



Supported by



# Participatory Zonation, Boundary Delineation, and Resource Management in HNN-NPA

Compilation of Activities and Experiences from December  
2014 to July 2018

**Published by the**  
Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices  
Bonn and Eschborn, Germany

Integrated Nature Conservation and Sustainable Resource Management in the Hin Nam No Region (GIZ-HinNamNo component)  
Protection and Sustainable Use of Forest Ecosystems and Biodiversity (ProFEB programme)  
Chomphet Village, Thakhek District  
Khammouane Province  
T +856 51 214 175  
F +856 51 214 175

**As at**  
July 2018

**Photo credit**  
GIZ/Thomas Wiedenmann

**Text**

Contributions of the contractor, Thomas Wiedenmann and Lorjong Lorfaijong , do not necessarily represent the position of GIZ.

On behalf of the  
German Federal Ministry for Economic Cooperation and Development (BMZ)

## Contents

1. Introduction.....	2
2. Historical outline .....	3
3. Description of the process of zonation, delineation and resource management .....	4
3.1 Development of the Hin Nam No zonation and boundary delineation approach.....	4
3.2 Description of the 5 step concept.....	6
4. Results .....	7
4.1 Zonation and boundary delineation.....	7
4.2 Continuation of the five steps concept .....	11
4.3 Resource management & conservation efforts (Step 3).....	12
4.4 Compliance monitoring (Step 4).....	14
4.4.1 Thongxam village .....	14
4.4.2 Phanob village .....	17
5 Lessons learned .....	18
6. Gaps and missing steps.....	20
6.1 Delineation, demarcation and zonation .....	20
6.2 Resource management and compliance monitoring .....	21
6.3 Village overview.....	22
7. Bibliography.....	23
8. Annex .....	25
8.1 Compilation of results of the village tour 2014/ 2015.....	25
8.2 Compiled list of NTFPs mentioned and named at village meetings.....	26
8.3 Conservation agreement draft of Thongxam village .....	27
8.4 Conservation agreement draft of Phanob .....	28

# 1. Introduction

Hin Nam No National Protected Area (HNN NPA) is situated in Bualapha District, Khammouane province in central Lao PDR. It encompasses an area of 88,500 ha. It is a portion of a discrete limestone massif situated in the Annamite mountain range. It is one of the original 18 National Biodiversity Conservation Areas (now called NPAs) of Lao PDR established on 29th October 1993 by Prime Minister Decree 164.

The Lao law requires zonation inside NPAs to identify Total Protected Zones (TPZ) for protection of biodiversity and to regulate limited access and use to Controlled Use Zones (CUZ). Participatory zonation is an essential tool required for local communities to engage in co-management. A new zoning in village management areas and conservation zones of the park is required in the revised co-management plan 2016-2020. Ideally this zonation supports the co-management by dividing the park into management zones per village. Berkmüller (2013) mentions an IUCN criteria for national parks in which they should try to define at least 75% of their total surface as “core zone”.

The national protected area has been geographically divided into areas to be managed by the 19 different guardian villages divided among the five village clusters. The process of participatory mapping of trails and the subsequent selection of key trails for regular biodiversity monitoring led to a clear agreement on which areas should be monitored by which village. This led to a de-facto delineation of village areas of management responsibility within the Hin Nam No NPA.

Based on these trail maps, villagers were asked to define their traditional village lands in which they collected NTFPs and aquatic products. These areas form the provisional Controlled Use Zones (CUZ) of HNN NPA They were also asked to define areas which are inaccessible and areas that should be left alone to protect wildlife. In all 19 villages the provisional zoning was completed in 2015. In total, 14% of the village areas inside HNN NPA were proposed by villagers to be declared as CUZ. The CUZ can be further divided into various sub-zones such as tourism zones if needed. Regarding the aim to improve the management of the CUZs towards more sustainability, further adjustments (fine-tuning) of the CUZs were considered necessary. Field inspections in combination with village discussions resulted in more detailed maps and thus a more realistic zonation. This process is still ongoing. 5 villages have been approached until July 2018.

Also based on the trail maps produced earlier, villagers were asked to define their traditional village lands which overlapped with the boundary of the national protected area, to define areas which are inaccessible and areas that should be left alone to protect wildlife. 86% of Hin Nam No NPA were proposed by the villagers to be declared as a Totally Protected Zone (TPZ) in 2014/2015. Ongoing research and the Open Standards Process will provide more information and insight on the conservation values within the accessible parts of the TPZ and for the park in general. It can be expected that future changes to the now existing TPZs will have to be made.

The fine-tuning of the zonation and the field inspections also provided further understanding of the outer boundary of HNN NPA. In order to make the boundaries understandable and as visible as possible changes were discussed with each village visited. Ideally, the outer boundary of the NPA should be reflected by topographic features (e.g. cliff) or be visible through the change of land-use (e.g. paddy field – forest) or any other means of local orientation. There is an existing system of milestones dating back until 2006, but inspections proved that these boundary posts are not always visibly located, thus the boundary remaining unclear. To get locals and outsiders used to

the previously agreed border the entry trails into the NPA are demarcated with easy to carry and durable signboards. This work is ongoing and part of the whole fine-tuning process.

For an improved management of the CUZs locally different options were identified by village group discussions. Participatory mapping and listing of NTFPs confirmed the suspected abundance of different types of NTFPs. Given the lack of available knowledge for technical management of each of the NTFPs locally suitable approaches for management had to be tested. Within the co-management approach it is intended that villagers take ownership and are responsible for the management of the natural resources inside the CUZs. The management of natural resources within the CUZs of the NPA should reflect engagement into conservation and not exploitation. The long-term aim is a more sustainable way of managing NTFPs. For the near future conservation agreements and the provision of conservation contracts is foreseen. By providing benefits to the villages that make efforts in conservation it is expected to accelerate the process of co-management for conservation.

## **2. Historical outline**

The historical outline of the HNN NPA is briefly reflected here. This information is mainly taken from the “Hin Nam No Protected Area Co-Management Plan 2009”, adjusted to the area management context and continued up-to-date:

- 1993 - Hin Nam No was declared by Decree 164 of Prime Minister as a National Biodiversity Conservation Area (NBCA) or commonly understood National Protected Area (NPA).
- 1999 - Land use planning in some villages.
- 2003 - MoU signed between Provincial Governor of Khammouane and Quang Binh on transboundary protected area management.
- 2006 - Land use planning revised, constructed boundary posts and strengthening cooperation with Vietnam (UNESCO and IUCN).
- 2006 - Agreement of Technical Cooperation between Hin Nam No NPA and Phong Nha Khebang National Park in Vietnam.
- 2008 - IUCN continued working in the area with funding support from LEnS project of Worldbank
- 2009 - Development of co-management with local communities and other stakeholders (incl. GoL staff) through series of trainings and practice, funded by LEnS/EPF Lao.
- 2009 - Continued dialogue on Natural World Heritage Site Designation.
- 2013 – IP Consult on behalf of GIZ supported a consultancy of Klaus Berkmüller to outline zonation and biodiversity monitoring in HNN NPA
- 2014 – GIZ support to develop a new Co-Management Plan for HNN NPA from 2016 to 2020
- 2014 – IP consult started the first round of village visits in order to elaborate the provisional zonation for HNN NPA.
- 2015 – Results of the provisional zonation available
- 2015 – Co-management regulation by-laws endorsed by the District Co-Management Committee
- 2015 – Co-Management Plan for HNN NPA finalized, presented and adopted by the Department of Forest Resource Management
- 2016 – IP Consult started the second village tour in Thongxam village for the presentation of the provisional zonation results and inquiring about possible options for improved natural resource management on village level. Topic of Lao lady palm came up.

- 2016 – Submission for tentative listing of HNN NPA as natural world heritage site under criteria (viii) and (x), provided by the Lao National Commission for UNESCO.
- 2016 – End of contract of IP Consult and handing over of all activities to GIZ.
- 2016 – Piloting compliance monitoring and introduction of permanent monitoring plots at Thongxam
- 2016/ 2017 – Mission of Odonata Consult (Peter Shadie) for the evaluation of HNN NPA readiness for UNESCO nomination, including section on boundaries and demarcation.
- 2017 – Second village tour continued in Phanob village. “Nong luang” wetland identified as conservation target.
- 2017 – Doksouri typhoon heavily impacted HNN forest ecosystems in September.
- 2017 – Second village visit to Khuan Khanyom. CUZ affected by Doksouri. Villagers are willing to give up the CUZ but demand for clear benefits.
- 2018 – Compliance monitoring at Thongxam. 3 out of 8 permanent monitoring plots destroyed by Doksouri typhoon.
- 2018 – Second village visit to Ka-I. Initial ground survey for research to be done by Tim Föhling on remote sensing. Alarming landscape degradation present. Former (before village tour 2014) boundary and CUZ proposed and demarcated. Damages of Doksouri typhoon inside the CUZ.
- 2018 – Second village to Nongping. Encroachment and forest fires detected during ground survey. Heavy impacts of Doksouri typhoon in the CUZ. Tourism development zone severely encroached for new paddy fields.

### **3. Description of the process of zonation, delineation and resource management**

#### **3.1 Development of the Hin Nam No zonation and boundary delineation approach**

So far, the envisioned and partially implemented process of zonation, boundary delineation, boundary demarcation and natural resource management (NRM) can be summarized as a **5-step-process**. The five steps of this process reflect what happened in the past and what still needs to be done. Experiences from past activities working with the villagers were guiding the development of these 5 steps. The approach is rather derived from continuous field-experiences and adaptations than from a previously set-up theoretical concept. An overview of the concept is shown at the following Chart 1:



Chart 1: Drafted scheme of the 5 steps concept

### 3.2 Description of the 5 step concept

1. The **first step** consists of the village consultations and participatory mappings that happened during November 2014 until April 2015. All 19 HNN guardian villages were visited during that phase. At each village a village meeting was held, including participatory mapping on paper done by different user groups (rangers, village authorities/ village elders and women) and a final discussion about the drafted outer boundary of the NPA, the inner boundaries to adjacent villages and the provisional zonation. These provisional results were captured on hand-drawn maps, a printed atlas of HNN and with the help of projected maps on a screen. Afterwards, the results were digitized. Note: At step 1 no direct field visits to or inside the NPA was done. Only the trails that the village rangers recorded using GPS are a direct input of information from the field. Otherwise, this step comprises exclusively of paper-based (printed maps, projected maps, hand-drawn maps) information. **Deliverables** of this step are: An updated map of the NPA including inner boundaries between villages and the zonation of each area of management responsibility (TPZs and CUZs).
2. The **second step** are the visits to the villages for the presentation and re-confirmation of the results of step 1. It comprises of the presentation of printed maps, a participatory mapping exercise of NTFPs and a more detailed discussion about the conditions inside each of the CUZ, a ranking and trend analysis exercise for NTFPs and the introduction of the idea of improved management and conservation. As a result of step 2 it is expected to have a more detailed map of the CUZ and to know about one possible effort that villagers can imagine to do for conservation and management improvement. This step has been implemented in 5 villages. **Deliverables** of this step are: Adjusted map, a list of NTFPs used by the villagers and a trend analysis of each NTFP, a drafted idea of possible conservation effort/ efforts (= village regulation) for the improved management of natural resources.
3. The **third step** is the field inspection and verification. The CUZ/ CUZs where a new management regime has to be introduced, including the demarcation of the entry trails into the NPA, the verification of the existing boundary posts, the demarcation of the CUZ/ CUZs and GPS data capture are included in this step. Geographic information has to be processed and stored, updated maps to be produced. Additionally, a village signboard displaying a map of the area of management responsibility and the agreed regulations concerning the management of natural resources has to be set up. At this point an official village conservation agreement (formulation of the willingness of making a certain effort in conservation by the village) should be drafted, at least. Ideally it should be also signed between the village (VCMC) and the District Co-Management Committee (DCMC). This step has been partially implemented in the same villages as step 2. Step No. 3 is where real visits and inspections to the field/ NPA are done. **Deliverables** of this step are: A draft for a conservation agreement between VCMC and DCMC, updated map of the NPA/ area of village responsibility based on recorded GPS data in the field, signboards at entrance trails into the NPA, village signboard.
4. The **fourth step** is the implementation of monitoring routines in order to cross-check if the previously agreed regulations are followed or not (compliance monitoring). Ideally, this monitoring should be carried out independently by the villagers under supervision of the Village Co-Management Committee (VCMC). This step is under development and being tested in 2 villages, so far. **Expected deliverables** are: Data collected during compliance monitoring (e.g. pictures of the area, spreadsheet with data recordings) and a (oral) presentation of these results to the VCMC.
5. The **fifth step** is the provision of benefits for the village due to proven compliance via conservation contracts. This step has not been done in any of the villages, until now. The **expected deliverables** would be a statement (written document) about compliance to the

village regulation and the provision of benefits, e.g. handover protocol, photo documentation, etc.

## 4. Results

The results and achievements on the above mentioned process are presented subsequently.

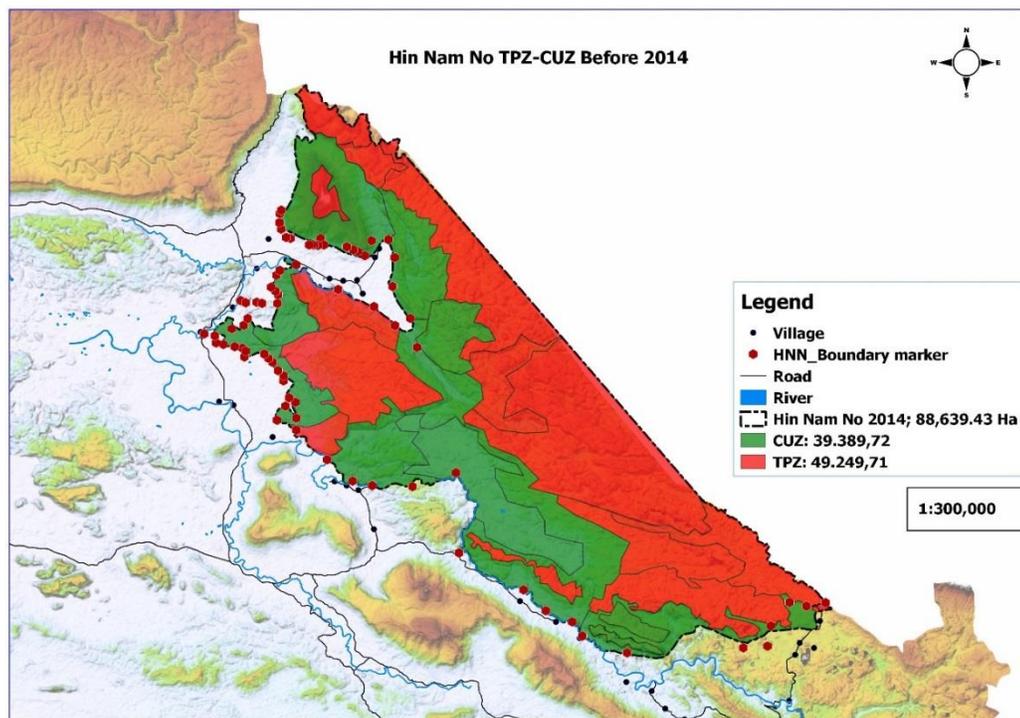
### 4.1 Zonation and boundary delineation

Step 1 has been completed in all villages between November 2014 and April 2015. These results were achieved after discussing boundaries and zones during village meetings and with the help of printed and projected maps and satellite images. Except the exploration of the existing trails inside the NPA via the village rangers using GPS, no field-based methods or ground-truthing methods were used. In Annex 8.1 the results of this delineation and zonation process are presented, divided into village clusters (based on the GoL administrative division as of 2015). The overall results of the zonation and boundary delineation works are summarized in the following Table 1 for comparison and documentation of changes:

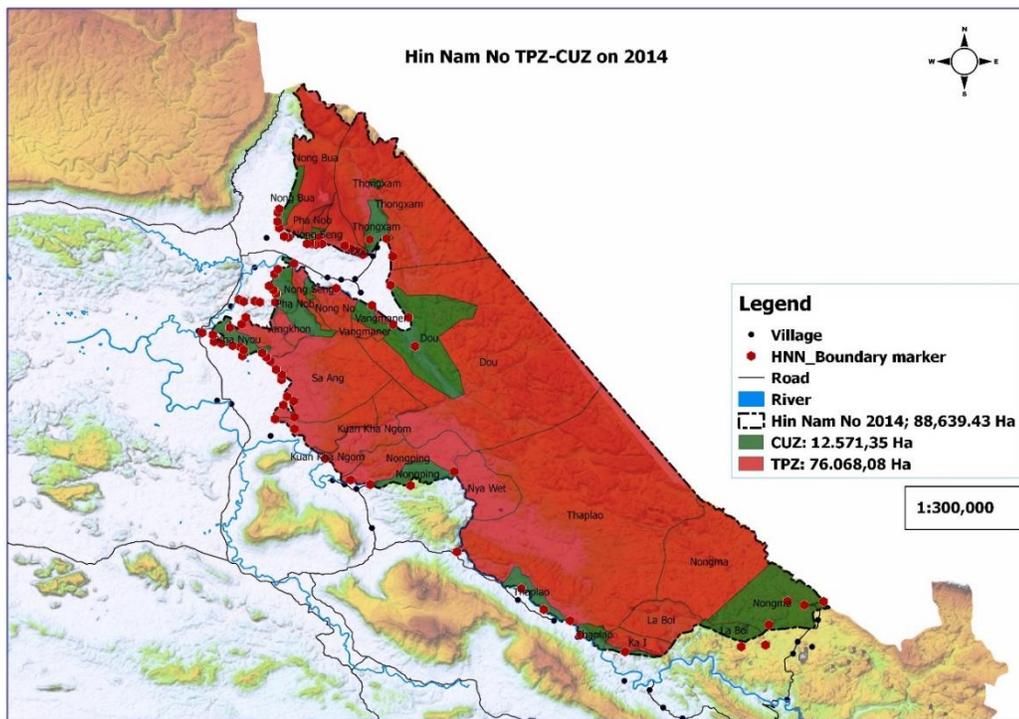
	before 2014	2015	2016	July 2018
Total size of HNN NPA (ha)	88,639	88,639	90,018	88,639
Total size of TPZs (ha)	49,250	76,068		74,451
Total percentage of TPZ (%)	56	86		84
Total size of CUZs (ha)	39,390	12,571		13,657
Total percentage of CUZ (%)	44	14		15

Table 1: Compilation of the changes in total size of the entire NPA, extend and percentages of TPZs, and extend and percentages of CUZs, from before 2014 until July 2018.

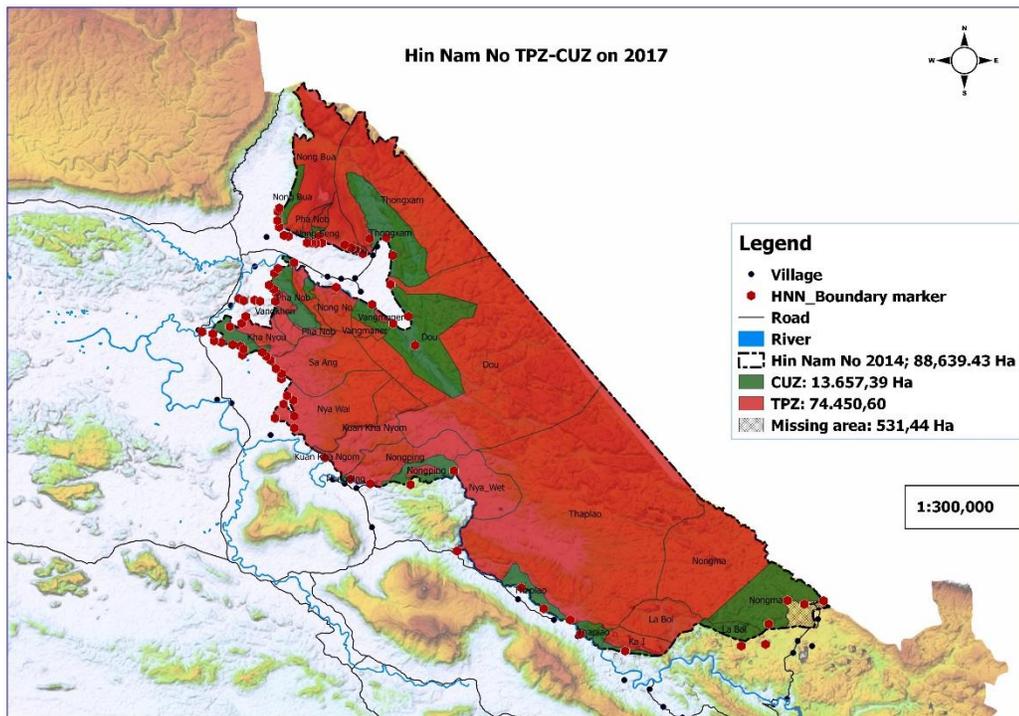
To visualize the comparison of the changes and shifts of the zonation and delineation process the following maps display the different stages over time:



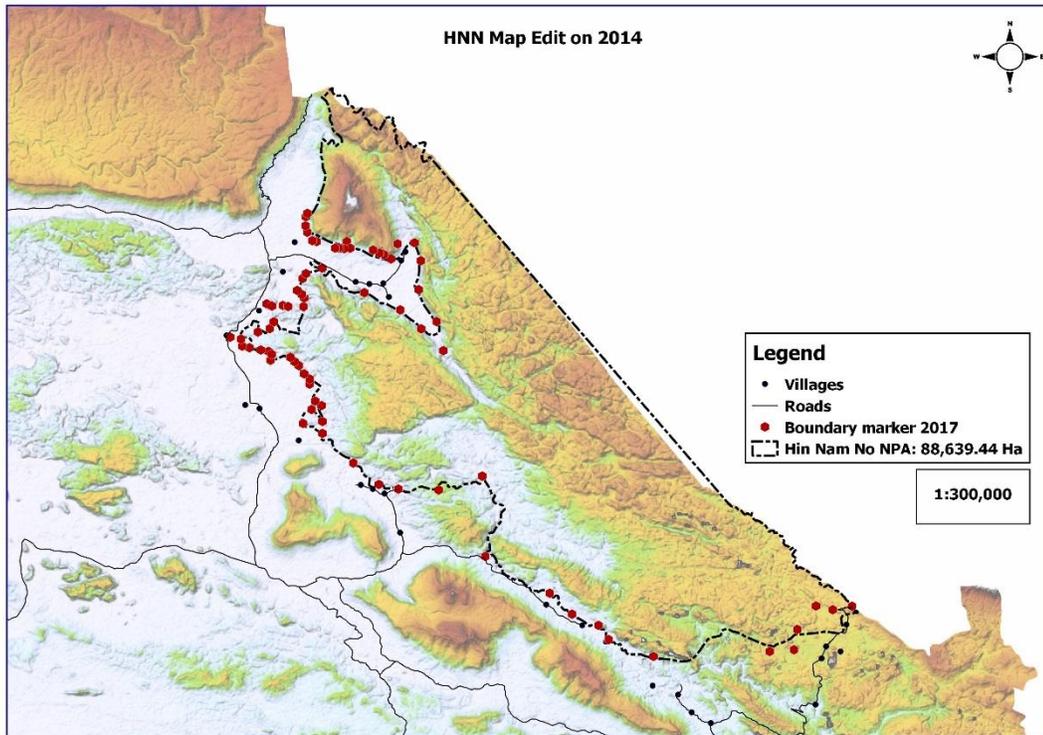
Map 1: State of the NPA boundary and zonation before 2014 (before the village tour of IP Consult)



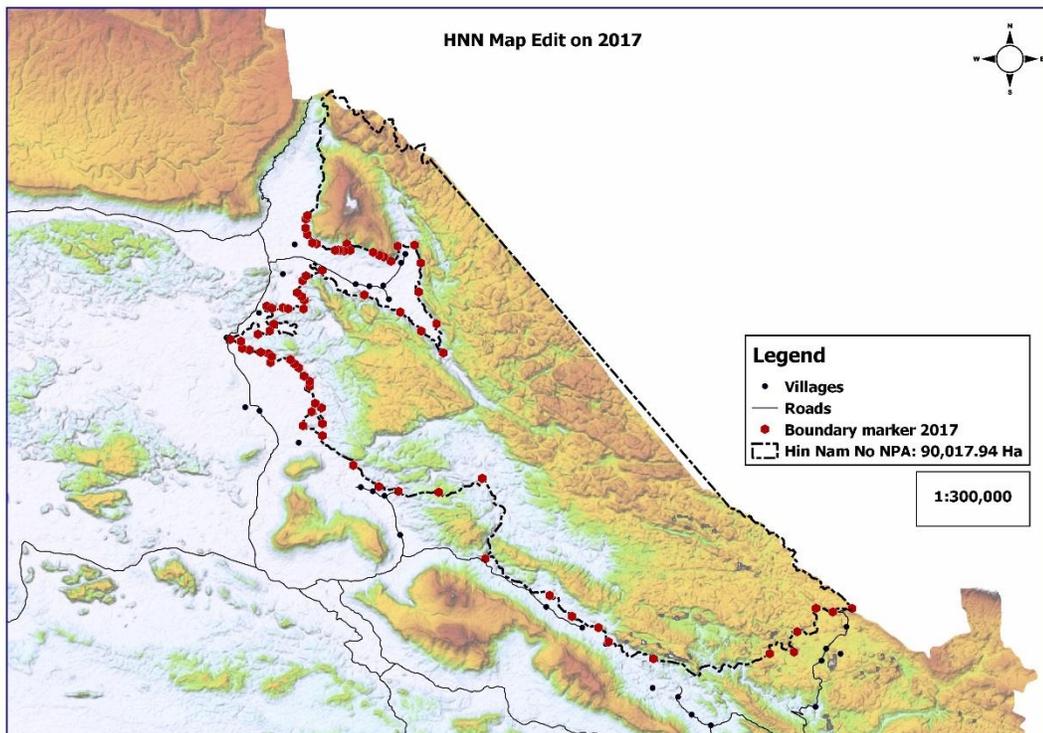
Map 2: State of the NPA boundary and zonation after the village tour of IP Consult (2014/2015)



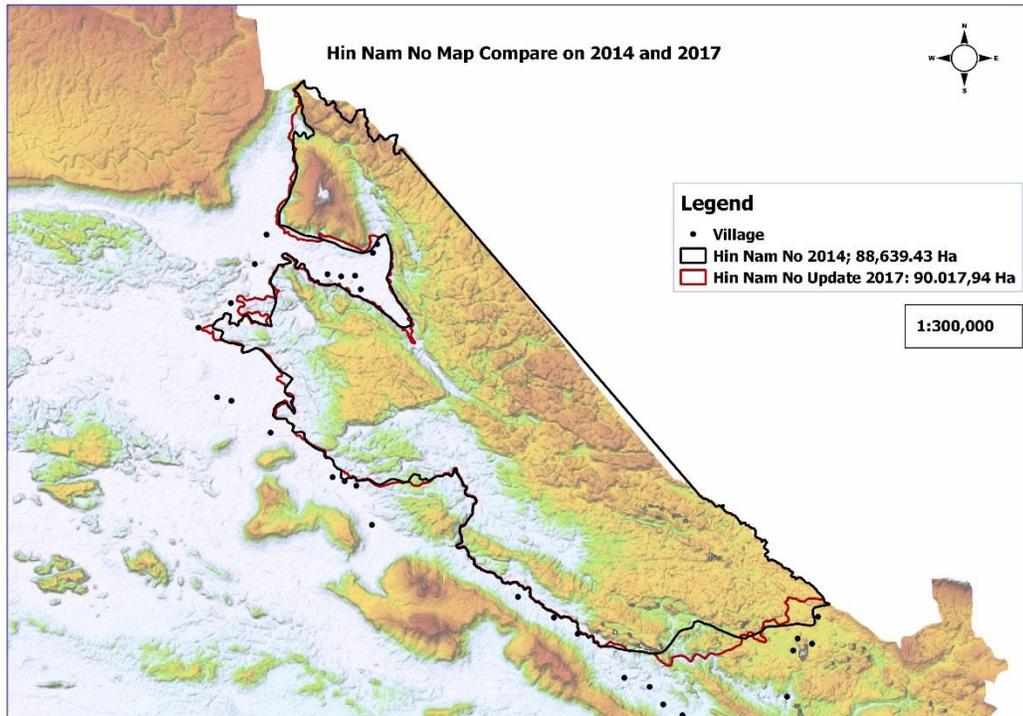
Map 3: State of the NPA boundary and zonation re-adjustments and fine-tuning (as of August 2018)



Map 4: Boundary of the HNN NPA as of 2014



Map 5: Boundary of the HNN NPA of 2017, as proposed by DONRE Boualapha based on desk analysis.



Map 6: Comparison of the 2014 and 2017 HNN NPA boundary

## 4.2 Continuation of the five steps concept

After the first (provisional) boarder delineation and zonation done together with village authorities and villagers during village meetings in 2014 to 2015, further steps were initiated and are ongoing in selected villages. Based on further village discussions and ground surveys the up to date results are heterogeneous, as can be seen at Table 2:

Village name	Step 1	Step 2	Step 3	Step 4	Step 5
Thongxam	Completed 2014	Completed in 2016	Mostly completed in 2017. Conservation agreement not officially endorsed, yet.	Compliance mechanism implemented. Compliance monitoring ongoing. Major set-back due to Doksuri. Cooperation with and supervision by VCMC still unclear.	Pending.
Phanob	Completed in 2014	Completed in 2017	Mostly completed in 2017. Conservation agreement not officially endorsed yet.	Compliance mechanism implemented. Compliance monitoring ongoing. Cooperation with and supervision by VCMC still unclear.	Pending
Kuan Kha Nyom	Completed in 2014	Conducted in 2017. Only partially applicable. Only 1 comparatively small CUZ with severe damage by Doksouri typhoon.	Partially completed in 2017. No village signboard yet. Conservation agreement not accepted by villagers. Villagers want conservation contract with provision of benefits.	Not yet.	Pending
Ka-I	Completed in 2014	Conducted in 2018. No final decision about boundary yet. No consent on agreement, yet.	Field inspection and demarcation conducted in 2018. Demarcation in the field based on the threatening situation of continuing agricultural land expansion.	Not yet.	Pending. Will have special importance due to severe land degradation.
Nongping/Tasaard	Completed in 2014	Partially conducted in 2018. Possible conservation efforts could be identified.	Demarcation conducted in 2018. Detected encroachment and forest fires interfering with conservation. No agreement yet.	Not yet.	Pending. Encroachment and forest fires need special consideration.

Table 2: Up to date achievements regarding the five steps concept, in 5 selected guardian villages of HNN NPA (July 2018).

### 4.3 Resource management & conservation efforts (Step 3)

Resource management is a vast term including various forms of management. Management itself can be active, e.g. harvesting certain goods, or passive, like not harvesting any/ a certain good and thus contributing to conservation or the regeneration of a resource (if this resource is able to recover in a natural way) or simply allowing for natural succession. There are basically two aspects for the management of (natural) resources that play a role at the moment: One aspect is the technical part including knowledge about e.g. ecological and physiological parameters, sustainable harvesting regimes, necessary human interventions, etc. The other aspect is the social part of resource management. This aspect can be understood as the interaction between humans, villages, families, outsiders, etc. in order to agree upon certain rules or to follow a certain scheme or simply the general acceptance of the (proposed) management and its implications (who is doing what and when and where and based on what rule). And it includes the skills and capabilities of the resource managers and resource users. Additionally, there has to be mentioned a third aspect, which is the economic part of NRM. Given, that in a first instance villagers and responsible organisms (co-management committees, involved GoL authorities, and outsiders) have to get used to a changing regime with under the co-management approach, the economic aspect is not considered, yet. Until now, the externally provided inputs would outpace the possible benefits by far.

For better understanding the example of a forest management plan (from temperate zones) is roughly outlined here: The ecological parameters are known and understood, the legal aspects are clear, responsibilities are transparent, necessary interventions are described, the amount of timber that can be harvested in a sustainable way can be calculated (because the ecological and physiological parameters are known, e.g. growth rates, reproduction rates, etc.) and the timeframe is set, e.g. management plan for the next 10 years, as well as the benefits and risks are clearly stated and mainly based on calculations.

