Kingdom of Cambodia

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Biodiversity and Protected Areas Management Project

National Policy and Capacity Building Component

Training Needs Assessment of Rangers
of Virachey National Park

Lay Khim

October 2000
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I. Introduction

The assessment of the current status of management of Virachey National Park (Khim, 2000) reveals that the ongoing protection of Virachey National Park still face some difficulties and problems resulted from wildlife hunting and trading; non-timber forest product collection; small-scaled logging; and swidden agriculture. These activities has caused mainly negative impacts on wildlife habitats and population of the buffer zones areas of the park but eventually will have negative impact on the park if there are no plan for actions and not enough human resources and capacity to carry out those actions. However, the optimistic of the protection of the park is that the park still have a great potential and values for the biodiversity conservation because of its remoteness; less development; low population density; good forest conditions; and rich of biodiversity. Furthermore, basic park protection activities are already in place and will be strengthened on the ground by the Biodiversity and Protected Areas Management Project. Obviously, the success of protection of Virachey National Park will depends on various factors, but importantly the effective performance of the recruited rangers will contribute a positive change of the park protection in the future.

II. Rational for the assessment

The main purpose of having the training needs assessment conducted is to enable the National Policy and Capacity Building Component of the Biodiversity and Protected Areas Management Project to assess the strength and weakness of rangers in performing their duties and to understand their training needs. This is also enable the component to commit itself to design, plan and develop a series of training during October 2000-September 2001. This is also aimed to improve performance of rangers of Virachey National Park to achieve their optimum performance on their duties to ensure effective protection of the park.

We, therefore, believe that by having training needs of Rangers of Virachey National Park assessed, we will:

- Systematically design, plan and conduct series of prioritized training modules for the rangers of Virachey National Park and of other protected areas,
- Greatly increase impacts in the management of Virachey National Park;
- Improve job performance of rangers of Virachey National Park by developing and improving proper knowledge, skills and attitudes;
- Direct and promote the integration of efforts among the team leaders of the components of the project; training officers; other resource persons and the rangers because only this integration can ensure the effective planning of the training; and
- Provide a good example to other protected areas to learn about training needs assessment; developing a training plan; training implementation; and evaluating and monitoring the training of Virachey National Park.

III. Objectives

The National Policy and Capacity Building Component conducts this needs assessment with the aims:

1. To determine and analyze actual tasks carried out by the rangers in protecting Virachey National Park;
2. To determine appropriate knowledge and skills; and attitudes of rangers, which need to be improved to carry out their duties effectively;
3. To understand priority training needs of rangers;

IV. Methodologies of Training Need Assessment

Open interview and semi-structure interview and group discussion were applied for the assessment. Identifying the existing problems and prioritizing training needs were conducted during a group discussion with 9 rangers representing from the three rangers stations of Veun Sai; Taveng and Siem Pang on 8 July 2000 at the Veun Sai Park Head Quarter.

Practically, four basic steps were used for conducting the training needs assessment including:
1. List the duties of rangers;
2. Conduct task analysis based on the existing organizational structure of Virachey National Park;
3. Identify and analyze the appropriate skills, knowledge and attitudes needed by rangers to effectively carry out their analyzed duties; and
4. Identify and prioritize adhoc training needs of rangers

V. Background information of rangers

34 rangers of Virachey National Park have been recruited locally including 4 rangers representing 11% are female. 23 of rangers representing 61% originally migrated from lowland provinces such as Kam Pong Cham; Kam Pong Chang;Svey Reang; and Prey Veng and Kandal and only 13 rangers representing 38 % are originally from Ratanakiri (Veun Sai and Taveng districts) and 5 people representing 15 % are from Stung Treng province. 22 rangers representing 65% are Khmer; while 5 rangers representing 15 % are ethnic laos people; 6 rangers representing 17% are Brao-ethnic people; and 1 ranger representing 3% is Kavet ethnic person. 22 rangers representing 65 % have worked about two years for Virachey National Park while 12 rangers representing 35 % have about one year experience working for the Park. Before working as park rangers, 5 rangers used to work in provincial departments; 7 ranger used to work at district offices; 7 rangers used to serve in army or military; and another 15 rangers used to work as school teachers, administrative assistant, technician and others.

