

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter entailed a summary of the essential findings of the study. According to the objective, recommendations for sustainable tourism development in the VNP and the community were generated. Furthermore, the researcher also provided perspective and recommendations for the future study. From the study, the results of the research purposed with each indicator were discussed: firstly to determine local community opinion in regard with tourism development in Virachey National Park and their suggestions, secondly, the recommendations for visitor satisfaction indicators and lastly, recommendations to improve factors with moderate and low potential in order to promote sustainable tourism development and management in Virachey National Park.

5.1 Conclusion

Survey and interview questionnaires were prepared and employed as the fundamental tool for data collection. Two distinctive sets of interview questionnaires were used in this study. One for officers of Biodiversity and Protected Areas Management Projects (BPAMP) of Virachey National Park and another one used for local residents. The survey questionnaires were separately distributed to international visitors to Virachey National Park.

5.1.1 Existing situation of tourism development in Virachey National Park

The researcher collected the data from the review of literature and on-site observation for SWOT analysis of current situation of tourism development in the park. Virachey National Park has a rich supply of complementary attractions, natural and cultural assets, safety and security which could be considered as a strength point for supporting sustainable tourism development in the park. Moreover, Virachey National

Park has the potential of providing economic opportunities for businesses and a range of employment opportunities for people living in and around the park. These include opportunities to be employed as Protected Area staff, ecotourism guides and porters. Virachey National Park

also has product and market opportunities including unique and authentic products. These points could be considered as the opportunities for supporting tourism development in the park. However, the park lacks visitor appeal including poor accessibility, lack of infrastructure, tourist facilities and services, lack of human resource development, lack of research and monitoring and the largest impacts has been in the areas surrounding the park. Inside the park the causes of depletion are the result of several factors including illegal logging, poaching of wildlife and other rare species, the extraction of scarce timber species and unsustainable resource utilization. These activities could be considered as the weak points of the park to achieve sustainable tourism development. On the other hand, Virachey National Park has a great danger of damage to the landscape because of the traditional agricultural activities of local communities and the bad image of the park including inaccessibility, remoteness, lack of safety and security, malarial and other born disease. These could be the threat point of the park for sustainable tourism development.

5.1.2 Existing tourism development plan and management strategy of the park

The research collected the data from key persons who are working for Biodiversity and Protected Areas Management Project (1 Park Director, 1 Warden Tourism, 1 Warden Community Development and 1 Warden Park Ranger). The interview questions consisted of 4 parts including existing current situation of sustainable tourism development in the park, visitors' health and safety, environmental impacts of tourism activities and destination planning and control in the park.

The data generated from key persons in regard with the existing current situation of tourism development plan and management in the park consisted of 4 components (included 28 sub factors) including physical conditions, management in the park, operation of natural and cultural tourism and participation of local communities in sustainable tourism planning and management in Virachey National Park.

For the first factor, the physical conditions have main potentiality of uniqueness of natural attractions, biodiversity of fauna and flora, uniqueness of cultural and attraction, tourist tradition and festival attraction and appropriate area for tourism activities, while other factors including, variety of cultural activities and lifestyles, ease of accessibility to tourist attractions, degree of accessibility in various seasons received low potential scores. Whereas, the ability in accepting the change of culture factor with moderate potential level. In summary, physical condition factors for Virachey National Park has moderate potential level for sustainable tourism planning and management.

Secondly, the management factors have main potentiality of waste disposal and consideration to limitation of carrying capacity while the other factors including management of water quality, tourist attractions' facilities management, life safety management, appropriate of area management to a type of tourist attractions, environmental impact prevention system and adequate measure to prevent deterioration of cultural heritage value have low potential level. Whereas, management of noise quality and area management have moderate potential level. In summary, management factors for Virachey National Park have low potential level for sustainable tourism planning and management.

Thirdly, operation of natural and cultural tourism factors have main potentiality of the advantage and value of learning and diversity of tourist activities in the park. Whereas, the other factors including quality of service information, the creation for tourists' impressiveness of park rangers and relevant people, types and methods of communication to visitors have

moderate potential level. In summary, operation of natural and cultural factors for Virachey National Park has high potential level for sustainable tourism planning and management.

Finally, organization and participation of local communities in tourism planning have low potential level of all main factors which are the advantage of local communities to preserve cultural identity, economic benefit for local communities, the opportunity from the government and private sectors or non-government organizations (NGOs) to support tourism development, and local community acceptance and participation. So, this factor has very low potential level for sustainable tourism planning and management in the park.

High Potential level

Virachey National Park has 9 factors with high potentiality for sustainable tourism planning and development including identify or uniqueness of natural attraction, biodiversity, uniqueness of culture and attraction, tourist tradition and festival attraction, appropriate area for tourism activities, waste disposal, consideration to limitation of carrying capacity, advantage and value of learning and diversity of tourism activities in the park.

Moderate potential level

Virachey National Park has six factors with low having moderate potentiality and existing situation for tourism development including, ability in accepting the cultural change, management of noise quality, area management, quality of information services, the creation for tourist impression of park ranger and relevant people, and type and method of communication to visitors.

Low potential level

Virachey National Park has thirteen factors with low potentiality and existing situation for tourism development

including variety of cultural activities and lifestyle, ease of accessibility to tourist attraction, degree of accessibility in various season, Management of water quality, tourist attraction and facility management, life and property safety management, appropriation of area management to a type of tourist attraction, environmental impact prevention system, adequate measure to prevent cultural heritage value damage, advantage of local community to preserve cultural identity, economic benefit for local communities, the opportunity from the government and the private sector to support tourism development, local community acceptance and participation.