In the context of Hin Nam No NPA it has to be understood, that the scientific base for ecological and physiological parameters of individual goods, the differences between and the peculiarities of the eco-systems and forest types of HNN, and the technically appropriate and sustainable methods for active management (e.g. harvesting techniques) of mostly all present resources (especially NTFPs; a list with all NTFPs that were mentioned during village meeting can be found at Annex 8.2) are lacking. From the technical side, this makes it impossible to define or to elaborate a management plan which could be comparable to the standard in e.g. temperate forests. On the other hand, the resource users of HNN are in transition, from a liberal way of making use of unlimited abundance towards realizing the increasing scarcity of certain resources. Thus becoming users of limited and rare goods. Within the context of the co-management approach the local resource users are supposed to become the resource managers, making sure that resource use patterns are developed and applied in a way to maintain healthy stocks or resources, yet allowing the users to fulfill their needs.

Until July 2018 the following approaches and/ or opportunities for conservation have been identified:

- **Thongxam village (2016):** A technical resource monitoring approach consisting of permanent monitoring plots for Lao lady palm inside one of the village's CUZ. It has been agreed (for the drafted conservation agreement please see the annex) that this CUZ will be closed for the harvesting of NTFPs during 3 subsequent years, with the idea of natural

regeneration of the depleted stocks of Lao lady palm in that area. The regular monitoring should demonstrate the effect of recovery (not harvesting) on the Lao lady palm stocks, but it also can give hints towards the compliance of villagers to their own regulation, namely letting rest the area and not harvesting Lao lady palm for three consecutive years. This is a rather technical approach allowing for better resource understanding and it would be the base for a conservation contract.

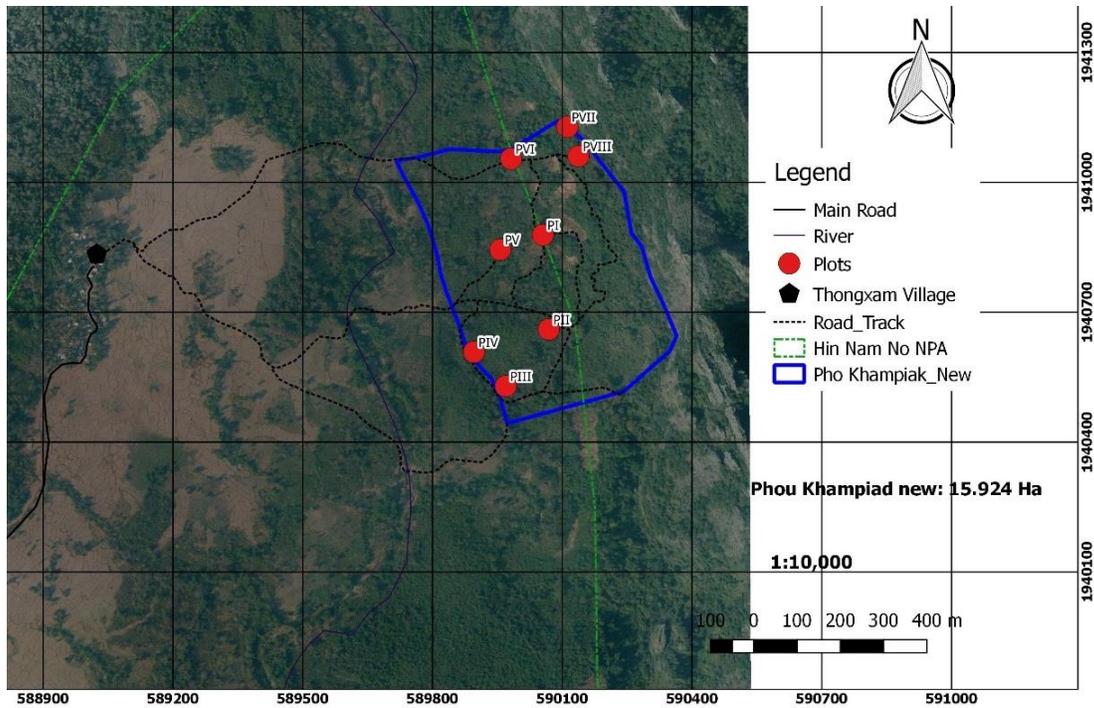
- **Phanob village (2017):** Allowing for natural succession with regular field inspections of one CUZ sub-zone which is a wetland. This wetland was a hunting and gathering ground for the villagers. The way of getting wildlife out of this wetland and to make use of the resource was burning the wetland during dry season. This destructive method was negotiated to be abandoned allowing the wetland ecosystem to recover for 3 years. Inspections towards the end of the dry season and end of wet season easily allow to judge if the wetland was burned or not. Compliance of the village regulation is easy to assess. The necessary base for a future conservation contract is laid on the conservation side.
- **Kuan Kha Nyom village (2017):** Rehabilitation of a degraded CUZ and extension of TPZ. Kuan Kha Nyom village only has one CUZ, approximately 30 minutes downstream of Xebangfai River from the village. The CUZ can be accessed directly from the river on one side and is surrounded by karst on the other sides. The only trail to enter the TPZ of Kuan Kha Nyom leads through the CUZ. In September 2017 Doksuri considerably damaged the vegetation/ tree cover by wind throws and breaks. Villagers use this remote place mainly for bamboo shoot collection and probably hunting. Attractiveness is limited due to its distance from the village. Villagers are willing to close this area and convert it into a TPZ, but ask for support of livelihood development in general. This case can be seen as an offer or a potential entry point for conservation contracting.
- **Ka-I village (2018):** Landscape rehabilitation and CUZ restoration. In the village of Ka-I the CUZ starts at the boarder of the NPA. For better identification it has been agreed in March 2015 to shift the boarder of the NPA to the east until a ridge of karst, thus allowing for a clear, visible and understandable boarder. The CUZ has been invaded and encroached already before 2015 and shifting the boundary also would erase that problem. But field inspection in March 2018 showed that there are still a few intact patches of forest inside the CUZ and that the CUZ is adjacent to old growth forest. Giving up the boarder would also put the old growth forest under more pressure, as it can be assumed that the extension of agricultural land will continue. The landscape around Ka-I village is heavily degraded through slash and burn agriculture and the remaining and thus isolated patches of forests are additionally suffering from the effects of Doksuri typhoon (September 2016). Ka-I is an excellent example showing the effects of unsustainable agricultural practices and growing population. The restoration of the CUZ and maintaining the original boundary would be an ideal measure for a conservation contract. Former catchments for the village's water supply (outside the NPA) are severely degraded and would require additional measure in order to restore and improve the village's water supply.
- **Nongping village (2018):** Extension of the NPA and restoration of the tourism zone. At Nongping there is the potential, and probably there are ecosystemic reasons to extend the NPA in order to include an adjacent karst area with difficult access. Additionally, zone allocated for tourism development would require intervention. That zone is already encroached and new paddy fields are under establishment. If this cannot be reversed or brought under control, the purpose of that area might become obsolete as e.g. trekking options and close to nature experiences for tourists would be less attractive.

#### **4.4 Compliance monitoring (Step 4)**

Basic approaches of improved resource management have been negotiated in Thongxam village (rotational system and period of resource recovery in combination with permanent monitoring plots) and in Phanob village (closure of one sub-CUZ “Nong Luang” and stop of wetland burning). These negotiations happened during village meetings and with the consent of the present village authorities and other villagers. The agreements were published on permanent village signboards. At both villages the implementation of the agreements can be monitored in the field. At Thongxam village permanent monitoring plots show the development of the lady palm population after each inventory of lady palms. And at Phanob village field inspection of the wetland will give proof of the land-use (wetland burned or not burned). Both options can be considered as compliance monitoring of the rules for improved resource management. Compliance monitoring has been carried out in Thongxam (permanent monitoring plots) and Phanob (inspection of Nong Luang wetland), so far. Both villages are still dependent on external support for carrying out the monitoring activities. A systematic monitoring routine has not been fully implemented, yet.

##### **4.4.1 Thongxam village**

The villagers of Thongxam identified the Lao lady palm as a scarce but important resource for household consumption. It was agreed upon that one of the CUZ subzones called Phu Khampiad will be closed for NTFP harvesting from 2016 to 2019, thus allowing NTFPs to recover. 8 permanent monitoring plots for Lao lady palm inventory have been established at Phu Khampiad sub-CUZ and adjacent village land in December 2016 (Map 7). The first inventory was conducted during the same time and with the help of villagers a rather simple criteria has been established. This is the division between lady palms that are tall enough to harvest and to eat (edible shoots) and lady palms that are still too small to harvest and thus are not yet suitable for household consumption (non-edible). The hypothesis behind this monitoring approach for compliance is that lady palm populations without human disturbance will a) increase in number and b) show an increasing amount of edible shoots. Until July 2018 a total of 3 inventories have been conducted. The last inventory in February 2018 showed that 3 out of the 8 monitoring plots were destroyed by the effects of Doksouri typhoon in September 2017.



Map 7: Blue polygon showing the part of the sub-CUZ "Phou Khampiad" where the permanent monitoring plots are located.

The method of Lao lady palm inventory comprises of measuring the leaf-free part of the stem from the ground to the first leaf. Palms with a leaf-free stem of less than 8 cm are considered non-edible. All palms with a leaf-free stem of 8 cm or more are considered as edible. The edible palms are divided into 7 height classes. Non-edible palms and palms of each height class are tally counted. The monitoring plots are 20m by 20m of size. The inventory of each monitoring plot is a full recording.

The development of the total numbers of Lao lady palms as a sum of the five monitoring plots is show in the following Figure 1:

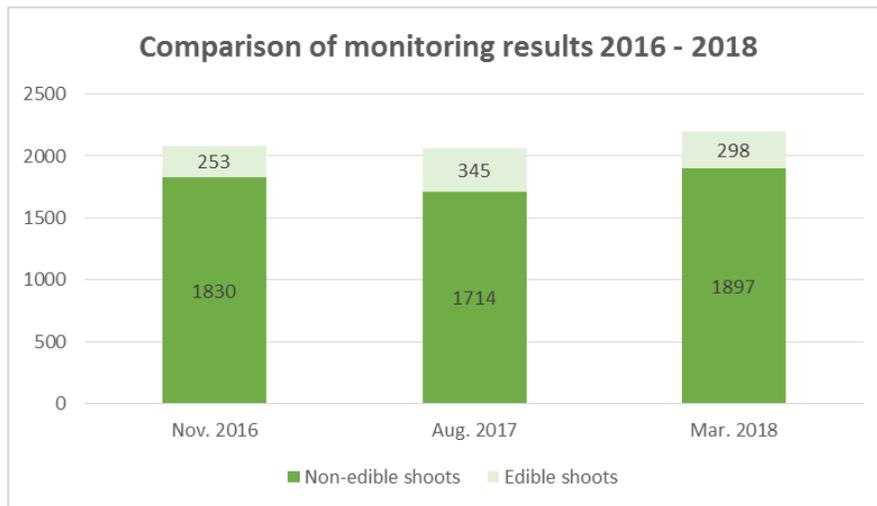


Figure 1: Comparison of the monitoring results of 2016, 2017 and 2018.