Only one ranger (namely Tep Borin) has completed his undergraduate diploma from the Faculty of Law. Only 4 rangers representing 12% have completed their high school; while 15 rangers representing 44% have completely their secondary school; and 13 rangers representing 38% have completed their primary school.
10 rangers representing 29% aged between 20-24; 7 rangers representing 20% are between 25-29 years old; 10 rangers representing 29% are between 30-34 years old; one ranger representing 0.3% is around 35-39 years old ; 3 rangers representing 0.9% are between 40-44 years old; and 2 representing 0.6% rangers are above 50 years old.

VI. Assessment of existing knowledge, skills and attitudes of rangers

A number of trainings have been provided to rangers of Virachey National Park during January 1998-June 2000 to develop their capacity (see table 1).

Table 1. Training courses and workshops attended by rangers of Virachey National Park between 1998–2000.

<table>
<thead>
<tr>
<th>No</th>
<th>Title of the Courses</th>
<th>Place</th>
<th>Date</th>
<th>Results</th>
<th>Supported by</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Protected Areas</td>
<td>Taveng; Voeun Sai; and Siem Pang</td>
<td>1998 and 1999</td>
<td>34 Rangers were trained in conceptual protected areas management and practical filed works. They understood concert of PA management; wildlife protection; institutional structure and responsibilities; their roles; use of field equipment; use of maps and compass; field observation and note taking; wildlife identification and work plan.</td>
<td>WWF</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Administrative</td>
<td>Voeun Sai</td>
<td>06-11/-98</td>
<td>10 rangers and 2 staff from PED attended the training to learn how to make correspondence; letter writing; document keeping; communication.</td>
<td>WWF</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Participatory</td>
<td>Bokor</td>
<td>01-05/07/98</td>
<td>One of rangers attended the course to learn concepts and techniques of participatory protected areas management</td>
<td>SPEC/WWF /ETAP/ UNDP/IDRC</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Basic of GPS</td>
<td>NTFP</td>
<td>12/98</td>
<td>Two rangers attended the training to learn who to use GPS</td>
<td>NTFP/Rat.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Field Practical</td>
<td>Yakpoy</td>
<td>12/98</td>
<td>One of rangers participated in field</td>
<td>NTFP/Rat</td>
<td></td>
</tr>
<tr>
<td>Knowledge skills and attributes of rangers of Virachey National Park are concluded as following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All rangers have basic knowledge on concept, principles and objectives of park management, basic legal framework of protected areas management; roles and responsibilities of MoE; DNCP; PED; field wildlife</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>practical training and he learned how to use GPS, Map and compass in boundary demarcation of community forest.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 6. Project planning, evaluation and monitoring | PPD | 1998 | Tow rangers attended the training to learn how to develop a small proposal, work plan and evaluation report. | CARERE |
| 7. PRA | Balung | 1998 | Tow rangers participated in the training and they learned about participatory mapping; interview; participatory resource identification, etc. | CBNRM/IDR C/PED |
| 8. PRA | Veoun Sai | 1998 | 5 rangers attended the training for 8 days | NTFTP/Rat. |
| 9. Workshop on Participatory Management of Virachey National Park | Balung | 16-20/11/98 | 3 rangers attended the training workshop to learn concepts and approaches for participatory management of VNP. | WB |
| 10. Tiger survey and conservation techniques | Khoa Yai National Park, Thailand | 3-13 May 1999 | One ranger and the park director attend the training and learned how to conduct tiger research through camera traps and tiger conservation | WWF |
| 11. Participatory Management of Protected Areas | Banlung, Ratanakiri | 4101-5/02/99 | Eleven rangers attended 11 days in the classroom and learned the concepts and approaches methods and tools of PRA to promote participatory management of protected areas and had a practical experience of field exercise. | WWF |
| 12. Tiger Survey Techniques and Conservation | Bokor National Park | 9-27/01/2000 | Five rangers attended the training and learned about, ecology of tiger, map, compass, GPS, observation and recording techniques, camera trap techniques from 11-16/01/200. The rangers also had field practical experience in the forest to conduct field tiger survey and camera trapping (18-25/01/200) | WWF/WCS |
| 13. Field wildlife information analysis | Phnom Penh | 13-15/5/2000 | Four rangers attend the training and learned about skills of wildlife information analysis and reporting | WWF/WCS |
| 14. material and typhoid fever prevention | Veun Sai District | 8-9/9/1999 | 29 rangers from the three stations attended the training | WWF |
| 15. Regional Protected Areas Management | Champasak, Lao | 4-12/12/99 | One of the Par Staff (Park Director) participated in the regional workshop and learned approaches; and strategies of protected areas management in regional countries. | IUCN/ DANIDA |
| 16. Tiger Survey and Camera trapping | Taveng | 22-24/12/1999 | Eight rangers were instructed and guided in the training by WWF Technical Advisor and WWF program coordinator prior to field tiger survey | WWF |
| 17. Guideline for Community Forestry in Protected Areas | Sihanouk Ville | 7-8/12/1999 | One of park staff attended the workshop supported by Sustainable Forestry Management Project (SFMP/ADB) and learned concepts, issues and approaches of community forestry in protected areas. | SFMP/ADB |
identification and observation; and field patrolling. They have been used their knowledge in day-to-day works related to patrolling, wildlife trade monitoring and coordination.