Visitors' health and safety

it is unclear about the number of visitors went to see the local doctor the number of visitor got sick from mosquito bite in the park. However, the park has the good performances of visitors' health and safety because there is no visitor get lost, no accident or crime involving visitors, no injury on short and long walks, no motor accident en route to the park, no animal attack and snake bite. Particularly, all of eco-tourism ranger guides (100%) have been trained with the first aid training. In contrast visitors still have some problems with boat accidents, but not serious, visitors thought that it is just fund and they also like this activity.

Negative impacts of the environment

The data generated from the park of oil entering water bodies through inspection of boat motors was not unclear. So, it is unclear about the negative impacts of the environment on the water bodies in the park. This is the weak point of park management on the environmental impacts caused by motor boat for facilitating and serving visitors during their visiting the park. Regarding to the waste treatment in the park, there is no waste disposal in the park because the park has the regulation of the waste disposal. The visitors could not allow to leave their

waste disposal in the park. They have to take it to their guest house or hotel where they stayed and all of visitors used of toilet supplied.

Destination planning and control

The park has created four zones based on the draft Protected Areas Law as Such as Core Zone, Conservation Zone, Sustainable Use Zone including, Eco-tourism areas, Community protected areas (CPA), Conservation of natural culture heritage areas, Botanic garden, and Special use areas, infrastructure, trails. etc. and Community Zone: In this zone, local communities and individuals will be able to obtain land title and Protected Area (PA) management will have no direct responsibilities after it has been awarded this status by the government of Cambodia.

5.1.3 Local communities' perception with regard to tourism development in the Virachey National Park

The data collected from representative of the local communities including head of Kok Lak commune, commune council committee, heads or deputy heads of villages and tribal chiefs and village rangers are the local communities' perceptions with regard to sustainable tourism planning and management including tourism is good for my community, I personally benefit from park tourism, creates job for local residents, employs local youth, tourism helps communities to obtain services, tourism helps stimulate local culture and crafts, the community has control over tourism, the money spent by visitors remain in the community, level of local people satisfy with park tourism, tourism rises price for goods, causes rise in crime rate, stop local from park access, harms moral standard, harms the environment, disrupt local activities and uses natural resources needed by local residents. Moreover, the local communities were personally asked for their suggestions in

regard with sustainable tourism planning and management in the park as well as in their community.

From 28 key informants, more than half of key informants were male. Almost were 41-45 years old. Most of local communities were people who have position in the community with non-education. Regarding the local communities' perception toward park tourism and tourism in their community, most of them felt satisfied with tourism. They thought that tourism could be good for their society in terms of creating job for local residents and tourism helps to preserve the culture of minority group especially the communities in and around the park are the poor areas. So, they viewed that tourism will contribute to alleviate poverty through park tourism development project. Meanwhile, most of local people expressed their concerns in regard with the negative impacts of tourism in their areas. However, most of local communities also suggested the government or non-government organizations to develop the basic infrastructure and services for their communities including sanitary toilet, well or pump well, health center, road from provincial town to community used in the community, primary or secondary schools, market and dam, agricultural hydraulics because the community lack of water source for agriculture.

5.1.4 Visitors' opinion with regard to the Virachey National Park

The data that collected from the international visitors to the Virachey National Park during 01-30 January 2006 were the visitors' behavior, visitors' satisfaction indicators with the park and the types of services visitor would like to be available in the park and factors that influence visitors' decision to select eco-tourism in Viracchey National Park.

From 28 international visitors, more than half of international visitors were male. Almost were 15-40 years old. Most of international visitor came from Europe, the majority were government officers with bachelor and higher than

bachelor degree. In consideration of visitors' motivation for visiting the park, more than half of male respondents and all of female respondents viewed that natural park sightseeing, natural park landscape, and the environment were their ultimate motivations to visit the park. Moreover, more than half of male and female respondents selected of natural beauty, waterfalls and streams as their predominant likes about the park. More than 50% of male respondents would like to have books and other printed material about the park available while in contrast, more than half of female respondents would like to have trails available in the park. In regarding with the types of accommodation, more than half of male and female respondents would like the service of camping site available in the park. Their expectations about the trip to the park were viewing new landscape and learning about the way of life and the culture of minority groups in and near the park. On the other hand, more than half of male and female respondents viewed that local guides were helpful and friendly. Nearly half of male respondents spent 3-5 days on an overnight stay in the park but nearly half of female respondents spent 1 week on an overnight stay in the park. In regarding with the visitors' satisfaction indicators, most of respondents (more than 90% of international visitors) felt satisfied with their experiences during visiting the park. However, more than half of respondents do not neither satisfy nor dissatisfy with the quality of transportations.

5.2 Discussions of significant findings

This section involved a summary of critical findings of this study. The findings were discussed based on the objective of the study.

