

CHAPTER 3

MOTHODOLOGY

This study is survey research by mainly focusing on the local communities' perception, visitors' opinion with regard to tourism development in the park, SWOT analysis of existing tourism development and existing tourism development plan and management strategy of Virachey National Park. In order to understand the key issues and development of the indicators for sustainable tourism planning and management of Virachey National Park, the study reviewed the document related to Cambodian National Tourism Development Plan, Tourism Development Plan of Ratanakiri and Mondulkiri provinces, management plan for Virachey National Park and Eco-Tourism Development Plan for Virachey National Park as well as data from other documentary sources such as newspapers, new releases, journals, books, Internet, and relevant research. Primary data were compiled by survey and interview questionnaires to evaluate the potentiality and existing situation of tourism development and sustainable tourism development in the park. Secondary data and general conditions of the park were compiled by review of document and individual observation. After that, it was analyzed and evaluated to be the way to develop tourism in the park under sustainable way.

3.1 Population of interest for the study

There are three groups of stakeholders in this study and the research tools were designed for each group of stakeholder as follows:

Group 1: Representative of local community including head of commune or commune council committee, heads or deputy heads of village and tribal chiefs.

Group 2: The international visitors to the park.

Group 3: The officer group of Biodiversity and Protected Areas Management Project (BPAMP) of Virachey National Park.

Group 1: Representative of local community including head of commune, commune council committee, heads or deputy heads of villages and tribal chiefs

The first group of stakeholders of interest for this study includes the head of commune or commune council committee, heads or deputy heads of villages, tribal chiefs of villages in Kok Lak commune (see table 3.1). During the pilot test of research tool, the researcher had some limitations in gathering all data with local people because the researcher could not interview them. According to their traditional cultures, the villagers pay more respects to their tribal chief (Chas Tum Phum), head of commune and head of villages. Most of the villagers did not answer the question during the process of pilot test. To achieve the research objectives, the purposive selection was used to select the key informants as follows:

- Head of Kok Lak commune
- Commune council committee
- Tribal chiefs (Chas Tum Phum) of Kok Lak commune
- Heads or deputy heads of villages
- Village rangers (Local communities with tourism involvement)

Table 3.1: The Number of head of commune, commune council committee, heads or deputy heads of villages and tribal chiefs and village rangers

Villages Of Kok Lak commune	Number of Head of village	Number of deputy head of	Number of Tribal chief of villages	Village rangers	Number of Commune council	Tribal chief of	Head of Kok Lak
La Lay village	1	1	2				
Rork village	1	1	2				
La Mouey village	1	1	2				
Trak village	1	1	1				
Total	4	4	7	7	4	1	1
Total number of key informants is 28							

Research tools

Survey questionnaire based was designed for interviewing the group of head of commune, commune council committee, heads or deputy heads of villages and tribal chiefs. To obtain the efficient information from local community, the interview questionnaires concern their thinking of the tourism development and management in Virachey National Park. The interviews questionnaires with the representative of local community were comprised of three parts. (See questions with local community in Appendix B).

Part 1: Respondent's profiles

Part 2: Sustaining local community satisfaction

Part 3: Local communities' suggestions

For this study, researcher has developed some tools including positive and negative indicators to investigate the local community satisfaction in order to compare the local people's thinking toward tourism development in the park as well as in their community before the advance of tourism in their community. The researcher could not check the indicators for local community satisfaction because the tourism development in the park or the community is underdeveloped.

Group 2: The international visitors to the park

Based on the visitor statistic recorded by visitor information center, Virachey National Park, the tourist arrivals to the park during January and February, 2005 were only 14 persons as shown in (Table 3.3). Since the number of tourists was small, the researcher decided to study the whole population of all visitors to the park in the same period of the year 2006. There were only 28 survey respondents who visited the park during on-site survey (January 01- January 30, 2006).