- About 10 rangers representing 29% have got basic administrative knowledge; paper management and filing system; principle and practice of Cambodian letter writing and correspondence. They have been applying their knowledge in helping the administrate functions of the park.
- About 10 rangers representing 29% have very good skills of using maps; compass and GPS in field patrolling. They have been used GPS; map and compass for field navigation in patrolling and recording locations of wildlife signs or forest crimes.
- Tow rangers representing 5% were trained in basic proposal writing and planning development. However, they still need to practically improve this area furthermore since they never applied what they learned.
- About 11 rangers representing 32% got basic knowledge on participatory information collection by using PRA. They occasionally have used their knowledge of PRA to collect information related with wildlife trade; wildlife hunting; and forest logging;
- 5 rangers representing 14% have got basic knowledge about participatory protected areas management including objectives of protected areas management; importance of community participation; importance of gender participation; conflict resolution. However, they have not yet got an opportunity to practically apply their knowledge.
- 5 rangers representing 14% were trained in tiger conservation. They understand the importance of tigers and their conservation, field tiger survey techniques; and using field equipment including GPS; compass and Camera Trap. They have very good opportunities to apply their knowledge in tiger survey in Virachey National Park;
- 8 rangers representing 23% experienced in placing down camera traps and camera retrievals and other field wildlife survey such as interview; wildlife track and signs identification; and 4 rangers representing 11% has got an experience in elephant reconnaissance in the park.
- 4 rangers representing 11% attended a training course on tiger information analysis. They understand basic analysis of tiger and its prey distribution, abundance of wildlife and technical report writing. However, they request for further practical exercises.
- Most of rangers have good motivation working in the field and they are enthusiastic in their field works.
- Most of them have good public interaction and relationship at provincial and district levels.
- Most of rangers have expressed their interest of having team work.
- Most of rangers express their strong interest and enthusiasm in participating in training and capacity building; and
- Most of rangers express their understanding about importance of the protection of the park; and their interest of nature.