5.2.1 The existing situation of tourism development in Virachey National Park

The data for SWOT analysis of existing situation of tourism development in Virachey National Park was collected

from the review of literature and on-site observation. Potentiality of natural resources: According to the physical feature of the park, Virachey National Park has various high potential tourist attractions. The fauna and flora of the park has meaningful aesthetic value. Plants and animals that have biological value because they are rare and unusual also have tourism value for the same reason. The most important aesthetic and tourist value is the remoteness and wilderness feel of the park. Adventure tourism is one of the fastest growing sectors of the tourism industry and Virachey National Park has a high potential of developing this type of eco-tourism without negatively effecting the natural and cultural environment concerning cultural resources values, it is imperative to acknowledge that Virachey National Park is of great significance for local communities. This is in part related to the values associated with traditional food and medicines obtained from the forests of the mountain. There is great importance attached to the harvesting and consumption of bamboo. Other plants and animals are also used for cultural practices associated with cultural ceremonies and rites. Aside from the cultural importance attached to traditional products extracted from the park, there is considerable cultural significance afford by local neighboring minority groups to certain specific sites in the park. The cave near Virachey mountain is sacred to the Kavet. Sacred site also includes burial or ritual sites associated with natural products that are present in unusual quality or quantity. It is important to realize that for visitors from other countries and cultures, cultural value associated with the Virachey National Park has the potential to add immeasurably to the interest and value of their visit to, and experience of Virachey National Park. Moreover, with the continuing expansion of the worldwide tourism industry, visitors nowadays are looking for experiential travel opportunity more than the traditional sun, sand and sea holiday. The tourism market has led to an increasing number of new niche markets available in destination country. Eco-tourism is predicted to be one of key tourism market segments in the

near future for development of products and marketing opportunities for Cambodia.

Official promoting tourism policy: The Ministry of Tourism (MOT) is the firm whose responsibilities are to look after the country tourism. The important task is not only to launch marketing policies to attract local and international visitors to travel in Cambodia but also to expand tourism to rural areas and improve all kinds of tourism facilities and services to meet the need of tourists at the world standard.

Transportation quality: Transport network that can be reached to Rattanakiri and Steung Treng provinces are developing under Asian highway project. Moreover, the government is now studying how to expand and develop the route of Rattanakiri and Steung Treng provinces. This means in the near future the road of Phnom Penh – Rattanakiri and Steung Treng will be more convenient for tourists and good for tourism business as well.

However, Virachey National Park lacks of infrastructure such as road or other transportation, water supply, energy, tourist accommodation, trail, village guide and local communities lack of education and awareness. Moreover, the park has a lack of specialization in term of sustainable tourism knowledge in the local community. Therefore, local community unawareness does not help sustainable tourism planning and management. As a result, lifestyle activities may directly affect the environment. On the other hand, the park lack of human resource development with good foreign language skills, especially English. Travel operation lacks organizational, networking and product development skills. Village guides and guide rangers lack the knowledge and interpretative technique needed to explain the natural and cultural heritage value of indigenous minority group in an informative and interesting way. Moreover, the park does not have adequate data and information on which to base sustainable tourism planning and management decision. In addition to regular data collection by ranger patrols, the park will need information from applied research.

Moreover, traditional agricultural activities of local communities have been largely responsible for the most of the vegetation changes and introduction of exotic (alien) species found in the park, Furthermore, the history of VNP points to past timber and agricultural activities. The park is a major watershed and unless erosion is prevented or reduced. There is a great danger of damage to the landscape.

5.2.2 The existing tourism development plan and management strategy of Virachey National Park

According to the study of the existing tourism development plan and management strategy of the Virachey National Park, the results found that Virachey National Park has moderate potential level for sustainable tourism planning and management. However, most of weak points toward the sustainable tourism development are the management in the park and the organization and participation of local community in tourism planning. From analysis of four main factors, the results explained that physical condition has moderate potential level, the management in the park has low potential level, operation of natural and cultural tourism has high potential level and the organization and participation of local communities has low potential level.

Factor 1: Physical condition

This factor has moderate potential level from 4 main factors because Virachey National Park was glorious as the eco-tourism icon with uniqueness of natural attraction, biodiversity of fauna and flora, uniqueness of culture and attraction, tourist tradition and festival attraction and appropriate area for tourism activities. So, the park is rich both natural and cultural tourist attractions. These factors met the need of the most visitors' expectation to the park that are looking for being close to nature, viewing new landscapes, true relaxation, and learning about the

way of life and culture of minority group. There has the uniqueness and original condition. So, it is different from other places. The interesting and uniqueness of the park could be claimed as the selling point of the area to attract the visitors.

Factor 2: Management in the park

This factor has low potential level. The infrastructure and tourist facilities and services including road, trails, the quality of water, water system, electricity, health center, and accommodation are the main components of tourist attraction and the basic infrastructure for sustainable tourism development. It also includes convenient transportation to get to the park and the safe of life, prevention system of environmental impact and adequate measure to prevent the deterioration of cultural heritage value. If these factors are available in the park, it will make the park receive more and more visitors. On the other hand, the environment and the balance of the park as a whole must not downgrade the physical condition of tourist attractions. Virachey National Park has moderate potential level with quite low score especially factors that concern about the environmental management in the park and organization and participation of local community in tourism planning. These may cause from lacking for effective tourism planning and management from concerned sectors.

Factor 3: Operation of natural and cultural tourism

This factor has high potential level. Virachey National Park has to improve the quality of service, especially in supporting service and information service such as printed material of the park to facilitate the visitors before and during their visits and local communities, and park rangers. Relevant people have to create high impression and good relationship with the visitors but sometimes serving the visitors' needs may lead to inappropriate service. Hence, the park must keep its original culture, so that it can go along with the service for

visitors. Another important factor of natural tourist attraction to satisfy the tourists' need is the type and method of communication to visitors including the arrangement of sign communication, village guides, ranger guides, and the arrangement of visitors' orientation before touring to the park.