Table 3.2: Tourists visiting Virachey National Park in the year 2005 classified by calendar months

Monthl y	Ja n	Fe b	M ar	Ap r	M ay	Ju n	J ul	Au g	O ct	Se p	No v	De c
Cambo dian	0	1	0	0	0	2	0	0	0	0	0	-
Foreign er	4	9	5	6	0	8	3	1	5	0	24	10
Subtota l	4	10	5	6	0	10	3	1	5	0	24	10
Grand total	78											

Source: VNP visitor information center (2005)

Research tools

Survey questionnaire based was designed for interviewing the international visitors. The interviews were comprised of three parts. To obtain the efficient information from the visitors who traveled to Virachey National Park, the questions concerned were designed based on the works of Wallace and Pierce (1996) titled “An evaluation of Ecotourism in Amazonas, Brazil” and the WTO Guidebook 2004 (p. 492). Some changes were added for Cambodian’s situation. The survey questionnaires with international visitors to the Virachey National Park were comprised of 3 parts (See Appendix C).

- Part 1: Behaviors and activities of tourists
- Part 2: Sustaining visitors satisfaction
- Part 3: Visitor’s profiles

Furthermore, the visitors to Virachey National Park were asked to provide some useful information related to their suggestions on how their revisit could be improved.

Group 3: The officers of Biodiversity and Protected Areas Management Project (BPAMP) of Virachey National Park

This group of comprised the key persons who are working in the Virachey National Park as described in Table 3.3

Table 3.3: The officer group of interest for the study

Officers of Biodiversity and Protected Areas Management Project for Virachey National Park	Number
Director of the park	1

Warden tourism	1
Warden ranger protection	1
Warden community development	1
Number of key informants	4

Research tools

Focus group interview were used with all key informants to get detail information of management plan of Virachey National Park, physical infrastructure, tourism facilities and services, health, safety and security, plan and policy and land management plan by focusing on core zone and sustainable use zone which allow for permanent structure to support tourism enterprises in the area.

The research aimed to identify some indicators for sustainable tourism planning and management, which has enough information to test them and to study the potentiality and existing situation of current tourism development, and the potentiality of natural resources through a case study of the park.

Interview questions with the officers of Biodiversity and Protected Areas Management Project (see Appendix A) were used:

. To examine the supply factors and existing situation of tourism development in the Virachey National Park comprising 4 component factors of physical conditions, management of natural tourism, activities and process of natural and cultural tourism, and organization and participation of local community.

. To check indicators for environmental impacts and destination planning and control for sustainable tourism planning and management as follows:

1. Drinking water quality indicators (WTO 3.8.4 baseline)
2. Water pollution indicators (WTO 3.7.2 baseline)
3. Waste treatment indicators (WTO 3.9.2)
4. Health and safety indicators (WTO 3.5.1)
5. Indicators for destination planning and control (WTO 3.11 baseline)

3.2 Data collection

The study collected data in order to find out the potentiality and existing situation of tourism development and the development of indicators for sustainable tourism planning and management in Virachey Nation Park in the following ways:

3.2.1 Secondary data

Secondary data were collected from the studies of relevant documents to get basic information on Cambodian National Tourism Development Plan, Tourism Development Plan for Ratanakiri and Mondulhiri provinces, and Ecotourism Development Plan for Virachey National Park.

3.2.2 Primary data

Primary data were collected from focus group interviews, survey questionnaires and on-site observation. Purposive selection was used to target the groups of stakeholders needed for focus group interviews. A total of 60 individuals provided focus group interview and survey questionnaires for this research.

3.3 Data analysis

For this study, the researcher used the different methods to analyze data. Each analysis method was described as below:

First method

The researcher collected the data from the review of literature and on-site observation to analyze SWOT of current situation for sustainable tourism planning and management in the Virachey National Park. The four elements of a SWOT analysis undertaken as part of wider strategic planning are:

- strengths: a resource or capacity the Virachey National Park can use effectively to achieve its objective.
- weaknesses: a limitation, fault or defect in the Virachey National Park that will keep it from achieving its objectives.
- opportunities: any favorable situation in the Virachey National Park's environment that will provide opportunity for tourism development.
- threats: any unfavorable situation in the Virachey National Park's environment that is potentially damaging to its strategy.