VII. Actual performed duties VS the official duties

Based on the interview of 9 rangers of Virachey National Park, the actual duties and their levels of performance are identified as following:

- Basic wildlife identification and recording;
- Understanding about the resources of the park;
- Occasionally participating in PRA processes of information collections;
- Frequently facilitating, coordinating and communicating with relevant agencies at provincial and district levels;
- Occasionally guiding visitors to the park or to areas nears the parks;
- Occasionally providing informal education and awareness about the park to local communities;
- Basic written communication or correspondence;
- Basic law enforcement activities;
- Frequent planning and implementation of patrolling;
- Understand and obey the internal regulations set by the Park Director;
- Writing monthly and weekly reports to the park director on the progress of their works;
- Basic wildlife trade monitoring;
- Technical or field reporting;
- Basic community outreach;
- Discussion in designing planning to conduct wildlife survey or social economic survey;
- Recording wildlife signs; and
Basic interpret and analyze information and data;

The official duties and roles of rangers were determined by the Ministerial Declaration No 1315 of 25 July 1995; most of which are actually carried out by the rangers presently. However, with limited capacity of rangers they can not effectively carry out their official roles. The following are the remaining official duties of rangers that they never carry out such as:

- Forest fire control;
- Boundaries demarcation and zoning;
- Participation in land use zoning of the park;
- Vegetation survey;
- Providing education and interpretation services to tourists; and
- Community development work;

VIII. Analyzed tasks or duties of rangers

Task analysis of rangers is very useful to determine which knowledge; skills; and attitudes are properly required by rangers to perform their duties well. The task analysis of the rangers in this assessment looked at the existing organizational structure of the park rather than look at the individual duties since terms of reference of rangers are not yet defined individually. The park has its organization structure which consists of 5 main components including: (1) Administrative and Information Management Component; (2) Patrolling and Law Enforcement Components; (3) Community Awareness Development Component; (4) Field Research and Survey Component; and (5) Eco-tourism Component. But those components have not clearly defined roles and functions. To fit into the above structure the following are the recommended roles and functions of each component and knowledge, skills and attitudes of rangers required to effectively carry out the roles and functions of each component:

8.1. Administrative and Information Management Component

The rangers who are assigned to work for the administrative and information management component of VNP should have the following duties, associated with the following knowledge; skills and attitudes:

8.1.1. Roles and Functions:

- Coordinate the development of annual planning activities for the park from all rangers stations or for each station;
- Develop monthly and 3 month progress reports to the park director on the progress of their works of each station;
- Undertake staff performance evaluation and monitoring;
- Enforce the internal and external regulations;
- Manage information and other relevant papers;
- Facilitate, coordinate and communicate with relevant agencies at province; district and commune levels; and NGOs;
- Develop written communication or correspondence;
- Record, analyze and interpret field information and data;
- Conduct monitoring and evaluation of station activities; and
- Facilitate and coordinate and organize meetings or workshops at district or commune levels

8.1.2. Knowledge

- Principles and practices of park management;
- Roles of relevant agencies in park management;
- Relevant legal frameworks,
- Time management;
- Accounting;
- Event (meeting) management and planning;
- Filing;
- Working with others (group working);
- Public speaking;
- Principle and practice of report writing;
♦ Basic administrative correspondence;
♦ Public relation and networking; and
♦ Problem solving or conflict management in protected areas;
♦ Information recording and management and interpretation.

8.1.3. Skills

❖ Office writing skills;
❖ Office communication and coordination skills;
❖ Public speaking and presentation skills;
❖ Typing skills (computer and typewriter typing skills)
❖ Paper management and field information recording and processing ;
❖ Organizing meetings and workshops;
❖ Managing conflicts;
❖ Good analytical skills;
❖ Basic monitoring and evaluation skills; and
❖ Monthly and progress report writing skills

8.1.4. Attitudes

❖ Supportive of teamwork;
❖ Good at public speaking;
❖ Good public relation

8.2. Patrolling and Law Enforcement Component

The rangers who are assigned to work for the patrolling and law enforcement component of VNP should have the following duties which associated with the following knowledge; skills and attitudes:

8.2.1. Roles and Functions:
❖ Develop and implement planning for patrolling and law enforcement
❖ Law enforcement activities;
❖ Conduct monitoring of forest crime and wildlife trade, and land use change and;
❖ Assess and analysis the threats of human activities to the parks;
❖ Promote local participation and networking in park monitoring;
❖ Develop inter-institutional relationship and networking for law enforcement and forest monitoring at district and commune levels; and
❖ Identify and record forest and wildlife crime information.