Factor 4: The organization and participation of local community

Participation of local community is the most important factor to support sustainable tourism planning and management in the park. This factor has lowest potential level, Virachey National Park has to increase local communities participating in tourism planning and management and give the advantage to stimulate local community to preserve cultural identity. Local communities have to pay the most importance and attention to their community and manipulate all problems, preserve nature, the environment, maintain culture of minority group in and around the park by themselves. The expanse of tourism activities in the community will enlighten local community's attention for developing natural and cultural tourism in their community. Local communities should have the democratic vote and respect opinion of each person. The community and people will be developed together for creating a strong and stable local economic. The famous vigorous community sets the example for other communities such as Kirirom village (Mlub Bai Tong). This community attracts many tourism communities to have visual education in their villages. Particularly, the economic advantage generate to local community equally, in main natural tourist attraction and they have equal opportunity to participate for tourism planning and developing especially in their community level.

The low potential level may cause from lacking effective tourism planning and management from all concerned sectors. All of these problems lead to irrelevant management and development.

5.2.3 Local communities' perception with regard to tourism development in Virachey National Park and in their community

The villages of Kok Lak commune is the one of indigenous minority group and scenic community in the area of the Virachey National Park of Northeast Cambodia. Visitors travel to the park to view the natural landscapes, wildlife and trekking because of its abundant natural resources and traditional culture and the way of life of local community nearby the park. These places became the researcher's focus in examining if park tourism can become an effective instrument in sustaining traditional culture and the way of life of local community and natural resources of the area and the development of park tourism could reduce poverty of local people. This section involved the critical finding of how local communities including commune council committee, heads or deputy heads of villages and tribal chiefs were asked to share their thinking regard to tourism development in Virachey National Park as well as in their community. The findings were discussed as follows:

Local communities' positive perception

From the result of the study related to positive perception of local communities with regard to tourism development in the park, the representative of local communities including head of commune, commune council committee, heads or deputy heads of villages and tribal chiefs expressed their opinions that tourism development in the park could be good for their community, local communities could benefit from the park tourism in terms of job for local residents, opportunity for local youth employment and preservation of local culture and crafts.

Local communities' negative perception

From the result of the study related to negative perception of local communities with regard to tourism

development in the park, the representative of local communities expressed their opinions that tourism development in the park could raise price for goods and cause rise in crime rates. Moreover, they expressed their main concern about park access that if tourism is developed in the park, the staff of the park would stop local to access their community through park area and the use of natural resources needed by local residents. Tourism could fairly harm moral standard, the environment and disrupt local activities. Local community also mentioned the negative perception about tourism development in the park as well as their community such as cutting down natural resources use (local people heavily depend upon natural resources in the park), the conflict between local people and visitors because most of visitors do not pay more respects to the traditional culture of local people and visitors' activities affected the spirit forest (Prey Arak), small number of local employment in the park, cultural changes and lack of English training.

5.2.4 Visitors' opinion with the park

There were 28 survey respondents who visited the Virachey National Park during the on-site survey. National park sightseeing, natural park landscapes, waterfalls, streams, and diversity of vegetation such as certain kind of ferns were the main factor to draw visitors to Virachey National Park. Potential of tourist attraction such as natural beauty, waterfalls, streams, landscapes, geographic location, mountain and culture of minority group were high and these characteristics satisfied visitors the most during their visit in the park. Printed material including books, maps of the park, knowledgeable tour guides and trails and guesthouse and home stay were the services that visitors need them to be available in the park. This need was in contrast to Boo's (1990) notion that nature tourist did not anticipate lodging accommodation, food or nightlife that correspond to the standard of comfort or luxury. Visitor' desire to travel to the park was to be close to nature, viewing natural landscapes and learning about the way of life of local

community. Local guides were friendly and helpful. The average length of stay was 3 to 5 days in the park.

5.3 Appropriate indicators of sustainable tourism development for the Virachey National Park

Several sets of principles for sustainable tourism have been proposed in the literature in an effort to operationalize the term of sustainable tourism and facilitate its implementation. (WTO Guidebook Indicators of sustainable development for tourism destinations, 2004b) has proposed principles for sustainable tourism such as involving local communities, sustainable use of the natural resources, planning for tourism, promoting information and research. The researcher proposed indicators as the principle of sustainable tourism planning and management for Virachey National Park as follows:

1. Managing scarce natural resources (WTO baseline 3.8)

Managing scarce natural resources referred to using resources in a sustainable way. The term “natural resources” includes water, energy, landscape, biodiversity, etc as well as socio-cultural resources. For natural resources, water and energy are the key concern for sustainability since both are extensively used by the tourism industry in the host area. Additionally, in the Virachey National Park, these two resources are in scarcity and are often the subject of conflicts due to competing demand for different uses. For instance, there is no water treatment system, no hygienic place for waste water treatment. Underground water, river and rainy water are the main sources of water supply in the Virachey National Park. Moreover, local communities lack of water for their agricultural activities.

The indicator of water consumption per tourist (or bed or night) is suggested to measure key resource consumption. Although this measure could be utilized, particularly in

Virachey National Park where no other data available or when strategies for consumption reduction have been implemented, such an index should be compared to

- a) some standard norms of consumption.
- b) the relative redundancy of the resource in the park
- c) the amount of resources needed by other sectors of the economy (agriculture, industry) which are developed or could be developed in the park (opportunity cost)
- d) the consumption before the implementation of reduction policy

Landscape is another natural resources to be considered. Overexploitation by the industry leads to deterioration of the landscape and the tourist. With large number of tourists visiting the park in the future, it should be expected that there would be loss of attractiveness, and disturbance of natural habitat because of the congestion and overuse. The large scale of infrastructure development can also be limited and dramatically alter the characteristic of the park, the traditional ecosystems, the quality of life for the local communities and of the experience for the visitors.

