

# WILDLIFE-BASED ECOTOURISM for wildlife habitat and buffer zone management

## OBJECTIVES

This project objects to propose tourism development model that physically link the conservation of wildlife habitat in large indigenous forest, the Thap Salao Reservoir, the HKK Wildlife Breeding Station and the HKK Extension and Development for Conservation Center – all located in the HKK Wildlife Sanctuary, and its buffer zone where communities livelihood is encroaching the protected areas border and prone to human-wildlife conflicts. Wildlife-based ecotourism will be creative strategy aiming at conservation of wildlife and their habitat, and alternative livelihoods serving as an effective model for the buffer zone management of the World Heritage Site.

## SCOPE OF WORK

### PART 1: WILDLIFE HABITAT MANAGEMENT PLAN

This part focuses on developing wildlife habitat management plan of the iconic species e.g., banteng, tiger, elephant, gaur, sambar deer and muntjac in the edge and HKK buffer zone area. The goal of the plan is to provide the guideline and solution of wildlife habitat improvement and management of wildlife existence in the suitable habitat of the rare species which can maintain their abundance in the nature. The plan will be developed based on the collected and reviewed baseline information, including 1) vegetation covers and environmental factors 2) wildlife populations and distributions and 3) forage plants utilized by large herbivores. Additionally, In the part of wildlife habitat management plan, participatory approach with key stakeholders will be applied in planning process.

In the part of wildlife habitat management plan (PART 1), the targeted area covered the area of the edge and HKK buffer zone area. **The total area was about 173 sq.km.**

### PART 2: WILDLIFE-BASED ECOTOURISM DEVELOPMENT AND LANDSCAPE DESIGN

This part focuses on develop the wildlife-based ecotourism that corresponds the needs of complementary between reduction of threats to wildlife and their habitats and alternative livelihood betterment via wildlife conservation. In this part, wildlife tourism program and landscape and facility design for wildlife tourism will be presented. Major activities in this part include:

1. wildlife tourism program development
2. landscape and facility design for wildlife tourism
3. competence development for wildlife tourism
4. wildlife tourism management plan for wildlife conservation.

For wildlife-based ecotourism development and landscape design (PART 2), the area focused on the Thap Salao Reservoir, the HKK Wildlife Breeding Station and the HKK Extension and Development for Conservation Center covering an area of 95.66 sq.km.

## PROJECT AREA



# WILDLIFE-BASED ECOTOURISM for wildlife habitat and buffer zone management

## DELIVERABLE OUTPUTS

### MAJOR OUTPUTS:

1. Baseline Information for Habitat Management of Large Herbivores in the Nang Ram and Huai Thap Salao Area
2. Wildlife Habitat Management Plan for Large Herbivore in the Nang Ram and Huai Thap Salao Area
3. The Study Report of Wildlife-based Ecotourism Development for Wildlife Habitat and Buffer Zone Management
4. Conceptual Design of Facilities for Wildlife-based Ecotourism for HKK and Buffer Zone Management
5. Wildlife-based Ecotourism development Plan for Wildlife habitat and buffer zone management (Wildlife and Habitat Restoration Project for Conservation and Promoting Public Learning)

### LOCAL COMMUNITY DEVELOPMENT AND PARTICIPATION:

1. Training program supporting wildlife-based ecotourism management have been delivered to community members during 24 August – 14 September 2019. The 2 topics based on the interests of the community included:
  - organizing wildlife tourism activities and skills of tour guide (there were 33 local people participated in this topic)
  - hospitality and homestay management (there were 32 local people participated in this topic)
2. Local community network was created named “Tourism Alliance for Wildlife Conservation, Huai Kha Khaeng Buffer Zone Area”
3. Wildlife tourism program was created by local community. Tour program consisted of community activities, homestay, and game drive activities on specified routes.