8. 2.2. Knowledge

❖ Basic principles of conservation-related laws
❖ Human right;
❖ Relevant Cambodia legal frameworks;
❖ Roles and responsibilities of relevant law enforcement agencies;
❖ Principle and practices of weapon handling, safety and self defense;
❖ Participatory monitoring activities;
❖ Investigation and interview techniques and evidence documentation;
❖ Coordination and networking for law enforcement;
❖ Law enforcement of minor offenses (verbal warning; written warning);
❖ Law enforcement for major offences (how to approach a suspect; requesting to examine permits; handling suspected contravention);
❖ Arrest and seizure of evidence procedures and techniques;
❖ Patrolling system planning and development;
❖ Participatory land use change and monitoring;
❖ Observation and reporting techniques.
❖ Participatory networking for patrolling; and
❖ Processing patrolling information
8.2.3. Skills

- Forest crime monitoring and investigation;
- Weapon handling; safety and self-defense; and
- Law enforcement techniques (minor and major offences);
- Recording; note taking and enforcement report; and
- Field patrolling techniques; and
- Field mission reports writing

8.2.4. Attitudes

- Legal based focus
- Seriousness;
- Motivation and commitment; and
- Willingness to communicate with local communities and other stakeholders

8.3. Community Awareness and Development Component

The rangers who are assigned to work for the Community Awareness and Development Component of VNP should have the following duties, which attached with the following knowledge; skills and attitudes:

8.3.1. Roles and Functions

- Developing and implementing participatory planning;
- Developing technical or field reporting;
- Participating in socio-economic information collections of the park;
- Provide informal education and awareness about the park to local communities;
- Participating in community development works;
- Planning and promoting community outreach activities at district or community levels;
- and Promoting local participation in the protection of Virachey National Park.

8.3.2. Knowledge

- Good general knowledge about resource uses of the park;
- Principle and practices of park management (zoning systems; boundary demarcations ect.)
- Fundamentals of integrated conservation and development;
- Problem analysis and need assessment;
- Design community outreach program and activities;
- Extension and facilitation;
- Gender and conservation;
- Community participation in biodiversity conservation;
- Community resource identification and mapping;
- Roles and objectives of national park;
- Roles of rangers and local communities in park protection;
- Relevant legal framework;
- Communication and presentation techniques,
- PRA techniques;
- Options for income generations and conserving resources;
- Traditional knowledge, practice and values;
- Participatory problems analysis and searching for root causes;
- Fundamentals of participatory protected areas management;
- Participating planning and monitoring and evaluation; and
- Conflict resolution.

8.3.3. Skills

- Extension and facilitation skills;
- Conflict resolutions
Communication and presentation;
Forest and wildlife extension skills;
Listening and observation skills;
Working with local people; and
Problem analysis.

8. 3.4. Attitudes

- Interest in working with and leaning from local communities;
- Sociability;
- Confidence in public speaking.

8. 4. Field Research and Survey Component

The rangers who are assigned to work for field research and survey component of VNP should have the following duties which attached with the following knowledge; skills and attitudes:

8. 4.1. Roles and Functions

- Facilitate and coordinate field wildlife and vegetation surveys;
- Participate in the planning and implementation of field wildlife surveys;
- Properly identify and record field wildlife information;
- Conduct basic wildlife survey;
- Participate in the planning and implementation of vegetation and habitat survey; and
- Develop participatory resource mapping of the park; and
- Identify and prioritize the gaps and needs of information collections.

