



Annual Report

2022



# Annual Report

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# 2022

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# Foreword

*Another year has ended.*

*As our **Annual Report 2022 testifies**, it has been yet **another busy year** with the **continuation of several of our projects and programs** from the previous years as well as the **start of exciting new biodiversity research projects**. These included a new project to study the population of the Endangered Asian Elephants (*Elephas maximus*) and a new project to study the population of the Endangered Wolf Barb (*Luciocyprinus striolatus*) in Nakai District, in and around the Nakai-Nam Theun National Park.*



*In 2022, we developed a **new collaboration with the National University of Laos from 2023** for all our projects in the coming years (announcement in 2023)!*

*In 2022, we worked on **reforming our administrative board**, with a **like-minded team** newly appointed **from 2023** (announcement in 2023)!*

*Ever since **Association Anoulak's interventions** in Laos, our long-term vision has been to **try our best** to establish a **strong basis for the overall conservation of biodiversity in the Annamite Mountains of Laos**.*

*Each year, our team works with determination to build the capacity and awareness of the **next generation of Lao nationals**. This also translates in our programs to **study the least known and most threatened species** and establish baseline information on the status of these species and to **support local communities** to develop and improve their livelihoods in a **sustainable manner**.*

*We are looking forward to the new year 2023!*

*~Camille~  
Nakai, 20 January 2023*



## About us

**Association Anoulak** (*conservation* in Lao language) is a French-registered association dedicated to the long-term nature conservation in the Annamite Mountains of Lao People's Democratic Republic (Lao PDR or **Laos**) and the support of human local communities for resilient livelihoods.

Our **mission** is to develop and implement innovative, multidisciplinary and sustainable approaches to the long-term conservation and study of the biodiversity and ecosystems in the Annamite Mountains of Laos, with a focus on Nakai-Nam Theun National Park, with a skilled, passionate and dedicated team of nationals and internationals.

Since 2019, Association Anoulak signed a **Memorandum of Understanding** (MoU) with the Nakai - Nam Theun National Park Authority, governed under the Department of Forestry of the Ministry of Agriculture and Forestry of Lao PDR for the long-term implementation of our programs.

## Our Team

In **2022**, **Association Anoulak** employs 11 persons (6 women):  
**1 foreigner** and **10 Lao nationals**:

- Ms. Dr. Camille Coudrat - Association Anoulak's Founder and Director
- Ms. Dr. Lampheuy - Community Program Manager
- Ms. Sisamay - Community Program local leader
- Ms. Laythong - Community Program officer
- Ms. Latdaphone - Community Program officer
- Mr. Khongphet - Community Program officer
- Ms. Keo - Wildlife Research Fieldwork officer
- Mr. Ouphakhone (Done) - Wildlife Fieldwork officer
- Mr. Chaolor - Wildlife Research Fieldwork officer
- Mr. Khammai - Wildlife Research Fieldwork officer
- Mr. Khantaly - Wildlife Research Fieldwork officer

In addition in 2022, Association Anoulak supports financially as part of our programs:

- Six anti-poaching patrols for Nakai-Nam Theun National Park, with 36 rangers from local community
- Eight village facilitators as part of our community sustainable livelihoods program



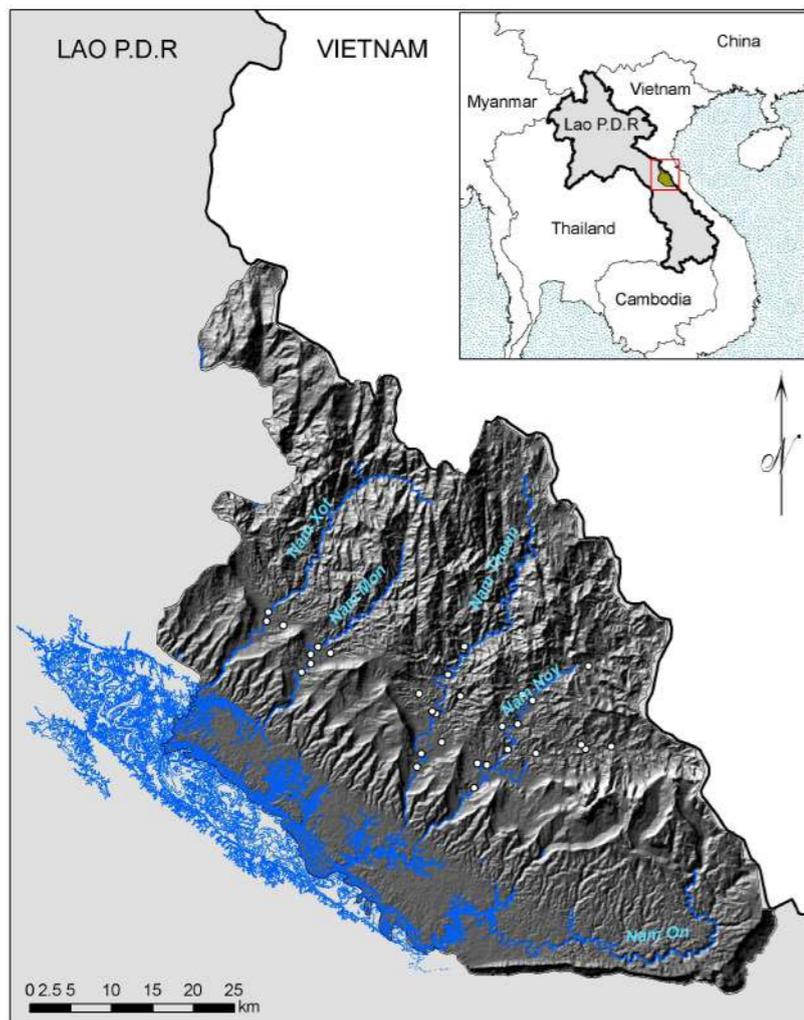
# Region of focus and intervention

**Nakai-Nam Theun National Park** (3500 km<sup>2</sup>) is one of the largest remaining contiguous forest blocks in the Indochinese peninsula and holds numerous **rare, endemic and highly threatened species**. It falls in the heart of one of the richest regions of Southeast Asia in terms of biodiversity and endemism and is one of the identified 'Key Biodiversity Areas' within the Indo-Burma biodiversity hotspot. In Laos, Nakai-Nam Theun is ranked as a **priority for its National and Global biodiversity importance**.



Nakai - Nam Theun is located in the heart of the **Annamite Mountains** with a unique climatic pattern and ecosystem characterized by a very high species richness and endemism. The Annamite Mountain range is where some of the **last mammals discoveries** took place (Critically Endangered saola *Pseudoryx nghetinhensis*; Critically Endangered large-antlered muntjac *Muntiacus vuquangensis*; Data Deficient Annamite muntjac *M. truongsonensis*; Data Deficient Annamite Striped Rabbit *Nesolagus timminsii*).

**The challenge:** Southeast Asia has long been identified (including by the IUCN) as being the region of the world with the **highest biodiversity extinction risk** principally from **unsustainable harvesting of forest resources** and this pattern is observed throughout Laos and in Nakai-Nam Theun.



Association Anoulak implements activities on:

**\*Biodiversity research and monitoring for conservation**

**Objective:** to understand the distribution, monitor wildlife populations and to increase our knowledge on in-situ species ecology and status of the threatened and endemic species in the Annamite Mountains which will inform conservation management

**\*Community anti-poaching patrols**

**Objective:** to reduce illegal poaching of species in the wild, allow their populations to remain stable or recover from unsustainable hunting

**\*Conservation awareness**

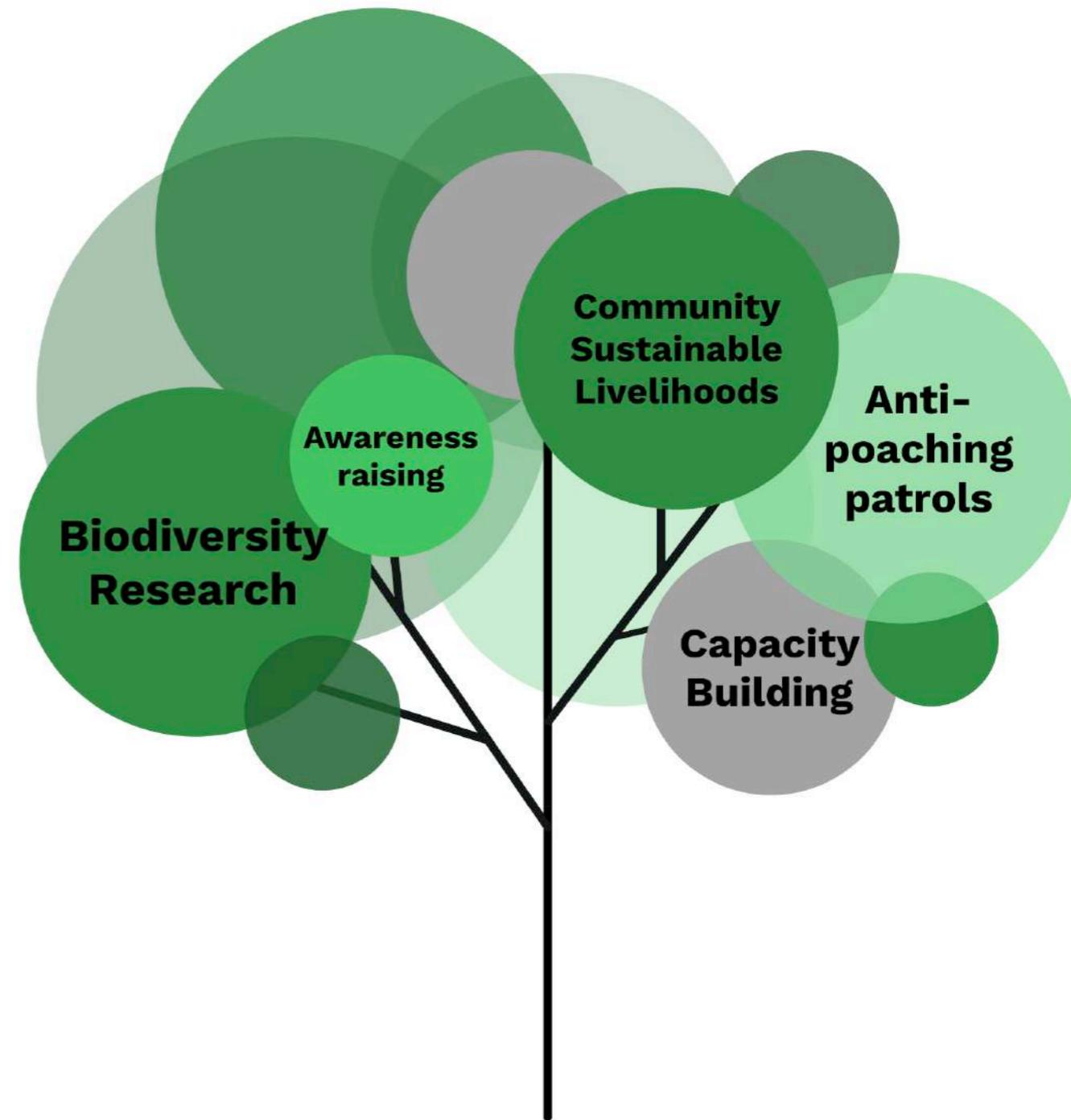
**Objective:** to raise awareness of the local and international community about the biodiversity of the Annamite mountains and the importance of protecting it.

**\*Community sustainable livelihoods**

**Objective:** to provide alternative and sustainable livelihoods and income to local communities to reduce their reliance on natural resources

**\*Capacity building**

**Objective:** to inspire and train the new generation of Lao conservationists and biologists and ensure the sustainability of and sense of ownership of all our projects at the national level





## **Biodiversity research and monitoring in 2022**

# White-cheeked Gibbons (*Nomascus siki*/*N. leucogenys*) distribution

**Rationale:** The current taxonomic status and distribution range limit of the population of gibbons occurring in Nakai-Nam Theun remains uncertain. It may hold both the Northern and Southern white-cheeked gibbon and/or a hybrid population. To better plan conservation actions on these species, it is crucial to know their distribution across the landscape. Because gibbon vocalizations are species specific we are recording gibbon calls in as many sites as possible across Nakai-Nam Theun, which we will identify to species.

We are collaborating with Dr. Michal Hradec from the *University of Life Sciences of Prague*, Czech Republic for the analysis using computer softwares.

Over the past few years, we collected gibbon call recordings from several sites across Nakai-Nam Theun National Park and collaborated with conservation institutions (WCS, Asian Arks, IUCN, GIZ) and researchers to obtain gibbon recordings from additional sites from central Laos (and some sites in Vietnam).

In **2022**, we collected gibbon call recordings from institutions of the *European Association of Zoos and Aquaria* of known species identity as *N. siki* and *N. leucogenys* to strengthen the statistical analysis of our study.

**In total**, our dataset contains **724 records from males and 220 records from females**. Records come from both the **wild (Laos, Vietnam)** and from **zoological facilities in Europe** (France, Sweden, Czech Republic, Nederland, and Poland).

Based on the first data inspection, it is possible to perform an extensive statistical analysis, which will be conducted by our technical partners in 2023 followed by the publication of the research.