## OUTCOME:

From the advocacy process in wildlife tourism development for conservation driven by this research, the area of Huai Thab Salao – Huai Rabam is in the official process of being designated as a new non-hunting area governed by the Department of National Parks, Wildlife and Plant Conservation. This process is a concrete product of the research that potentially leads to an ongoing process of wildlife tourism development and wildlife management in those areas. Developing sustainable wildlife tourism will be served as powerful tools to promote the management of the buffer zone according to the objectives of the establishment of the Nature World Heritage Site.





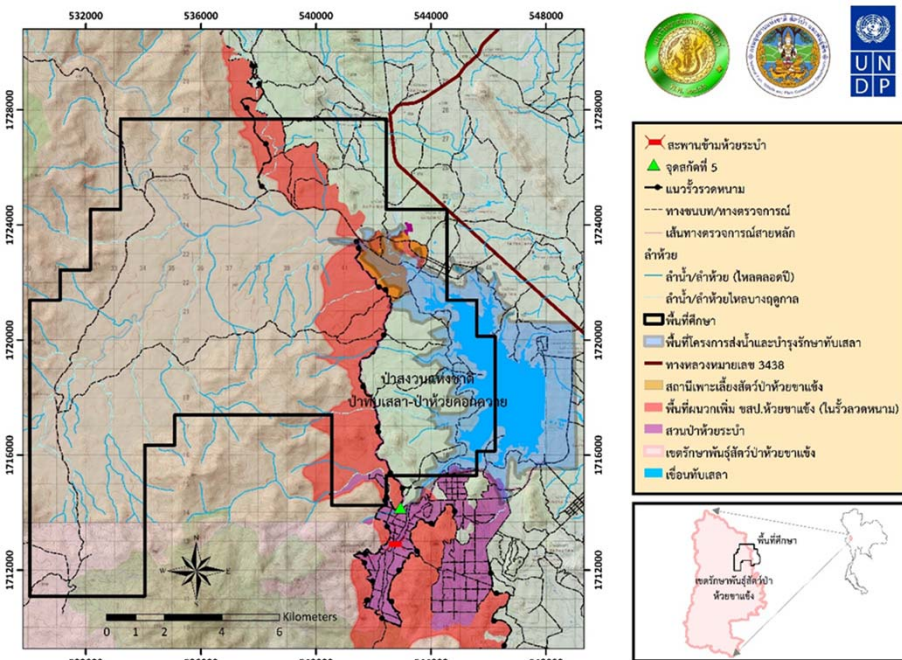
# HABITAT MANAGEMENT PLAN FOR LARGE HERBIVORE IN THE NANG RAM AND HUAI THAP SALAO AREA

## MANAGEMENT GOALS AND OBJECTIVE

This plan objects to promote the efficiency of the habitat management for large herbivores in the Nang Ram and Huai Thap Salao Area and can lead to actions that could support the achievement of the tiger population restoring project in HKK wildlife sanctuary. This study, therefore, has set a clear management goal that is consistent with the tiger's population recovery plan in Thailand. Thus, the specific goals of this plan are to;

1. increase the population of banteng (*Bos javanicus*) that lives in the area of Nang Ram and Thap Salao to be no less than 1,000 in the next 5 years;
2. support the rehabilitation plan for the population of Eld's deer (*Rucervus eldii*) by improving the condition of forest to be suitable for being a core habitat;
3. manage suitable habitat for large herbivores to control or reduce the impacts of wildlife intruding in agricultural areas of local communities adjacent to the border of HKK Wildlife Sanctuary
4. improve the proportion of wild forage plants in nature to have suitable abundance and diversity among forage plant groups;
5. increase the amount of forage plants that can be utilized by large herbivores across spatial and time (to meet the needs of wildlife's use), especially for elephant and banteng;
6. preserve deciduous forest conditions, especially the deciduous dipterocarp forest, to have species composition and structure that represent the dipterocarp forest in the western region of Thailand that can be a habitat for large herbivore sustainably; and
7. develop guidelines for managing existing wildlife habitats in the area to maximize efficiency in accordance with resource constraints and legal regulations.