The total number of Lao lady palms slightly decreased from November 2016 to August 2017 (2083 palms in November 2016 versus 2059 palms in August 2017), but not significantly. Assuming that the unknown growth rate of lady palms at Thongxam allows for reaching an upper height class between two inventories, the increase of edible palms and the decrease of non-edible palms could be explained. But noticeable regeneration or growth of new palm shoots would not have happened, then. Given that between November 2016 and August 2017 it was mainly dry season the lack of regeneration (increasing number of non-edible palms) seems reasonable, supposed that lady palms build new shoots only during or shortly after the rainy season with soil moisture content and humidity being high. The changes between August 2017 and March 2018 indicate a general increase of the total lady palm population, due to the appearance of more non-edible palms. This fits well with the assumption that new shoots grow under conditions of higher soil moisture and humidity. But on the other hand the total number of edible palms decreased, meaning that edible lady palms disappeared from the monitoring plots.

A more detailed look into the development of each height class of edible lady palms is allowed for by the following Figure 2:

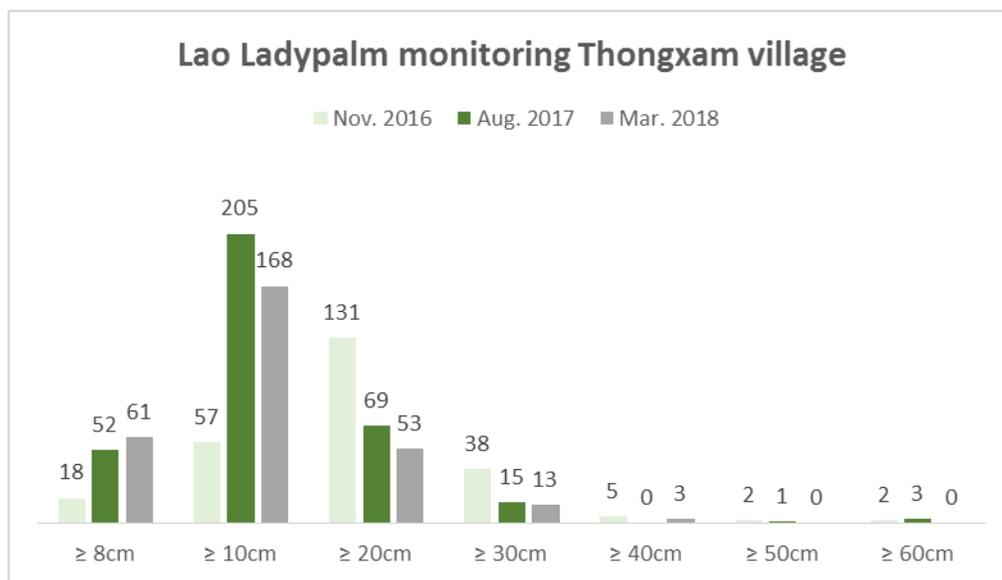


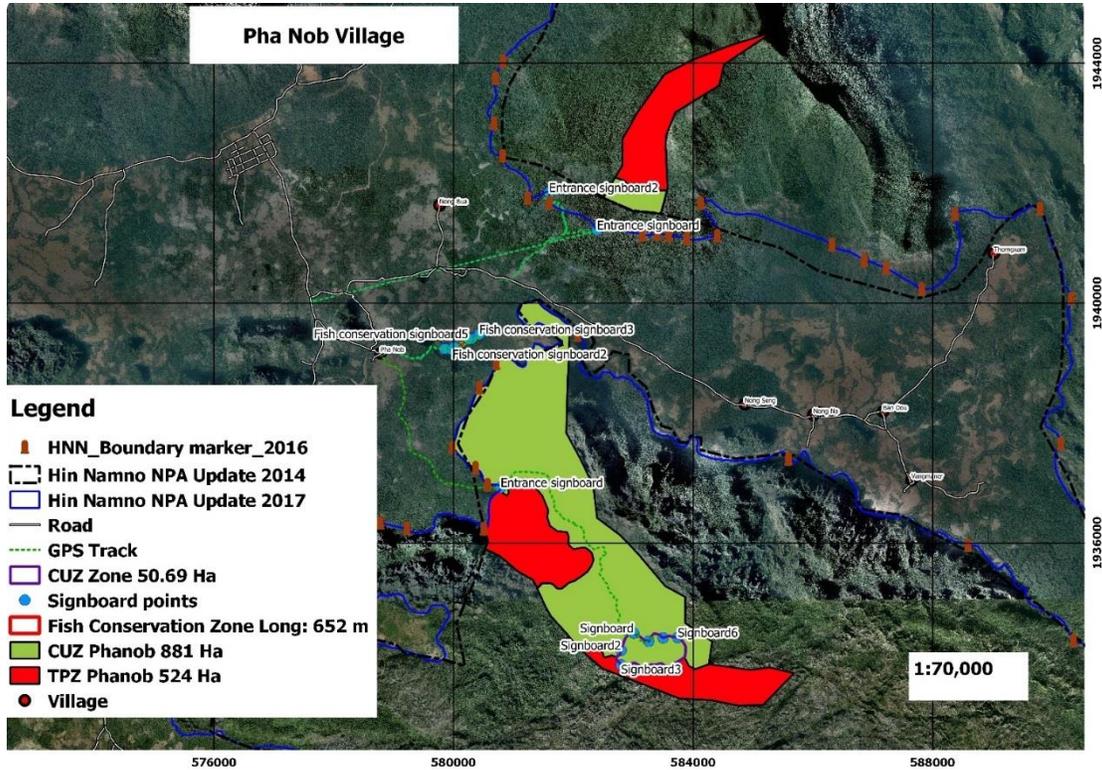
Figure 2: Comparison of the total number of lady palms in each of the edible height-classes.

The criteria for consumption was defined to be 8 cm of leaf-free stem. It can be seen that the number of palms in the first height class from 8 – 10 cm is increasing throughout, but the numbers of the second class dropped in 2018 after an initial increase in 2017. All other height classes mostly show a negative trend, from Nov 2016 to Mar 2018. As this trend starts to occur in the height class of palms that have ≥10 cm and < 20 cm of leaf-free stems, it indicate a selective disappearance of individual palms with a certain characteristic. That means that the palms defined as edible are specifically targeted and disappear, although the 8cm criteria seems to be more likely 10 cm. The exact reason for the disappearance of palms remains unknown. But full compliance is not given - either by villagers of Thongxam themselves or by outsiders. The latter thus not being detected by the rangers or other villagers. This would mean that the villagers are not able to effectively control their own area of management responsibility.

For Thongxam village one possible option for a conservation contract is given, now. But following repetitions of the monitoring would need to show a positive trend, again.

#### 4.4.2 Phanob village

At Phanob village the fine-tuning of the CUZs showed that villagers were willing to try to make efforts for conservation. They proposed to close a part of their CUZ called “Nongluang” on the southern tip of their area of management responsibility as shown on the following Map 8.



Map 8: Areas of management responsibility of Phanob village. TPZs in red color, CUZs in green color. The polygon outlined in purple color in the South, north of the TPZ is the sub-CUZ called "Nong Luang".

Field inspection in May 2017 showed that this area is a wet-land and that villagers burn it during dry season in order to hunt reptiles and get better access to the pools for fishing (Photo 1).



*Photo 1: Nongluang wet-land with burnt vegetation as seen during the first ground survey in May 2017.*

Demarcation of the area around the wetland including adjacent forest and shrub-land was done during the same visit. The village signboard that was installed also states the agreed conservation measures, even if the official document between VCMC and DCMC is not signed, yet. The second inspection of the wetland in November 2017 showed no traces of recent fires.

In the case of Phanob village a rather simple compliance monitoring approach could be developed together with the villagers. Ideally, an inspection shortly before the rainy season (around May) and another inspection after the rainy season (November or December) would allow for verification of compliance. Given the distance of this part of the CUZ to the village minor activities of NTFP collection or hunting will not be able to be controlled throughout the year. But the vegetation would at least allow for a clear indication if the use of fire is continuing or not. It is even imaginable, that the future monitoring of this area could be included into the remote sensing, as burnt vegetation/ fires can be detected by satellite.

For Phanob the possible entry point for a conservation contract is given at this stage.

## **5 Lessons learned**

- Given the difficult terrain and the length of the border and sometimes unclear conditions in the field, it would take much more time to completely demarcate the boundary. Ground surveys and the practical part of boundary demarcation are major operations. It implies long distance hikes transporting all the equipment. To demarcate the entry trails with signboards seems suitable and sufficient for the moment. One trial building a concrete signpost directly in the field did not deliver the desired results. It would take far too long, would require to revisit every boundary marker at least one more time in order to take off the framework and to paint and number the marker with visible colors. This will not be suitable to do all along the HNN border, under present conditions. The transport of pre-fabricated boundary markers to the correct place along the boundary would not be less time or budget consuming, either. Wherever the boundary is not a physical obstacle, e.g. cliff, or clear topographic feature, e.g. river, the exact definition and demarcation in the field will remain a challenge.