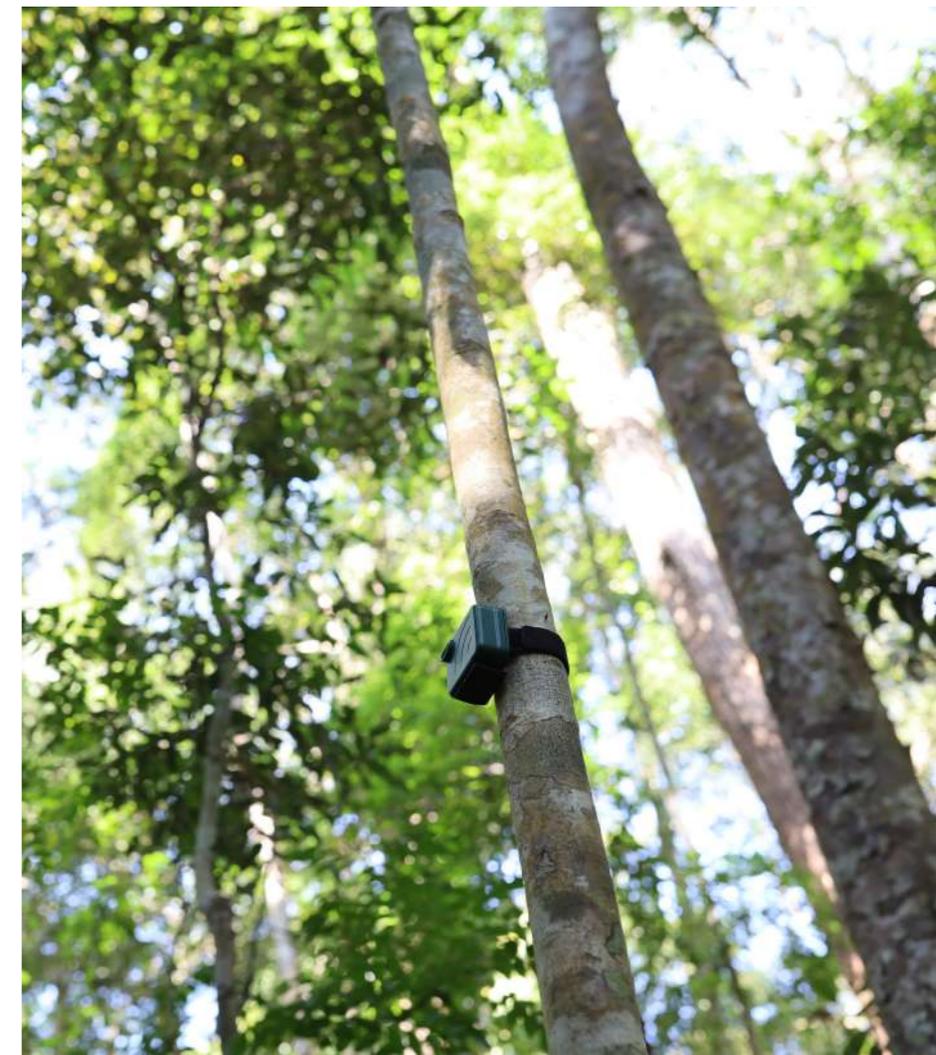
# Gibbon survey methods development

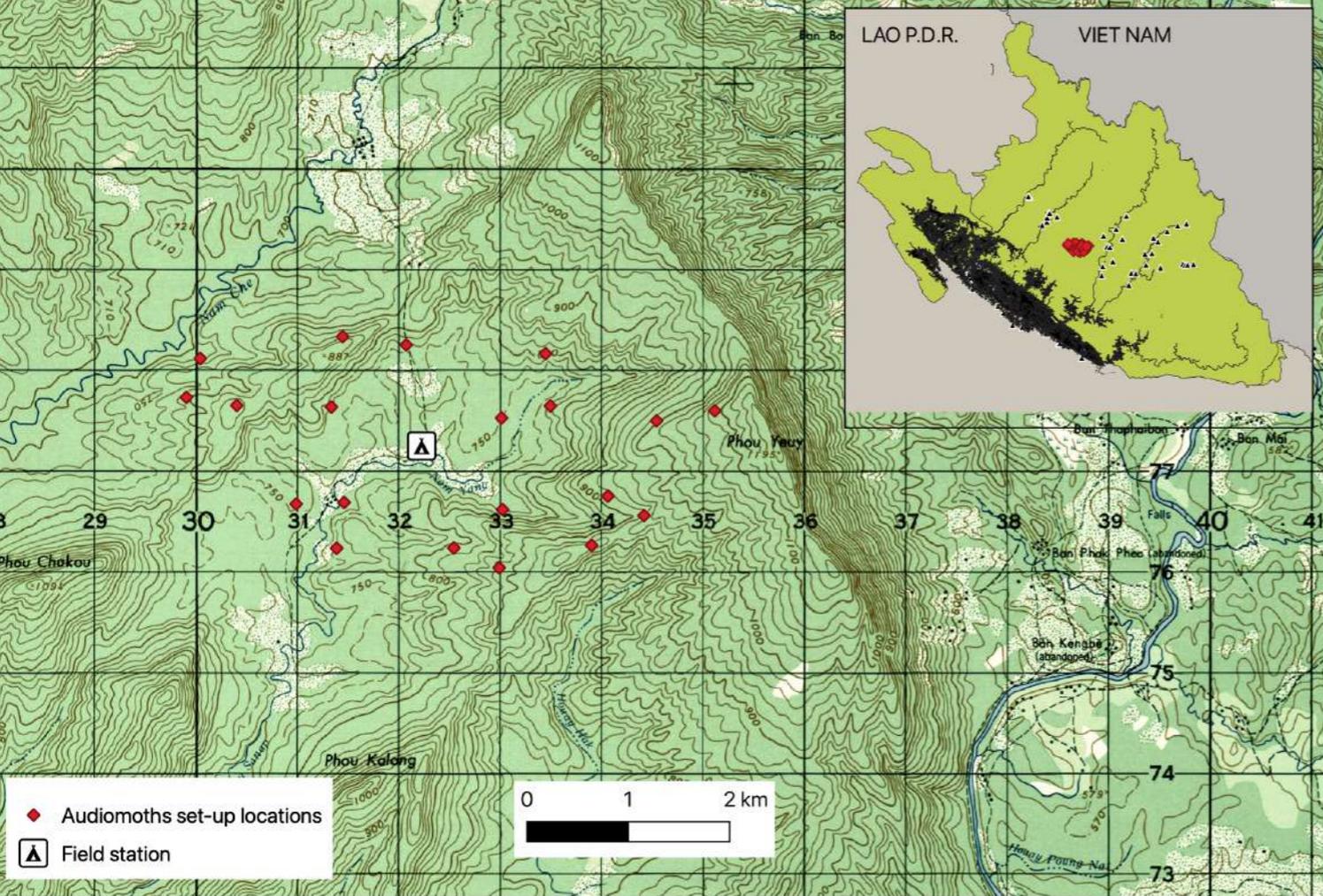
**Rationale:** Gibbons are some of the **most threatened primates in the world**, due to habitat loss, illegal pet trade, and hunting for food and traditional medicine. All twenty species of gibbons are threatened with extinction on the [IUCN Red List of Threatened Species](#): five are Critically Endangered, fourteen are Endangered, and one is Vulnerable. **Effective conservation measures and actions** to mitigate threats to gibbon populations **require accurate and precise estimates of their abundance, distribution, and population trends**. However **reliable survey methods are lacking**.

Acoustic surveys are the most applicable method for gibbon, as they produce territorial calls that can be heard from large distances. Acoustic survey methods (with human detectors) have commonly been used to survey gibbons but there is subjectivity in the data from these surveys as they require surveyors to estimate gibbon locations without ever seeing them, resulting in unreliable abundance estimates. There is also no existing standardized survey protocol and/or analysis method, which prevents long-term population monitoring across time and space.

In 2020, we initiated a new collaborative project between Association Anoulak, The [Centre for Research into Ecological and Environmental Modelling \(CREEM\)](#), University of St Andrews in Scotland, and [Rainforest Connection](#) with the aim to produce and test affordable, easily deployable acoustic recorders that generate data designed for use with cutting-edge statistical abundance estimation methods, to estimate gibbon abundance. The first prototype of the hardware and software will be tested in 2023 at our research site in Laos.

As part of this project, in **January 2022** we set-up **20 Audiomoths** (low-cost, full-spectrum acoustic loggers) in the field to record as many gibbon calls as possible and from several groups. The Audiomoths were retrieved after a month. The data were sent to our technical partner Rainforest Connection to **develop a digital artificial intelligence model** that will automatically **identify and extract gibbon calls** from future field recordings.





# Wildlife populations monitoring with systematic camera-trap surveys

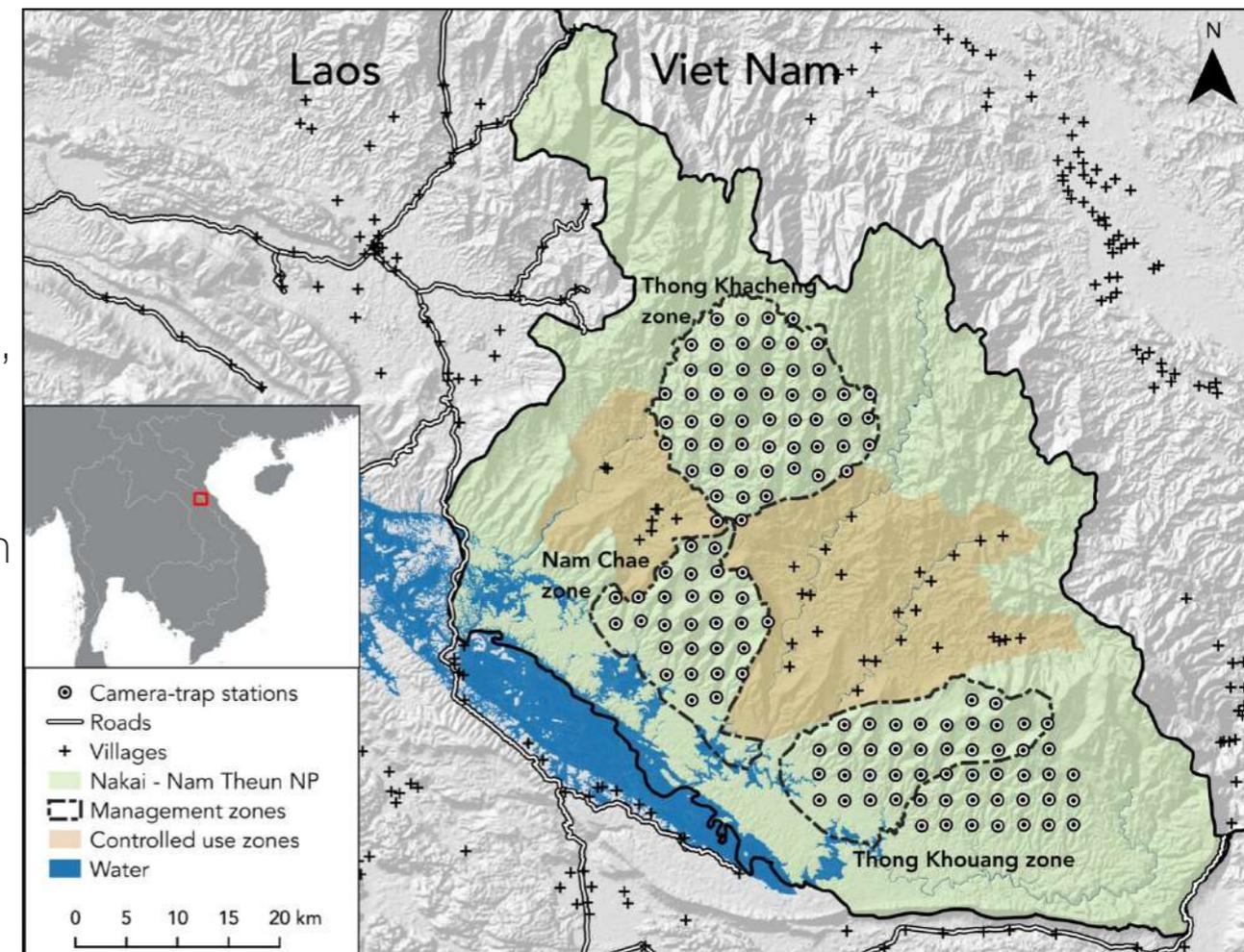
**Rationale:** The current **conservation status** of several globally threatened species remains unknown in Nakai-Nam Theun. In addition, in order to **evaluate the management efforts** (especially patrol efforts) being implemented it is critical to obtain **baseline population estimates of key indicator species and monitor their populations trend over time**.

Since 2017, Association Anoulak has been providing **technical advise and supervision** to the Biodiversity Research and Monitoring Section of the National park, including the camera-trap wildlife monitoring program.

Any conservation management plan requires appropriate methods to assess its effectiveness to protect wildlife populations and ecosystems in the long-term. Monitoring wildlife populations using automated camera-traps placed in the forest is one of these methods, which we apply in Nakai – Nam Theun National Park.

The **science-based survey design** applied allows the **estimation of population abundance index over time and landscape**. When surveys are replicated systematically at regular time intervals (e.g. every two years), we can obtain trends in the abundance of wildlife species and their distribution across the national park: this **facilitates an assessment of whether some wildlife populations are increasing, decreasing or remaining stable as a result of management interventions** (e.g. law enforcement; community sustainable livelihood for conservation; outreach).

