COMMUNITY ACTION PLAN (CAP) TO CONSERVE HMAN PIN INN AND SUPPORT ALTERNATE LIVELIHOODS IN HMAN PIN VILLAGE

Community-based integrated management to conserve the Upper Chindwin Basin

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Contents

Introduction

The Upper Chindwin River's Key Biodiversity Area (KBA) serves as a habitat for endangered species within the nation of Myanmar. The KBA encompasses Hkamti Township, which harbors 38 freshwater species that are currently facing threats. Among these species are the *Batagur trivittata* (Burmese Roofed Turtle) and *Puntius manipurensis, Schistura kangjupkhulensis, and Schistura reticulate*, all of which are classified as Critically Endangered or Endangered by the International Union for Conservation of Nature (IUCN) in 2017.

The town of Hkamti situated along the Chindwin River, is characterized by a number of tributaries and streams, thereby providing ample freshwater resources. The wetlands of this area hold significant value in terms of the resources and their contribution to the economic sustenance of the local population. These wetland ecosystems are highly productive and offer diverse habitats for a wide array of flora and fauna. The degradation of wetlands has been observed for several years, resulting from both natural and anthropogenic factors. Under anthropogenic pressure, the function and services of these ecosystems have deteriorated.

In order to address the current improper land and water management practices in the Hman Pin inn and Hman Pin village, this practical action plan is being developed. In addition, community-driven initiatives have the potential to sustain current livelihoods in an environmentally responsible manner by the means of wetland conservation, rehabilitation, capacity-building and awareness-raising programs (CEPA). Based on the research conducted and expert deliberations, the favored approaches or actions include pisciculture, pig farming, poultry farming, provision of seed capital for rice and groundnut production, and financial support for land acquisition and tenure.

Purpose of CAP

The purpose of the Community Action Plans (CAP) are to ensure biodiversity conservation and integrated management of land and water in the region through sustainable and wise use of priority wetlands and ecosystem services. CAPs will identify priority actions to enhance livelihood opportunities, help community to pursue alternative livelihoods and lead conservation and monitoring of the wetlands and their ecosystem services on which their livelihoods depend.

The current project will empower the community by co-designing the CAPs and forming Village Working Committees (VWC) to lead implementation. The VWC will be key in implementing the identified actions to achieve the goal of ensuring wetland conservation and foster alternate livelihoods.

Goal and Objectives

The goal of the Community Action Plan for Hman Pin village and Hman Pin inn thereof, is to "ensure the conservation of a wetland ecosystem that is abundant in biodiversity, sustains the provision of ecosystem services, fosters alternate livelihoods and to be scaling up the CAP model that was initiated to apply in the Nar Myitter village as a model" for community-based wetland management. Overall objectives for CAP are to:

Objective 1: To maintain healthy wetland habitats by conservation of key habitats and species

Objective 2: To reduce pressure on wetlands through provision of varied livelihood opportunities to communities of Hman Pin

Objective 3: To design a Communication, Education, Participation and Awareness programme (CEPA) to enhance community's engagement and ownership in wetland management, monitoring and assessment.

Objective 4: To develop a community-based governance framework to ensure the effectiveness of the Community Action Plan of the Hman Pin village and Hman Pin inn.

Village and wetland profile

Hman Pin village is located at the upstream area of Chindwin River and it takes about 30 minutes to arrive at the village by boat from Hkamti town. With respect to the number of households, there are 138 households and 318 Female, 321 male and 120 children under 16 years old can be observed. The education level is primary (49%), middle (31%) and high (20%) levels in the village. Buddhist, Shan, Burma, Kachin and few Naga ethnic groups can be found in the village. The majority of the community are Shan ethnic minority group. Cultural services of the wetland are particularly relevant in this village due to Shan spiritual beliefs with one of the two shrines of the village is in the wetland area. There is also a traditional festival to be celebrated in the shrine yearly. The village administration committee restricted fishing using unsustainable techniques. However, these rules are flexible once per year to allow fishing by electric shock to catch large stocks of fish for donation festivals. The impact of such activities could be detrimental to the overall health and productivity of the wetlands. This distinguishes Hman Pin from the other villages which do not follow these traditions and have limited to no cultural values associated with the wetlands.

