THE IMPACT OF LOCAL PEOPLE’S PARTICIPATION IN FOREST CONCESSION MANAGEMENT OF CAMBODIA: A CASE STUDY OF THE COLEXIM FOREST CONCESSION COMPANY IN KAMPONG THOM PROVINCE

Thesis Presentation

BY PHAN KAMNAP
NRB 027302
Objective of the Study

❖ Overall Objectives
➢ To identify the potentials and constraints which encourage or discourage local people participation
➢ To suggest a possible framework for the coexistence between community forestry and forest concessions

❖ Specific Objectives
➢ To describe and document the main conflicts between local people and COLEXIM
➢ To describe the current status of local people’s participation in forest concession management
➢ To define the real gaps in participation and develop a possible solution oriented recommendation
Scope of the study

1. Impact of local people participation
   ♦ Socio-economic and forest condition aspect
   ♦ Conflicts in the use of forest resources and
   ♦ Current status of the level and ways of local people participation

2. Impact study was mostly at household and community levels

3. Socio-economic and forest condition
Conceptual Framework

Defining the conflicts and local people’s participation in forest concession management

Livelihood and forestry Assessment

- Social Aspect
  - Transportation
  - Education
  - Employment opportunity
  - Housing condition
  - Health
  - Water collection

- Economic Aspect
  - Income from NTFPs
  - Income from timber
  - Income from fish and others
  - Income from farm
  - Marketing

- Forest condition
  - Timber for house construction
  - Spirit forest
  - Resin tree density
  - Wildlife

Level of Participation in Forest Concession Management

- Decision-making
- Implementation
- Benefit sharing
- Monitoring and Evaluation

Defining the conflicts

Solution oriented recommendations for future improvement

Defining the gaps
Selecting the Study Area

Criteria
- Zone of CF representative and located in the core and buffer zone
- People depend on forest resources
- Available information
- Safety

Sampling Design

1. Sampling Methods and Procedures
   - Simple random sampling
     For selecting 3 villages
   - Simple random sampling
     For selecting households

2. Sample Size
   - 89 HHs
   - 12 Key informant

Data Source, Collection Method & Analysis

1. Data Source
   - Primary data
   - Secondary

2. Data collection Methods
   - Questionnaires
   - Observation
   - Stakeholder interview
   - Group discussion
   - PRA

3. Data Analysis:
   Quantitative
   - Descriptive statistic:
     Frequency, percentage, mean and Analytical statistic:
     t-test, and WAI
   Qualitative
     SWOT
Profile of the Study Area and Respondent

COLEXIM Forest Concession Company in Kampong Thom Province

Kampong Thom Province

▪ COLEXIM is the joint venture between RGC (DFW) and Japanese company (Okada), 1992 in Sandan district of Kampong Thom, located in the central part of Cambodia in Tonle Sap Lake, 168 Km along the National Road 6 from Phnom Penh city.
▪ 3 villages out of 21 are selected in Meanrith and Toumring commune.
Respondents Background

<table>
<thead>
<tr>
<th>Village's Name</th>
<th>Population</th>
<th>Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samoung</td>
<td>637</td>
<td>143</td>
</tr>
<tr>
<td>Choumsvay</td>
<td>552</td>
<td>120</td>
</tr>
<tr>
<td>Rountheigh</td>
<td>394</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>1,583</td>
<td>343</td>
</tr>
</tbody>
</table>

Forest Type

1. Shorea odorata
2. Litsea pierrei
3. Lagerstroemia sp
4. Xyilia dolabriformis
5. Pentacme siamensis
6. Tarrie javanica
7. Sindora cochinchnensis
8. Hopea roxburghiana
9. Hopea odorata
10. Shorea vulgaris
11. Vatica astrotricha
12. Payena ellipteca
13. Anisoptera glabra
14. Dipterocarpus intricatus
15. Dipterocarpus alatus
16. Hassia cumeata
17. Shorea sp
18. Dipterocarpus tuberculatus
19. Mangifera indica

Forest History

Total forest cover of COLEXIM is 139,473.90 H.a

- 1964: Forest harvesting was conducted by the Govt. on the Kbal Hong Sang Lan forest field

- 1967 to 1970: Another harvesting was conducted at the Roung Knagh village within the Meinrieth commune

- 70-98: During 20 years of civil war people migrated from the forest concession area and started living along the Steung Sein River and in other communities.