In most of the Virachey National Park the quality of bathing water is a major resource which should be considered as well. Measure such as continuous monitoring of water pollution or even the leakage of boat motors' oils into water bodies in the park can be used to indicate the sustainable use of this resource.

It is difficult to measure directly social and cultural sustainability. This is because most of variable related to these are qualitative rather than quantitative. An indirect measure for socio-cultural sustainability can be the involvement of local communities in the decision-making process. The study proposed indicators for using resources in a sustainable way at Virachey National Park as follows:

Proposed indicators for using resources in a sustainable way at Virachey National Park

Components of the issues	Suggested indicators
Water availability and conservation, water supply, water pricing, shortage and quality of water (WTO: Baseline 3.8.3)	
Overall water use relative to supply	<ul style="list-style-type: none"> • Water use: (Total consumed and litres per tourist per day)
Seasonal shortages Water shortages	<ul style="list-style-type: none"> • Number shortage incidents per years or number of day per year where there are supply shortage • % water supply imported to the park
Allocation of water among users - Such as agriculture, local residents, tourist accommodation, and often specific large users such as water park	<ul style="list-style-type: none"> • Total use as percentage of installed capacity • Total use by each sector (Tourism as a % of all users) • (Note consumption by key user derived from consumption data).
Cost and pricing of water	<ul style="list-style-type: none"> • Water price per litre or cubic metre
Drinking water quality: purity of supply, contamination impact	
- Purity of the drinking water supply	<ul style="list-style-type: none"> • Percentage of tourism establishment with water treated to international potable standard • % of local population with access to treated water • Number of incidents of violation of water standards
- Impact of contamination on tourist health	<ul style="list-style-type: none"> • Frequency of water borne diseases: percentage of visitors reporting water-borne illness during their visit
- Impact of water related contamination	<ul style="list-style-type: none"> • Perception of cleanliness of water

on image of the park	
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Source: WTO (2004)

2. Protection of natural resources (WTO baseline 3.7)

Protection of natural resources referred to maintaining diversity. The term diversity is a multifaceted aspect and includes diversity, socio-cultural diversity as well as diversity in terms of products and recreation offered to the tourist.

Biodiversity is important but possible loss should be compared to that caused by other activities. If some kind of development is decided there will be some loss in different fields. The study proposed indicators for protection of resources at Virachey National Park as follows:

Proposed indicators for protection of resources at Virachey National Park

Components of the issues	Suggested indicators
Protecting Critical Ecosystem (WTO: baseline 3.7.1)	
1. Ecological Value	
- Representativeness: (Whether the resource has characteristics typical of the ecosystem)	<ul style="list-style-type: none"> • N^o of unique or rare species present at the Park
Uniqueness (rarity of the site relative to group)	<ul style="list-style-type: none"> • % of site area occupied by unique species • % of endanger species at the park
Level of park protection	<ul style="list-style-type: none"> • % of area subject to control (IUCN categories) • Recognition by international programmes (e.g UNESCO World Heritage Site of Biosphere

	Reserve, RAMSAR Conservation)
2. Tourism Value	
Fragility: degree of susceptibility to impacts related to tourism and recreational activities.	<ul style="list-style-type: none"> • N° of species and endemic species • N° of species and endemic endanger species • Population of every species

Proposed indicators for protection of resources at Virachey National Park (Continued)

Components of the issues	Suggested indicators
Tourism feasibility: (Access, easement, traditional uses, management capacity to ensure it protection or enhancement), economic viability restoration costs, operation and maintenance costs.	<ul style="list-style-type: none"> • Level of acceptance of the tourism activity by the local community (% positive) • Inventory of attractions (distinguished natural features, including flora and fauna, landscape) • N° of observation of fauna or flora per circuit and per season • N° of days of observation of the natural features preseason • Profitability of tourism activity at the park, visitor fees, concession fees, fees for guiding and other services, sales of handicrafts and other items, etc.
Accessibility: refers to the ease with which the park can be visit	<ul style="list-style-type: none"> • N° of access routes in good condition for tourism use
Tourism carrying capacity of the park: the park's capacity to serve	<ul style="list-style-type: none"> • N° of visitors acceptable, according to the perception of the visitors themselves

as the venture of tourism / recreational activity.	<ul style="list-style-type: none"> • N^o of visitors acceptable, according to the capacity of the requirement and facilities of the park
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Source: WTO (2004)

3. Integration of tourism into planning (WTO: 3.11.1)

From its very beginning sustainable tourism has been associated with the need for tourism planning, the idea being that with careful destination planning, many of the adverse impacts of tourism could be avoided. The study proposed indicators for integration of tourism into planning as follows:

Proposed indicators for tourism planning at Virachey National Park

Components of the issue	Suggested indicators
1. Basic information for planners	
Performance of the tourism industry	<ul style="list-style-type: none"> • Tourist number over time /purpose of visit • Average length of stay • Visitor expenditure per day • Revenue generated from tourism • Leakage from the economy
Impact of tourism on the park	<ul style="list-style-type: none"> • Ratio tourist to locals • Local satisfaction with tourism • Economic dependency on tourism-Contribution to Gross Domestic Product (GDP)
Quality of tourist product	<ul style="list-style-type: none"> • Attractiveness of the park and facilities

	<ul style="list-style-type: none"> • Satisfaction of visitors • % returning visitors
Threat to tourism from other areas	<ul style="list-style-type: none"> • Environmental threats (logging, reduction of wildlife populations) • Environmental vulnerability (wild fire)

Source: WTO (2004)