## TARGETED AREA FOR HABITAT MANAGEMENT

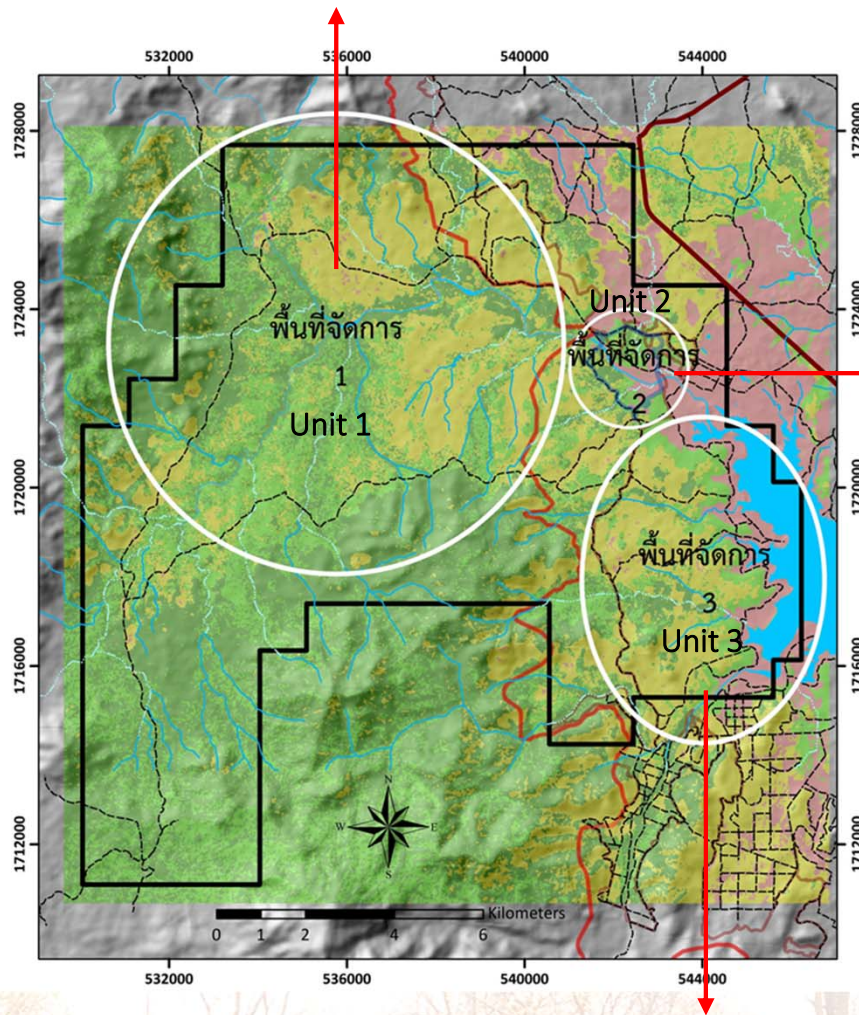


The study area of the habitat management plan for large herbivore consists of the Nang Ram and the Thap Salao area located to the northeast of HKK. The total area is approximately 173 square kilometers. In the part of buffer zone area located outside HKK, this area is a part of the Huai Thap Salao - Huai Khok Khwai National Reserved Forest with an area of approximately 60 square kilometers which most of the area is connected to the boundary of wildlife sanctuary in the west and to the Thap Salao Reservoir in the east.



## Management Unit 1: HKK Wildlife Sanctuary and Nang Ram and Huai Thap Salao

1. Selective cutting of undesired trees in targeted area to achieve of preserving deciduous forest ecosystems that are more suitable habitats for large herbivores and favorable to produce higher amount of forage plants.
2. Prescribed burning to remove deadwood and other fuel biomass with the main objective of reducing the fire risk and preserve the dry forest ecosystem.
3. Temporary forest opening (size: 1-5 rai) distributed widely in the target area to be natural food sources for wildlife
4. Permanent opening (making an open space covered with herbaceous plants) (size: 2-10 rai) to support forage plants throughout the year.
5. Edge feathering to promote friendly transition zone for wildlife
6. Woody cover control to make understory more opened and more suitable for wildlife to use as their habitats.
7. Providing food plot by using local plants to achieve management objectives in terms of capacity building of herbivore nutrition and to keep wildlife away from the agricultural areas.



