



Annual Report

2021



Annual Report

2021

Table of Content

	Foreword	<u>4</u>
	About us	<u>5</u>
	Biodiversity Research and Monitoring in 2021	<u>9</u>
	White-cheeked Gibbons (<i>Nomascus siki</i> / <i>N. leucogenys</i>) distribution	<u>10</u>
	Gibbon survey methods development	<u>12</u>
	Wildlife populations monitoring with systematic camera-trap surveys	<u>13</u>
	Canopy camera-traps	<u>15</u>
	Otter surveys	<u>19</u>
	Consultancy collaboration in other sites in the Annamite Mountains	<u>20</u>
	Anti-poaching patrols in 2021	<u>21</u>
	Community sustainable livelihoods in 2021	<u>27</u>
	Conservation awareness in 2021	<u>36</u>
	Media communication and publications in 2021	<u>39</u>
	Partner meetings, presentations, public talks and events in 2021	<u>44</u>
	Financial report for 2021	<u>51</u>
	Workplan 2022	<u>53</u>
	Acknowledgements	<u>56</u>
	New Year's greetings	<u>59</u>

Foreword

The past two years have been challenging. Not only due to the COVID-19 pandemic but also due to political management transitions at the Nakai-Nam Theun National Park. But we have been able to adapt and carry on. Keeping our focus on what we are able to achieve, given the circumstances.

This year 2021 has also allowed me to take the time to analyze with partners large datasets that we collected over the past few years, and to prepare and publish several scientific papers, all with direct applications to species conservation in the Annamite Mountains.

In addition, in 2021, I have taken the time to develop new partnerships for the implementation of crucial new projects on threatened and endemic species. Our goals remain clear: the protection of biodiversity in the Annamite Mountains of Laos, with science-based and community-based approaches. These goals carry me forward for the many years to come.

I wish you all a resourceful (in all aspects of your life) new year 2022 (the year of the Tiger on the lunar calendar!), and hope you will enjoy this Annual Report 2021, as much as I enjoyed writing and creating it; it reflects our relentless commitment.

Camille.

Founder and director of Association Anoulak.
Laos, January 2021.





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 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

Association Anoulak currently employs 9 persons (4 women):
1 foreigner and **8 Lao people**:

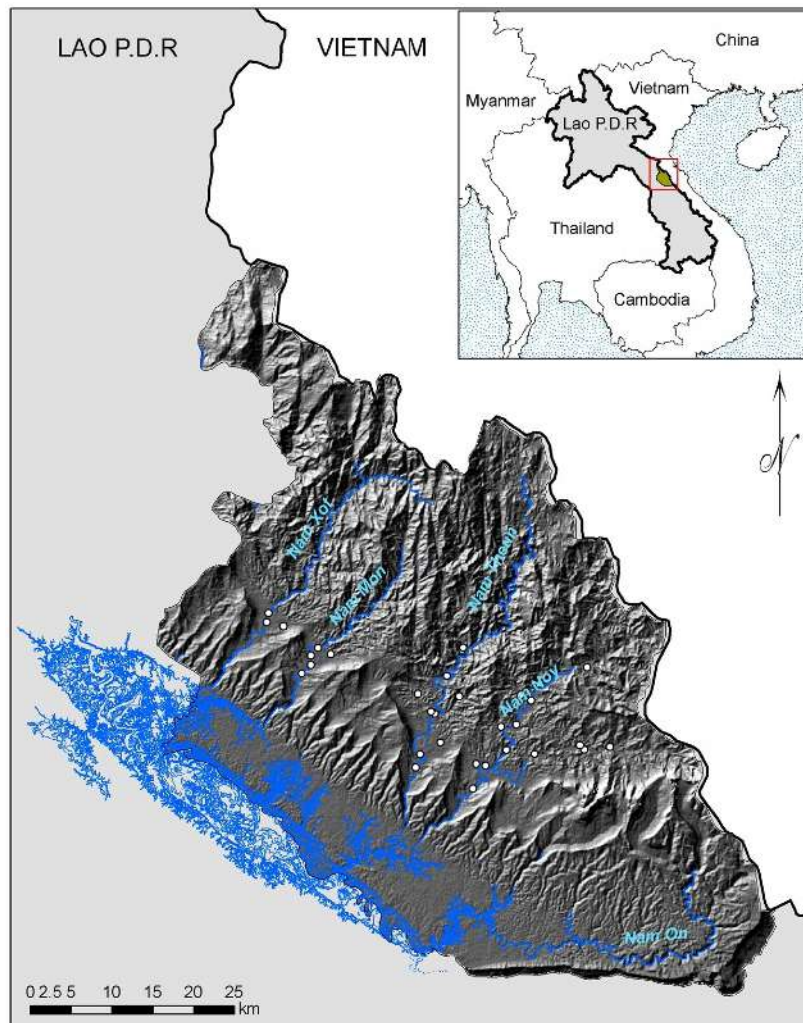
- Ms. Dr. Camille Coudrat - Association Anoulak's Founder and Director
- Ms. Dr. Lampheuy - Community project Manager (part-time)
- Ms. Sisamay - Community project local leader
- Ms. Laythong - Community project officer
- Mr. Khongphet - Community project officer
- Mr. Ouphakhone (Done) - Wildlife Fieldwork officer
- Mr. Chaolor - Wildlife Research Fieldwork officer
- Mr. Khammai - Patrols quality control and coordinator officer
- Mr. Khantaly - Patrols quality control and coordinator officer