- The participatory approach of discussing zonation, delineation and resource management takes time and is resource consuming. For each village it would require frequent and continuous visits throughout the year. There are 18 villages to work with for the delineation. And 13 villages out of the 18 villages have CUZs that should become managed for conservation. A one-time meeting in order to inquire about possible conservation efforts and to come up with immediate decisions will not be possible and is not realistic. The meetings with villagers in the HNN guardian villages and the results that can be achieved are often a random product, in the sense of participating villagers at the meeting and the outputs of the meeting. In case the village head cannot join the meeting, which happened e.g. earlier in Thongxam, no decision will be taken. In case the rangers are not present the answers about boundaries or trails can be very contradictory. Village administrative and decision making structures may officially exist, but still lack of routine. It proved that the head of village and the rangers are the most reliable and available persons for holding meetings or having discussions. Probably, this is the kind of authority that at the moment is recognized.
- Publication of zonation and boundary demarcation in village level by installing big village signboard could enhance understanding of the NPA boundary and village CUZ for local people which were done in 2 guardian villages: Thongxam and Phanob. There should be village signboards in all guardian villages in order to make sure that each village is well demarcated and known by villagers. Additionally, village signboard could also be reference for protection village management responsibility and encroachers punishment.
- The Village Co-Management Committees (VCMC) partially exist at the moment (ongoing election process) but their work or their role within the co-management system is not institutionalized, yet. It would require more persistence to approach these committees directly and sometimes exclusively for a meeting. But it has to be taken into account that due to project reality and the cooperation between partners, meetings in the villages are held, even if the VCMC members are not present. This is also due to the fact that traveling to a certain village, not holding the meeting and coming back without any result would hardly be justifiable. Activity and budget planning and the implementation of operational plans do not allow for a lot of flexibility in that sense. The local way of implementing activities is also not making it easier (e.g. every activity not taking place in Boualapha village will take several days by default. A simple one day trip is almost impossible to organize or to have as this would not allow the provision of sufficient benefits to the staff), nor do the complications for announcing a meeting in advance, e.g. a simple phone call is not always possible and if so, it cannot replace an official letter and it happens that a meeting is only announced once the whole team is there, already. Of course, this leaves to chance even more the participants of the meeting and thus the outputs.
- With one HNN NPA unit consisting of 2 persons it is not realistic to adequately attend 18 villages for all matters concerning area management. The alarming indications of encroachment, forest fires, effects of Doksouri, etc. would require some kind of immediate action. But it seems that besides the activities supported by the HNN GIZ project there are no further operations regarding area management. Response mechanisms for e.g. forest fires do not exist, nor is technical equipment available, nor budget allocated for such purposes.
- At least in the case of Ka-I and Nongping/ Tasaard it could be observed that the level of village self-organization and the ability of community action is considerably low. Encroachers are known but cannot be stopped (Nongping and Ka-I), a community

decision about a certain boundary cannot be taken (Ka-I), accompanying villagers to the field cannot be agreed upon (Ka-I), the existence of a tourism development zone seems meaningless in practice (Nongping), paddy fields reaching until the river bank are known to cause erosion followed by sedimentation and destruction of fish habitat but there is no community reaction (Nong Ping), just to mention a few examples.

- Both, the lack of serious enforcement mechanisms and tangible benefits is contributing to a low acceptance or simply to a voluntary acceptance of rules. For an individual it seems to be just a personal decision if integer behavior is practiced or not. For example, if there are no serious consequences from encroaching the NPA, nor tangible benefits for not doing so, it lets to chance the efforts of delineation, demarcation and resource management.
- Credible resource management, like the management of NTFPs, has to be considered just a vision for the future. Too little is known about the different resources/ NTFPs and compliance mechanisms would need to be intrinsic, because permanent external support cannot be provided (timewise, budgetwise). But internal compliance mechanisms are not functional, yet. It can also be that in general the availability of natural resources is still good enough and thus keeps motivation for changing practices on a low level. Cultural aspects may also play a certain role, as resignation also can be observed in other aspects, e.g. education and health care.
  - The case of Thongxam serves well for capacity building and to demonstrate the set-up and function of permanent monitoring plots as one means of gathering data for planned and evidence based management of a certain resource. That this sort of data based resource monitoring and management will ever work automatically, or because of intrinsic interest is not very likely to happen and without external support it could not happen at all.
  - In the case of Phanob village a very simple monitoring approach has been designed, which in the future might be possible to follow from office desk by remote sensing. But it has to be considered that this kind of monitoring is just superficial and the management is simply conservation. Other possible options, like restricting the amount of a certain NTFP that can be harvested by an individual, or agreements that only allow for household consumption and prohibit marketing of NTFPs, show a positive attitude and a certain level of understanding what management of natural resources should mean. But again, due to the lack of data, enforcement mechanisms of rules and lack of tangible benefits serious implementation is hindered.

## **6. Gaps and missing steps**

### **6.1 Delineation, demarcation and zonation**

- The 13 remaining villages have to be visited as soon as possible in order to update the information about boundary delineation and zonation, and subsequently demarcate the boundary suitably. Ka-I and Nongping have to be visited again and a final decision has to be taken. Ideally, this should go together with discussions about the topic of encroachment.
- Due to the consistent adjustment and revision of the outer boundary, milestones are not always located at the right place. If by authorities it is regarded as necessary and if project budget allows for, these milestones need to be allocated correctly.

- Considering the UNESCO nomination process the NPA needs a definite outer boundary which has to be considered as permanent. For this reason, after finishing the second tour to all villages a document needs to be prepared, clearly stating/ showing the outer boundary of HNN NPA. Against that boundary, integrity of the park will be checked. In order to formalize the permanent outline of the NPA this document has to be submitted to Boualapha District authorities. District authorities need to adopt the document and submit it as their proposal to the authorities of Khammouane Province. And following the same procedure, the province has to submit the document to national level (Ministry level). The final and thus the legal decision about the boundary and shape and extension of the HNN NPA has to be taken by the National Assembly. This said, it should be kept in mind that this procedure will require some time. And it demonstrates, that legally there is only one boundary which is the one decided when the decree on the national protected area was published.
- Furthermore, HNN NPA needs a buffer zone. The necessary characteristics of such a buffer zone and the minimum requirements have to be inquired and the buffer zone has to be defined.
- At least in theory, fulfilling international requirements or standards (e.g. UNESCO) will lead to the point where resignation and management for conflict prevention will not work anymore. It is already hard to imagine that moonscapes like around Ka-I or permanent boundary violations like in Nong Ma or now in Nongping will be accepted by any international commission. There has to be proper law enforcement, even if it would imply damaging the superficial harmony between government authorities and local villages. The Co-Management structures and mechanisms are still not strong enough to solve serious problems like encroachment and thus have to be supported by the long arm of the law. Otherwise, serious ecosystem damage and breach of integrity will be accepted and will continue.
- Research should support the zonation system, for example by indicating sensitive ecosystems or high value habitats, etc. Having a zonation that is purely based on the needs of the villagers and the accessibility of certain areas or customary use, might coincide to a certain extend with ecological values, but surely it is not robust in a scientific senses. HNN NPA aim to protect unique universal values.
- At least 3 HNN NPA units are working with spacial data. These 3 units should have the same data available in an ordered and structured way. The future data and knowledge management system should make that possible. Trails, boundaries, zonation system, etc. should all be the same up to date and available to everybody working with special data of HNN NPA.

## **6.2 Resource management and compliance monitoring**

- It might be necessary to adjust the term “sustainability” for the HNN context. Technically spoken, sustainability is a term that can be calculated based on credible data and/ or known parameters. This is not the case for HNN, yet. “Sustainability” might be more understood as “No obvious damages” and thus be more part of what could be called integrity.
- For the provision of incentives and as part of any conservation contracts it should be defined what amount of budget will be available. To whom it will be allocated under which condition is also necessary to define but this will be part of a conservation contract design, already.

- Serious law enforcement is still deficient. Without the presence of structures and mechanisms to effectively enforce agreements, rules, regulations and laws any attempt of improving the management of any of the natural resources will be prone to violation and individual interpretation of what is right or wrong. As it is not likely that effective law enforcement will be practiced in the near future awareness raising, community engagement and the provision of tangible benefits should be emphasized. Otherwise the deterioration or depletion of natural resources will continue or even increase.
- The VCMCs need to be institutionalized. In order to make that part of the co-management system work, it should be very clear to everybody who are the VCMC members at each of the HNN NPA target villages.
- For the HNN area management unit it is still not clear to whom to report what in which form. Especially, the formal cooperation and exchange with the DCMC is not settled, yet. Up to date the responsible member of the DCMC that should be approached for matters related to Area Management (e.g. drafting conservation agreements, or supporting the design of conservation contracts, etc.) is not assigned, yet. Thus, using the traditional way of informing their superior or simply waiting for instructions from their superior does not support any routine of co-management.
- The present situation of working equipment bears any standard. Not even the minimum of tools, like computer, printer, GPS or camera are available to the unit. It is very difficult to build professional capacities other than field work.

### **6.3 Village overview**

The following table gives an overview of the HNN NPA guardian villages and the present state of works:

CLUSTER/VILLAGE	CUZ	TPZ	Fine-tuning	CUZ regulations	Comments
	Controlled use zone (2015): hectares	Land in total protection zone (2015): hectares	Process of step 2 to step 5 initiated	controlled use zone regulations defined	
<b>Langkang Cluster</b>					
Phanob	1213	184	x	x	Under process
Vangkhone	21	404			Step 2 to step 5 to be initiated asap
<b>Ban Dou Cluster</b>					
Vangmaner	429	335			Step 2 to step 5 to be initiated asap
Nongseng	216	607			Step 2 to step 5 to be initiated asap
Nongbua	343	3278			Step 2 to step 5 to be initiated asap
Ban Dou	3638	16786			Step 2 to step 5 to be initiated asap
Nongno	0	1690			Results from step 1 still valid?
Thongxam	665	7844	x	x	Under process
<b>Kha Nyou Cluster</b>					
Seangphan	0	0			Not applicable
Kha You	597	742			Step 2 to step 5 to be initiated asap
Sa-ang	0	2871			Results from step 1 still valid?
Nya-wai	0	3531			Results from step 1 still valid?
<b>Nong Ping Cluster</b>					
Nong Ping	722	2195	x		Under process
Nya-wet	0	1966			Results from step 1 still valid?
Kuan Khayom	11	2375	x		Under process
<b>Nongma Cluster</b>					
Thaplao	236	23029			Step 2 to step 5 to be initiated asap
Ka-l	0	717	x		Under process
Laboi	1314	1798			Step 2 to step 5 to be initiated asap
Nongma	2466	5730			Step 2 to step 5 to be initiated asap

Table 3: Overview of HNN NPA villages and need for action.

## 7. Bibliography

- Berkmüller K., Hallam C., 2014. Developing a Roadmap for the Revision of the Co-Management Plan for the Hin Nam No NPA over 2016-2020. Consultancy report (unpublished) on behalf of GIZ.
- Berkmüller K, Dobbelssteijn R., 2013. Zoning and Biodiversity Monitoring at Hin Nam No National Protected Area. Published by the Deutsche Gesellschaft für International Zusammenarbeit (GIZ) GmbH.
- Dobbelssteijn R., Foppes J., 2014. Participatory Zoning for Co-Management of the Hin Nam No National Protected Area, Khammouane. Interim-report. Internal document of GIZ.
- Koning de M., Dobbelssteijn R., 2015 (?). Participatory zonation and Boundary Delineation in Hin Nam No. GIZ Laos internal newsletter article.
- Ministry of Agriculture and Forestry, 2017. Review, Mapping, and Data Collection on Land Use and Forests Inside and Outside the Three Forest Categories (3FC) to Inform Re-Delineation of the 3FCs and Enhanced Forest Management. Guideline published by the Government of Laos, (No. 0024/MAF), Vientiane.
- Siksidao P., 2013. Report on zoning workshop. Internal document, GIZ Laos.