5.4 Guidelines for sustainable tourism development in Virachey National Park

5.4.1 Recommendations for Kok Lak Commune

The significant finding of this research resulted in the following recommendations for the community leaders and local communities including village guides or ranger guides in the Kok Lak commune as follows:

1. The community has to attract more prospective visitors to the park and the community. It is advised that the local community study the probability of increasing tourism activities such as cultural performance related to the traditional culture and the way of life of respective minority group in and nearby the park to attract more visitors and extend the visitors' average length of stay in the park or community. Cultural events of minority groups including killing buffalo for drinking wine (Kab Krabey Phek Sra) and other traditional festival related to the way of life and culture can be an instrument for community tourism promotion. Traditional dresses, activities, art handicraft and food are strongly recommended by the researcher to attract more visitors to the park or community. Then, the local communities have to perform all types of culture especially traditional dresses. It means that the community is strong to preserve their culture. This should be the good point to be sustained for sustainable tourism planning and management in

Virachey National Park. Moreover, according to the researcher's opinion, it is believed that the local community should consider the possibility of maintaining and preserving the original house styles, which are very captivating to visitors.

2. The community should establish a particular visitor information center to improve information of minority group culture in order to assist the visitors who come to visit the community. This will enhance the visitors' first impression and confidence. And Support local communities to take part in the direct sale of handicrafts, supply goods and services to visitors and encourage local people to participate in traditional entertainment and activities.

3. This study also considered a variety of environmental impacts which would be caused by community and park tourism. If tourism is to promote community development in Kok Lak commune, waste and trash could become the most conspicuous problem in the community. As a result of this, it is suggested that warning sign of "No littering" or "Please keep clean as you do at home" are recommended to remind visitors. It would be helpful if the community could provide and install more trashcans, which are landscaped to surrounding along the attraction and roadsides. Penalties such as fine should be given to visitors who violate or disobey communities' agreement. A Non-Government Organizations including Biodiversity and Protected Areas Management Program (BPAMP) that is favorable to natural conservation and cultural sustainability should supervise and evaluate the community and park tourism practice.

4. From the survey, the community leaders have to select the village rangers on a permanent patrol for rigid prevention and protection from drugs and crimes which may be brought in to the community by visitors or even the villagers.
Village rangers

have to ask permission from visitors, strangers or even villagers for inspection. If found guilty of holding drugs or any additives, the village rangers will report to the community leader for investigation and then notify to the provincial authority. This method would possibly be highly effective for minimizing in crime or drug invasion to the villagers or visitors.

5. Local community should be educated to protect the natural environment in the park or community especially preserving, protecting and conserving wild animal (poaching of tigers, the extraction of scarce timber species are strictly prohibited).

6. Educate the local communities and make them understand on the consequences if they discharge waste water into the environment. Create attitudes in local people that discharging waste water directly into the environment will give an adverse long-term impact to the environment.

7. If tourism is to promote community development in Kok Lak commune, it should concentrate on expanding, improving, promoting local own facilities and services including home stay or camping established by local residents or Community-Based Eco-tourism (CBET) to accommodate visitors, and indicating that community tourism was beginning to generate some local economic benefit but for only a group of village guides and park rangers. This resulted in the unbalanced economic benefits to other local residents who host visitors. The researcher suggested that the officer group of Biodiversity and Protected Areas Management Project (BPAMP) should discuss the possibility of allotting the tourism benefits. Otherwise, this controversial issue will become a chronic conflict.

8. The park should implement the pricing and fee collection policy for the appropriated community benefit levy, which stated in the Eco-tourism strategy of the park. The

community benefit levy will be distributed on a monthly basis according to the park benefit.

9. Eco-tourism rangers or village guides must explain and respect the traditional secret places (e.g spirit forest “Prey Arak”) or dangerous places within the community areas. These only can be visited in accordance with community wishes.

10. Eco-tourism rangers, village guides and tourists should respect culture and traditions when visiting local community as stated in code of conduct for visitors to Virachey National Park.

- Dress conservatively with long sleeve shirts and long pants when visiting community.

- Do not buy or accept ancient artifacts from communities inside or adjacent to the park. Visitors can buy handicrafts or souvenir that have been made especially for sale.

- Do not give gifts (tobacco, cigarettes) or money to any individual community members or children. Gifts and donation should only be given to a group of elders or a management group so they can be shared in cultural appropriate ways.

- Do not let visitors take photographs of villagers unless they have been given permission first. Don't be offended if they refuse and do not give money for photograph.

From the result of the study, there is a lack of local community participation in sustainable tourism planning and management. Therefore, the local community participation in tourism development in the park as well as in their community are strongly recommended to increase and encourage local to participate in tourism planning and management in the following ways:

1. Increase representation in tourism organizations

The establishment of Community-based Eco-tourism (CBET) through local development process, basic measures for

implementing this kind of development includes such techniques as participatory planning and creative thinking. For example, “future workshops”, open discussion and development forums such as seminars as well as informal meeting. The most important thing of all is to start a process which activates the mental and physical resources of the local community on a broad scale and which finally leads to join action.

2. Promote investment and maximum benefit to communities from private sector tourist enterprises on Community Protected Areas (sustainable use zone).

The Ministry of Environment (MOT) or park officers encourages revenue sharing and partnerships in which many local people stand to benefit. Good planning, training of local people, marketing and promotion are important when starting a tourism venture. Commercial tourism ventures are encourage to set up local funds which will help local people in the areas to plan and start new activities.