In addition, 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
- Six village facilitators as part of our community sustainable livelihoods program

Region of focus and intervention

Nakai-Nam Theun National Park (3500 km²) 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. truongsongensis*; 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**

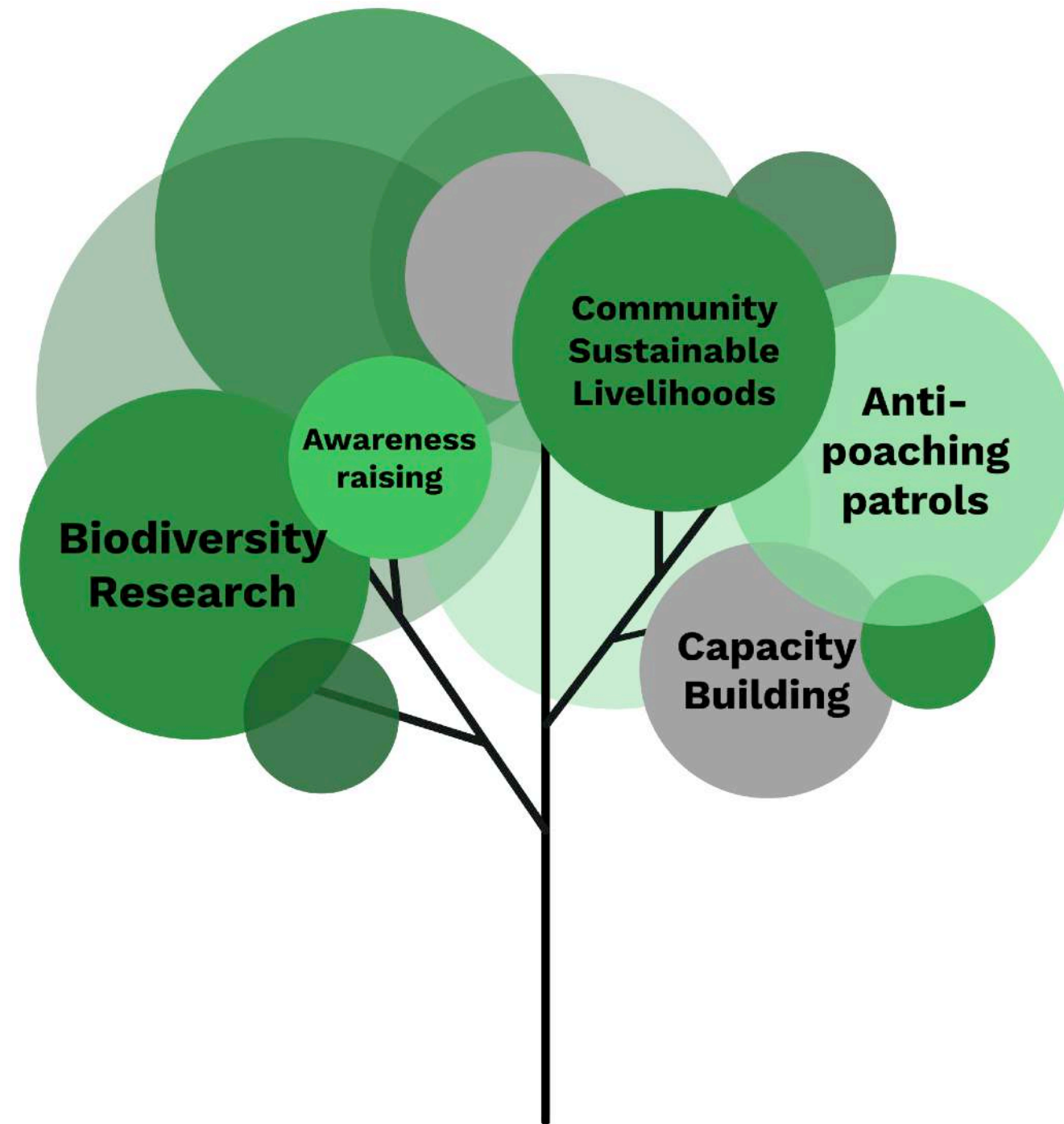
Objective: to raise awareness of the local and international community about the biodiversity of the Annamite mountains and the importance of protecting it.