Second method

After the collection of the primary data from interviewing the director of Virachey National Park, warden tourism, warden community development and warden ranger protection of Biodiversity and Protected Areas Management Project (BPAMP) for Virachey National Park, plus secondary data of Eco-tourism strategy and management plan for Virachey National Park, the researcher adopted the factors criteria studied by Suriyavarakul, Narongsak (2003) to evaluate the level of existing tourism development plan and strategic management as follows:

Factor 1: Physical conditions

1) Identify/uniqueness of natural attraction

Having special attractions that other places do not have

High potential

Having attractions that can be found in other places but rarely

Moderate potential

Having attractions that normally can be found in other places

Low potential

2) Biodiversity (Fauna and flora)

Consider from each components as follows:

Biodiversity of fauna

Having fauna of more than 150 species in the park

High potential

Having fauna of more than 100 species in the park

Moderate potential

Having fauna of less than 100 species

Low potential

Biodiversity of flora

Having flora of more than 150 species in the park

High potential

Having flora of more than 100 species in the park

Moderate potential

Having flora of less than 100 species

Low potential

Bring the points from 2 components to calculate the average

3. Uniqueness of culture and attraction

The unique of cultural of arts considered: dressing, traditional activities, arts handicraft, and food

Having unique attraction potential

High

Having rare attraction that can be seen in some other places

Moderate potential

Having general attraction that can be seen in other places
Low potential

4. Variety of cultural activities and lifestyles

Consider the 5 types of culture as follow:

- 1) Meal culture
- 2) Resident contracted culture
- 3) Leisure and entertain culture
- 4) Produce culture
- 5) Traditional culture (concerned lifestyle)

Having cultural activities and all kinds of way of life
High potential

Having cultural activities and 3-4 kinds of way of life
Moderate potential

Having cultural activities and 0-2 kinds of way of life
Low potential

5. Tourist tradition and festival attractions

Having unique traditional attractions
High potential

Having rare tradition that can be seen in some other places
Moderate potential

Having general tradition that can seen in other places
Low potential

6. Ability in accepting the changes of culture

After effect of tourism, the effect of culture and community is none to less. High potential

After effect of tourism, the effect of culture and community is moderately changed. Moderate potential

After effect of tourism, the effect of culture and community is highly changed. Low potential

7. Ease of accessibility to tourist attraction

Consider the following factors

- 1) Road condition

- 2) The distance through the tourism site
- 3) The safety from the journey
- 4) The clarity of direction signs

Ease of accessibility to tourist attractions, high convenience

High potential

Ease of accessibility to tourist attractions, moderate convenience

Moderate potential

Ease of accessibility to tourist attractions low convenience

Low potential

8. Degree of accessibility in various seasons

If weather conditions are very good, tourists can travel all the year. High potential

If weather conditions are good, tourists can travel 8-11 months

Moderate potential

If weather conditions are very good, 1-7 months

Low potential

9. Appropriate area for tourism activities

The area is appropriate for an expansion in the future

High potential

The area is appropriate for the activities in the present only

Moderate potential

The area is not enough for the activities

Low potential

Factor 2: Management

10. Waste disposal

Consider the following factors

- 1) The number of garbage bin is sufficient
- 2) The colour of garbage bins is environmentally friendly
- 3) The material of garbage bins is environmentally friendly
- 4) The position of garbage bins is environmentally friendly