- Wiedenmann T., 2014. Natural resource monitoring according to villager criteria. Article for the internal GIZ Laos newsletter, December 2014.
- Wiedenmann T., 2015. Hin Nam No – Controlled Use Zones. Internal document for the discussion within the team of advisors of GIZ Laos and IP Consult.
- District administration of Boualapha, 2016. Sustainable use of NTFPs in the controlled use zone of Thongxam village. Drafted regulation for approval and signature by the head of village of Thongxam village. Provided by district authority (District Office of Agriculture and Forestry, DAFO).
- Wiedenmann T., Chitpaseuth V., 2016. What villagers need to improve the management of natural resources. Article for the internal Newsletter of GIZ Laos, March 2016.
- Chitpaseuth V., 2016. Supporting the sustainable use of natural resources in Control Use Zones (CUZ). Drafted activity progress report. Internal document of IP Consult on behalf of GIZ Laos.
- Wiedenmann T., Vilavongsa V., 2017. Installation of Lao lady palm monitoring plots. Field report. Internal document of GIZ Laos.
- Wiedenmann T., 2017. Installation of boundary milestones in Thongxam village. Field report. Internal document of GIZ Laos.
- Wiedenmann T., Vilavongsa V., 2017. Meeting on zoning, border re-delineation and improvement of NTFP use inside CUZs in Phanob village. Field report. Internal document of GIZ Laos.
- Wiedenmann T., 2017. Border delineation and natural resource management inside Controlled Used Zones at Ban Phanob. Field report. Internal document of GIZ Laos.
- District administration of Boualapha, 2017. Sustainable use of NTFPs in the controlled use zone of Phanob village. Drafted regulation for approval and signature by the head of village of Phanob village. Provided by district authority (District Office of Agriculture and Forestry, DAFO).
- Ministry of Natural Resources and Environment, Department of Forest Resource Management, 2015. Hin Nam No National Protected Area Co-management plan (2016 – 2020).
- Shadie P., 2017. Hin Nam No National Protected Area – UNESCO World Heritage Nomination Process for Hin Nam No National Protected Area, Lao PDR. Consultancy report. Internal document of GIZ Laos.
- Phiapalath P., Southichack S., 2009. Nin Namno National Protected Area Co-Management Plan. Ministry of Agriculture and Forestry, Department of Forestry, Vientiane, Lao PDR.
- Fischer A., 2011. Hin Nam No National Protected Area. Brochure published by Sustainable Climate-friendly Management of the Environment and Natural Resources (SusCLIME) project. GIZ Laos.

## 8. Annex

### 8.1 Compilation of results of the village tour 2014/ 2015

	Village name	Total area of management responsibility (ha)	TPZ (ha)	% of the total	CUZ (ha)	% of the total
<b>Dou village cluster</b>	Dou	20,424	16,786	82.2	3,638	17.8
	Tongxam	8,509	7,844	92.2	665	7.8
	Vangmaner	764	335	43.8	429	56.2
	Nong No	1,690	1,690	100.0	-	0.0
	Nong Seng	823	607	73.8	216	26.2
	Nong Bua	3,621	3,278	90.5	343	9.5
	<b>TOTAL</b>	<b>35,831</b>	<b>30,540</b>	<b>85.2</b>	<b>5,291</b>	<b>14.8</b>
<b>Nong Ping village cluster</b>	Nong Ping	2,917	2,195	75.2	722	24.8
	Kuan Kha Nyom	2,386	2,375	99.5	11	0.5
	Nya Wet	1,966	1,966	100.0	-	0.0
	<b>TOTAL</b>	<b>7,269</b>	<b>6,536</b>	<b>89.9</b>	<b>733</b>	<b>10.1</b>
<b>Nong Ma village cluster</b>	Nong Ma	8,196	5,730	69.9	2,466	30.1
	La Boi	3,112	1,798	57.8	1,314	42.2
	Ka-l	717	717	100.0	-	0.0
	Tap Lao	23,265	23,029	99.0	236	1.0
	<b>TOTAL</b>	<b>35,290</b>	<b>31,274</b>	<b>88.6</b>	<b>4,016</b>	<b>11.4</b>
<b>Kha Nyou village cluster</b>	Pha Nob	1,397	184	13.2	1,213	86.8
	Vang Khone	425	404	95.1	21	4.9
	Kha Nyou	1,339	742	55.4	597	44.6
	Sa Ang	2,871	2,871	100.0	-	0.0
	Nya Wai	3,531	3,531	100.0	-	0.0
	<b>TOTAL</b>	<b>9,563</b>	<b>7,732</b>	<b>80.9</b>	<b>1831</b>	<b>19.1</b>
<b>Overall</b>		<b>87,953</b>	<b>76,082</b>	<b>87%</b>	<b>11,871</b>	<b>13%</b>

Table 4: Compilation of the results for all HNN NPA guardian villages, as of May 2015. (Note: Meanwhile, the administrative structure of the village cluster changed)

## 8.2 Compiled list of NTFPs mentioned and named at village meetings

ລ.ດ	ຊື່ພາສາລາວ (Local Name)	ຊື່ພາສາອັງກິດ (English Name)
1	ເຫັດ	Mushroom
2	ສານ	Lao lady palm
3	ຍອດຄອນແຄນ	N/A
4	ບອນ	N/A
5	ຜັກກະດິງ	N/A
6	ຜັກກະເສດ	N/A
7	ຜັກກະໂດນ	N/A
8	ຜັກກະໂປະ	N/A
9	ຜັກກະໄລຍ	N/A
10	ຜັກກາດຮອງ	N/A
11	ຜັກກຸ່ມ	N/A
12	ຜັກຂະເມັກ	N/A
13	ຜັກຂົມ	N/A
14	ຜັກສະໄລ	N/A
15	ຜັກຕະໂງ	N/A
16	ຜັກຕົວ	N/A
17	ຜັກຕຳລຶງ	N/A
18	ຜັກບ່ວງ	N/A
19	ຜັກປີປາກັງ	N/A
20	ຜັກບົງ	N/A
21	ຜັກຫວານ	Melientha
22	ຜັກຫົມໜາມ	Spiny pigweed
23	ຜັກໜອກ	Tiger herb
24	ຜັກໝາກຫວ່າ	N/A
25	ຜັກອີສິມ	N/A
26	ຜັກອີເລິດ	N/A
27	ຜັກຸດ	Fiddlehead fern
28	ຜັກເຄືອເຮາະ	N/A
29	ຜັກເຫົ້າ	N/A
30	ຫວາຍ	Rattan
31	ຫວາຍທຸນ	N/A
32	ຫົ່ຂ່າ	Galangal
33	ຫົ່ຕາວ	Suger palm shoot (Mak tao)
34	ຫົ່ປີຕິນ	N/A
35	ຫົ່ປຸ່ນ	N/A
36	ຫົ່ເລົາ	N/A
37	ຫົ່ເຂມ	N/A
38	ຫົ່ໄມ້	Bamboo shoot
39	ໝາກກ້ວຍເຫັນ	Wild banana
40	ໝາກກຸ	N/A
41	ໝາກຄໍ	Taraw palm
42	ໝາກລິນໄມ້	Indian trumpet flower
43	ໝາກຫຼີ່	N/A
44	ໝາກອາໂລກ	N/A
45	ໝາກເຄືອ	N/A
46	ໝາກແງວ	N/A
47	ໝາກແຜນ	N/A
48	ໝາກໄຟ	Burmese grape