***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





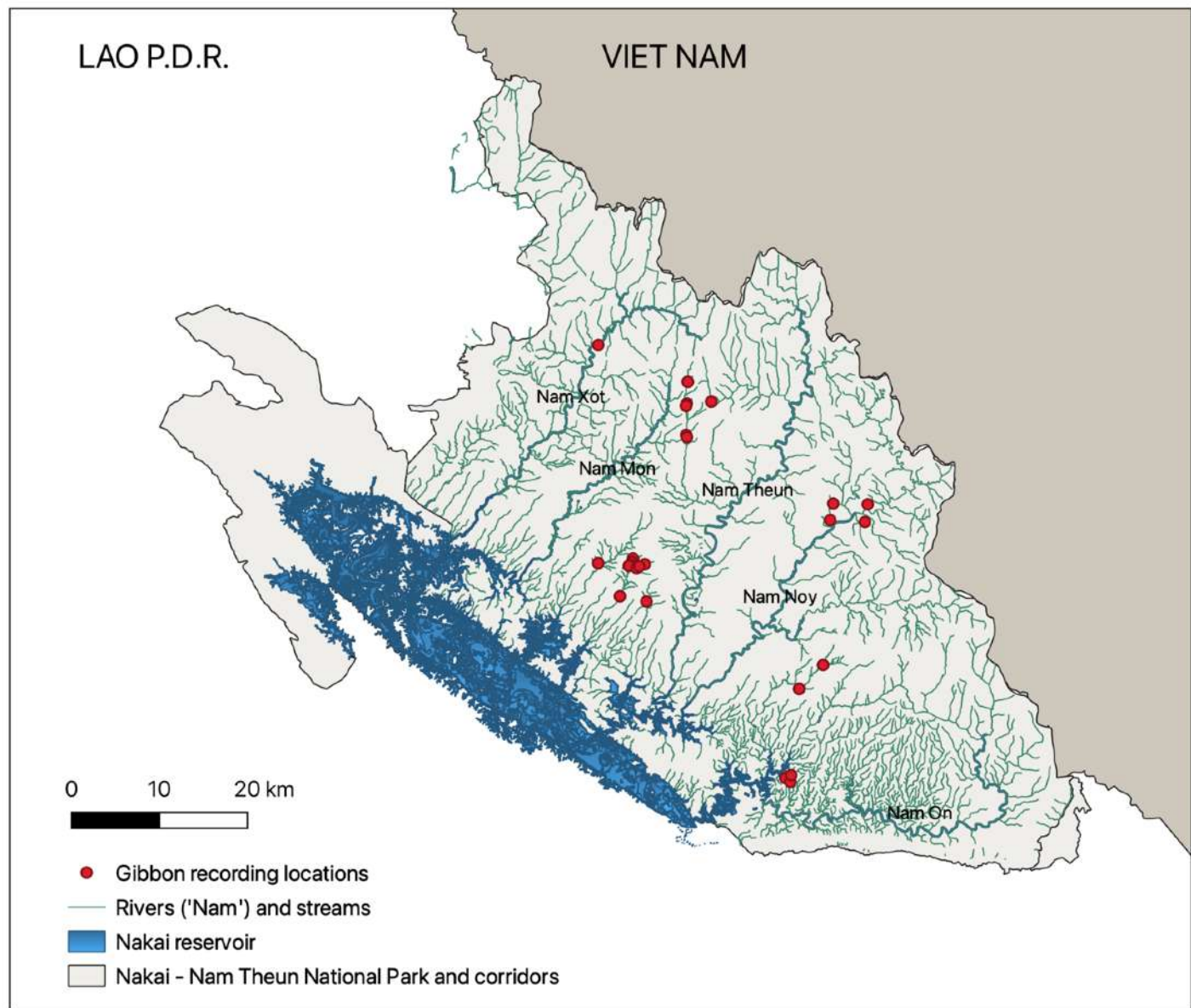
Biodiversity research and monitoring in 2021

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.