3. Ongoing promotion of community-based eco-tourism development The head of commune, commune council committee and tribal chief have been appointed to coordinate activities and to help improve communication between communities, the park officers, the government, non governmental organization (NGOs) and the private sectors.

4. Have meetings for local people every month or whenever is suitable for them to change ideas and experiences about how to support sustainable tourism planning and management in the park as well as their community. Moreover, stress the benefits that the community will get from the park tourism. In addition, communities will get the chance for thinking about managing, planning and solve the problems that occurred in the areas.

5.4.2 Recommendations for authority of Ratanakiri province

1. From the survey results about transportation, it suggested that the distance from major cities to the community in and around the park and the clarity of direction signs are needed to be urgently improved. Moreover, access to basic infrastructures is also one of the primary aims of programmes for fighting poverty. The basic infrastructure that are considered essential, such as

- Transportation (year-round road access)
- Electricity
- Water treatment system (drinking water)
- Telecommunication
- Medical services
- School (Primary and secondary school)
- Sanitary toilet
- Well and pump well
- Dam, agriculture hydraulics

To reduce poverty of local the community, the park should give more opportunities of employment related to park tourism to local community.

In addition, empower local communities requires a long-term effort coupled with the strong support and commitment of many partners including public and private sectors and non-government organizations (NGOs).

2. Improving Ratanakiri and Steung Treng Airports

Improving and extending the runway, constructing a new taxi way, apron, drainage system, passenger terminal, airport fence, control tower, operation building, car park and access, securing navigation, security and communication equipment.

5.4.3 Recommendations for authority of Vivachey National Park

1. To improve sustainable tourism management in the park, park officers or eco-tourism rangers should implement the risk management strategy of the park as follows:

- Raise awareness of risks in all promotional material, and pre-tour briefings. Describe avoidance behaviors and what equipment required in promotional materials. Provide mosquito nets to visitors on overnight walks. Establish procedures with local health providers to test visitors for malarial if requested.

- Encourage visitors to have adequate footwear and appropriate clothing

- Minimum of two rangers and two visitors on any treks.

- Supply life jackets to protect and help visitors who travel by boat.

- Encourage visitors to dress with heavy clothing to protect against gravel rash.

- Staff train in rafting techniques

- Ranger to be aware of symptoms and carry additional water. Encourage visitors to drink regularly.

- Visitors encourage to carry and manage their own food and medication.

2. The management in the park and the organization and participation of local communities in tourism planning and management should be immediately improved. The government and non-government organizations (NGOs), especially warden community development of Biodiversity and Protected Areas Management Project (BPAMP) for Virachey National Park should support the community and offer small grant to the community for supporting Community-Based Eco-tourism and preparing the group of cultural show and training local people to

perform the cultural show. This activities could be improved the variety of cultural activities and lifestyles for visitors experience during they visit the community and maintain the traditional culture of indigenous minority groups especially it contribute to reducing poverty through tourism development project.

3. Virachey National Park should provide the warning sign of noise usage at the appropriate place in the park. and eco-tourism ranger should give the advice to the visitors before and during trekking and warn visitors who are making noise during trekking. Moreover, the park should provide the activities sign for visitors and increase the number of park rangers, eco-tourism ranger guides and village guides by training them from local people who have knowledge and understanding about the traditional culture of local people especially the local people who know well about the road in the park. They could become good guides and give good information to visitors. Moreover, the Ministry of Tourism should provide website and information about Ratanakiri province, hill tribe culture and traditional events, Virachey National Park and other tourist destinations such as Siem Reap, Ankor Wat and Sihanouk ville.

4. Increase improvement the quality of transportations from Phnom Penh city to Ratanakiri province and especially from O' Pong Mean to Bun Lung, from Bunlung to Taveng and Veun Sai district and From Veun Sai district to the park. Moreover, the park should provide the basic infrastructures and services that visitors would like to be available in the park such as

Guide book, maps and other printed material about the park

Knowledgeable tour guide about plants and animals

More trails in the park

Fresh drinking water and litter disposal.

Camping and Home stay and the signboard to guide the visitors for the appropriate activities in the park and type of tourist site.

5. Check the quality of water (underground water and mountain water supply) at the tourist destination to make sure that the water is clean and safe.

6. The park should collaborate with ecotourism specialists to study the appropriate number of visitors and activities in the park by considering physical, social, cultural, and ecological aspects. The park should also provide the environmental consideration system and natural resources prevention in the park and systematic appraisal on tourism activities and number of visitors which could lead the negative impacts on the environmental and natural resources.

7. Minimize occurrence of wild fire and its related impacts in the park. Fire could be a prime factor in shaping the vegetation composition. Long-term damage could be inflicted on some of the forest patches, and the fragile ecosystem of the park. Fire control and prevention could therefore become integral part of resource management.

The park should therefore control the fires through combating fires as well as the education of communities as follows:

- Educate communities and park rangers on the dangers of wild fires.
- Research the impact of annual burning on the open grassland areas of Virachey national Park.
- Develop a fire management plan for the park.
- Purchase fire fighting equipment.
- Periodically train park rangers and local communities in fire fighting and fire management techniques.
- Implement the fire management plan.

7. Checking the quality of water bodies as recommended in moderate potential factors.

8. Develop guidelines and policy for local communities to enter Virachey National Park.

9. Eco-tourism rangers must respect local community cultural and tradition as stated in code of conduct for eco-tourism ranger in Virachey National Park in the following manners:

- Treat community members with respect at all times and address them in a way what they would be addressed in their own culture.

- Speak to elders in the communities to obtain accurate information and obtain permission to use of cultural information on tours.