## 8.3 Conservation agreement draft of Thongxam village

<div style="text-align: center;">  <p><b>Lao People Democracy Republic</b> Peace Independence Democratic Unity Prosperity —000—</p> </div> <p>Bulapha District Thongxam Village</p> <p style="text-align: right;">No. ....../Village Chief Thongxam Village, Date...../.....</p> <p style="text-align: center;"><b>Regulation</b> <b>Sustainable Use of NTFP in Control Zone in Ban Thongxam</b></p> <ul style="list-style-type: none"> <li>- Pursuant to the provisions of Forestry law No. 06/MNA, dated 24 December 2007.</li> <li>- Pursuant to the provisions of aquatic and wildlife Law No. 07/MNA, dated 24 December 2007.</li> <li>- Pursuant to the regulation of By-Law HNN NPA No. 01/HoD.BLP, dated 7 May 2015.</li> <li>- Pursuant to the agreement of village authorities and villagers in Ban Thongxam about setting up the rule of sustainable use of NTFP in control zone in Ban Thongxam in 25 August 2016.</li> </ul> <p style="text-align: center;"><b>Village Chief of Ban Thongxam:</b> Section I: General Provisions</p> <p><b>Article 1: objectives</b> This regulation is formulated as additional documentation for implementing By-Law HNN NPA No. 01/HoD.BLP. In addition, based on an agreement of villagers and village authorities in Ban Thongxam to formulate the area and boundary for control use zone. Also formulate prohibitions and obligations about sustainable use of NTFP within that control use zone on the sideline of enhancing the role of organizations in village level in order to supervise and led the villagers implementing By-Law HNN NPA.</p> <p><b>Article 2: Location, scope and area of control use zone of Ban Thongxam</b> Control use zone of Ban Thongxam are situated in HNN NPA between latitude N: 17°31'47.913 - 17°36'10.59 and parallel E: 105°49'53.68 - 105°52'17.75 that covers</p> <p>3.3 Yod Sam and Yord Boon can be collected for consuming not over 5kg per person, but it is forbidden to collect for selling. If someone breaks the rule, he/she will be fined 200,000kip/time/person.</p> <p>3.4 Individual or entities is forbidden to do fishing along upon Nam Houk upstream during reproduce season that start from July to October each year. The prohibited zone for fishing is Vang Pak Tham fish conservation zone up to Huay La Mark and Huay Pha Xong upstream. If someone breaks the rule, he/she will be fined according to article 14 of By-Law HNN NPA No. 01/HoD.BLP</p> <p>3.5 Vang Pak Tham is addressed to be fish conservation zone permanently. If someone does fishing there, he/she will be fined according to article 14 of By-Law HNN NPA No. 01/HoD.BLP</p> <p>3.6 Individual or entities is forbidden to collect any NTFP in Phou Kham Pied area because this area have been agreed to be restoration area by stopping any NTFP collection for 3 years that begin from September 2016 to August 2019. If someone breaks the rule, he/she will be fined as following details:</p> <ul style="list-style-type: none"> <li>&gt; 1<sup>st</sup> time: Educate rule breaker and impound NTFP to divide to each households equally.</li> <li>&gt; 2<sup>nd</sup> time: Fine the rule breaker for 50,000kip/person/time and impound NTFP to divide to each household equally.</li> <li>&gt; 3<sup>rd</sup> time: conduct the article 14 of By-Law HNN NPA No. 01/HoD.BLP</li> </ul> <p>3.7 Every living thing and non-living thing inside the caves in control use zone is strictly prohibited collecting. If someone breaks the rule, he/she will be fined according to agreement of villagers on the sideline of the article 14 of By-Law HNN NPA No. 01/HoD.BLP</p> <p style="text-align: center;">Section III: <b>Responsibilities and Monitoring</b></p> <p><b>Article 4: Responsibilities of village chief</b> Village chief have to supervise and led villagers and all village organizations strictly implementing this regulation of sustainable use of NTFP and By-Law HNN NPA No. 01/HoD.BLP. Village chief is the central coordinator between village and other stakeholders in order to assess progress made and report to all parts in cluster and district level.</p>	<p>.....ha, the area start from Ban Thongxam go up to stream(name?) to Pha Hom, bottom of Khanna mountain (Phou Khanna) cross to Huay Tuak, cross Huay Ar Bao, cross to Huay Tha Ny, Huay Yuak, Huay Ateng, and Huay La Mark and then go down from Huay La Mark to Huay Pha Xong, down from Nam Houk to Phou Tali shortcut to Kuan Ka Jao, Kuan Ka Tok, Kuan Nam Thuam, Kuan Mark Ba, Kuan Pha Ya, cross Hin Ma mountain to Nam Houk, then cross rice field to the village.</p> <p>Control use zone in Ban Thongxam consists 8 sub-areas:</p> <ol style="list-style-type: none"> <li>1. Pha Hom-Phou Khan Na area .....ha</li> <li>2. Huay Ateng area .....ha</li> <li>3. Huay La Mark area .....ha</li> <li>4. Huai Pha Xong area .....ha</li> <li>5. Kuan Ka Jao - Kuan Tali area .....ha</li> <li>6. Kuan Ka Tok – Kuan Nam Thuam area .....ha</li> <li>7. Kuan Mark Ba – Kuan Pha Ya area .....ha</li> <li>8. Bottom of Kham Pied Mountain area .....ha</li> </ol> <p>Besides of these 8 sub-areas, the control use zone in Ban Thongxam also covers to other areas such as: rivers, trekking trail, construction area, hill, rice field, garden, top of mountains and etc .....ha roughly.(please look at Annex 1 in detail)</p> <p style="text-align: center;">Section II: <b>Prohibitions and Harvest of NTFP for sustainable us in control use zone</b></p> <p><b>Article 3: Prohibition and sanctions measures for overusing NTFP</b></p> <p>3.1 Individual or entities in the village or outside is forbidden to collect any type of orchids. If someone doesn't follow, he/she will be fined according to article 14 of by-law HNN NPA No. 01/HoD.BLP</p> <p>3.2 Kaen Chan (Dragon blood) that falling naturally within control use zone only is allowed to be collected. That means it is not allowed to cut, burn or other methods to make Kaen Chan dead for collection. If someone breaks the rule, he/she will be fined according to article 14 of By-Law HNN NPA No. 01/HoD.BLP</p> <p><b>Article 5: Responsibilities of Village Co-management Committee of HNN</b> VCMC have responsibilities for helping village chief and follow-up ranger's duties about monitoring NTFP use in control use zone that addressed in this letter and according to By-Law HNN NPA No. 01/HoD.BLP. Then, VCMC have to report the results to village chief regularly and report to DCMC quarterly.</p> <p><b>Article 4: Responsibilities of village ranger</b> Village ranger is responsible for patrolling to find the threats within HNN NPA. Monitoring NTFP use in control use zone is also a duty of ranger in order to ensure the sustainable use, implementing of By-Law HNN NPA No. 01/HoD.BLP and the rules of Ban Thongxam through agreement. In case, the rangers meet illegal activity about collecting NTFP, they have to report to village chief or village authorities and VCMC in order to prosecute who not follow the rule according to the article 1 in this letter.</p> <p><b>Article 5: Responsibilities of Villagers</b> Villagers in Ban Thongxam have to be responsible for strictly implement the By-Law HNN NPA No. 01/HoD.BLP and the regulation of sustainable use of NTFP. Villagers have obligation to be involved in following-up situation of NTFP use and report to village rangers or village authorities in case of they see illegal activities according to both of regulations (By-Law &amp; sustainable use of NTFP)</p> <p style="text-align: center;">Section IV: <b>Benefit and Benefit Sharing</b></p> <p><b>Article 6: Benefit and Benefit sharing</b> Village chief, village's organizations and VCMC together with other stakeholders consider for the benefit and benefit sharing that get from fine, management and protection budget, selling of confiscated NTFP, fees, services and contribution of individual and entities. To consider the benefit sharing is according to article 16: benefit sharing in By-Law HNN NPA No. 01/HoD.BLP in transparency and justice manner for each party.</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p style="text-align: center;"><b>Section V:</b> <b>Final Provisions</b></p> <p><b>ເມັດ 7: ຜົນກະທົບ</b> <b>Article 7: Effectiveness</b></p> <p>This regulations will become effective from the date adopt in with signature of head of Thongxam Village.</p> <p style="text-align: center; margin-top: 100px;">Head of Thongxam Village, Bualapha, Khammouan Province</p>	
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

### 8.4 Conservation agreement draft of Phanob

<div style="text-align: center;">  <p><b>Lao People's Democratic Republic</b> <b>Peace Independence Democracy Unity Prosperity</b></p> </div> <p style="text-align: center;">-----000-----</p> <p>Bualapha District Phanob Village</p> <p style="text-align: right;">No:...../Village Chief Phanob Village, date:.....</p> <p style="text-align: center;"><b>Regulation</b> <b>On Sustainable Non-Timber Forest Products Management-Use</b> <b>In Controlled Use Zone of Phanob Village</b></p> <ul style="list-style-type: none"> <li>- Pursuant to the provisions of Forestry Law No. 06/MNA, dated on 24<sup>th</sup> December 2007</li> <li>- Pursuant to the provisions of Aquatic and Wildlife Law No. 07/MNA, dated on 24<sup>th</sup> December 2007</li> <li>- Pursuant to the regulation of By-Law HNN NPA No. 01/HoD.BLP, dated on 7<sup>th</sup> May 2015.</li> <li>- Pursuant to the agreement of village authority and villagers of Phanob Village about setting up the rule on sustainable NTFPs management-use in CUZ (Controlled Use Zone) and FCZ (Fish Conservation Zone) of Phanob Village on 8<sup>th</sup> March 2017.</li> </ul> <p style="text-align: center;"><b>Chief of Phanob Village:</b> <b>Section I:</b> <b>General provisions</b></p> <p><b>Article 1: Objectives</b> This regulation is formulated as additional documentation for implementing the By-Law HNN NPA No. 01/HoD.BLP. In addition, based on the agreement from village authority and villagers of Phanob Village to set up the location and boundary of Fish Conservation Zone and Controlled Use Zone in Phanob Village for NTFPs rehabilitation to ensure that natural resources in CUZ is used in a sustainable way altogether with the enhancement of village authority's role to guide and lead villagers in implementing the regulation on Hin Nam No National Protected Area Management and Protection in accordance with the government's policy.</p> <p><b>Article 2: Location, scope and area of Controlled Use Zone in Phanob Village</b> Controlled Use Zone in Thongxam Village located in Hin Nam No National Protected Area between longitude 175°5'07.0" - 175°29'03.1"N and latitude 105°48'14.3" - 105°48'08.0"E. Total surface area is .....ha, starts from.....to..... Controlled Use Zone in Phanob village consists of 2 areas as following: 1. Phoucheung hill foot Tadomsoua area is .....ha 2. Nonglouang area is .....ha Other than these 2 areas, Controlled Use Zone in Thongxam village also covers other areas such as: rivers, streets, construction land, slopes, paddy fields, plantations, peak, etc. which is .....ha (Appendix 1).</p>	<p style="text-align: center;"><b>Section II:</b> <b>Prohibitions and Sustainable Non-Timber Forest Products Use</b> <b>in Controlled Use Zone</b></p> <p><b>Article 3: Prohibitions and sanction measures</b> 3.1 Vanghin was set up as a permanent Fish Conservation Zone which nobody can go fishing, violators will be fined according to article 14 of the By-Law HNN KPA No. 01/HoD.BLP. 3.2 Individual or entities in the village or outside are forbidden to go fishing in Vanghin Area which is a fish conservation zone, seasonal forbidden starts from July to October every years. Anybody who violator this regulation will be fined according to article 14 of the By-Law HNN NPA No. 01/HoD.BLP. 3.3 Individual or entities in the village or outside are forbidden to collect non-timber forest products in Nonglouang Area because it was formulated as non-timber forest products rehabilitation area. Duration of NTFPs rehabilitation takes 3 years long which starts from May 2017 to April 2020.</p> <p style="text-align: center;"><b>Section III:</b> <b>Implementing and Monitoring Responsibilities</b></p> <p><b>Article 4: Responsibilities of Village Chief</b> Village chief responsible for guiding and leading villagers and village organizations to implement rule on sustainable NTFPs use in the controlled use zone, as specified in this document to strictly implement the By-Law HNN NPA No. 01/HoD.BLP. This regulation is a central coordination between village chief and related authorities to punish violators. Village chief has to report the progress of regulation implementation to all villagers in the village, village cluster and district authority. <b>Article 5: Responsibilities of Village Co-management Committee of Hin Nam No National Protected Area (VCMC)</b> VCMC is responsible for assisting village chief to monitor the operation of rangers which focus on checking the use of NTFPs within controlled use zone, as specified in this document and the By-Law HNN NPA No. 01/HoD.BLP. VCMC has to report to village chief constantly and report to DCMC (District Co-management Committee) every 3 months. <b>Article 6: Responsibilities of village ranger</b> Village ranger is responsible for patrolling to look for all threats around Hin Nam No National Protected Area. Also monitor NTFPs conditions in controlled use zone to meet sustainable NTFPs use and in accordance with the By-Law HNN NPA No. 01/HoD.BLP, and the rule of Thongxam village as specified in this document. In case the rangers found any violations regarding to the use of non-timber forest products, they directly report to village chief or village authority and VCMC in order to punish violators, according to article 1. <b>Article 8: Responsibilities of villagers</b> Villagers of Phanob village have responsibilities to strictly implementing the By-Law HNN NPA No.01/HoD.BLP and the rule of Phanob village as specified in this document, and villagers also have obligations in participating to monitor NTFPs use, if found anyone who break the rule on sustainable NTFPs use or violate the By-Law HNN NPA No. 01/HoD.BLP villagers has to directly report to village rangers or village authority.</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Section IV:  
Benefits and Benefits Sharing**

**Article 6: Benefits and benefits sharing**  
Village chief, village's organizations and VCMC together with other stakeholders consider for the benefit and benefit sharing that got from fire, HNN/NPA management and protection budget, selling of confiscated NETTs, fees, services and contribution of individual and entities. To consider the benefit sharing is according to article 16 on benefit sharing in By-law HNN/NPA No. 01/16d.HLP in transparency and justice manner for each party.

**Section V:  
Final Provisions**

**Article 7: Effectiveness**  
This regulation becomes into effected from the date that is adopted by chief of Phanob village.

Chief of Phanob village, Bualapha District, Khammouan Province.