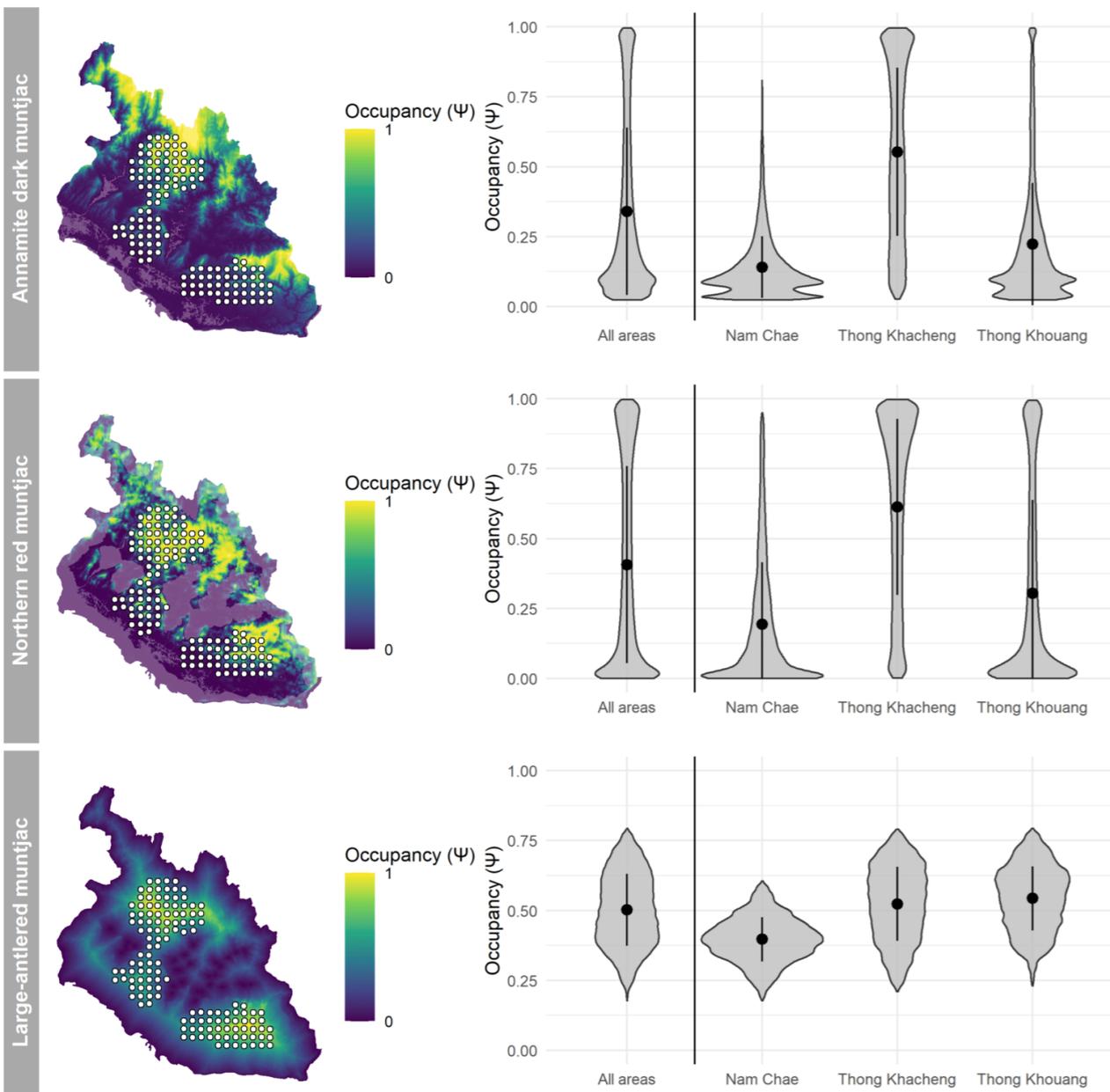
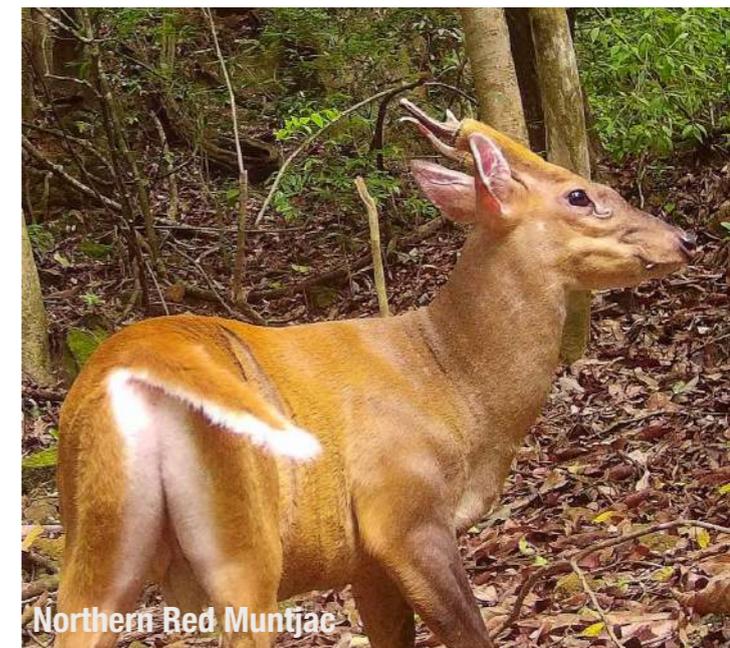
The survey design for the camera-trapping implemented in Nakai – Nam Theun National Park follows the rationale and protocols developed by the [Biodiversity Dynamic research Team](#) at the Leibniz Institute for Zoo and Wildlife Research (IZW) ([Abrams et al., 2018](#)), one of our research partners.



Location of Nakai – Nam Theun National Park in Laos and of the 133 camera-trap stations (265 camera-traps) set-up in 2020 to cover the three Biodiversity Priority Zones of the national park

In **2022**, our first peer-reviewed research paper from our camera-trap wildlife monitoring in Nakai-Nam Theun conducted in 2018-2019 was published in the journal ***Mammalian Biology***.

In this research paper, we investigate the **ecological, environmental and anthropogenic variables** in Nakai-Nam Theun National Park **driving the distribution and population status of three sympatric muntjac species occurring in the national park**: the Annamite Dark Muntjac species complex *Muntiacus rooseveltorum/truongsonensis*, the Northern Red Muntjac *M. vaginalis*, and the Large-antlered Muntjac *M. vuquangensis*.



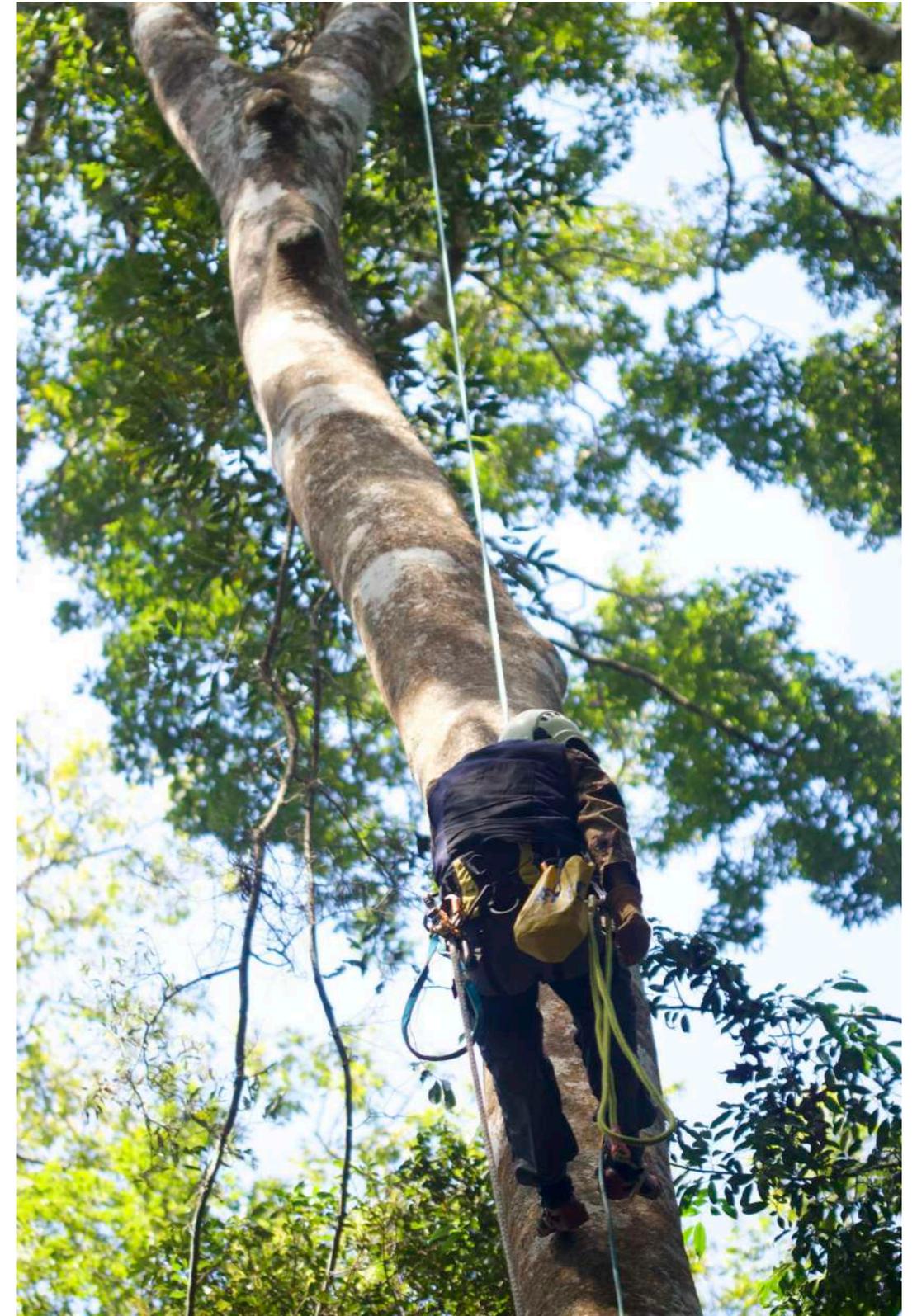
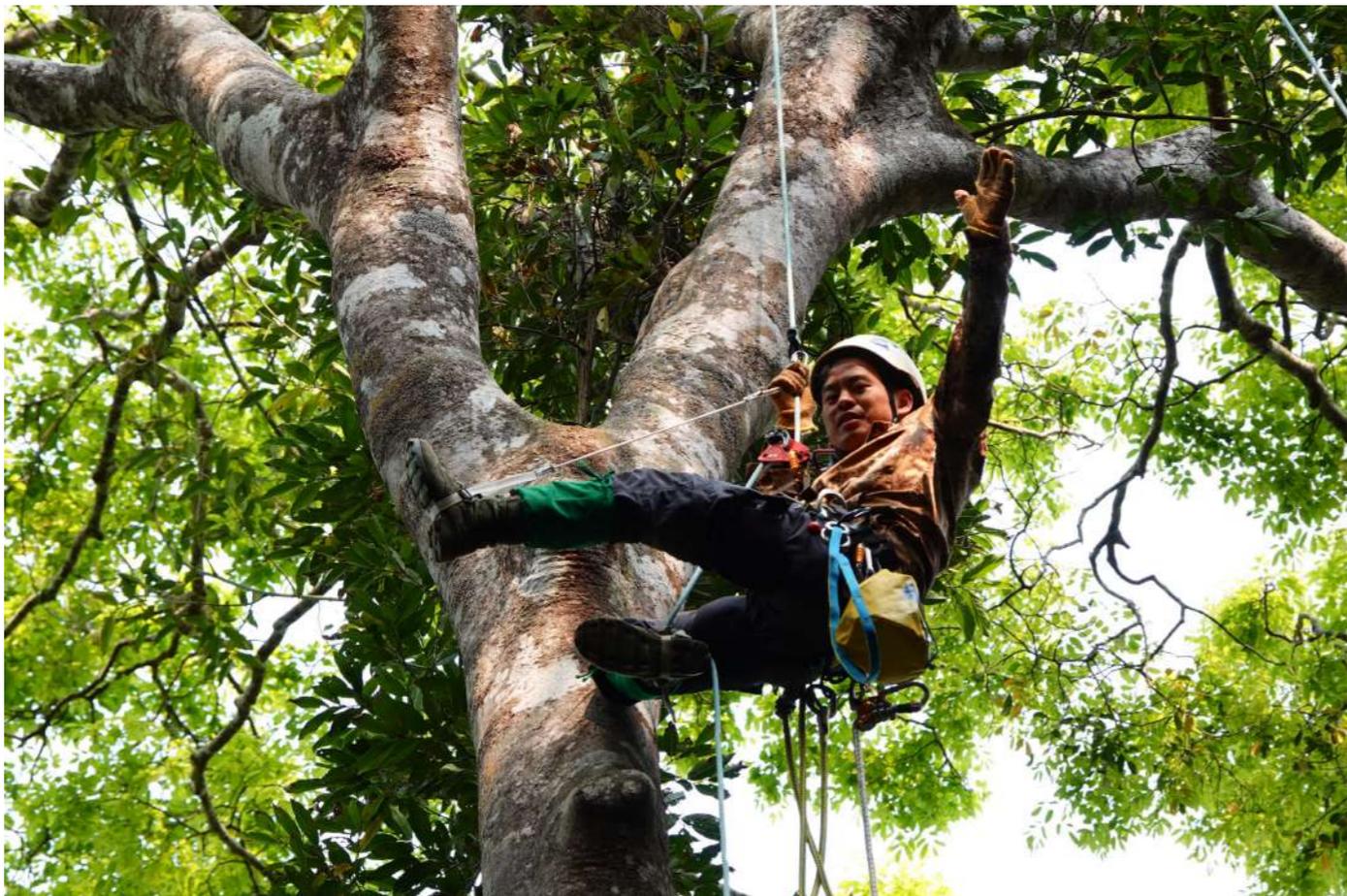
*Predicted probability of occurrence for the three muntjac species across the Nakai-Nam Theun National Park. Transparent colors indicate uncertain areas falling outside of the range of the covariates used. White dots with black outline represent camera-trap stations (left). Violin plots show occupancy probability per biodiversity priority zone and species (right). Mean and SD are shown inside each violin plot*

# Canopy camera-traps

**Rationale:** Our ground camera-traps overlooks several arboreal species also occurring in Nakai - Nam Theun National Park. Setting-up camera-traps in the canopy is relatively novel and offers new avenues for conservation and research of biodiversity. This pilot project will determine how best to put this method to use in our programs.

Since 2019, we have been setting-up camera-traps in the canopy to obtain incredible and unique photos of elusive arboreal species, that we use for communication purpose.

In **2022**, we monitored seven cameras on a regular basis, which have not failed to amaze us with yet again with mesmerizing photos of wild animals!