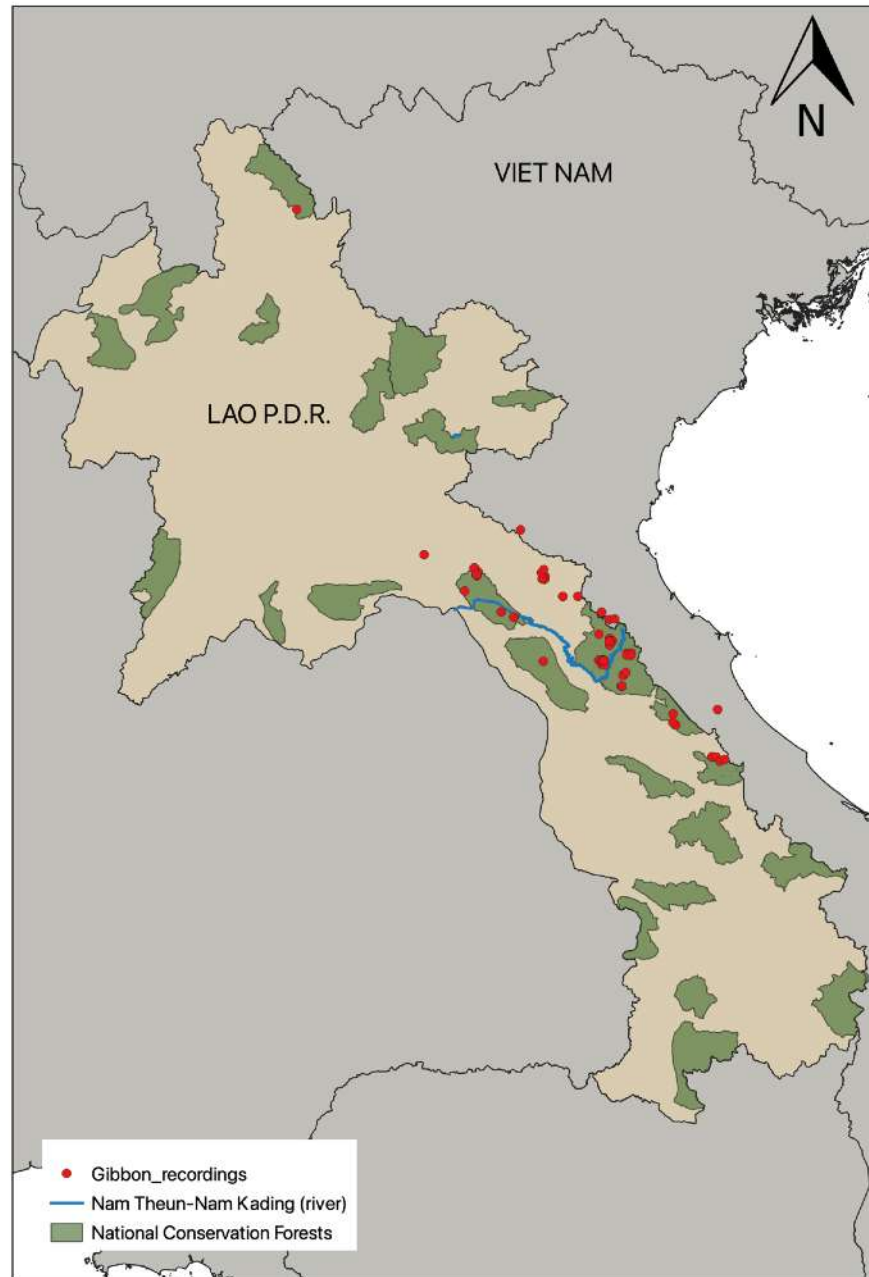
In **2021**, we continued the collection of gibbon recordings at additional sites in Nakai-Nam Theun National Park.



All gibbon recordings locations surveyed in Nakai - Nam Theun National Park **since the beginning of the project**

In **2021**, we also collaborated with conservation institutions and researchers to obtain gibbon recording from additional sites from central Laos (and Vietnam).

We obtained recordings from WCS, Asian Arks, IUCN, GIZ, and other researchers.



*All gibbon recordings obtained from Laos and Vietnam **since the beginning of the project***