## Management Unit 2: HKK Wildlife Breeding Station

1. Creating food plots for herbivores live inside the large cages of the soft-release program, in both handling zone, and acclimatization zone to meet the demand throughout the year
2. Changing conditions of present plant community in targeted area to be more suitable habitats for banteng and Eld's deer
3. Creating a living and breeding area for peacocks and creating permanent opening area for ungulate habitats.
4. Edge feathering to promote friendly transition zone for wildlife
5. Increasing open space area to be more suitable for wildlife to use as their habitats
6. Improving water reservoir and providing mineral sites

## Management Unit 3: HKK Wildlife Sanctuary and Nang Ram and Huai Thap Salao

1. Creating food plot for herbivores to meet their demand throughout the year
2. Changing conditions of present plant community in targeted area to be more suitable habitats for banteng and Eld's deer.
3. Managing a large grassland to support 1) public learning and wildlife tourism activities, 2) capacity building of herbivore nutrition, and 3) controlling the spread of invasive plants
4. Adjusting the edge of the forest to increase the open space on the road network to be suitable for the use of wildlife and reduce the impacts from tourism to wildlife by extending flushing distances
5. Prescribed burning to 1) remove deadwood and other fuel biomass in the forest, 2) increase the sprouting of young forage plants, 3) control invasive species 4) controlling disease from livestock to wildlife and 5) maintain dry forest ecosystem
6. Providing mineral sites (approximately 100 -200 sites) in targeted area
7. Providing water sources, a total of 5 sites, distributed widely on both sides of the road where wildlife education stations has been created



# TARGETED AREA AND FACILITY DESIGN FOR WILDLIFE TOURISM DEVELOPMENT

## Development Concept

The wildlife-based ecotourism development for this project has designed based on the IUCN Protected Area Category VI: Protected area with sustainable use of natural resources which sets the primary objective to protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial. This development concept would incorporate wildlife-based ecotourism serving as a useful tool to create motivation for local people to change their mindsets towards protected area management and wildlife conservation by viewing wildlife as a valuable commodity and a key component in the wildlife tourism. Host communities will be encouraged to participate in tourism development process. The basic facilities and services supporting wildlife tourism will be developed. Additionally, the further goal might be to maximize the benefits of wildlife tourism to wildlife and the natural environment, visitors, host communities, and tourism-related businesses. The goal of this scenario is to develop the wildlife tourism destination in international level. Under this management alternative, emphasis is placed on developing up-scale of wildlife tourism.

## Development Zone

### ZONE 1: National Wildlife Conservation and Management Learning Center:

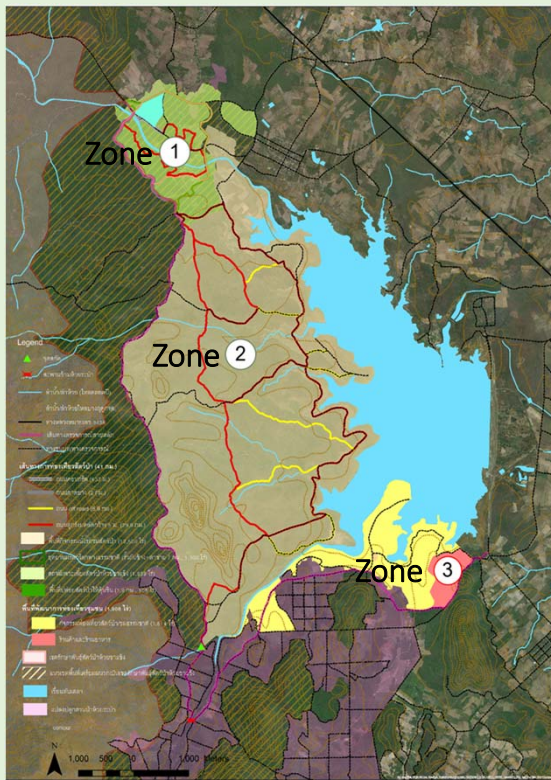
ZONE 1 is designed for outdoor recreation zone and service zone providing the opportunity to visitors to learn about wildlife management and nature conservation. The supported facilities in this zone comprise of the soft release area, the exhibition hall, the nature interpretive trail system, the wildlife observatory tower, the coffee shop, the restaurant, the community shop, the multi-purpose building, the community tourism office, the game drive office, and the parking area. The design concept is closely related to user behaviors and the connection of activities. Additionally, the design emphasizes the relationship with the environment and appropriate construction technology in the area.