Agriculture and livestock are the main livelihood activities. Mining is a secondary livelihood option. Wetland resources such as wood and timber, fruits and vegetables, medicinal plants, animals, aquatic and fish diversity are extracted for home consumption and sale purposes locally. Wood and timber particularly extract during the summer season to use for an entire year. Tea plantation can be found nearby a village which is in the wetland compound.

The village is also associated with Hman Pin inn and 10-15 minutes has taken to the wetland by walking. The location of the Hman Pin inn is approximately 5.95 kilometers at the

northeast of the Hkamti Town. It is located 0.5 kilometers at the southeast of the Hman Pin village and 0.75 kilometers away at the south of the Chindwin River. The wetland area is about 4 acres and services on provisioning, regulating, and supporting are provided to the community. The wetland is also lowland and shallow type, and 0.69 hectares of the wetland area. It is located at 26° 00' 51.3" N and 95° 45' 00.7" E. The water depth is 9.1 meter and altitude is 157m amsl. Highest phosphate levels (0.3 mg/l) were observed at Hman Pin wetland. The wetland is dominated by open water with marshes (dominated by water hyacinth and water lilies) situated within a secondary forest (of *Baccaurea ramiflora*, *Shorea obtuse*, *Polyalthia longifolia*, *Ficus pisocarpa*).

There are Tea leaf plantation sites around the wetland area and the forest is agro-forest type. Hman Pin inn is a permanent wetland and water level fluctuates with the seasons. The water body of the wetland is covered with the emergent plants, submergent aquatic plants and floating plants. The dominant aquatic plants are water hyacinth and water lilies.

Mining is a significant threat in the village and the wetland inlet of Hman Pin Inn was obstructed to permit large-scale gold mining in the past years. The obstruction causes annual flooding in rice fields consequently.

Floral diversity

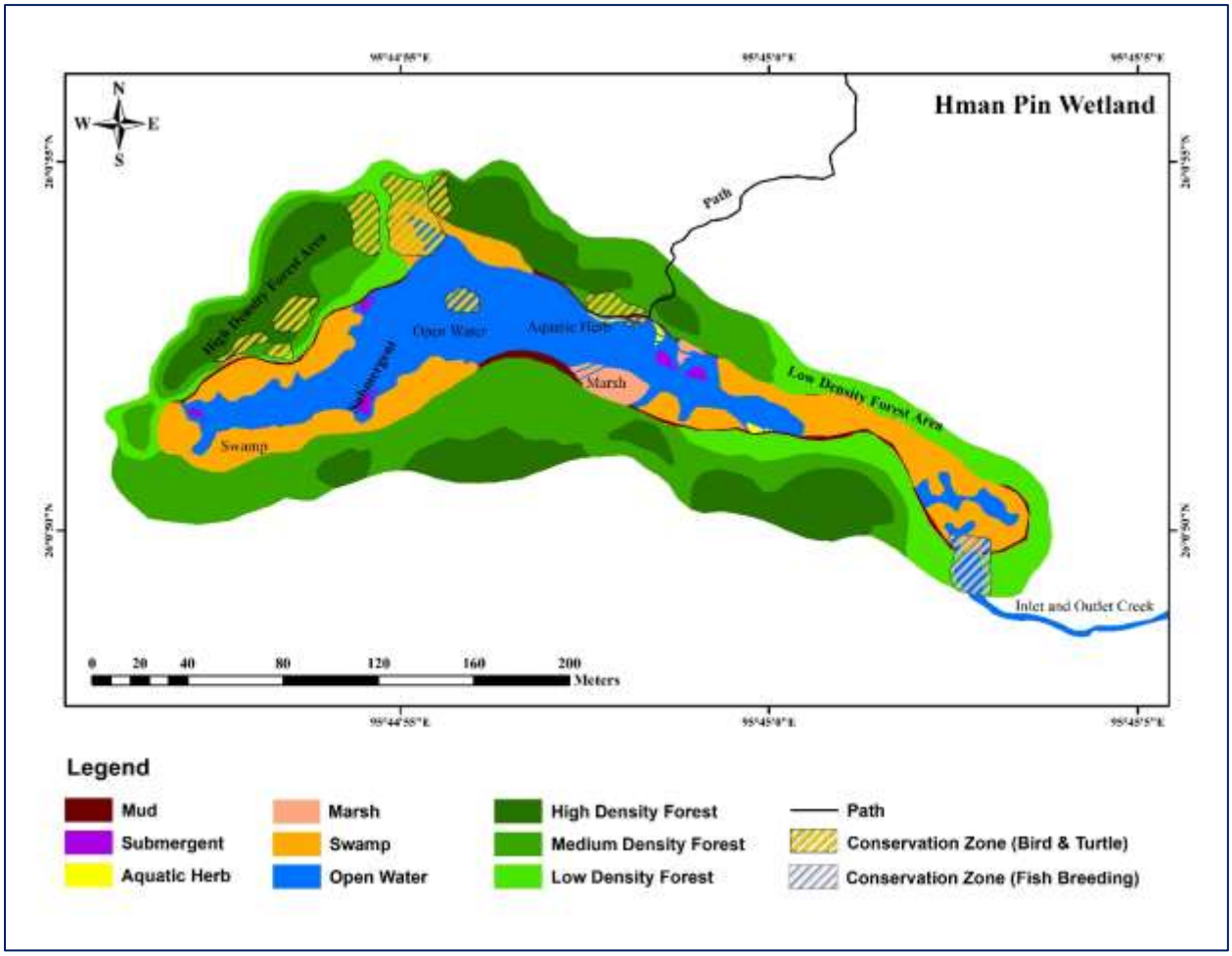
Eleven of the 47 plant species recorded in Hman Pin inn were aquatic, including *Eichhornia crassipes, Nuphar lutea, and Lemna minor*, along with the near-threatened *Dimocarpus longan*. The forest of Hman Pin area is semi-evergreen forest, variety of woody trees species therefore grow in the forest. A total of 47 plant species, 23 trees species, 13 shrub, herb, grass and climber species were observed. A total of 11 aquatic plant species were recorded. These include Beda *Eichhornia crassipes*, Kyar *Nuphar lutea*, Zayit and Balsar *Lemna minor*, etc. Some grass species (*Dichanthelium clandestinum*) and (*Dulichium arundinaceum*) were listed inside the wetland. One near threatened species *Dimocarpus longan* (Taw Kyat Mouk) was found in the sampling plot.