5) Having suitable garbage management system

Have all components potential High

Have 3-4 components

Moderate potential

Have 1-2 components potential Low

11. Management of noise quality

Consider the following factors

1) Having the warning sign of noise usage at the appropriate place

2) Having the park ranger(s) to guide and warn about the noise usage

Have 2 factors potential High

Have 1 factors

Moderate potential

Have none Low potential

12. Management of water quality

Consider the following factors

1) Having water treatment system

2) Always check water quality

3) Having hygienic place for waste water treatment

Have all factors potential High

Have 2 factors

Moderate potential

Have none or 1 factors

Low potential

13. Tourist attractions' facilities management

Consider the following factors

1) The arrangement of sign communication

2) A public utility such as electricity, telephone, accommodation

3) A public construction such as road, trail, parking lot, toilet

Have all factors High

potential

Have 2 factors

Moderate potential

Have none or 1 factor Low

potential

14. Life and property safety management

Consider the following factors

1) Having enough officers (policemen, park rangers) per tourist

2) Having enough health centres

3) Having the appropriate sign board and warning signs

4) Having the plan to prevent any hazardous

Have all factors High

potential

Have 2-3 factors Moderate

potential Have none or 1 factor

Low potential

15. Appropriation of area management to a type of tourist attraction

Consider the following factors

1) Having the arrangement of signboard to guide the appropriate activities for the area and type of tourist site

2) Having the arrangement of signboard for appropriate action and warning for the area and type of tourism site

3) Having the tourism site plan in appropriate order

Have all factors potential	High
Have 2 factors Moderate potential	
Have none or 1 factor potential	Low

16. Consideration to the limitation of carrying capacity

Consider the following factors

1) Have rules to determine the number of tourists and activities in term of carrying capacity and facilities of the tourist attraction by considering physical implications

2) Have rules to determine the number of tourists and activities in term of carrying capacity and facilities of the tourist attraction by considering social implications.

3) Have rules to determine the number of tourists and activities in term of carrying capacity and facilities of the tourist attraction by considering ecological implication.

Have all factors potential	High
Have 2 factors Moderate potential	
Have none or 1 factor potential	Low

17. Environmental impact prevention system

Consider the following factors

1) Natural resources prevention are provided

2) Environmental consideration systems are provided

3) Study of tourism activities and the number of tourists that impact

with the environmental and natural resource

Have all factors potential	High
Have 2 factors Moderate potential	
Have none or 1 factor potential	Low

18. Adequate measure to prevent cultural heritage value damage

Consider the following factors

- 1) Having the cultural heritage value protection in preventing the destruction of cultural resources
- 2) Having the cultural and local wisdom are provided
- 3) Having research on the tourism activities and amount of tourists in concerning the effect of cultural heritage value

Have all factors potential	High
Have 2 factors Moderate potential	
Have none or 1 factor potential	Low

19. Area management

Consider the following factors

- 1) Activity sign are provided
- 2) Do and Don't signs are provided

Have 2 factors potential	High
Have 1 factors Moderate potential	
Have none	Low potential

Factors 3: Activity and process of natural and cultural tourism

20. Quality of services

Consider the following factors

The completion of information services

1) Having high information services

High potential

2) Having moderate information services

Moderate potential

3) Having information services

Low potential

21. The creation for tourist impressiveness of park ranger relevant people

1) Park rangers or relevant people have create high impression and good human relation with tourists

High potential

2) Park rangers or relevant people have create moderate

impression and good human relation with tourists
Moderate potential

3) Park rangers or relevant people have create low impression and good human relation with tourists

Low potential

22. Advantage and value of learning

1) Visitors have high benefit and value of learning
From the park about the natural environment and
Cultural heritage value of local community

High potential

2) Visitors have moderate benefit and value of learning

From the park about the natural environment and

Cultural heritage value of local community

Moderate potential

- 3) Visitors have low benefit and value of learning
From the park about the natural environment and
Cultural heritage value of local community

Low potential

23. Type and method of communication to tourists

Consider the following factors

- 1) Having the arrangement of sign communication
- 2) Having the arrangement of village guides
- 3) Having the arrangement of tourists' orientation