In **2021**, we initiated the data analysis. In order to strengthen the statistical analysis of the recordings, we approached to the European Association of Zoo and Aquaria (EAZA) through the Gibbon Taxon Advisory Group to obtain call recordings from the Northern and Southern white-cheeked gibbons *N. leucogenys* and *N. siki* that have been identified to species with certainty (through DNA) in EAZA facilities.

These recordings will be collected by EAZA members and compiled in 2022.

The overall dataset obtained both from the field and from EAZA facilities will be analyzed. The results will be published in a scientific publication prepared in 2022.



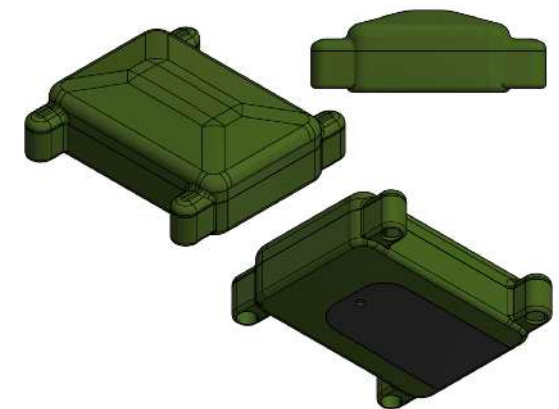
Gibbon survey methods development

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 2022 at our research site in Laos.

