natural colors such as brown and green (Table 7). Basically, natural colors are much suitable for forest environment due to the fact that those colors are calm and peaceful (Brenda and Robert 1996 in Riry Zaimora 2006). Majority of the respondents (KP - 84.2%; PS - 94.5%; PHR - 95.6%) also perceived that structural design should portray special characteristics of forest that only can be found in recreational forest (Table 7). Noorizan (2004) argued that enhancing special characteristics of recreational forest is necessary because it can control the important of history value, cultural, conserving ecosystem and aesthetic values, increasing economy and tourism sector as well as can educate the publics.



Photo 4: The development of human landscape elements of recreational forest should followed several criteria's to avoid abandonment syndrome such as portray local design and enhancing surrounding environment

Table 7 Perception towards Criteria that can Avoid Abandon Syndrome of Recreational Forest

Items	Strongly agree		Agree		Not agree	
	Number	%	Number	%	Number	%
Trees cutting for construction area should be at 10 %-15 % only						
* KP (N=79)	25	31.6	35	44.3	19	24.1
PS (N=90)	24	26.7	52	57.8	14	15.6
PHR (N=360)	203	56.4	117	32.5	40	11.1
Structural should be constructed on the slope more than 30° and not on the flood and landslide risk area						
*KP (N=81)	46	56.8	33	40.7	2	2.5
PS (N=90)	24	26.7	55	61.1	11	12.2
PHR (N=360)	215	59.7	120	33.3	25	6.9
Building construction such as chalet not use air conditioner						
*KP (N=82)	40	48.8	24	29.3	18	11.0
PS (N=90)	44	48.9	40	44.4	6	6.7
PHR (N=360)	221	61.4	105	29.2	34	9.5
Building construction such as chalet should use sun energy as energy source						
*KP (N=81)	31	38.3	27	33.3	23	28.4
PS (N=90)	39	43.3	41	45.6	10	11.1
PHR (N=360)	68	18.9	112	31.1	180	50.0
Structural form/design (bench, bridge and others) should enhance local design and portray natural environment						
*KP (N=81)	40	49.4	41	50.6	0	0.0
PS (N=90)	34	37.8	51	56.7	5	5.6

PHR (N=360)	232	64.4	115	31.9	13	3.6
Structural/building design enhance vernacular /local design						
*KP (N=81)	32	39.5	49	60.5	0	0.0
PS (N=90)	35	38.9	52	57.8	3	3.3
*PHR (N=359)	237	66.0	115	32.0	7	1.9
Construction materials for structure from local materials such as wood, bamboo and others						
*KP (N=82)	30	36.6	46	56.1	6	7.3
PS (N=90)	30	33.3	52	57.8	8	8.9
*PHR (N=359)	212	59.1	129	35.9	18	5.0
Colors application for structural must appropriate with existing environment which is enhance nature colors such as chocolate and green						
*KP (N=82)	28	34.1	41	50.0	13	15.9
PS (N=90)	41	45.6	46	51.1	3	3.3
PHR (N=360)	228	63.3	126	35.0	6	1.7
The structural design enhance special characteristics that can only be found in recreational forest						
*KP (N=82)	29	35.4	40	48.8	13	15.9
PS (N=90)	44	48.9	41	45.6	5	5.6
PHR (N=360)	244	67.8	100	27.8	16	4.5

Note: * Some respondents did not answered. KP – Management staff, PS – Local people, PHR – User of recreational forest