Common plants of the forest are Kana-so *Baccaurea ramiflora*, Thit-yar *Shorea obtusa* wall, and Ye-ta-mar *Polyalthia longifolia*. Bayan trees *Ficus pisocarpa* grow around the wetland area. Tealeaf plants are grown around the wetland area as commercial products of the local people.

Fauna diversity

15 fish species each were recorded at the Hman Pin. Seven species of fish were common to all five wetlands including *Notopterus notopterus, Puntius chola, Labeo rohita, Parambassis ranga, Ompok vimaculatus, Channa striatus* and *Wallago attu.* Of these, three species are of conservation significance of which two are near threatened (*Ompok bimaculatus* and *Ompok pabo*) and one is vulnerable (*Wallago attu*). Asiatic softshell turtle (*Amysda cartilaginea*), a

vulnerable reptile species was recorded at Hman Pin inn as well. 15 avifaunal species were observed.



Map 1: Location of Hman Pin Wetland

Threats to the wetland ecosystem

Table 1: Types and levels of threats to the Hman Pin Wetland ecosystem

Sr. No.	Conservation pressure	Types of threats	Level of Threat
1.	Mining	Land exploitation and extension for mining areas; the obstruction still remains leading to annual flooding over the rice fields. Heavy metals leaching affecting water quality and fisheries	High

2.	Logging and wood harvesting	Increased sedimentation due to forest clearance; wood harvesting/construction in dry season for consumption for a whole year	High
3.	Fish stock and diversity	Overfishing for festivals twice per year (shrine festival due to Shan ethnical culture)	High
4.	Land use for Agriculture and livestock	Tea plantation at the edge of the wetland area; grazing for animals such as cattles	Medium
5.	Hydro-morphological	Land drainage, increased erosion, construction of embankments, conversion to agriculture	Medium
6.	Nutrient Enrichment	Nutrient enriched inflows from agriculture and/or urban areas and/or seasonal enrichment during floods	Low
7.	Biological	Loss of species, Increase spread of invasives, overexploitation of resources. Overfishing for festivals twice per year (shrine festival due to Shan ethnical culture)	Medium
8.	Climate change induced	Decreased water levels, inflows, flash floods, overexploitation of wetland ecosystem services	Medium

Approach for CAP formulation

The project began by conducting a rapid assessment of ten wetland habitats situated in the Upper Chindwin Basin. The primary objective of this evaluation was to determine the degree to which the local communities depend on the ecosystem services provided by these wetlands, as well as to identify the threats that these wetlands face. The prioritization of conservation efforts was determined based on the results obtained from the RVA, which indicated that five wetlands and four villages were identified as high priority areas. Focus group discussions were carried out in each of the villages to determine the management needs, assess community experiences and interests, and identify strategies for managing expectations. In the course of the discussion, committees comprising village members were established to spearhead and facilitate the implementation of the Community Action Plan (CAP) in each of the villages. Notably, the committees were constituted with the active involvement of both women and youth.