8. 4.2. Knowledge

- Identification of tracks and signs of wildlife;
- Wildlife specimen preservation techniques;
- Field wildlife observation techniques;
- Note taking;
- Basic field craft;
- Using maps, compass and GPS;
- Interview techniques;
- Using some basic field research equipment;
- Basic forest taxonomy;
- Basic ethno-botany;
- Basic forest ecology;
- Basic wildlife ecology;
- Bird identification techniques;
- Using PRA in resource assessment and monitoring;
- Community resource field mapping;
- Participatory resource inventory for NTFP;
- Technical report writing;
- Vegetation specimen preservation techniques;
- Describing major plant communities;
- Micro habitats characteristic and description;
- Vegetation field mapping; and
- Measurement of shrubs and tree layers.

8. 4.3. Skills

- Observation and note taking skills;
- Interpretation skills of different tracks and signs;
- Using GPS, maps; and compass; and other field research equipment;
- Facilitation and communication skills;
- Interview skills; participating resource assessment techniques;
- Observation and monitoring;
- Applying PRA techniques;
- Recording; and;
- Field technical report writing; and
- Basic reading English.

8. 4.4. Attitudes

- Motivation in field work;
- Enjoy team work;
- Co-operation with field researcher;
- Enthusiasm for working with local people and learning from them; and science.

8. 5. Eco-tourism Component

8. 5.1. Roles and Functions

- Guiding visitors to the park or to areas near the parks;
- Providing education and interpretation services to tourists; and
- Managing visitor activities; and
- Collect visitor information.

8. 5.2. Knowledge

- Concept of park management and eco-tourism development;
- Tourism management zone; visitor public relations,
- Ability to answer visitor's questions;
- Interpretive planning, impressing visitors;
- How to handle problems and complaints;
- Reporting incidents;
- Visitor service patrols;
- Campground visits;
- Visitor feedback and its evaluation;
- Collecting visitor statistics;
- Visitor carrying capacity; and
- Tourism resource inventory.

8. 5.3. Skills

- Interpretation skills; facilitation and guide; and
- Understanding and speaking English.

8.5.4. Attitudes

- Socialize;
- Reliable and helpful; and
- Discipline.

IX. Discussion and analysis on the gaps of knowledge; skills and attitudes of rangers

Based on the actual performed duties and the analyzed duties of rangers as highlighted in section VIII and IX, it is obvious that there are stills a big gap of knowledge, skills and attitudes of rangers required to carry out their analyzed duties. Mostly, their levels of competency are just recognition or awareness of most relevant subject matter. This is because they just have two years working experience in park protection. In addition, their working experience and capacity are still limited yet to deal with very complicated park protection issues. Moreover, the park has no practical technical advisory to coach their work on a day-by-day basis; and especially their levels of education are very basic (82% of rangers completed their secondary and primary school). Less than 50 % of rangers have experienced to new skills of working such as wildlife identification and tiger survey; using some basic field equipment such as map, compass, and GPS. It is very important, therefore, that the training should be planed and designed to developed and improved their levels of competency to the working (competent) levels in most of the subjects matters as defined in section VIII. To fill the gaps of knowledge; skills
and attitudes of rangers of Virachey National Park, there should be a systematic training and adhoc training. For
the systematic training, a basic level should be provided to rangers with specific focus on basic survival;
communication and park administration and report writing skills; patrolling and law enforcement; community
awareness and development, basic wildlife and habitat monitoring and survey techniques. As far as adhoc
training courses are concerned, such training courses can be designed and implemented after a basic level of
training provided and evaluated. The series of adhoc training courses are recommended as following:

1. Basic field wildlife conservation and field research techniques;
2. Basic forest ecology and ethno-botany
3. Principle and practices of participatory protected areas management;
4. Wildlife habitat conservation and basic vegetation survey techniques;
5. Legal and institutional framework of biodiversity and protected areas management in Cambodia;
6. Basic strategic planning;
7. Weapon handling; first aid; safety and self-defense techniques;
8. Public relation and networks for Protected Areas Management;
9. Park administrative management and equipment maintaining;
10. Conflict resolution in protected areas;
11. Patrolling planning and techniques;
12. Training on the application of PRA techniques for participatory natural resource assessment and monitoring;
13. Law enforcement techniques;
14. Crime monitoring, and reporting techniques in protected areas;
15. Park extension skills and community outreach;
16. Mammals and bird identification technique; information recording and processing;
17. Principles and practices of eco-tourism development and visitor services;