Looking at respondents' satisfaction toward recreational forest landscape development, Table 8 show that their satisfaction can be divided into two: firstly, nearly half of them feel satisfy (KP - 57.8%, PS - 62.3%, PHR 46.4%) and secondly, half of them feel unsatisfied (KP - 42.2%, PS - 37.8%, PHR - 53.3%). This results has similarity with the findings by Wahida 2006) where she found that majority of the visitors of Sungai Tekala Recreational Forest are not satisfy with infrastructural development of the site and nearly 58% satisfy with the development. Two category of satisfaction has occurred because respondents always have different attitude and norm (Dorwart 2007) and has been influenced by the differences in individual desire and taste that are always change according to time (Roshanim dan Fazidah 2008). Probably, it's also due to the perception made according to situation where respondents thinks it is necessary (Manning 1999). For instance, for PS respondents who received economic benefits from the recreational forest development will act positively (satisfy) towards tourism (Davis et al. 1995). PS respondents, who feel the development does not increase their quality of life, will neglect the existence of recreational forest (W. Mansor et al. 1991). Therefore, those perceptions urge related party to improve their landscape development implementation efforts that can change public's negative perception and can fulfill the needs of public at all level.

Table 8 Respondents Satisfaction Towards Landscape Recreational Forest Development

Item	Very satisfy		Satisfy		Not astisfy	
	Number	%	Number	%	Number	%
Are you satisfy with landscape recreational forest development currently?						
KP (N = 83)	4	4.8	44	53.0	35	42.2
PS (N = 90)	5	5.6	51	56.7	34	37.8
PHR (N = 360)	19	5.3	149	41.1	192	53.3

Note: KP – Management staff, PS – Local people, PHR – User of recreational forest



Photo 5: People's perceptions towards recreational forest landscape are difference because people always have different attitude, norm, desire and taste that are always change according to time

Conclusions

This study has shown that recreational forest landscape planning in Peninsular Malaysia's needs further improvement and transformation. Stakeholders' still perceive that their development is less harmony with existing environment and does not fulfill the ecotourism as well as sustainability concept. Sustainability should stress on the ability to fulfill current needs without compromising the future generation requirements. *Adhoc* or *insitu* planning approach has resulted to the study sites have faced unsustainability. Thus, a good landscape planning should be given priority by the management. Recreational forest landscape development must have overall landscape master plan and accordance to related development policy plan, e.g. Ecotourism Policy. While, site problems that has been identify should be solve through landscape designs in order to achieve required landscape objective. The point is landscape development must give priority to environmental, social and economic aspects that can lead to sustainability of recreational forest landscape.

A clear picture of this study was the development that has been implemented without overall landscape master plan. Most probably, these developments were based on necessity, user needs and *ad hoc* basis that causes to no special identity has been created to the infrastructures/accommodations. It was found that nearly all man-made landscape elements of the study sites have similarity in terms of design or forms and quite similar with recreational areas in urban park. Therefore, the management should prepare overall landscape master plan for their site in order to identify the site own identity, easy to make decision and to supervise the site. A part of that, planning, experts' collaboration, design, local people involvement and landscape maintenance should be given priority when developing and managing the site.

On the other hand, criteria's for avoiding recreational forest abandonment syndrome as perceived by the stake holders in this study should be given priority. Those factors are very important in helping to achieve sustainable landscape development. Fails to take into account of that factors can causes to landscape sustainability approach cannot be achieve, hence resulted to site elimination and abandonment.

Several improvements need to be taken by related party in order to strengthen the aspects of environment, social, economy and design as mentioned earlier. In addition, landscape recreational forest development must be planned before the development takes place in order to protect and preserve natural landscape resources (e.g. forest, river, hills, and water fall). It is also very important in strengthening the efforts of achieving higher sustainable development of recreational forest.

Finally, collaboration from all party involved is needed in ensuring the successfulness of sustainable landscape approach for recreational forest in Malaysia. All levels of public, no matter they are politician, professional, decision maker, local people and user must plays their own rule in ensuring landscape sustainability of recreational forest are success for the sake of our environment, social and economy. Recreational forest landscape development process should start from bottom to the top levels which start from user, local people, owner, decision maker and politician. In line with this, overall landscape master plan for recreational forest is very important and must be prepared in order to ensure all parties can be involved. Through that plan, the development also can be made more efficient and effective as well as can fulfill the sustainability principles. When it comes to reality,

stakeholders' perception towards recreational forest landscape can be improved and abandonment syndrome can be avoided.

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