A baseline survey was conducted at four villages to gain an in-depth understanding of the socioeconomic characteristics and reliance on wetland resources for sustenance. Concurrent biodiversity and water quality assessments were carried out at five specifically chosen wetlands to ascertain suitable habitats and locations for the conservation of key species.

An expert meeting was held at the SEI Bangkok office with the participation of experts in hydrology, biodiversity, wetland, fisheries, livelihoods, agriculture, and forestry to identify crucial measures for attaining the management goal and objectives outlined in section 3, based on the

aforementioned inputs. The discussions and formulation of the CAP for Hman Pin was guided by the Conservation of Biodiversity and Protected Area law of Myanmar, 2018, which advocates for the establishment of formal mechanisms for Local community protected areas. In addition, an integrated landscape approach has been adopted to restore and maintain the ecological integrity of wetlands.

The CAP aims to develop a localized management system that prioritizes continuous learning, adaptive management, participatory and user-friendly monitoring, and enhanced stakeholder engagement. The objective of the Conservation Action Plan (CAP) is to effectively balance the competing demands of conservation and development, while also addressing the various challenges encountered by Hman Pin inn.

This draft Community Action Plan will be presented to the Village Committee group for review and defining roles and responsibilities.

Community Action Plan

Activities to meet the four objectives have been clustered under three components: Sustainable livelihoods, wetland habitat conservation, and Communication, Education, Participation and Public Awareness (Refer Table 2).

Wetlands habitat conservation

Proactive management of wetland habitats is key to maintaining and enhance populations of species of high conservation significance including turtle and fish species dependent on Hman Pin inn.

- Restrict unsustainable practices in wetland habitats critical for populations of endemic, threatened and vulnerable species
- Identification, demarcation and monitoring of conservation zones
- Demarcating wetland boundary to mitigate the impacts and restrict land conversion within wetland

Sustainable livelihoods

Providing alternate and sustainable livelihood options to the communities dependent on wetlands resources is key to managing the pressures resulting from extensive biological resource extraction from the wetland.

- Groundnut cultivation and pig farming will be promoted in the village area through project support to improve the village community's livelihoods.
- Financial support to land tenure and ownership

CEPA

Community and stakeholder engagement in wetlands conservation and management will be promoted through creating awareness on wetland biodiversity and ecosystem services values,

management strategies adopted and opportunities for participation. Specific activities should be undertaken :

- To enhance community and government stakeholders' understanding of the significance and roles of wetlands, workshops and outreach initiatives will be organized. These endeavors will be facilitated in collaboration with Village Committees and the Environmental Conservation Department (ECD), whenever feasible.
- Additionally, bilingual signages in Myanmar and English will be installed in the wetland area to disseminate knowledge pertaining to wetland ecosystems, habitats, and species.
- Training workshops on issues such as wetland conservation and management, rehabilitation, sustainable agricultural practices, community forestry etc.
- Publication and Brochures – do's and don'ts for communities and visitors, wetlands factsheet, CAP summary

CAP implementation

The village committee is envisaged to maintain an overview of implementation and monitoring of activities identified in the community action plan. Committee will also review of other projects proposed for the region, convergence of some other schemes and action plans of some line departments including ECD and Township Administration in the future.

The committee will also foster and promote community engagement for wetlands conservation and management efforts. The Stockholm Environment Institute, Myanmar Environment Institute, and NSNO will provide leadership and support for capacity development through training workshops at various levels, such as township and village. These workshops will focus on specific topics as outlined in the aforementioned table.