- 1996: COLEXIM started established
## I. Economic Impacts

<table>
<thead>
<tr>
<th>No.</th>
<th>Types of Income Sources</th>
<th>Income before COLEXIM</th>
<th>Income after COLEXIM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Liquid resin collection (<em>Dipterocarpus alatus</em> and <em>Dipterocarpus intricatus</em>)</td>
<td>83</td>
<td>93</td>
</tr>
<tr>
<td>2</td>
<td>Hard resin collection (<em>Shorea vulgarus</em>)</td>
<td>85</td>
<td>95.5</td>
</tr>
<tr>
<td>3</td>
<td>Vine collection</td>
<td>83</td>
<td>93</td>
</tr>
<tr>
<td>4</td>
<td>Rattan collection</td>
<td>85</td>
<td>95.5</td>
</tr>
<tr>
<td>5</td>
<td>Hunting</td>
<td>85</td>
<td>95.5</td>
</tr>
<tr>
<td>6</td>
<td>Fishing</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Rice</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Cash crops</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Vegetable</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Livestock</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Small business</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Wage laborer</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Remittance support</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Government employee</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
1. Income Levels before and after COLEXIM

<table>
<thead>
<tr>
<th>Type of income</th>
<th>N</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income before COLEXIM (*1000 R)</td>
<td>89</td>
<td>1,551 (USD 629)</td>
<td>245 (USD 99)</td>
<td>2,857 (USD 1,158)</td>
</tr>
<tr>
<td>Total income after COLEXIM (*1000 R)</td>
<td>89</td>
<td>3,513 (USD 878)</td>
<td>384 (USD 95.5)</td>
<td>6,645 (USD 1,661)</td>
</tr>
</tbody>
</table>

Before exchange rate 2,467 Riel/USD
After exchange rate 4,000 Riel/USD

2. Marketing system before and after COLEXIM

<table>
<thead>
<tr>
<th>Types of Marketing Systems</th>
<th>Before COLEXIM</th>
<th>After COLEXIM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Sandan market</td>
<td>89</td>
<td>100</td>
</tr>
<tr>
<td>Kampong Thmor market</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Middleman in the villages</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Steung Traing province</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Total: 89 100

Although COLEXIM was already established, but it is still unable to provide an effective marketing system to the local people in order to effectively improve their selling of the products.
II. Social impacts

1. Impact on Transportation

Company had already constructed a total of about 114.50 km of access road going to the operational area and there still another 170 km of road.

2. Education

<table>
<thead>
<tr>
<th>No</th>
<th>Education levels</th>
<th>% of Households</th>
<th>Change (Before &amp; After)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Before COLEXIM</td>
<td>After COLEXIM</td>
</tr>
<tr>
<td>1</td>
<td>Illiteracy</td>
<td>70</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>Primary school</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Lower secondary school</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Even though COLEXIM was providing some equipment and financial support to the targets study areas, the study found that no change in literacy but not expected because only six years.
3. Employment opportunity
Only nine people (10%) of the trainees have been recruited by the forest concession company in handling operations and repair/maintenance of heavy machineries used in forest management activities.
Impact of the activities of the company was not up to the satisfactory level to improve the socio-economic conditions of the local communities.

4. Housing condition

<table>
<thead>
<tr>
<th>Housing Conditions</th>
<th>Before COLEXIM</th>
<th>After COLEXIM</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Kammar or soum leave (roof and wall)</td>
<td>75</td>
<td>87</td>
<td>44</td>
</tr>
<tr>
<td>Roof tin or brike or kammar or soum leave, but wooden wall</td>
<td>9</td>
<td>10.5</td>
<td>33</td>
</tr>
<tr>
<td>Wooden House (wooden wall and brick roof)</td>
<td>2</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
<td>89</td>
</tr>
</tbody>
</table>

Housing conditions have been improved after COLEXIM's through increased income from forest products, high yield of rice production, cash crops plantation, enough of agriculture means.
## 5. Impact on Water Collection

<table>
<thead>
<tr>
<th>Water collection</th>
<th>Before COLEXIM</th>
<th>After COLEXIM</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Hard labor</td>
<td>-</td>
<td>-</td>
<td>44</td>
</tr>
<tr>
<td>Not so hard labor</td>
<td>66</td>
<td>74</td>
<td>45</td>
</tr>
<tr>
<td>Not hard at all labor</td>
<td>23</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
<td>89</td>
</tr>
</tbody>
</table>