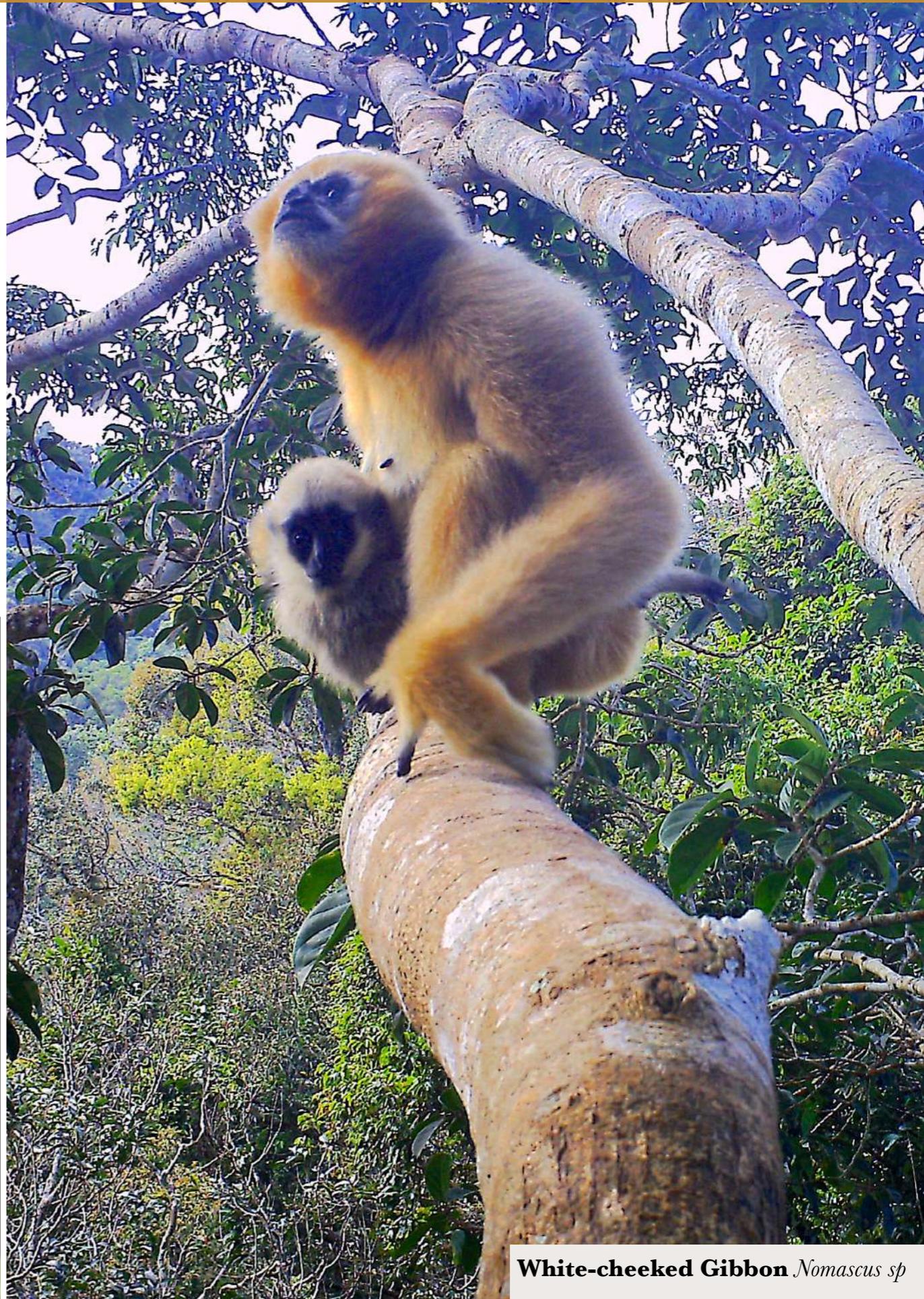


**Great Hornbill** *Buceros bicornis*

12.10.2021 06:28:15 07 013°C 055°F



**Masked Palmed Civet** *Paguma larvata*



**White-cheeked Gibbon** *Nomascus sp*



Red-shanked Douc *Pygathrix nemaeus*

# Otter surveys and species identification

**Rationale:** The distribution of Asian-ranged otter species remains very little known. **In Laos, three species have been confirmed to occur: Asian Small-clawed Otter *Aonyx cinereus*, Smooth-coated Otter *Lutrogale perspicillata* and Eurasian Otter *Lutra lutra*.** Given the global conservation status of these three species – with declining populations throughout their range due to a continuous loss of habitat, decreasing number of their prey and hunting for the pet trade and pelt trade – **information is urgently needed on their distribution, habitat use and local threats** in order to adopt species-specific and site-based management and conservation strategies. **Nakai – Nam Theun National Park is of regional importance for otter conservation.**

In 2019 we initiated a collaboration with [Conservation Ecology Program](#), School of Bioresources and Technology, King Mongkut's University of Technology Thonburi, Thailand, to conduct baseline otter fecal DNA surveys based on mitochondrial DNA (mtDNA) to identify species, assess the occurrence, and map the spatial distribution of genetic diversity and evolutionary relationships of otter populations from Nakai-Nam Theun National Park in the Annamite Mountains of Lao PDR. **Our research is the first otter-specific noninvasive genetic study in Lao PDR** and provides baseline insights into the otter population diversity in a regional priority site for biodiversity conservation.

In **2022**, we published the results of our research in *Ecology and Evolution* journal. Our findings and conclusions:

- From December 2019 to May 2020, six sites were surveyed across Nakai-Nam Theun National Park from where otter fecal samples were collected.
- Of the total 56 samples identified to species, the majority (87.5%) was of the widely distributed Eurasian otter with three haplotypes.
- **All Eurasian otter haplotypes were newly characterized and clustered within the strongly supported South–Southeast–North Asian clade of *Lutra lutra*.**
- The second species was the Asian small-clawed otter with only one haplotype detected, which had not been detected in previous genetic studies.
- Our otter survey provides the **first baseline reference for the species presence and genetic diversity in Nakai-Nam Theun National Park**, where such surveys should be repeated in the future over wider areas and habitats.
- Our study, combined with a previous camera-trap otter survey (Coudrat, 2016), **suggests that Nakai-Nam Theun National Park retains healthy populations of *L. lutra* and *A. cinereus* and be considered a priority site for regional otter conservation.**



Asian Small-clawed Otter



Eurasian Otter

Received: 11 July 2022 | Revised: 10 October 2022 | Accepted: 22 November 2022  
DOI: 10.1002/ece3.9601

## RESEARCH ARTICLE

Ecology and Evolution  
WILEY

### Taxonomic status of otter species in Nakai-Nam Theun National Park, Lao PDR, based on DNA evidence

Camille N. Z. Coudrat<sup>1</sup> | Wanlop Chutipong<sup>2</sup> | Manakorn Sukmak<sup>3</sup> |  
Supaphen Sripiboon<sup>4</sup> | Worata Klinsawat<sup>5</sup>

# Asian Elephant (*Elephas maximus*) population survey

**Rationale:** One of the largest elephant populations of Laos is in Nakai-Nam Theun National Park and surrounding areas. In 2008, the Nam Theun 2 hydroelectric dam resulted in the flooding of a large part of the resident elephant population's habitat. Prior to the impoundment, the population was estimated at 132 elephants, likely the largest and genetically most diverse in Laos at the time. But it was suggested that the elephant population would be affected and disperse due to the habitat loss. Since the impoundment, elephants have moved closer to villages and human-elephant conflicts have increased across a wide region, spanning several provinces. The size of the elephant population has not been systematically monitored. Association Anoulak therefore initiated and is leading the study of the current status, genetic diversity and movement patterns of the elephant population, which has implications for the national and global conservation of the species.

In **November 2022**, we began our new project to survey the population of **Asian Elephant (*Elephas maximus*)** in Nakai-Nam Theun National Park and surrounding areas.

The aims of this study are to provide an **estimation of the current elephant population size on the Nakai Plateau and surrounding areas**, as well as its genetic diversity, social structure and dynamic.

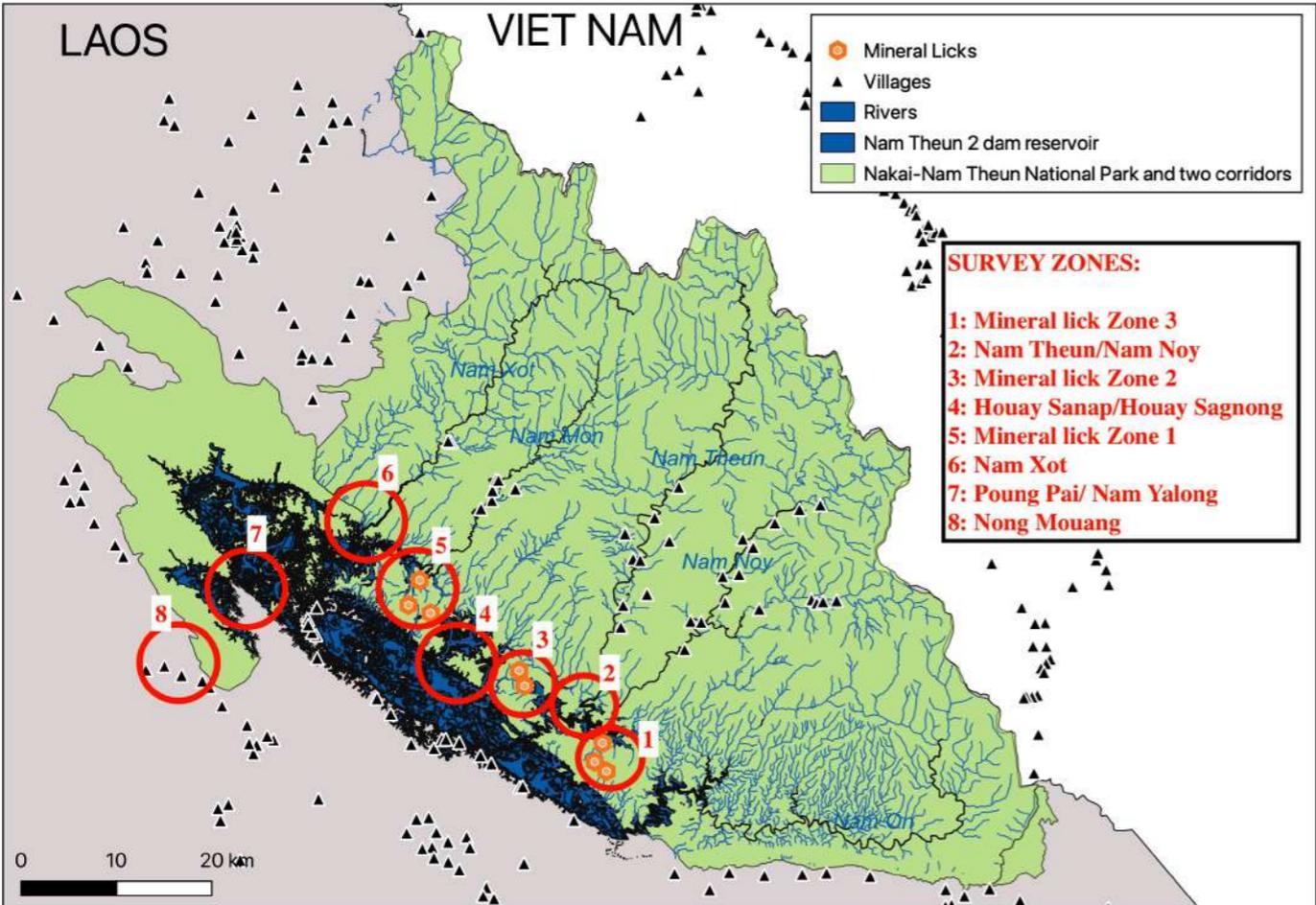
For this elephant survey, we apply **non-invasive fecal DNA-based capture–recapture population survey methods** which consist of collecting elephant dung samples from which individual elephant DNA is later extracted in laboratory. Association Anoulak is collaborating with several technical advisors to conduct this project.

Prior to start our survey, we identified key survey zones that are known to be regularly visited by elephants. These survey zones will be surveyed each month for the next 6 months, in 'Survey Replicates' to cover the dry season 2022-2023.

In **2022**, we **conducted 3 Survey Replicates**, which resulted in a total of **377** dung samples collected.