In **2021**, we received AudioMoths: low-cost, full-spectrum acoustic loggers. The field set-up was delayed due to the COVID-19 restrictions. We will set these acoustic recorders in the field in 2022 to record as many gibbon calls as possible over a few months. The gibbon calls will be identified digitally from the recordings. These recordings will be used to develop the software that will automatically identify and extract gibbon calls from recordings.



Wildlife populations monitoring with systematic camera-trap surveys

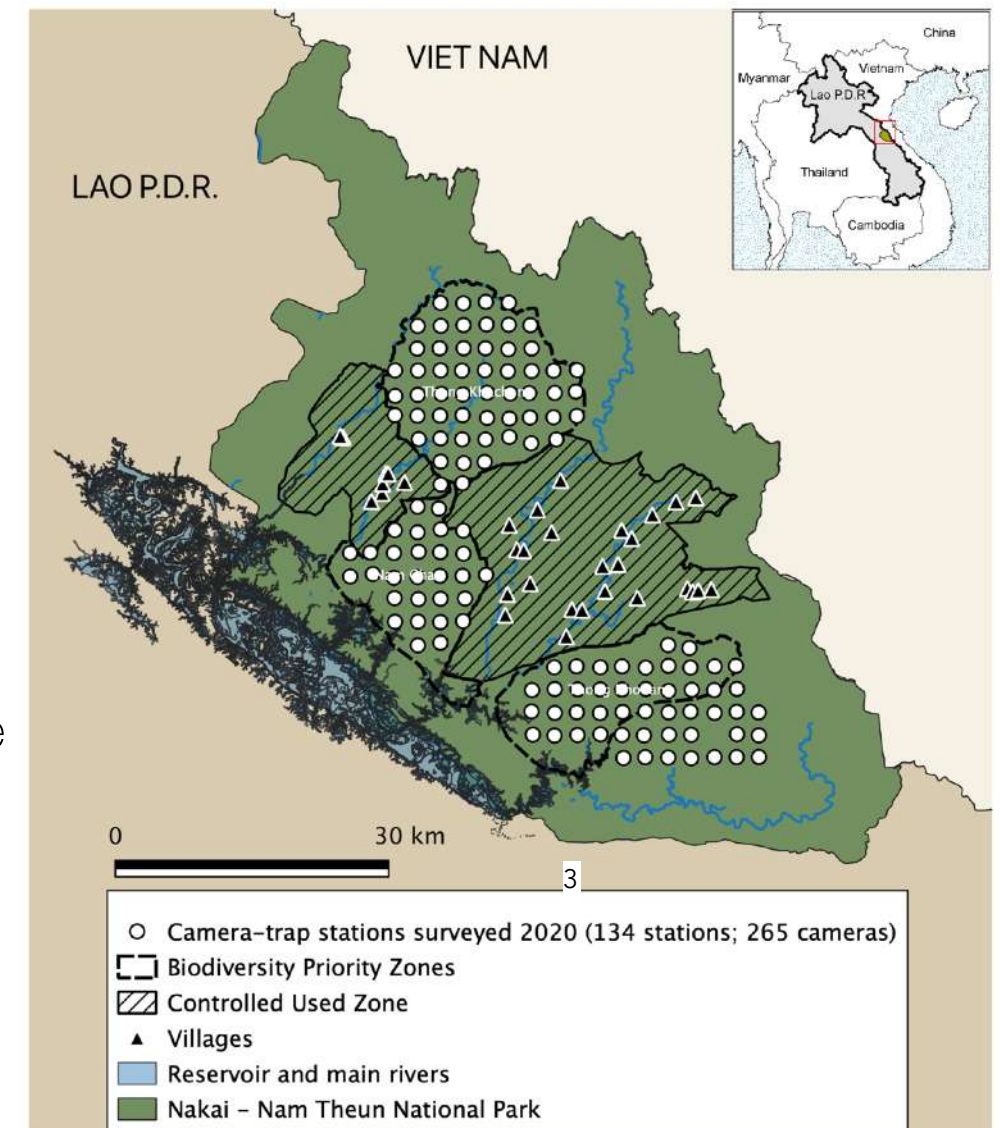
Rationale: The current **conservation status** of several globally threatened species remains unknown in Nakai-Nam Theun. In addition, in order to **evaluate the management efforts** (especially patrol efforts) being implemented it is critical to obtain **baseline population estimates of key indicator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

