Traditional Forest Land Management Practices in Southern Shan Highland, Thanlwin River Basin: Selected Indigenous People Group

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26-27 Feb 2017

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1. INTRODUCTION

-Four Major Rivers
1. Ayeyarwady River - 2210 Km
2. Thanlwin River - 1224 Km
3. Chindwin River - 900 Km
4. Sittoung River - 320 Km

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Name of River Basin</th>
<th>Length (Km)</th>
<th>Catchment Area (000 sq-km)</th>
<th>Annual Surface Water (km³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chindwin River</td>
<td>900</td>
<td>115.30</td>
<td>141.293</td>
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<tr>
<td></td>
<td>Upper Ayeyarwady</td>
<td>1310</td>
<td>193.30</td>
<td>227.92</td>
</tr>
<tr>
<td>2</td>
<td>Lower Ayeyarwady</td>
<td>690</td>
<td>95.60</td>
<td>85.8</td>
</tr>
<tr>
<td>3</td>
<td>Sittoung River</td>
<td>320</td>
<td>48.10</td>
<td>81.148</td>
</tr>
<tr>
<td>4</td>
<td>Thanlwin River (from Myanmar boundary to its mouth)</td>
<td>1224</td>
<td>158.00</td>
<td>257.918</td>
</tr>
<tr>
<td>5</td>
<td>Mekong River (within Myanmar territory)</td>
<td>350</td>
<td>28.60</td>
<td>17.634</td>
</tr>
</tbody>
</table>

Figure (1) The major rivers in Myanmar
Source: 1. Myanmar Agricultural Atlas
2. Khon Ra, 2011
The basin of the Salween river, also known as Nu river in China
- China (53 percent),
- Myanmar (42 percent),
- Thailand (5 percent)

Figure (2) Thanlwin River Basin in Myanmar
Source: 1. Myanmar Information Management Unit (MIMU),
3. FAO - AQUASTAT, 2011
4. DEM (90m)
2. Indigenous people groups in Shan State and Thanlwin River

Figure (3) Indigenous people groups in Shan State and Thanlwin River
Source: Thein Zaw, 2002, Beauty Shan State, Friendly Myanmar Series
3. Study area and selected indigenous people group

- Hpekhon Township is located in Taunggyi District, Southernmost of Shan State
- Kaya State in the east,
- Kayin State in the south,
- Pyinmana Township in the west
- Kayan ethnic are mainly living with other minor ethnic groups

Figure (4) Location of the study area
Source: Myanmar Information Management Unit (MIMU)
According to the spatial difference in land management and land-use management decision, the vegetation cover changes situation also spatially different

- Hpekone Township- one of the township, best practice in traditional forest land management
- Traditional land management and land use management decision are still strong with their identity on vegetation cover changes

- The objective of the study is to explore the traditional forest land management practices of the Kayan indigenous people group in Hpekone Township that contribute positively to the conservation of the forest resources and to advise means of utilizing these practices to conserve the remaining natural vegetation of the locality

Figure (5) Location of the study area and Thanlwin Rievr Basin
Source: Myanmar Information Management Unit (MIMU)
3. DEM (90m)
4. Traditional Forest land management practices

- Traditional land owners have still an active role in managing many parts

- Traditional land owners are a key part of the land and all the lands are also central to their identity and cultural

- their native title (their traditional laws and customs) also still strong and connection to the land more broadly and reflects the strong spiritual and cultural connection to the land

Plate (1) Near Hanghsi old village, Kayan Lahta group, Sub-group of Kayan Indigenous People, their original forest are still strong with their traditional land management system, Hpekone Township, Taunggyi District
Source: Photo by Min Oo
• land-use and forest land management decision is bottom-up system - gone well with their customary ways

• Especially land and forest were owned or management by community, family group, sub-family group and individual since the time of ancestors and land-use is strong limited by their principle and decision

• land-use management decision system, in individual or sub-family own land; even the other ethnic groups or individual or sub-family have the option practicing the shifting cultivation system, they have to take the permission from the land owner since the time of ancestors till today

Figure .7 Land-use management decisions of the Kayan indigenous groups in Hpekone Township
land-use and forest land management decision is bottom-up system - gone well with their customary ways

- Especially land and forest were owned or management by community, family group, sub-family group and individual since the time of ancestors and land-use is strong limited by their principle and decision

- land-use management decision system, in individual or sub-family own land; even the other ethnic groups or individual or sub-family have the option practicing the shifting cultivation system, they have to take the permission from the land owner since the time of ancestors till today

- shifting cultivation- (the gap years from 30 to 50 years has changed to 15 to 20 years) in line with its disciplines seem to be sustainable forests,
Plate 2. Family own forests and community own forest in Kayan Ethnic people group area
Source: Photo by Kayan community
Date: 29-2-2018
5. What are the major CONTROLLING FACTORS OF CHANGES?