- Explain to visitors and model good behaviors described in the visitor code of conduct regarding to the respect for culture and traditions such as standard of dress, buying handicrafts, giving gifts, respect for privacy and taking photographs.

- Explain to visitors and model good behaviors described in the visitor code of conduct regarding to camping, rubbish removal, protecting native plant, and animals and use of soaps and detergents and toilets.

10. Encourage local suppliers to use local producers and manufacturers to increase the destination supply chain further and help decrease rise price for goods.

5.4.4 Recommendations for poverty reduction through the development of park tourism

The basic of management plan and ecotourism strategy for Virachey National Park, interested in ecotourism, and community tourism. All of these focus on the need to ensure that tourism does not erode the environment and cultural base on which it depends. But these generally do not consider the full range of impacts on the livelihoods of the poor (local community). Thus this study also included some suggestions for poverty reduction through the development of tourism project.

The aim of Pro-Poor Tourism (PPT) is to increase the benefits to poor people (local people living in and surrounding the park are poor people) from tourism, and increase their participation in managing the tourism products. If more tourism can be developed in the park as well as in the community, particularly in way that involve high local participation in decision and enterprises. Then poverty impacts are likely to be enhanced. The nature of the park or community tourism products, often involving small-scale operation and culturally-based, can be conducive to wide participation. Tourism development in Virachey National Park should also bring a range of other benefit to the areas, such as infrastructure development. However, developing Virachey National Park has its challenges. Any successful tourism development, whether pro-poor or not, depends on commercial, economic and logistic issues such as the quality of the product, accessibility and infrastructure of the destination, availability of skills, and interest of investors.

Tourism development in the park can generate four different types of local cash income such as:

- Wages from formal employment
- Earning from selling goods or services (food, crafts, local guide services).
- Dividends and benefits arising from community benefit levy.

- Collective incomes: this may include profit from a community-run enterprise (home stay), dividend from a private sectors partnership.

To reduce poverty through the development of tourism projects, the stakeholders from private and public sectors should:

1. Enhance economic activities and a wide range of economic positive impacts. Two approaches need to be combined:

- Expand local people's economic participation by addressing the barriers they face, and maximizing a wide range of employment, self-management and informal sector opportunities (see propose action in table 5.1).

- Incorporate wider concerns of local people into decision-making. Reduce competition for natural resources, minimizing trade-offs with other livelihood activities, using tourism to create physical basic infrastructures such as transportation (air, road, rail, water, etc.), year-round road access, water supply, electric power, sewage and solid waste disposal, and telecommunication) that benefits the local people and addressing cultural disruption will often be particular important.

Table 5.1 Actions to enhance economic participation of local community in park tourism

Barriers to participation of the local community in tourism	Actions that can reduce barriers
Lack of human capital	Provide education and training for local people and self-employment opportunities.
Lack of finance, credit	Expand access to small grant of community development for BPAMP or NGOs. Gradual pace of tourism development; avoiding cash development relying on outside investment.
Location-far from the park	Develop core tourism assets and infrastructure in relatively community areas-where commercially viable product exists.
Lack of market power. No ownership or control over resources of market value. No bargaining power with investors	Strengthen local tenure rights over land, wildlife, cultural heritage values, access to the park (scenic destination) and other tourism assets. Use planning gain to encourage potential investors to develop their own strategies for enhancing local impacts for the local people.
Regulation and red tape	Minimise red tape, revise or remove regulations that exclude the least skilled, ensure

	necessary tourism regulations embrace sectors and activities operated by local people with appropriate standards and processes.
Limited capacity to meet requirement of tourism market	Business support to improve quality, reliability of supply, transport links

2. Work through partnership and business network

National and local governments, private sectors, Non-Government Organization (NGOs), community organization, consumers and donors especially Biodiversity and Protected Areas Management Project (BPARMP) for Virchey National Park all have a role to play. It is particularly important to engage business, and to ensure that initiatives are commercially realistic and integrated into mainstream operation.

3. Reform decision-making systems

Tourism development in the park as well as in the community should develop in ways that best fit with livelihoods. The most important principal is therefore to enhance participation by the poor in decision-making. Systems that allow local livelihood priorities to influence tourism development are needed. Three different ways to achieve this can be identified.

1. Strengthen rights at local level (tenure over tourism assets) so that local people have market power and make their own decision over developments.

2. Develop more participatory planning.

3. Use planning gain and other incentives to encourage private investors to enhance local benefits.

These approaches require implementation capacity among governmental and non-governmental institutions within the area especially Biodiversity and Protected Areas Management Project (BPARMP) for Virchey National Park, and also require a supportive national framework.

5.5 Recommendations for future research

The researcher strongly recommends future research and more study. The recommendations for future research are as follows:

1. To study indicators for improving the use of natural resources (Water, Waste, Biodiversity), the design and management of tourism infrastructure (trails, home stay, camping etc.) and the promotion to enhance competitiveness of involved agents, and of opportunities for small and medium business, new business and residents.
2. To study the local communities and tourists satisfaction as tourism develop and study the carrying capacity of individual tourist attraction to determine the number of visitors that might be allowed to come in the future.
3. To study the Environmental Impact Assessment (EIA) associated with new activities and development including trail erosion, waste treatment, water pollution, bank erosion, wildlife and vegetation changes.
4. There is other community-based ecotourism sites in Cambodia like Kirirom community (Mlob Bai Tong). It would be interesting to administer comparative survey in that place. The researcher is confident that the information from that study area will provide various insights and understanding for future and reciprocal sustainable tourism planning and management.