The Village Committee, with the guidance of local CSO, NSNO, and MEI, will conduct a mid-term and end-term evaluation of the Action plan to determine the level of achievement of the identified objectives. The village committee may also collaborate with various departments such as the Township Administration Council, Environmental Conservation Department, Livestock Breeding and Veterinary Department, Department of Fisheries, Department of Agriculture, Department of Agriculture Land Management and Statics, Forest Department, among others, to establish a comprehensive management plan to ensure sustainability and offer long-term conservation.

Table 2: Action plan for conservation and management of Hman Pin Inn

Community Action Plan (CAP)	Priority	Responsibility	Starting Time (Season)	Time Frame	Estimated Budget (USD)	Link to wetland threats and supporting livelihood	Remark
a. Sustainable livelihoods							
Initial funding for groundnut sowing	High	Proposed farmers, Agri Expert, Village Working Committee	Winter season	5-6 months	620/acre	The farmers can reduce loan amount with high interest and benefit from a regular price when the product (oil) is available in a market. By implementing this kind of CAP, pressure and complete reliable activities on the wetland can be reduced such as harvesting of wetland resources, logging, fuel wood, fishing etc.	- The project is required to provide technical and financial support to the community initially. - The village working committee can manage the funding and provide the expenses with an agreement (accomplish to implement the activities with a well plan with signature). - The project needs to discuss
Pig farming	High	Community, Livestock Expert, Village Working Committee	Whole season	11-12 months	645 (one piglet for one household)	It can increase income generation and provide job opportunity for women. The threat of livestock farming and	

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						grazing can be reduced.	clearly the benefit sharing and an agreement letter between the project and proposed farmers before starting the implementation activities. - The current price of every item for CAP (especially for fish farming) is very high in Hkamti because of transport limitations. - Availability of feed for poultry farming is limited because of transportation difficulty and high
Fish farming	Low	Proposed fish farmers, Fisheries Expert, Village Working Committee	Dry season (April-May)	220 days	4,500-5,000	The proposed fishermen are getting high incomes and knowing sustainable ways on how to manage fish farming because the project is supporting an Expert to implement activities. It can also reduce illegal fishing methods (electric shock and poisoning), avoid killing aquatic resources and can decrease their interests on auctions (over exploitation).	
Poultry production	Low	Community, Expert, Village Working Committee	Whole season	Layer - 150 days Boiler – 45 days	740 (for 100 numbers	It can increase income and reduce the threats of livestock farming and grazing.	

Community Action Plan (CAP)	Priority	Responsibility	Starting Time (Season)	Time Frame	Estimated Budget (USD)	Link to wetland threats and supporting livelihood	Remark
					of one-day old chick)		price consequently.
Financial support to land tenure and ownership	Low	Community, Village Working Committee	Whole season		1200 (at least; depends on location and soil condition)	It increases number of land ownership and enhance agricultural activities with good income. Use of wetland resources (logging and deforestation, mining) can be reduced.	
b. Wetland conservation and rehabilitation							
- To develop local rules and regulation at village level for protecting sustainable wise use	High	Community, Local authority	Whole season	Within 30 days (depends on process)	100 (estimated amount for organizing meetings at village)	It can reduce illegal activities and wetland pressure. Fishing by other villages can also be prohibited.	- Coordination with multi-stakeholders level including relevant departments. - Discussions and agreement with the community and consult with the relevant departments (e.g, Forest
To define boundary line of wetland among the village and	High	Community, Local authority	Whole season	Within 30 days (depend on linkage and process	100 (estimated amount depends	It can reduce small conflicts among the villages and reducing the illegal actions by other villages.	

Community Action Plan (CAP)	Priority	Responsibility	Starting Time (Season)	Time Frame	Estimated Budget (USD)	Link to wetland threats and supporting livelihood	Remark
village tract located nearby boundary areas				by relevant departments)	on process)		department, Environmental Conservation). - Community has main responsibility to take actions.
Signage boardsto indicate restoration zone, habitat conservation zone, non-illegal fishing zone around the wetland area	High	Community, Local authority	Whole season	2-3 days (for set up signage boards) Within 30 days for a process if relevant departments are needed to inform	100 (estimated amount for boards)	It can conserve the habitat areas for flora and fauna, protect sprawling ground for aquatic resources and sustain wetland health and wise use.	
Replanting and contribution of seedlings to community to grown in wetland area	High	Community, Local authority	June-July and October, 2024	2-3 days	300 (estimated cost for 100 seedlings)	It can promote good ecosystem, restore the wetland degradation, recovery natural habitat.	
c. Capacity building and awareness raising							
Wetlands conservation	High	MEI	July, 2023	3 days	1500 USD * 4 times =	This is important to share on how to	- The project will be provided to