# Asian Elephant (*Elephas maximus*) population survey

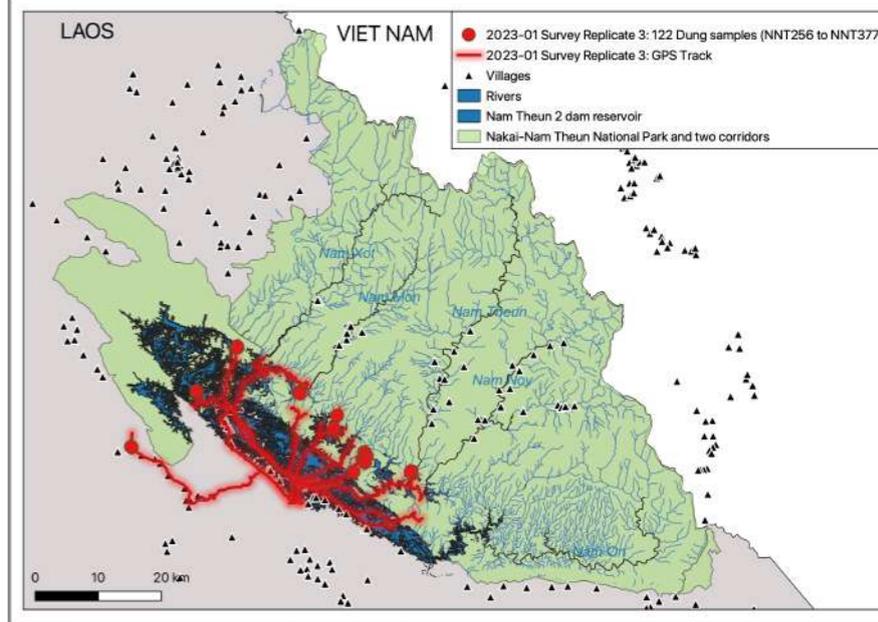
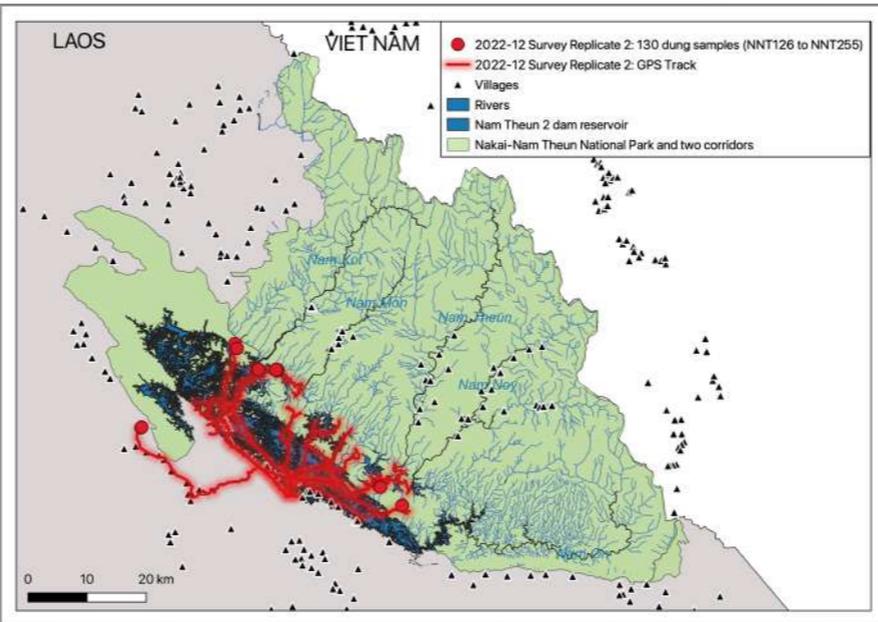
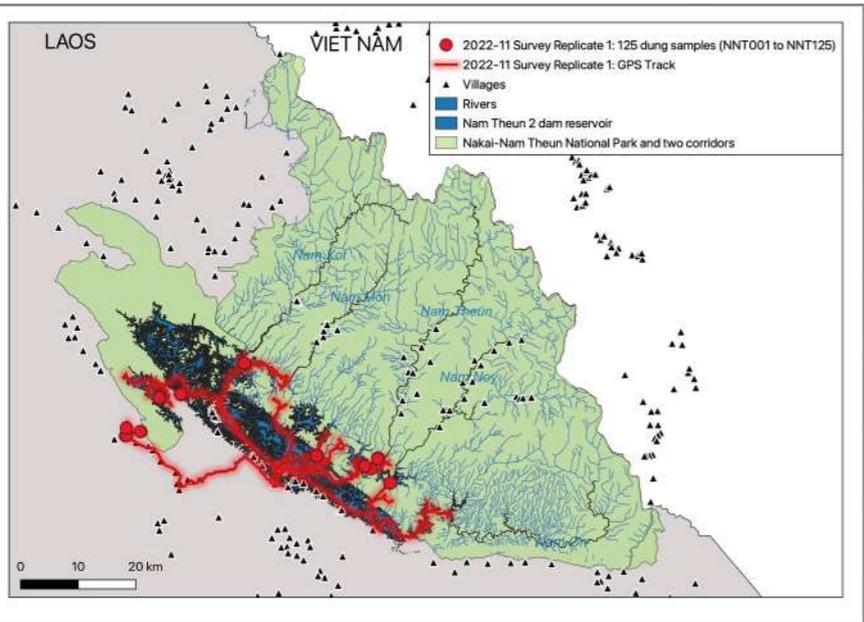


Survey design identifying Survey Zones that will be re-visited at each sampling Replicate. Visits survey effort will be targeted at specific locations within the survey zone with recent reports of elephants to maximize the collection of fresh dung

**SURVEY REPLICATE #1 November 2022**

**SURVEY REPLICATE #2 December 2022**

**SURVEY REPLICATE #3 December 2022**



# Survey and distribution of the Endangered *Luciocyprinus striolatus*

**Rationale:** *Luciocyprinus striolatus* (Local names: Pa Khouan-Zai, Pa Kang, Pa Sak) is a species of endangered cyprinid native to parts of Laos and China. The species is believed to be already extinct from China, which make Laos the only country to protect the species. The distribution of the species in Laos remains little known, as well as the threats it faces where the species has been confirmed. There are currently only two locations in the country where the species has been recorded: Nam Pak river, a tributary of the Nam Ou river in Oudomxay Province, northern Laos; and Nam Kading/ Nam Theun river, a tributary of the Mekong river, in Khammouan Province, central Laos. Confirming the confirmation status of the species in Laos is crucial to inform conservation planning for the species.

In **2022**, we initiated a **collaborative research and conservation project** on the **Endangered Wolf Barb *Luciocyprinus striolatus*** that aims to develop scientific knowledge and understanding of the abundance, distribution, life cycle and threats of this data-poor endangered species in order to conserve and protect the population in Laos.

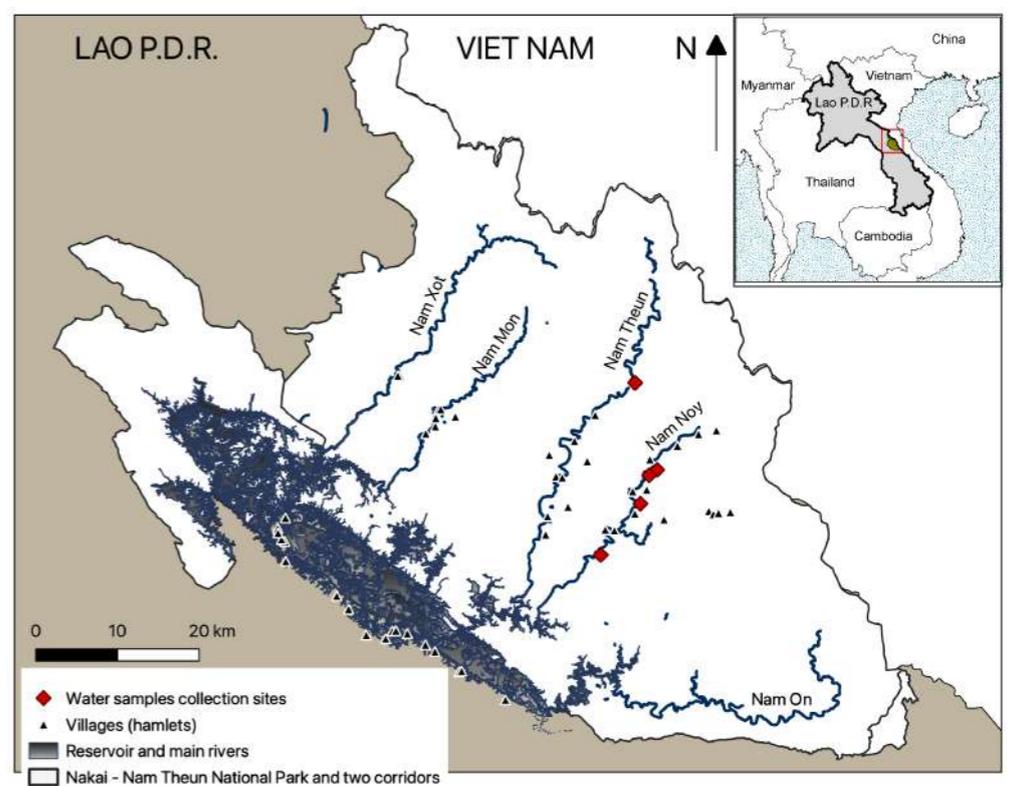
The overall objectives of the project will include:

- Conduct an assessment of the threats to *Luciocyprinus striolatus* in Nakai – Nam Theun National Park watershed
- Conduct an assessment of the current presence/absence, distribution, abundance, and ecology of *L. striolatus*
- Conduct workshops to discuss conservation action plans for the species

This project is a collaboration between Association Anoulak and technical partner Fishbio (Fishbio received co-funding from IUCN/CEPF for this project)

In **April 2022**, we conducted water-sampling collection in two rivers (Nam Theun and Nam Noy) in Nakai-Nam Theun National Park to detect the species via environmental DNA technique. We collected **six water samples** that were analysed in the Fishbio laboratory in the US: **the species' DNA was detected in both rivers.**

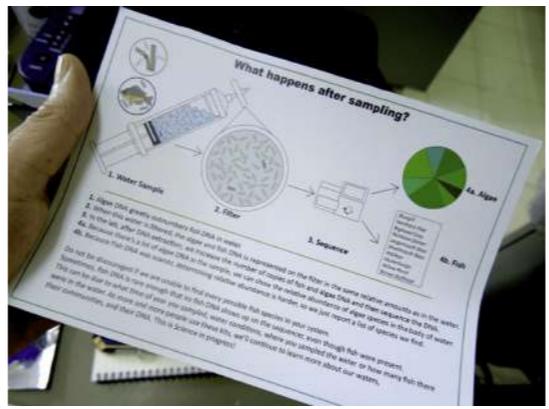
We will be collecting additional samples at other sites inside the National Park in 2023.



## A short video of the field mission:

A research and conservation project on the Endangered *Luciocyprinus striolatus* in Nakai-Nam Theun National Park 2022-2023

The image shows a photograph of a *Luciocyprinus striolatus* fish, which is a species of cyprinid. The fish has a slender, elongated body with a prominent red stripe running along its side and a red-tipped tail. It is shown against a dark background.



# Consultancy collaboration in other sites in the Annamite Mountains

**Rationale:** As part of our **commitment to biodiversity conservation in the Annamite Mountains of Laos**, we work in **collaboration with partner institutions** in other sites in the Annamite Mountains. These interventions notably include setting up systematic wildlife monitoring programs, following the same approach we have been implementing in Nakai-Nam Theun National Park. This will provide the opportunity to study the distribution and occupancy of species endemic to the Annamites and **prioritize sites in conservation planning** across the Annamite Mountains region.

In 2021, Association Anoulak started a consultancy collaboration with WWF-Laos to implement a systematic biodiversity monitoring program with camera-traps in one of WWF-Laos target sites in Laos as part of the Carbon and Biodiversity Phase 2 project (CarBi 2)<sup>[1]</sup>: Xe Sap National Protected Area (in Sekong and Salavan Provinces), located along the Annamite Mountain range.

In **2022**, our technical team conducted **camera-trap surveys** in the two last zones. In addition we managed and reported to **WWF** on all data collected so far. The surveys will be completed in 2023.





# Anti-poaching patrols in 2022

# Anti-poaching patrols

**Rationale:** Illegal poaching in Nakai-Nam Theun National Park have led in the past few decades to declines in biodiversity populations and local species extirpations, including several globally threatened and endemic species. In order to conserve the current remaining populations of threatened species in the area and allow animal populations to recover from past hunting pressure, it is imperative that an **intensive anti-poaching patrol system** is put in place **over the long-term**. To do so, site prioritization is essential. Three Biodiversity Priority Zones have been identified in terms of their qualitative and quantitative biodiversity value. We collaborate with current law enforcement technical teams and authorities and support anti-poaching patrols that complement existing efforts from the national park.

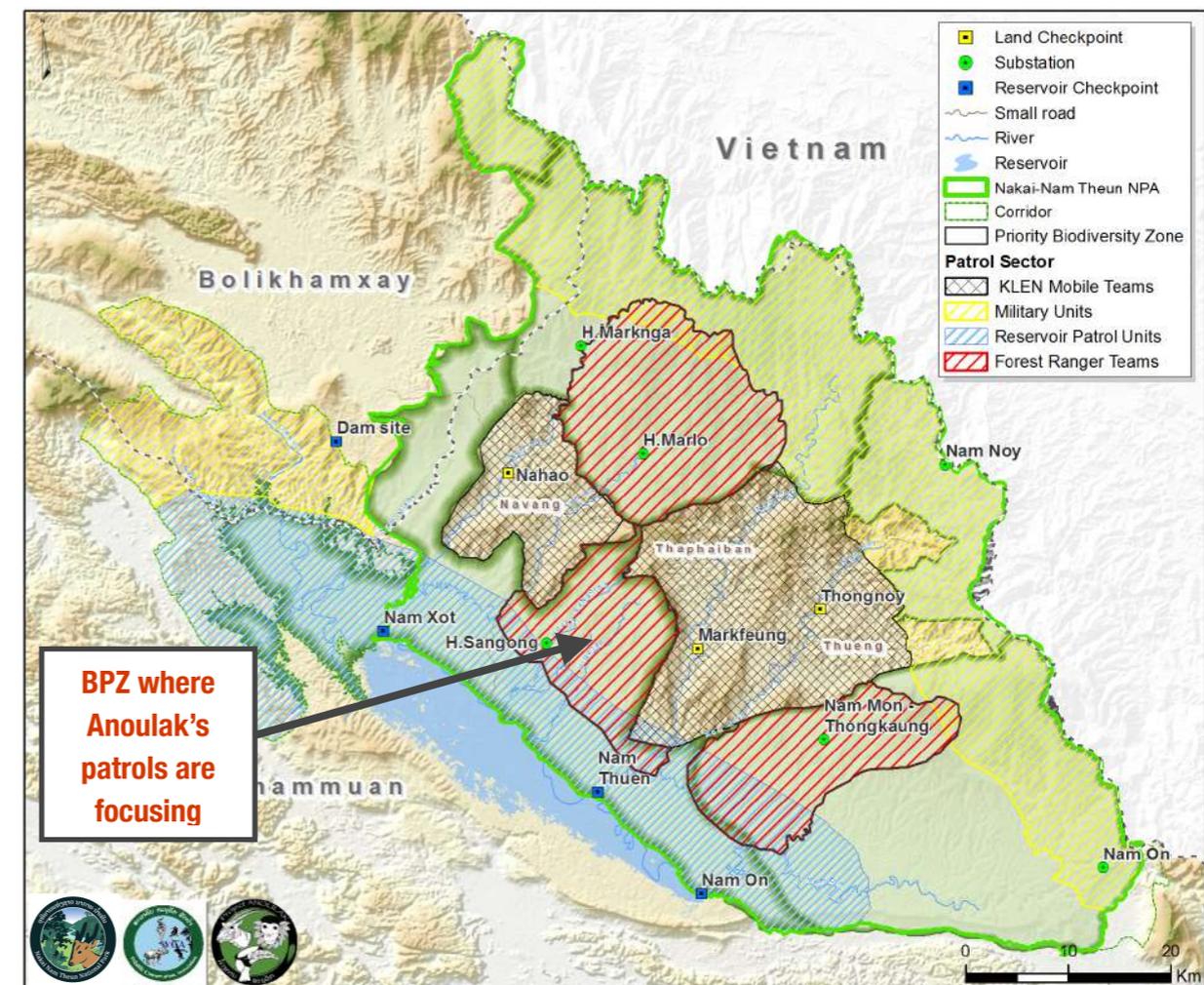
## Context

We are working in close collaboration with the Nakai - Nam Theun National Park authority and its technical law enforcement team to coordinate our efforts in anti-poaching patrols as part of the overall Law Enforcement Strategy for the national park. Data management and work flow is facilitated with the Program SMART (Spatial Monitoring and Reporting Tool ; <http://smartconservationtools.org/>).