X. Agreed priority adhoc training needs

The adhoc training needs as agreed and prioritized by rangers are related to the following subjects:

10.1. Training on Basic Strategic Planning

Rangers of Virachey National Park express their strong needs to be trained in basic planning because most the
rangers do not have ideas of how to develop action planning of their own station. Rangers get used to working
without the direction of work plan, and adapted to the top down approach working system (waiting to be told to
do without having their own activities planned). These working habits need to be changed in order to plan the
present activities of rangers to fit in the long term goal of park protection as well as to assist the evaluation and
monitoring process of park management.

This training should target 15-20 rangers from the 3 stations to provide knowledge; skills on the areas of planning
cycles; problem identification and analysis; stakeholder analysis; setting up goals; objectives and activities;
planning formulation, report writing techniques; basic monitoring and evaluation by using SWOT. This training
should be designed for 5 days to improve their attitudes of long term thinking; and working as a team. This
training should have a follow up activities to develop one years strategic plan for the protection of Virachey
National Park.

10. 2. Training on Patrolling Planning and Techniques

Training course on patrolling planning and techniques is one of the most important training course for rangers.
Less than 50 % of rangers have basic field working techniques and skills such as tiger survey; using some basic
field equipment such as map, compass, and GPS; observation techniques, wildlife tracks and signs identification;
as a result from few training courses provided between 1999-2000 and their field patrolling experience. It is very
important, however, that the training course should improve their existing knowledge and skills of some rangers
and extend those skills and knowledge to other rangers who do not have the same levels yet. The patrolling
planning and techniques should be designed to provide knowledge and skills to rangers of how to set up
patrolling system for the park or for each station; and how to reliably and effectively take note, record, inform
and report what they experience during patrolling activities. Therefore, the training course on patrolling planning
and techniques should be designed and implemented to provide skills and knowledge to rangers on field wildlife
(including birds and mammals) and habitat observation and recording, interview and reporting techniques;
monitoring the changes of the park; developing action planning and follow-up activities for patrolling;
participatory networking for patrolling; processing patrolling information; development of trail system and;
navigation; and investigation techniques. This training course should target all rangers and last about 10 days
including classroom sessions for 4 days; field exercise for 4 days; and group presentation of field work for 1 day and feedback and cause evaluation for 1 days.

10. 3. Training on Law Enforcement Techniques

The Park Director and presently the Team Leader of the Park Protection Component of the Protected Areas and Biodiversity Management, regards the training on law enforcement techniques as the most important and the interviewed ranger express their immediate needs of being trained in this field. Basically; one of the objectives of patrolling is to promote law enforcement. But for law enforcement it needs additional skills and techniques to effectively confront and handle the illegal activities. It is very important to train rangers to know how to conduct law enforcement of minor offenses (verbal warning; written warning); and major offences (how to approach a suspect; requesting to examine permits; handling suspects); and to understand relevant article of Cambodia legal frameworks for law enforcement; roles and responsibilities of relevant law enforcement agencies; and principle of law enforcement. The Module I of this training should target all the rangers and last for at least 5 days.

10. 4. Training on the Application of PRA Techniques for Participatory Natural Resource Assessment and Monitoring

Some rangers express their needs of having a training course on application of PRA techniques for resource assessment and monitoring. This because they understand that one of their duties is to collect information. This is realistic since socio-economic information and patterns of resources uses of local communities are becoming very important for the development of policy and management plan of the park in the near future. Furthermore, the rangers need to understand the livelihood situation of local community as well as develop close relation with them for the benefit of park protection. Local communities also need to understand changes and importance of natural resources within their communities. It is believed, therefore, training rangers to know how to apply PRA techniques for participatory resource assessment and monitoring will answers properly those needs. The training on Application of PRA techniques for participatory resource assessment and monitoring should be designed to provide knowledge and skills to rangers on observation and interview techniques; participatory mapping; and other participatory tools of information collection. This training should be provided for 10 days including classroom session for 3 days; field information collection for 3 days; and report writing presentation and feedback in the class room and in the villages for 4 days.