Community Action Plan (CAP)	Priority	Responsibility	Starting Time (Season)	Time Frame	Estimated Budget (USD)	Link to wetland threats and supporting livelihood	Remark
and management					6000 USD (estimated budget for four times trainings)	conserve wetland and resources for long term such as provide habitat for aquatic resources naturally. Basic understanding on wetland management and how to reduce the threats	build capacity, training, awareness programs. - The project is required to provide perdiem, meal, accommodation and travel allowance to the participants. - For M&E, NSNO will check regularly on ground level and MEI and SEI team can join in favorable time.
Biodiversity Conservation and Ecosystem Services	High	MEI	Feb-Mar, 2024	2 days		Basic understanding on general knowledge of biodiversity and ecosystem services and how to reduce the threats on biodiversity and their habitats	
Fish farming and aquaculture	High	Fisheries Expert	September, 2023	1 day		Basic knowledge of fish farming and aquaculture production, income generation by fish farming.	

Community Action Plan (CAP)	Priority	Responsibility	Starting Time (Season)	Time Frame	Estimated Budget (USD)	Link to wetland threats and supporting livelihood	Remark
Management of Fisheries resource	High	Fisheries Expert	September, 2023	1 day		This is important for sharing knowledge because of illegal fishing. More understanding on fisheries management and catching methods with sustainable ways.	
Fish processing and associated value chain	High	Fisheries Expert	September, 2023	1 day		Supporting livelihood options and enhance employment opportunity for women	
Sustainable agriculture and soil management practices	High	Agri-Expert	October-November, 2024	1-2 days		Basic practices of knowledge from land preparation to harvesting steps and soil management to get more productivity and increase incomes	
Community forestry and Agro-Forestry	High	Forestry Expert	October-November, 2024	1 day		More understanding on the importance of forests, good	

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						governance, forest management	
MEL	High	SEI, MEI	Feb-Mar/ June-July, 2024	2 days		Methods of monitoring and evaluation to evaluate the progress	
Financial management	High	SEI, MEI	Feb-Mar/ June-July, 2024	2 days		Basic understanding on budgeting, accounting and reporting	

Monitoring, Evaluation and Learning

This section of the CAP proposes a monitoring framework for Hman Pin inn to ensure its management and biodiversity conservation. Following are few key objectives for establishing a monitoring plan.

- Establishing a baseline to map changes in ecosystem structure and function
- Generating information on wetland status and drivers of change
- Identifying and prioritizing risks to wetland ecosystem and developing strategies to mitigate risks
- Assessing effectiveness of wetland conservation and management

Table 3 lists the key parameters that must be monitored from the beginning of implementation of CAP till the end along with the priority and frequency of monitoring.

Table 3: Monitoring parameters, proposed frequency and priority

Scale	Parameter	Frequency	Priority
Wetland	Wetland area	Beginning and End of CAP implementation	High
	Water level	Seasonal	High
	Water quality trends	Seasonal	High
	Type and extent of wetland habitats	Beginning and End of CAP implementation	High
	Floral diversity	Seasonal	Medium
	Faunal Diversity	Seasonal	High
	Perception of wetland values	Beginning and End of CAP implementation	High
	No of graziers dependent on wetland	Beginning and End of CAP implementation	High
	No. of direct beneficiaries Fisheries Timber Fuelwood Other Wetland resources	Seasonal	High
Wetland Catchment	Inflows and outflows	Beginning and End of CAP implementation	High

	Land use land cover change	Beginning and End of CAP implementation	High

The CAP needs to be periodically assessed based on these parameters to make sure that the set objectives are being achieved. The effectiveness of CAP towards achieving objectives can be enhanced if it focuses on following questions:

- What is the current status of Hman Pin inn?
- Is the management ensuring the conservation of Hman Pin inn?
- What threats have been mitigated and are any future threats identified?
- Are adequate resources available for achieving objectives?
- What additional steps can ensure effectiveness?

Periodic reports must be developed by the Village working committee with support from NSNO providing summary of the outcomes of monitoring in Myanmar language which can later be translated to English by SEI colleagues. This report should also detail out the information based on questions framed above.