The law enforcement strategy for the national park is based on sites prioritization where forest patrols are focusing on three Biodiversity Priority Zones (BPZ; the three BPZ where delineated based on a consultation workshop with experts coordinated by Association Anoulak in 2015 and represent zones with the highest value in terms of biodiversity richness, wildlife population abundance and relative lower level of threats).

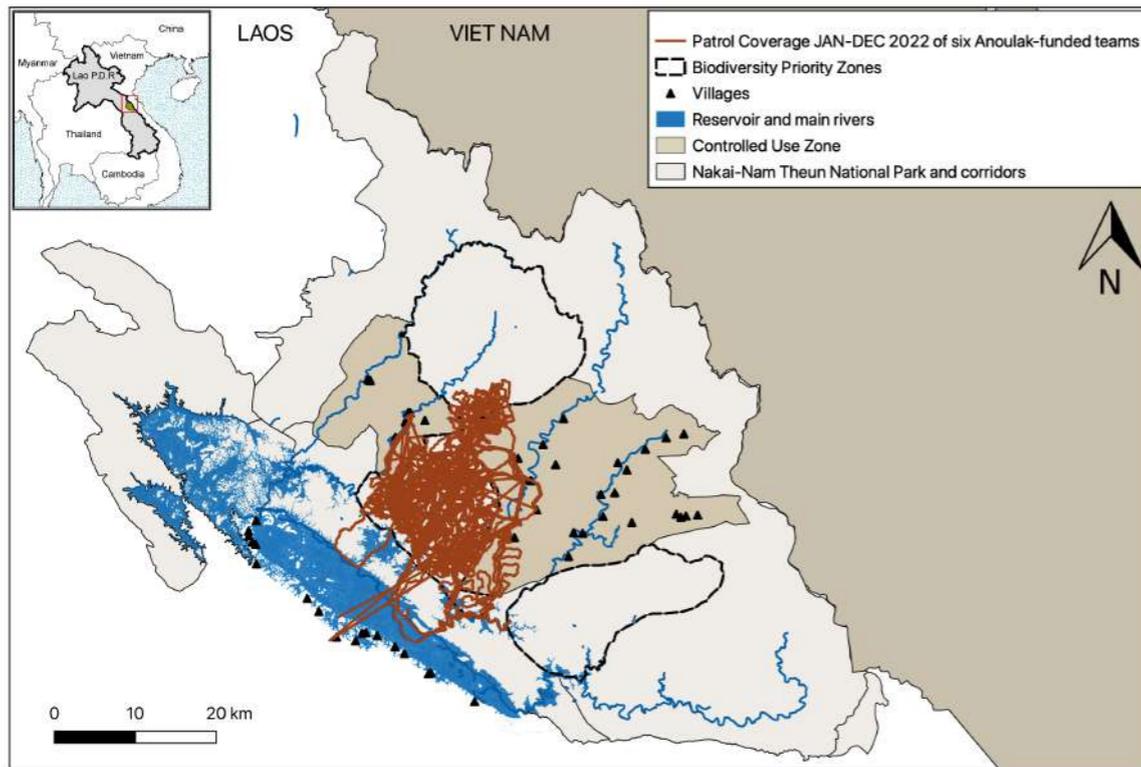
**Association Anoulak financially supports 6 anti-poaching patrols (i.e. 36 trained villagers from the local community)** deployed mainly in the Nam Chae Biodiversity Priority Zone

Patrols in the other two BPZs (and other key areas) are supported and managed by the Nakai-Nam Theun National Park authority.



*Strategic zonation of law enforcement in Nakai-Nam Theun. This includes three Biodiversity Priority Zones (BPZ; ~700 km<sup>2</sup>) where 'Forest Ranger Teams' focus their patrols. Association Anoulak's six ranger teams focus on one of these three zones (indicated on the map).*

# Association Anoulak's Patrol Report for 2022



Patrol coverage from GPS tracklogs of the six (6) patrol teams combined financially supported by Association Anoulak for the year 2022.

**New from 2023:** It was discussed and agreed with the Nakai-Nam Theun National Park that from 2023, Association Anoulak will no longer support financially the 6 patrol teams that have been supported in the past years (since 2016).

The 6 teams will however continue to patrol as usual, funded and managed by the National Park, and planned accordingly in the park's annual budget for 2023. This will ensure the sustainability of the source of funding available for these activities.

Association Anorak will continue to support on technical aspects of the law enforcement, where it may be required.

## Patrol effort from 1st Jan 2022 to 31st Dec 2022

Patrol team	Number of Patrols	Number of Days	Distance (km)
Thaiphai banh Team	12	180	1814
Makfuang Team	12	180	1984
Fangdeng Team	12	176	1860
Navang Team	11	164	1983
Korbong Team	13	169	1440
Nakang Team	12	179	1973
<b>Total</b>	<b>72</b>	<b>1048</b>	<b>11053</b>

## Total number of poachers encountered

	Observed Only	Escaped	Written warning	Confiscated items	Arrested
<b>Total</b>	<b>1</b>	<b>26</b>	<b>54</b>	<b>58</b>	<b>0</b>

## Total number of snares collected

	Snares (all types)
<b>Total</b>	<b>483</b>

## Total number of firearms collected

	Semi Automatic	Hand-made guns
<b>Total</b>	<b>0</b>	<b>0</b>





## **Community sustainable livelihoods in 2022**

# Community resilience and biodiversity conservation in Nakai District

**Rationale:** Local communities on in Nakai District (1) are highly reliant on natural resources for their livelihoods, (2) their food security often is dependent on foods collected in the wild; (3) their income generation often is dependent on unsustainable natural resources harvest, (4) often practice unsustainable agriculture; (5) are lacking of entrepreneurship capacity, and technical capacity. This project aims to address some of these issues to provide alternative income to local communities

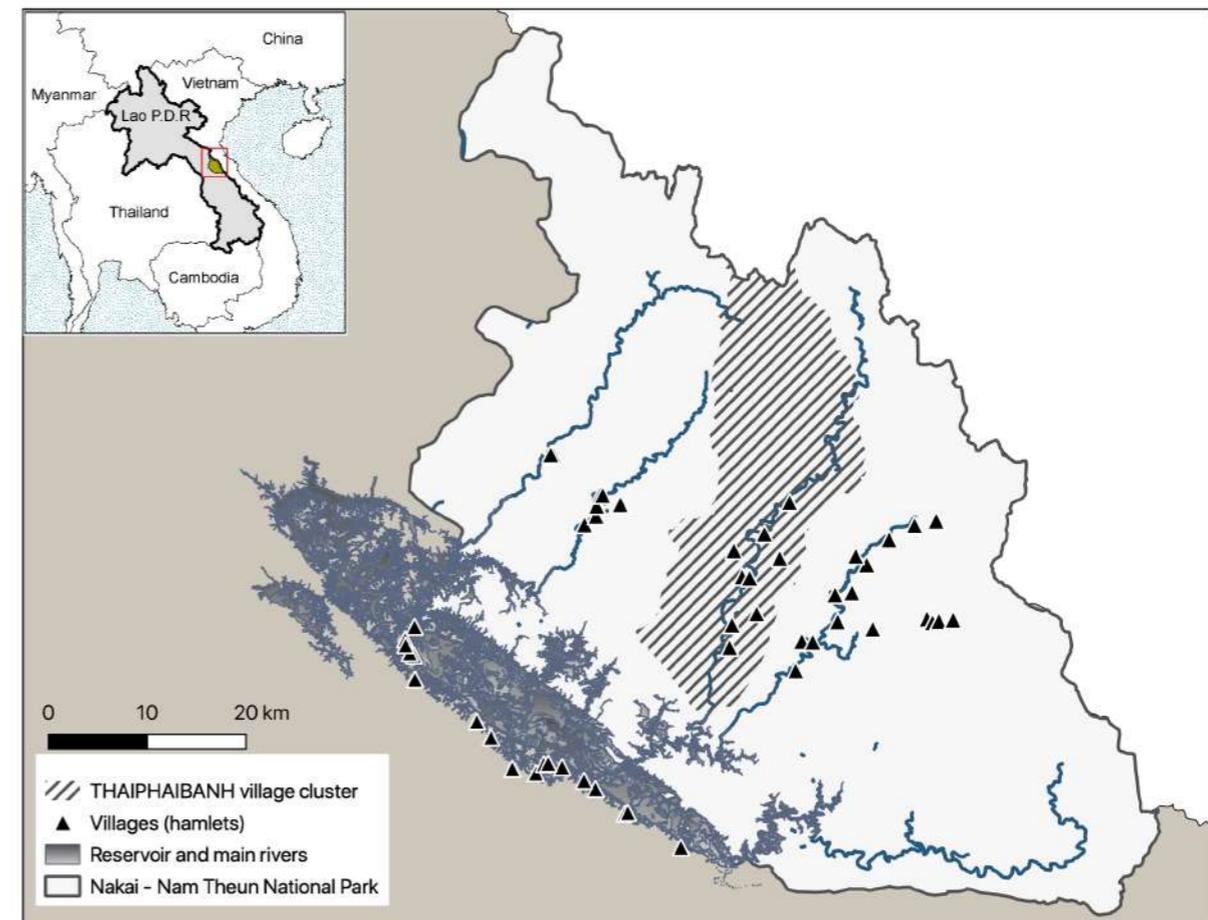
Since 2019, Association Anoulak initiated the project *Community Resilience and Biodiversity Conservation in Nakai District, Lao PDR*.

## Project overall aims

- Support the local communities in implementing innovative and sustainable approaches to bring **alternative incomes** and to **preserve local traditional craftsmanship and cultural integrity**
- **Reduce the illegal and unsustainable use of natural resources** (including plants and wildlife; e.g. illegal poaching/logging/land encroachment) in Nakai-Nam Theun National Park to contribute to biodiversity conservation in the region

## Project location

All the activities are based in **Thaphaibanh village cluster** (one of the three village clusters within the Nakai – Nam Theun National Park), where villagers are the **most reliant on natural resources for their daily livelihoods**. Villagers from this cluster have also been identified as the most vulnerable in terms of food security and income. Thaphaibanh village cluster includes includes **4 villages** (further divided into nine hamlets), **520 households and >1200 people**.



*Location of Thaphaibanh cluster in Nakai – Nam Theun National Park where the project activities are implemented*

## Project approach

Since the beginning of the project in 2020 and up to 2022, we have progressed with a **step-by-step and community-based (bottom-up) approach**, to eventually meet our **goal of a self-functioning alternative income generation for local communities** based on **sustainably sourced and harvested forest products with added value**. Since 2020, we have worked on **securing the market demand and production process**. We focus on **technical capacity building** of the local community and local stakeholders to provide them the **knowledge, confidence and power** to become the leaders in the projects they initiate.



## Project updates and summary accomplishments in 2022

By the end of **2022**, a total of **96 households** are involved in the program (**171 villagers [78 women]**). The villagers involvement is voluntary based on their interest.

Since the beginning of the project in 2020, it is a **cumulated total** of 189,069,000 LAK (**~11,084 USD**) of **cash income directly benefited to the crafters** (in 2021: 6,583 USD; in 2022: 4,500 USD).

In addition, in **2022** we set-up a **village-level 'handicraft fund'**: all handicrafts are purchased fairly at the cost decided and agreed commonly by all villagers and sold back by Anoulak at cost with added value of at least 5000 LAK (~0.5 USD) per item (depending where it is sold), which is reallocated to the village-level 'handicraft-fund'. Overall, it is a cumulated total of 47,510,000.00 LAK (**~2,784.00 USD**) handed over to the handicraft-fund since 2020 (in 2021: 1752 USD; in 2022: 1032 USD), used by each of the 4 villages for future activities as part of the program.

We conducted **monthly Monitoring, Evaluation and Learning missions** to the 4 target villages to follow up the implementation of their village action plans, resulting in:

- Product design, order, production supply, quality control check and direct purchase from crafters
- Trainings from elder crafters to the youth
- Support and lead villagers in the implementation of their plans and train and support the villager facilitators in following up all activities at the village-level





## Project updates and summary accomplishments in 2022 (continued)

We supported the community in the initiating a pilot **natural resources management** to ensure the **sustainable sourcing of natural products**:

- We conducted **socio-cultural survey of families** to better **understand the traditional cultural natural resource management** practiced by families, so that activities are integrated into traditional practices.
- A **community village forest plot** was delineated by villagers to **develop a pilot management plan at the species and landscape levels**: 165 rattans and 177 Pandanus seedlings were planted in the plot. A **management plan rules** was drafted by the villagers. A **harvesting calendar** per species used for craftings was prepared.