Before establishing COLEXIM, local people in target study never faced the lack of water use because these areas reached of forest. Most of the wells were digged by local people to use the clean quality of water. After the company established, people face increased workload of water collection due to indiscriminate forest destruction water shortage occurred in the above ground.
6. Impact on health

<table>
<thead>
<tr>
<th>Water collection</th>
<th>Before COLEXIM</th>
<th>After COLEXIM</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Satisfied</td>
<td>-</td>
<td>-</td>
<td>88</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>-</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>84</td>
<td>94</td>
<td>-</td>
</tr>
<tr>
<td>Strongly unsatisfied</td>
<td>5</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
<td>89</td>
</tr>
</tbody>
</table>

COLEXIM has slightly positive effects on health facility improved to the local people in the target study through easy access to clinic at Kampong Thmor and hospital at Phnom Penh or Kampong Thorn province that cause to decreased of mortality rate. However, this impact is still limited because the company is still not yet providing health care service or health care center directly to local people. Moreover the company just starts its activities in these areas about six years ago.
III. Forestry impacts

1. Impact on collection for timber for house construction

<table>
<thead>
<tr>
<th>Timber collection</th>
<th>Before COLEXIM</th>
<th>After COLEXIM</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Hard labor</td>
<td>-</td>
<td>-</td>
<td>53</td>
</tr>
<tr>
<td>Not so hard labor</td>
<td>29</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Not hard at all labor</td>
<td>60</td>
<td>67</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
<td>89</td>
</tr>
</tbody>
</table>
2. Impact on spirit forest

<table>
<thead>
<tr>
<th>Spirit forest</th>
<th>Study area</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Samaung</td>
<td>Choumsvay</td>
</tr>
<tr>
<td>Neakta forest</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Cave forest</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
</tr>
</tbody>
</table>

Only one village (Rountheigh) among three which changed spirit forest (cave forest) due to road building and Toum Ring Rubber Plantation.
3. Impact on resin tree density

- Dipterocarpaceae trees are among those favored by loggers, and this often includes trees actively tapped for resin.
- Three of the villages study substantial lost resin tapping trees especially Dipterocarpaceae trees species by COLEXIM:
  . Samoung (170 standing tree),
  . Choumsvay (2,000 standing tree),
  . Rountheigh (3,700 standing tree).

4. Impact on wildlife

Due to forest extraction by COLEXIM and increase hunting by insider and outsider cause to negative significant impacts to the wildlife species.
IV. Conflicts and local people’s participation in COLEXIM’s forest concession management

1. CONFLICT

<table>
<thead>
<tr>
<th>Categories of Conflicts</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New expanding shifting cultivation</td>
<td>89</td>
<td>31</td>
</tr>
<tr>
<td>Resin tapping tree</td>
<td>80</td>
<td>28</td>
</tr>
<tr>
<td>Timber collection for house construction</td>
<td>81</td>
<td>28</td>
</tr>
<tr>
<td>CF establishment</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Road using</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>288</td>
<td>100</td>
</tr>
</tbody>
</table>
1.1. Conflict on resin tapping trees

-The root cause of this problem was due to COLEXIM’s team collectors of logs and in some case, local people try to expand the resin trees for asking compensation back from the company.

- 5,000 to 10,000 Riel/tree (1.5 to 3 $/tree)
1.2. Conflict on new expanding shifting cultivation

- People would like to expand more shifting cultivation due to population growth and high economic value, but COLEXIM tries to crackdown this kind of activity.

- 3,000 hectares of forest land had been clear for new expanding shifting cultivation by outsider
1.3. Conflict on road using by local people

Company block the road by used the stand of trees put across the road in order to reduce the illegal logging that make difficulty to traveling and access to forest of local people.

1.4. Conflict on timber collection for house construction

build the house, there are two main problems, financial and bureaucracy of permission letter of COLEXIM.
1.5. Conflict on community forestry establishment

- 3,977 hectares of forest concession land has to be CF (Master Plan of COLEXIM), but people not agree with and still have legal framework to support.

- This conflict lead to local people wrote protest letter to MAFF (29 Nov 2001) as well as going to protest in front of DFW (5 Dec 2002).