Have all factors High
potential

Have 2 factors
Moderate potential

Have none or 1 factors
Low potential

24. Diversity of tourism activities in the park

Consider the following factors

- 1) Having the natural tourism, eco-tourism
- 2) Having the traditional and cultural tourism
- 3) Having the way of life tourism

Have all factors High
potential

Have 2 factors
Moderate potential

Have none or 1 factors
Low potential

Factors 4: Organization and participation of local community

25. Advantage of local communities to preserve cultural identity

The communities gained the benefit from the park tourism which maintains the tradition and culture of local communities. It builds the identity of traditional and cultural conservation and intellectual group, which will set up the cultural network and be a good model for the other communities.

High potential	High
Moderate potential	Moderate
Low potential	Low

26. Economic benefit for local communities

Consider the following factors

- 1) Local people have more job
- 2) Local communities get more income from tourism activities
- 3) Income widely distributed in the local community

Have all factors	High
Have 2 factors	
Moderate potential	
Have none or 1 factors	
Low potential	

27. The opportunity from government and the private sector to support tourism development

Consider the following factors

- 1) Government support of tourism development

2) The private sectors support of tourism development	
Have all factors potential	High
Have 1 factors Moderate potential	
None	Low potential

28. Local community acceptance and participation

Consider the following factors

- 1) Participating in process decision and control of policy all the way through master plan of sustainable tourism development in their communities
- 2) Local communities show their opinion to support the sustainable tourism planning and management
- 3) Local communities give a warm welcome and willing to help tourists

Have all factors potential	High
Have 2 factors Moderate potential	
Have none or 1 factor potential	Low

To analyze the opinion of respondents on the about factors, the data were evaluated in descriptive analysis.

Third method

The SPSS program was used to analyze the level of visitor satisfaction and the level of local community thinking toward indicators for sustainable tourism development in the park. In addition to a likert scale being used to assess the level of thinking in all set of interview, the meaning of each assessed

level was ranged on interval level at 0.80. All assessment ranging scales was analyzed by the descriptive statistic including frequency, percentage and mean.

The analysis of mean is based on the interval level that is calculated as follows:

$$\begin{aligned} \text{The interval level} &= (\text{Maximum} - \text{Minimum})/n \\ &= (5 - 1)/5 \\ &= 0.80 \end{aligned}$$

Then, the researcher ranged the level of each assessment as follows:

Assessed levels	Scores of with scores answers	Meaning	determined
5 satisfaction	4.21 - 5.00	Strongly agree/or	Strongly
4	3.41 - 4.20	Agree/or	Satisfaction
3	2.61 - 3.40	Neutral	
2 Dissatisfaction	1.81 - 2.60	Disagree/or	
1 dissatisfaction	1.00- 1.80	Strongly disagree/or	Strongly

3.4 Research Limitation

There are many limitations of the research on sustainable tourism planning and management: the case of Virachey National Park, Ratanakiri and Steung Treng provinces. Because the results of existing tourism development plan and management strategy were primarily drawn from the officers of Biodiversity and Protected Areas Management Projects

(BPAMP). The view of the Ministry of Tourism and Ratanakiri provincial tourism department were inevitably reliant upon only Biodiversity and Protected Areas Management Projects (BPAMP) which might have lead to bias. In addition due to small number of visitors to the park, so researcher has limitation of data collection from visitors to the park. Moreover, the time constraint, remoteness and inaccessibility of the park, so the research collected the data of local communities in and the park from 1 of 5 communes (Veunsai district, Ratanakiri Province) by focus on Kok Lak commune which would possible result in the research because the livelihoods of local communities in this commune heavily depend upon natural resources in the park and it is the village target of Biodiversity and Protected Areas Management Projects (BPAMP) for Virachey National Park. On the other hand according to the local traditional culture, the villagers pay more respect to their tribal chief (Chas Tum Phum) and head of commune, so researcher has limitation of data collection from the local communities for sustainable tourism planning and management in the park and in the community.