XI. Conclusion and recommendations

Training is a process which help rangers develop their knowledge; skills; and attitudes. Training is one of the most important factors which can help influencing positive and productive ways of working of the recruited rangers of Virachey National Park. It is important that training should be designed and conducted to build up the strength of rangers and to eliminate the gaps as discussed in section IX. In order to eliminate the gaps of knowledge; skills and attitude of ranger the recommendations for training planning are addressed following:

- It is very important for the park to strengthen rangers capacity to work as a team since the rangers do not have good knowledge and experience in performing their duties independently. Furthermore, the existing organizational structure has distinguished two group (levels) of rangers which fall into junior level (rangers; tourist guides; community extension workers …etc.); and senior levels (team leader and chief or deputy chief of the stations). In team work, this two levels should always mix together. So any model of training should be designed to strengthen the ability of junior and senior levels to work closely together as a team.
- Job descriptions need to be identified for a team of rangers of 4 members working at a team including 3 junior rangers and 1 senior rangers. This can also lead to a decision to determine levels of competency for different levels based on subject maters in designing the training.
- Training should be designed to place the rangers in practical real life situations rather than just in the classroom setting. Any model of training should challenges rangers to relate the subject matter to their own experience of work by taking many forms including field visits; demonstrations; presentation; role play; learning by doing; exercise and case study. This means that any training module should have two inter-related sections (1) classrooms (lecture) sessions and (2) field or classroom exercises. It should take between 4-10 days for the two sessions combined together. This aims to provide opportunity to rangers for practice and application of lessons learned.
- Training should promote discussion and sharing experience among rangers on problem solving by putting lot of efforts into facilitation and coordination in group working exercises.
- Training should be designed to improve the existing knowledge and experience of rangers and confidence of rangers in performing actual works. It is very important, therefore, to coach them during exercises; and provide them with practical formats; outlines; and guidance.
The best learning is to create a good training environment. According to adult learning theory, trainees can learn best when training is self-directed; is based on an immediate need; is participatory; is experimental; is reflective; provides feedback; shows respect for the learner; provides a safe atmosphere; and occur in a comfortable environment. Since 78% of rangers aged below 35 years, and 82% of rangers has basic education levels (primary and secondary levels) using adult learning theory will be most appropriate.

Training should be designed and prepared properly to include techniques to focus on improving knowledge (gaining information about subject matters); development of new skills (learning of how to do something); and changing attitudes and values as highlighted in point VIII. For that reason, a systematic training for rangers is really needed. To meet overall aspects of development of knowledge, skill, and attitudes of rangers as identified in point XIII, there would be a need to design 3 levels of training curriculums including basic; intermediate; and advance levels. For the development of the basic level of training curriculum, it is important to focus on basic survival, communication and administration and reporting skills, patrolling and law enforcement, basic field research techniques; community awareness and development; and basic wildlife and habitat monitoring and survey techniques. Some of specific adhoc training needs as identified in point IX and as prioritized in point X should be specifically designed and provided to rangers at intermediate and advance levels.

There are some local resource persons at the Department of Nature Conservation and Protection or at MoE in general who have different skills, experience and knowledge and who can be formed as a training team to provide long term training services to rangers. In conducting any training, it is important to identify appropriate local resource persons available who can assist the training. Using their abilities or capacity can be seen as the most beneficial in terms of capacity building of trainers and also appropriate to ranger training levels. However, international training consultants (curriculum specialist) are really needed to design and develop training curriculums and train the local resource persons to make sure that they can run the training for rangers effectively.

An appropriate incentive system needs to be considered along the way so that the rangers capacity or performance is improved after having a series of training provided. This is very important in order to maintain and motivate the trained rangers in the job of park protection. This is a cost-benefits of capacity building system of rangers.
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