We supported the community and local stakeholders to set-up **village-level handicraft production groups** including training, and knowledge exchange study tours:

- In **April 2022**, a study tour to **Bolikhamsay Province** to visit the a program lead by **WWF-Laos** to learn about sustainable **management of Rattan and Bamboo resources** and **handicrafts village production groups**
- In **October 2022**, a **study tour** to the **21<sup>st</sup> National Lao Handicraft Festival 2022**, in Vientiane capital brought the village facilitators team, best crafters and youth from Nakai to have an exchange on lesson learned from existing handicraft production groups from Salavan and Luang Namtha Provinces.
- In **December 2022**, **study tour** exchange on handicraft value chain and sustainable natural resources from a project in **Luang Namtha Province**, with 59 participants (14 women), including 21 (6 women) from Nakai district.

## Project updates and summary accomplishments in 2022 (continued)

We organized for the local community and local stakeholders to visit several **handicraft festivals** in Laos to sell their products. These market fairs also give them the opportunity to promote their craft and connect with potential traders and other crafters from Laos in order to establish a long-term sustainable value chain for their handicrafts and other natural products. The handicraft markets and fair visited included:

- From the 25th to 28th of March 2022, the **Folk Art Market Fair** organized by the Crown Plaza in Vientiane Capital.
- On the 17th September 2022, at the **Open Day Market** French Institute in Vientiane Capital.
- From the 15th to 23rd of October 2022, the **21st Annual National Lao Handicraft Festival** held in Vientiane Capital.
- From the 26th to 30th of October 2022, the **Lao-Vietnamese handicraft market** held in Thakhek.
- From the 9th to 11th of December 2022, the **Christmas Market Fair** organized by the Crown Plaza in Vientiane Capital.



**Folk Art Market Fair at Crown Plaza, Vientiane**



**Open Day Market French Institute, Vientiane**



**Christmas Market at Crown Plaza, Vientiane**



**21st Annual National Lao Handicraft Festival, Vientiane**

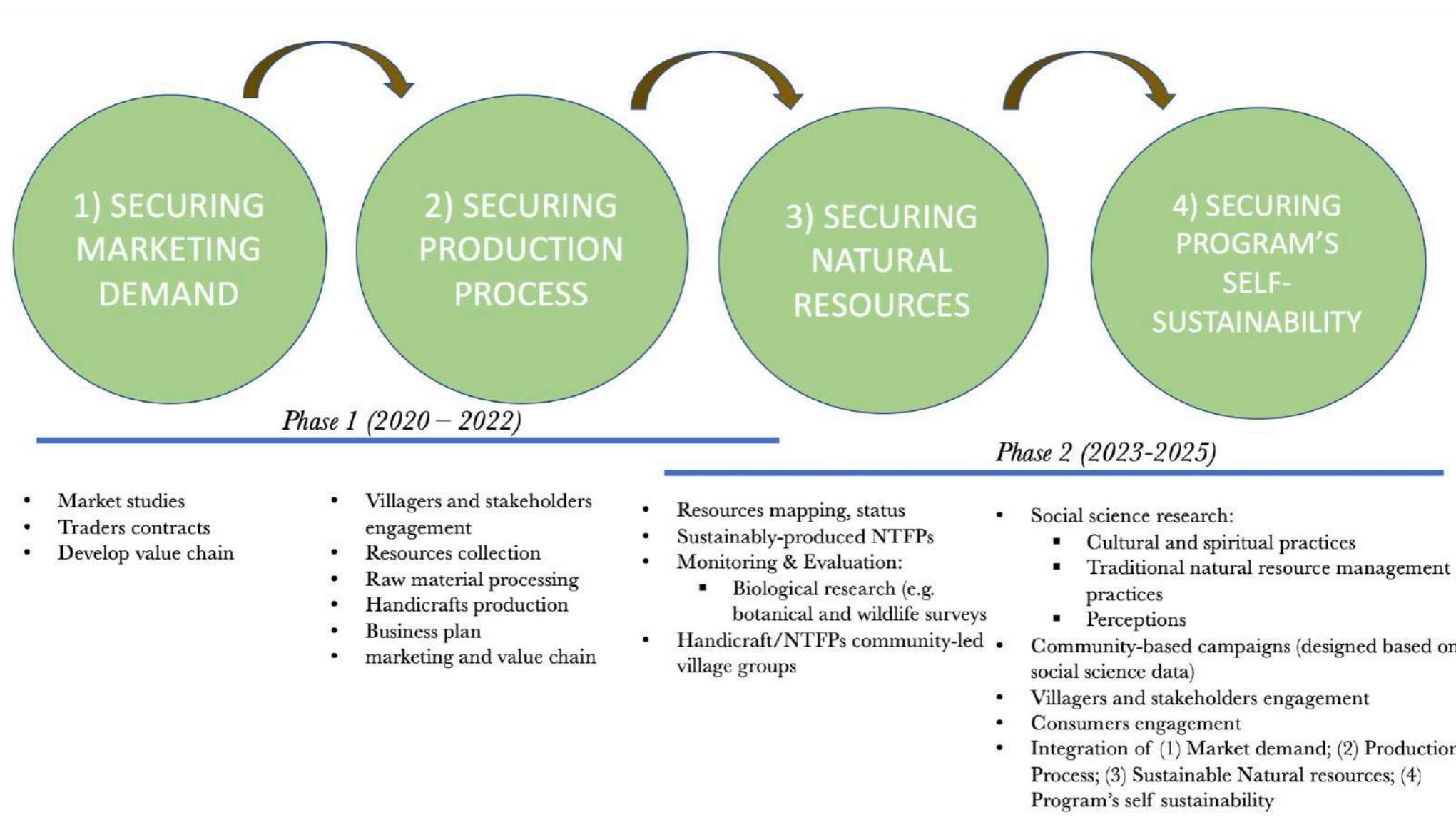


**Lao-Vietnamese handicraft market, Thakhek**



In **2022**, we secured **additional funding** for the next three years (2023-2025) to **implement Phase 2** of the project, with the following two main objectives and expected results:

- Establish **village-level and/or cluster-level Non-Timber Forest Products production groups** functioning, including all processes along the value chain of the products (sustainable collection and production respecting ecology of selected products, quality control, marketing), resulting in a sustainable income going directly to the local communities
- Explore and assess with the local communities and the involvement of external experts and consultants the **potential of value chain of other forest products** that can generate sustainable income, be sustainably harvested and reduce illegal harvest of forest products and wildlife hunting.
- Establish a functioning **natural resources management plan for sustainable sourcing of natural products**, in at least one pilot village (transferred knowledge and practice to all other villages), agreed at the community, district and provincial levels.





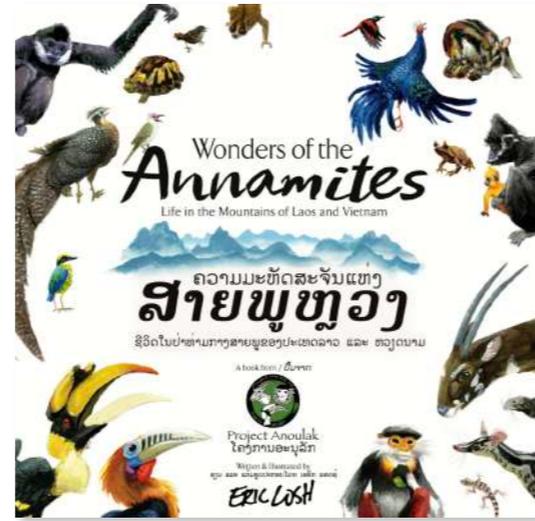
## **Conservation awareness in 2022**

# Conservation awareness published books and posters

**Rationale:** There is a general lack of knowledge by the national and international community of the rich biodiversity from the region and the critical threat it is facing. Knowledge is one of the key components to protect biodiversity. Association Anoulak has made one of its numerous missions to raise awareness of young and older humans, from the region and abroad, of the beautiful nature of Laos, and the importance of biodiversity conservation. Art and storytelling are great ways to do so, and notably through the publication of attractive and informative books about animals and nature.

## Wonders of the Annamites

**Wonders of the Annamites** is written and illustrated by Eric Losh and Camille Coudrat. It was first published in 2016-2017 by Association Anoulak in three editions: English-French; English-Lao; English-Vietnamese.



## Protect Your Health - Protect Wildlife

**Protect Your Health - Protect Wildlife** is a bilingual Lao-Eng poster/brochure to raise awareness in Laos of the human health risks of consuming wildlife created in partnership with graphic designer Josephine Billeter. It was published by Association Anoulak in 2020.



## Spirit of the Saola

**Spirit of the Saola** is written by Melody Kemp and illustrated by Dao Van Hoang. It was first published in 2018 by Association Anoulak in English-Lao edition.



## Pangolin Life of a scaly anteater

**Pangolin Life of a scaly anteater** is written and illustrated by Joséphine Billeter. It was first published in 2019 by Association Anoulak, Pha Tad Ke Botanical Garden and Comité de Cooperation avec le Laos in English-Lao edition.



In **2022**, these publications continued to be disseminated through different channels.



## **Communication and publications in 2022**

# On our Website and Email Subscribers List

Number of Blogposts  
in 2022 =  
**18**

Number of  
Anoulak Newsletters sent  
in 2022 =  
**6**

The screenshot shows the 'Lastest news' section of the Anoulak website. It features a navigation bar with links for Home, About, Our Projects, Galleries, Resources, News, Our books & posters, and Support Us. The main content area displays four news items, each with a thumbnail image, a date, a title, a short description, and a 'Read more' button.

- January 1, 2023:** Happy New Year 2023 from Team Anoulak! Dear friends and supporters, This year 2022, has been very busy, yet it has gone so fast. Once again Team Anoulak has worked with dedication towards [...]
- December 29, 2022:** New Publication on our research on otters in Nakai-Nam Theun National Park! We are pleased to share our new publication on our otter research in Nakai-Nam Theun National Park, published in Ecology and Evolution journal! In this study, [...]
- December 26, 2022:** Promoting the crafting skills of the local communities of the Nakai-Nam Theun National Protected Area This end of year 2022, our community project team was busy to prepare visits to various handicraft festivals in Laos. From the 15th to 23rd of [...]
- December 4, 2022:** We begin a population survey of the Asian Elephant on the Nakai Plateau and the Nakai-Nam Theun National Park! In November 2022, we began our new project to survey the population of Asian Elephant (Elephas maximus) in Nakai-Nam Theun National Park and surrounding areas. One [...]

The screenshot shows an email newsletter from Anoulak. It features the organization's logo and a header image with the text 'Association Anoulak : Biodiversity conservation in the Annamite Mountains of Laos'. The main content includes a 'Happy New Year 2023 from Team Anoulak!' message, a 'New Publication on our research on otters in Nakai-Nam Theun National Park!' announcement, and a 'Help us to promote conservation to local community' call to action. The footer contains social media links and contact information.

**Association Anoulak : Biodiversity conservation in the Annamite Mountains of Laos**

**Anoulak Newsletter**

Discover in this email the 3 last news from our blog

**Happy New Year 2023 from Team Anoulak!**

Dear friends and supporters,

This year 2022, has been very busy, yet it has gone so fast. Once again Team Anoulak has worked with dedication towards achieving our mission of protecting the biodiversity of the Annamite Mountains of Laos.

This year 2022, we progressed on all our programs including our Biodiversity Research and...

[Read more](#)

**New Publication on our research on otters in Nakai-Nam Theun National Park!**

We are pleased to share our new publication on our otter research in Nakai-Nam Theun National Park, published in Ecology and Evolution journal!

In this study, we conducted baseline otter fecal DNA surveys based on mitochondrial DNA (mtDNA) to identify species, assess the occurrence...

[Read more](#)

**Help us to promote conservation to local community**

[Support Us](#)

**Social Media**

- Facebook
- @ConservationLao

**Contact us**

If you want to learn more or have any question about Project ANOULAK, feel free to contact us by [this form](#) or by email: [info@conservatorias.com](mailto:info@conservatorias.com)

© 2023 Projet Anoulak. All rights reserved.

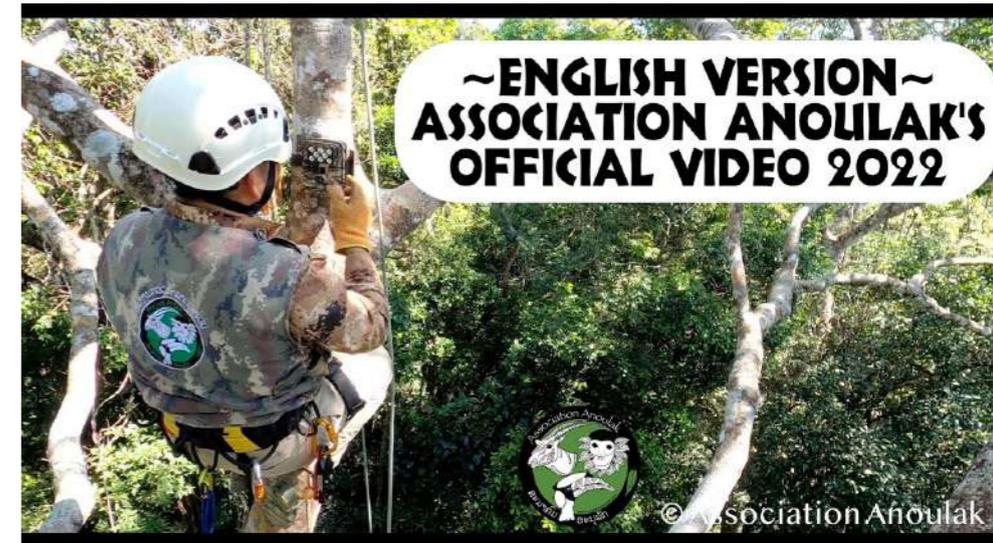
# Video Productions

In **February 2022**, our team welcomed Lao film maker Mr. Xaykhome Manilasith to produce for us a promotional video about Association Anoulak.

We spent together 10 days in the field. During this mission, Mr. Xaykhome had the opportunity to follow some of our key activities we implement under our programs on biodiversity research and monitoring; forest patrols and community alternative and sustainable livelihoods.

The mission also provided a great opportunity for us to get professional photographs of the forest, landscapes and of our teams in action.