AGRICULTURAL PRACTICES

- The major factors of the Hillside cultivation practices which impact on vegetation cover are
- Population pressures
- Lack of regeneration of vegetation cover
- Poor intercultural activities
- Lack of traditional land management units and state land management policies

Plate 2. Hillside cultivation type in Hopone Township, Taunggyi District
Source: Photo by Min Oo
• Shifting cultivation - the main subsistence activities of small-scale societies and rural population in Hpekone Township particularly Kayan indigenous resident area

• In the past, at least 50 years to repeat cultivation of crops on the same plot, but the time gap gradually reduced to 30 years, and then to 20 years and 10 years due to the growing number of population, enhancing the rate of vegetation cover change

Plate 3. Shifting cultivation land after collective crops, near Hanhsi ethnic group’s village, Yelonyekan Village Tract, and western part of the Hpekone Township
Plate 4. - Shifting cultivation land after five years, near Hanhsi village, Yelonyekan Village Tract, and western part of Hpekone Township

Source: Photo by Min Oo
Landcover changes in Phekone Township

Figure (6) Land cover condition in 1990 and 2015
Source: 1. Myanmar Information Management Unit (MIMU)
2. Landsat TM5, Landsat 8
Table (2) Landcover changes in Phekone Township (1990-2015)

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<tr>
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<tbody>
<tr>
<td>Closed forest</td>
<td>71598.53</td>
<td>36955.77</td>
<td>34642.76</td>
</tr>
<tr>
<td>Open forest</td>
<td>65097.56</td>
<td>72612.31</td>
<td>7514.75</td>
</tr>
<tr>
<td>Agricultural land</td>
<td>60718.6</td>
<td>89745.01</td>
<td>29026.41</td>
</tr>
<tr>
<td>Settlement area</td>
<td>1383.28</td>
<td>1453.28</td>
<td>70</td>
</tr>
<tr>
<td>Water body</td>
<td>9993.57</td>
<td>8064.51</td>
<td>1929.06</td>
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</table>

Source: Based on Table (2)
ILLEGAL LOGGING

• According to UN Food and Agriculture Organization, Myanmar is the third-worst country in the world for deforestation and, many forests remain beyond government control (Myanmar Times, February, 2018)

• Phekone Township-illegal logging -one of the factor that affecting on deforestation and traditional land use practices

• Over the last two decades the forest resource - depleted throughout the wide area due to a number of factors

• The most significant factors -illegal logging and other forest crimes, improper forest management practices, and poor inspection and monitoring

• In many cases, illegally over extraction of the timber within the western part of the study area were traded and exported to other regions
Plate 5. Family own forests are being cut down by local business people
Source; Photo by Min Oo
Plate 6. Community forests are being cut down by illegal logging people
Source: Photo by Kayan community
Date. 20-2-2018
Plate 7. Community forests are being cut down by illegal logging people
Source; Photo by Kayan community
Date. 20-2-2018
Plate 8. Community own forests are being cut down by illegal logging people
Source: Photo by Kayan community
Date: 20-2-2018
INFRASTRUCTURE DEVELOPMENT

- Another point to be taken care of is the development of the locality.
- Good communication is a good sign of a community, but there is after-effect along with the development if preventive measure is out of order.
- The western part of Hpekone Township, along with its development in transportation is in a more difficult situation to conserve its natural forests than ever. The forests thus were not violated and intruded by anyone.
- But now due to the improvement of communication in the region the intruders are committing unofficial timber production and illegal farming as well.

Plate 10. Transportation network development in Kayan Indigenous group region, western part of Hpekone Township
Source: Photo by Min Oo
## SWOT

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESS</th>
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<tbody>
<tr>
<td>- Large natural forest area, most of forest are rich and medium forest</td>
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<td>- Long traditional forest management practices and experiences</td>
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<td>- Also still strong and connection to the land more broadly and reflects the strong spiritual and cultural connection to the land</td>
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<td>- Weak forest management competency of the forest owner</td>
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<td>- Lack of environmental awareness</td>
<td></td>
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<tr>
<td>- Lack of knowledge</td>
<td></td>
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<tr>
<td>- Lack of Leading Organizations</td>
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<tr>
<td>- The land use system of the current forestry act of the government has not yet been exercised in the regions such as the forest conservation where the indigenous people groups’ traditional way is still</td>
<td></td>
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<tr>
<td>- Many forests remain beyond government control</td>
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</tbody>
</table>
OPPORTUNITIES

- Maintenance of environmental services and welfare for locality- open for future reform
- Potentials for improvement of the indigenous knowledge systems, technology transfer and forestry education
- Effective conservation- not only forest but also biodiversity
- Sustainable livelihoods due to the traditional forest management

THREATS

- Population pressure had a high impact on the agricultural expansion
- Farming is the only livelihood for hill tribes without any other alternatives as yet
- Shifting cultivation in line with its disciplines seem to be sustainable forests; but due to the increase of the population, the gap years from 30 to 50 years has changed to 15 to 20 years, not a good sign for forest conservation but forest degradation
- Some landowners sell out their forest partly or wholly to the traders because of their substance
- Illegal logging - one of the factor that affecting on deforestation and traditional land use practices
- The development of the locality- there are after-effect along with the development if preventive measure is out of order
- Alternative livelihoods that may seem appealing to landholders
6. SUGGESTIONS AND RECOMMENDATION

- In brief, to fight against forest degradation in order to sustain the Thanlwin River Basin- the following points should be considered;
- The customary forest conservation system is to be considered
- To study the traditional customs of the ethnic groups thoroughly
- To find out other alternatives in fighting against forest degradation rather than establishing reserved forests and protected forest;
- To point out the land and forest conservation law of the government that are not vivid and clear are to be amended;
- To carry out awareness- raising activities on land, forest and environment for the local communities and cultivators.
- Based on the facts that, to go well with the problems- government, non-governments, professional foresters, environmentalists, university teachers, political leaders, researchers and other communities should collaborate the local indigenous leaders who responsible for preserving the forest
- Leading Organizations- Governments or NGOs should be collaborate and encourage local communities’ best practices
Thank you very much for your attention.
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