1.6. Conflict on access to forest products collection

Restriction access also led to conflict to the local people due to lack of communication, company not allow local people to access some part of forest land such as at area for mother tree (DANIDA tree seed project) and sample plot of FOA for measurement tree growing that was did by DFW.
2. PEOPLE’S PARTICIPATION IN FOREST CONCESSION MANAGEMENT OF COLEXIM

2.1. Participation in decision-making

➢ Still limited as well as don’t have in some context particular participation in decision-making mostly done by RGC,

➢ Before starting the forest concession in 1992 RGC never consult with local people and district authority by using top down approach.

➢ But in the year of 2001, local people and local authorities have chance to consult with company. On the other hand, people also wrote a protest letter to Minister of MAFF and conducted the meeting with Director of DFW and protest in front of DFW as well during the ESIA open process consultation.
2.2. Participation in Implementation

- Less participation of local people in implementation stage. Mostly done by company staffs (37%), DFW (33%), and (30%) PFW.

- The people participate in this stage as positive and negative impacts to forest condition.

  • Negative impacts by local people to forest condition in these areas was due to new expanding shifting cultivation.

  • Positive impacts due to wage labors opportunities as seasonal wage labor during forest harvesting, people already have very strong existing traditional belief to conservation forest such as resin tapping tree and spirit forest (Neakta and cave forest).
2.3. Participation in benefit-sharing

Benefit sharing company has still low due to just providing the benefit to villager for development physical infrastructures.

such as school building, pagoda building, road construction, house construction (by using handsaw), and livelihood through increase in income, wage labor, health care facility is better than before, and some gifts.
2.4. Participation in monitoring and evaluation

Monitoring stage as in an indirect way and evaluation stage was nothing to participate, its mostly done by DFW and PFO

<table>
<thead>
<tr>
<th>People's Participation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>89</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stake holder relevant in monitoring and evaluation process</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFW officer</td>
<td>53</td>
<td>60</td>
</tr>
<tr>
<td>Don't know</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>PFO officer</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Local authority</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
</tr>
</tbody>
</table>
V. Conclusion

- Increase daily workload of local people in the case of water collection
- Income source was found to be increased and housing conditions and health facilities have been improved.
- Access limited to forest products collection, bureaucracy of collecting of timber for housing, not allow to expand new shifting cultivation, cutting resin tapping trees, destroy spirit forest that traditional believe of local people, some kind of wildlife species are very rare to hunt, and health facility still limited due to company still not yet providing health care service or health care center directly to local people.
- There are many conflicts faced between local people and company:
  - Resin tapping trees;
  - New expanding shifting cultivation;
  - Road using by local people;
  - Timber collection for house construction;
  - Community forestry establishment, and
  - Access to forest products collection.
- Participation of local people within forest concession management was:
  - Still limited as well as don’t have in some context particular participation in decision-making mostly done by RGC,
  - Less participation of local people in implementation stage,
  - Benefit sharing company has still low due to just providing the benefit to villager for development physical infrastructures,
  - Monitoring stage as in an indirect way and evaluation stage was nothing to participate.
VI. Recommendations

- Increase the participation of local people
- Should allow local people to create community forestry
- Should conduct fields survey for boundary demarcation
- Should apply extension service to grass-root level
- Improve harvesting technique through environmental friendly
- Should review the law on the right to share the forest and forest products between forest concessionaire and community
THANK YOU
Research Design

Identification Problem of Research

Define the Conceptualization of The Research Idea

Research Objective

Research Design

Literature Review
that related to community forest management, forest concession issues, participation and impact evaluation concept

Data Source and Methodology

Secondary Data
Reports, journal, document, references, maps

Data Processing

Primary Data
Questionnaire, interview, observation, group discussion and PRA

Sampling Design and Sample size

Data Analysis and Interpretation

Findings and Discussion

Conclusions

Recommendations
Sample Size and Sampling Methods

Forest Concession Area

1,347 HHs

Village 1
Village 2
Village 3
Village 4
Village 5
Village 6
Village 7
Village 8
Village 9
Village 10
Village 11
Village 12
Village 13
Village 14
Village 15
Village 16
Village 17
Village 18
Village 19
Village 20
Village 21

Village 143HHs
Village 120HHs
Village 80HHs

Total size 343HHs

Sample size 89HHs

Simple Random Sampling

Simple Random Sampling