Our official video was published on our **YouTube Channel** in **July 2022**. It is available in **ENGLISH**, **FRENCH** and **LAO**.



# Video Productions

In **February 2022**, we published a video on our **YouTube Channel** that presents our project that supports local communities' handicraft value chain strategy in Nakai – Nam Theun National Park.

This video aims to promote the traditional skills of ethnic minorities (Makong/Bru) from the beautiful national park in Khammouan Province.

It was produced by Lao film maker Mr. Xaykhame Manilasith who came to visit our project in 2021.

It is available in **LAO**, **ENGLISH** and **FRENCH** versions:



# Scientific Publications

Alexiou, I., Abrams, J.F., **Coudrat, C.N.Z.**, Nanthavong, C., Nguyen, A., Niedballa, J., Wilting, A., Tilker, A. (2022) [Camera-trapping reveals new insights in the ecology of three sympatric muntjacs in an overhunted biodiversity hotspot](https://doi.org/10.1007/s42991-022-00248-0). Mammalian Biology.

<https://doi.org/10.1007/s42991-022-00248-0>



**Coudrat, C.N.Z.**, Chutipong, W., Sukmak, M., Sripiboon, S., Klinsawat, W. (2022). [Taxonomic status of otter species in Nakai-Nam Theun National Park, Lao PDR, based on DNA evidence](https://doi.org/10.1002/ece3.9601). Ecology and Evolution. <https://doi.org/10.1002/ece3.9601>



In **2022**, we also worked with our partners on several other publications, on our different research projects, that will be published in 2023.



**Partner meetings,  
presentations, public  
talks and events in 2022**

# Meetings, Presentations and Public Talks

- From **15 to 19 August 2022**, Dr. Camille Coudrat, founder and director of Association Anoulak visited **Mulhouse Zoo**. Camille gave a presentation to Zoo staff to provide an overview of Association Anoulak's ongoing work and future work in Laos.

Camille also met the zoo visitors for a day to explain what it is like to work in the field to protect biodiversity. She raised awareness of the role of zoos in biodiversity conservation. The teams at **Mulhouse Zoo** also organized a booth to sell some Association Anoulak's goods to raise funds for on-the-ground activities of the association. Some activities were also offered to children and their parents to learn more about gibbons and their behaviour.



# Meetings, Presentations and Public Talks

- On **9 September 2022**, Dr. Camille Coudrat visited our partners at **Mandai Wildlife Reserves** and **Mandai Nature** to give a talk to their staff members. Some 40 team members attended the talk with very engaging questions to better understand Association Anoulak's work in Laos.



- On **28 September 2022**, Dr. Camille Coudrat gave a public talk for the Vientiane community to speak about the rich and fascinating biodiversity of the Annamite Mountains of Laos. This public talk was organized by the **Cultural Studies Series** (CSS) which coordinates monthly talks by members of the community in Laos (researchers and experts in their respective fields) with the aims to promote understanding and appreciation of Lao culture.

**Biodiversity Conservation in the Annamite Mountains**

A talk by  
**Camille Coudrat of Association Anoulak**

Wednesday, 28 September  
at Kualao Restaurant Meeting Room  
Doors open at 19:00 for a 19:30 start  
Entry: 50,000 kip (standard), 10,000 kip (student)

The poster features images of a monkey, a bird, and a group of people. The Cultural Studies Series logo is at the bottom.



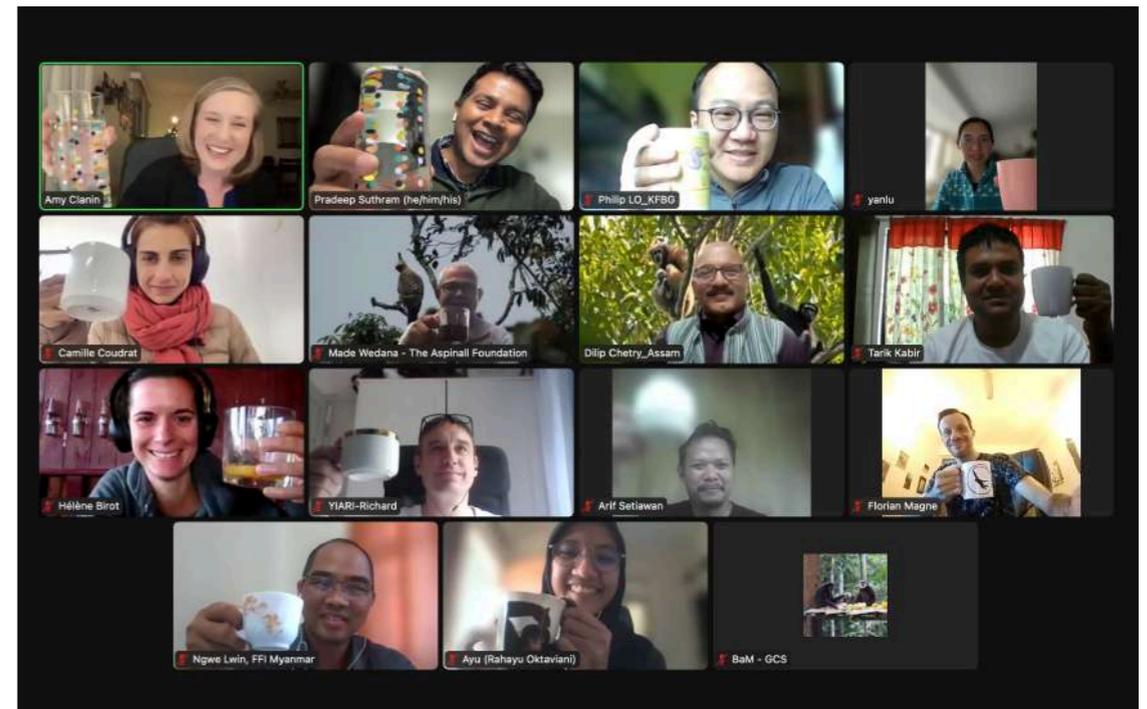
# Other Events

- From **8 to 11 August 2022**, Dr. Camille Coudrat and Dr. Lampheuy Kaensombath (Association Anoulak's Community Livelihoods Program Manager) participated in a fully-funded (thanks to one of our donors) training on ***Influencing Conservation and Sustainability Behaviour*** using the ***C.A.R.I.N.G.*** approach (Connected, Accountable, Realistic, Identity-relevant, Networked, Gratifying) to develop public campaigns applied to biodiversity conservation and the climate crisis.

The training was provided to a selected group of conservationists working in Southeast Asia and provided by the world-leading behavioural scientists from *INFLUENCE AT WORK UK*.



- In **December 2022**, Dr. Camille Coudrat was selected to enroll in a ***Leadership Learning Program*** for the *IUCN/SSC Primate Specialist Group Section on Small Apes*. The program will run until 2023. It is provided by *Design Pathways*.





## **Financial report for 2022**

In **2022**, our association **spent a total of 235,580 USD** for our activities

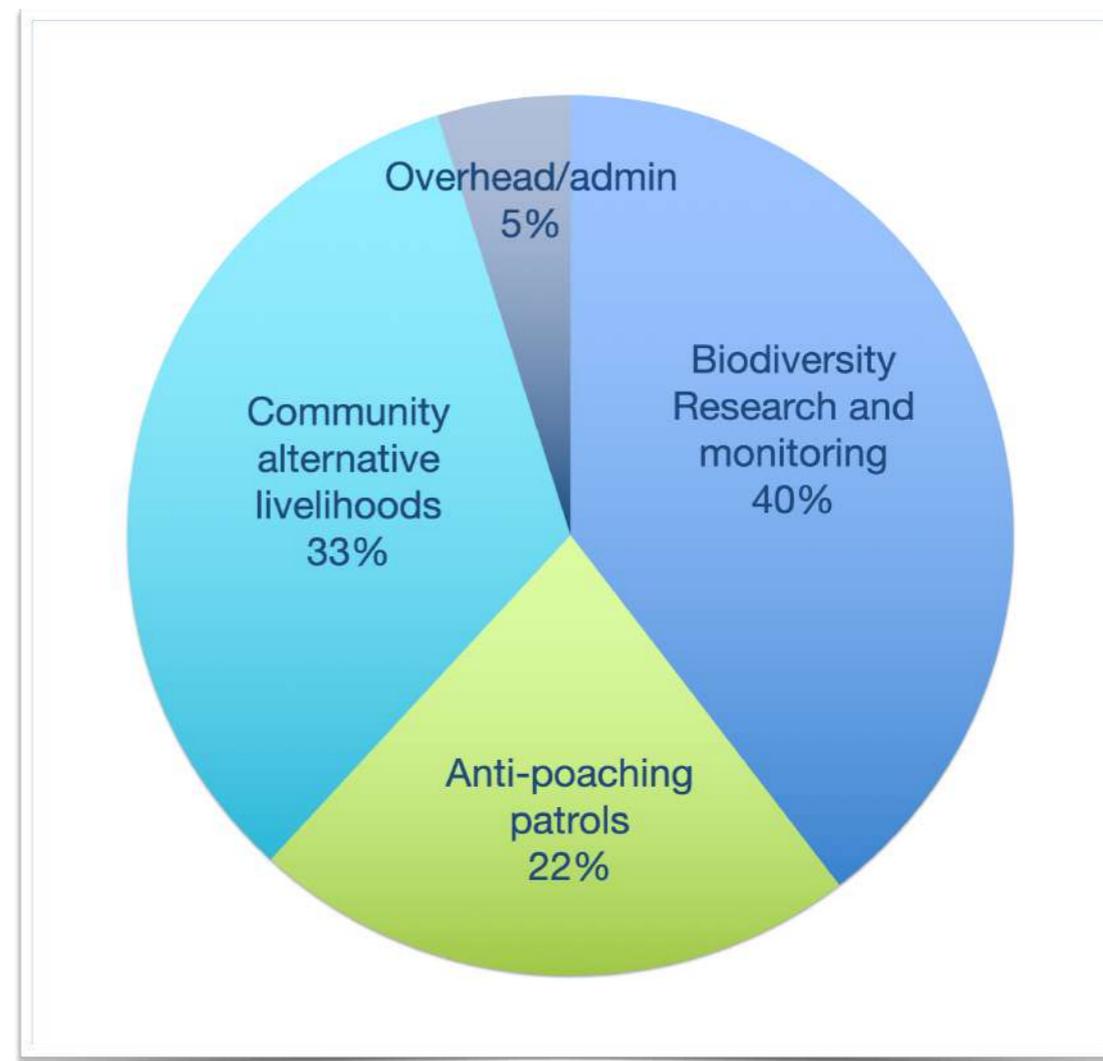
## INCOME 2022

TOTAL DONATIONS in 2022  
*for projects to be implemented in 2022-2023*      **276,814.00 USD**

## EXPENSES 2022

Programs/projects	Total spent	%
Biodiversity Research and monitoring	USD 93,349	40%
Anti-poaching patrols	USD 52,285	22%
Community alternative livelihoods	USD 78,522	33%
Overhead/admin cost	USD 11,424	5%
<b>TOTAL SPENT IN 2022</b>	<b>USD 235,580</b>	<b>100%</b>

- ▶ Of the Total Expenses, **79,182 USD (34%)** were allocated to **salaries**.





## Workplan for 2023

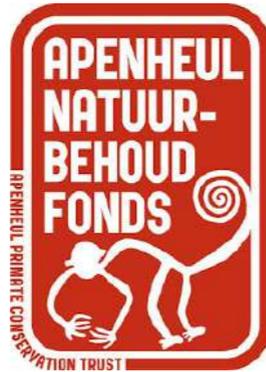
# Work Plan 2023 (tentative)

Associaton Anoulak	2023											
Project/Program	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<b><i>Biodiversity research and monitoring in Nakai-Nam Theun National Park</i></b>												
Wildlife populations monitoring with ground camera-traps												
Arboreal camera-trap monitoring												
Gibbon research: white-cheeked gibbon distribution range limit (data analysis)												
Gibbon research: gibbon survey method development (test of hardware/software prototype in the field)												
Elephant survey research (field survey + laboratory analysis + data analysis and reporting)												
<i>Luciocyprinus striolatus</i> survey research (field survey + laboratory analysis + data analysis and reporting)												
Pilot reptiles and amphibian surveys ( <i>to be confirmed</i> )												
Pilot botanical surveys ( <i>to be confirmed</i> )												
<b><i>Biodiversity research consultancy</i></b>												
Wildlife populations monitoring with ground camera-traps in Xe Sap National Protected Area + data management and reporting (as consultancy for WWF-Laos)												
<b><i>Community Livelihood Program</i></b>												
Program activities implementation: - <i>Objective 1</i> : Development and implementation of bottom-up Non-Timber Forest Products Production Groups - <i>Objective 2</i> : Natural Resources Management Plan for sustainable sourcing and use (will include village-level resource management plans, botanical research, social science)												
<b><i>Conservation Awareness</i></b>												
Participation in video footage for French television show ( <i>to be confirmed</i> )												
International Primatological Society Congress 2023												
Public talks and presentations ( <i>to be confirmed</i> )												
Publication of book about the Annamites ( <i>to be confirmed</i> )												
Capacity building courses for team ( <i>to be confirmed</i> )												



## Acknowledgements

# WE ARE GRATEFUL TO DONORS WHO SUPPORTED OUR ACTIVITIES IN 2022



Private individual donations: *David Borchers; Douglas Bender; Donald S Fitch; Stefan Koch*

# THANK YOU TO OUR PROJECT PARTNERS IN 2022



Leibniz Institute for Zoo  
and Wildlife Research  
IN THE FORSCHUNGSVERBUND BERLIN E.V.



University of  
St Andrews





**New Year's Greetings**



2023



Happy New Year

We wish you all a new year 2022 filled with new experiences, creativity, personal and professional projects and meaningful connections with people and nature

Contact:

[camillecoudrat@conservationlaos.com](mailto:camillecoudrat@conservationlaos.com)

**SUPPORT US**



Association Anoulak

Association Loi 1901 n°W044006152

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[www.conservationlaos.com](http://www.conservationlaos.com)