### ZONE 2: Outdoor Recreational Zone for Wildlife Conservation and Management

ZONE 2 is located nearby the Thab Salao Reservoir. This zone is designated for wildlife tourism and game drive activity. The design concept is to increase the potential of the area by using the traffic network to increase the opportunity to see wildlife in natural setting. Additionally, the serval viewpoints are determined to provide the opportunities for visitors for nature appreciation.

### ZONE 3: Local Community Tourism Zone – Ra Bam Wildlife Friendly Community

ZONE 3 is located in the southern part of Thab Salao Reservoir. The aim of the area is for local community to use the area for tourism-related activities and for professional development to support tourism (community use zone). The design in this area is based on topography characteristics and has applied the concept of sustainable architectural design.





# MANAGEMENT PLAN FOR WILDLIFE-BASED TOURISM FOR HUAI KHA KHEANG AND BUFFER ZONE MANAGEMENT

## VISION

- WORLD CLASS WILDLIFE-BASED ECOTOURISM
- NATIONAL WILDLIFE CONSERVATION AND MANAGEMENT LEARNING CENTER

## MANAGEMENT GOALS

1. The main goal is to develop a model area for the restoration of wildlife populations and habitats based on academic basis, in order to promote the sustainability of the management of the world heritage site.
2. Develop an area promoting wildlife management as effective communication for public learning with international standards to raise awareness about conservation.
3. Enhance the value and create added value of wildlife in the area.
4. Create opportunities for local community development (i.e., job opportunities for local people) that will lead to a change of attitudes towards the world heritage area in a more appropriate direction and reduce the unsustainable use of forest resources in the communities.
5. Create alternative tourism for specific groups of visitors who want to learn about ecosystem and wildlife.

## STRATEGIES AND MANAGEMENT ACTIONS

PLAN'S DURATION: 3 Years

Strategy 1: Habitat management and wildlife restoration	Strategy 2: Facility development for wildlife-based ecotourism	Strategy 3: Development of management system and encouraging local participation
<b>Habitat management and wildlife restoration</b> which is a key component of wildlife tourism as a key resource. This is a major component that will attract visitors to visit the area	<b>Facility development</b> that supports wildlife management learning program and also promotes recreational activities and wildlife tourism	<b>Creating management system</b> for personnel management, marketing and public relations which is a supporting factor in promoting community participation and distribution of benefits to the local community, and popularity of wildlife tourism destinations.
<b>Management Actions:</b> <ol style="list-style-type: none"> <li>1. Wildlife habitat management program in HKK Wildlife Breeding Station</li> <li>2. Wildlife habitat management to support the goals of National wildlife conservation and management learning center</li> </ol>	<b>Management Actions:</b> <ol style="list-style-type: none"> <li>1. The development of wildlife conservation and management center</li> <li>2. The development of outdoor recreational zone to promote wildlife conservation and management for publics</li> <li>3. Outdoor recreational zone to promote wildlife conservation and management for publics</li> </ol>	<b>Management Actions:</b> <ol style="list-style-type: none"> <li>1. Human resource development and development of management system</li> <li>2. Public relations and marketing</li> </ol>