We completed, in collaboration with the national park's authorities, [the first baseline survey in 2019](#) (Coudrat, 2019), which was replicated in 2020 (Coudrat, 2020).

In **2021**, we analyzed with our partners from IZW the datasets from the two previous surveys to compare the occupancy estimates of selected (indicator) species and model their distribution across the national park.

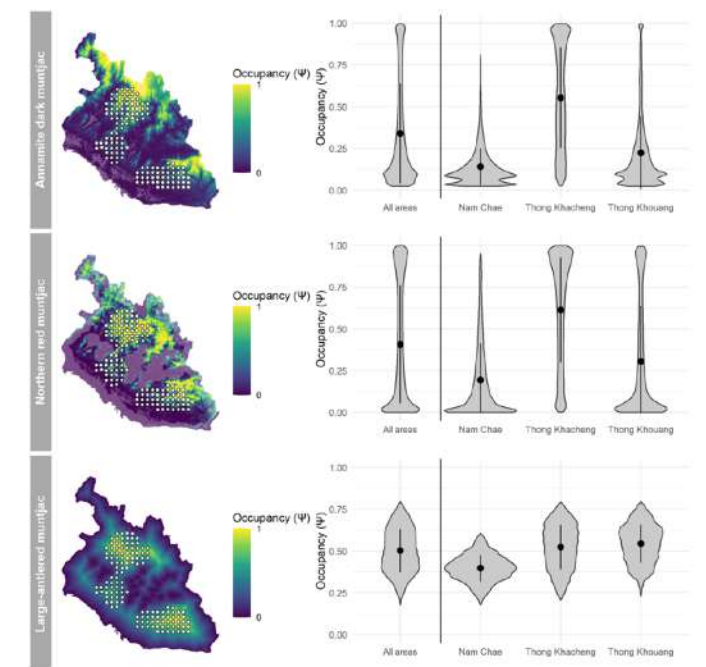
The preliminary results of these analysis were compiled into a technical report.

Our team worked on two manuscripts for scientific publication:

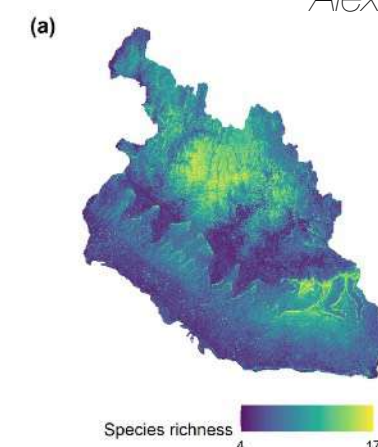
1. **Camera-trapping reveals new insights in the ecology of three sympatric muntjacs in an overhunted biodiversity hotspot.** The manuscript was accepted for publication in ***Mammalian Biology*** after a series of reviews.

*Ioannis Alexiou, Jesse F Abrams, Camille NZ Coudrat, Chanthaphone Nanthavong, An Nguyen, Jürgen Niedballa, Andreas Wilting and Andrew Tilker. In press. Camera-trapping reveals new insights in the ecology of three sympatric muntjacs in an overhunted biodiversity hotspot. **Mammalian Biology**.*

2. **Inferring priority areas in the Annamites using a multi-species approach.** The manuscript will be finalized for publication submission in early 2022.



Alexiou et al., in press



In prep.

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 **2021**, we monitored seven cameras on a regular basis, which have not failed to amazed us with yet again beautiful photos!

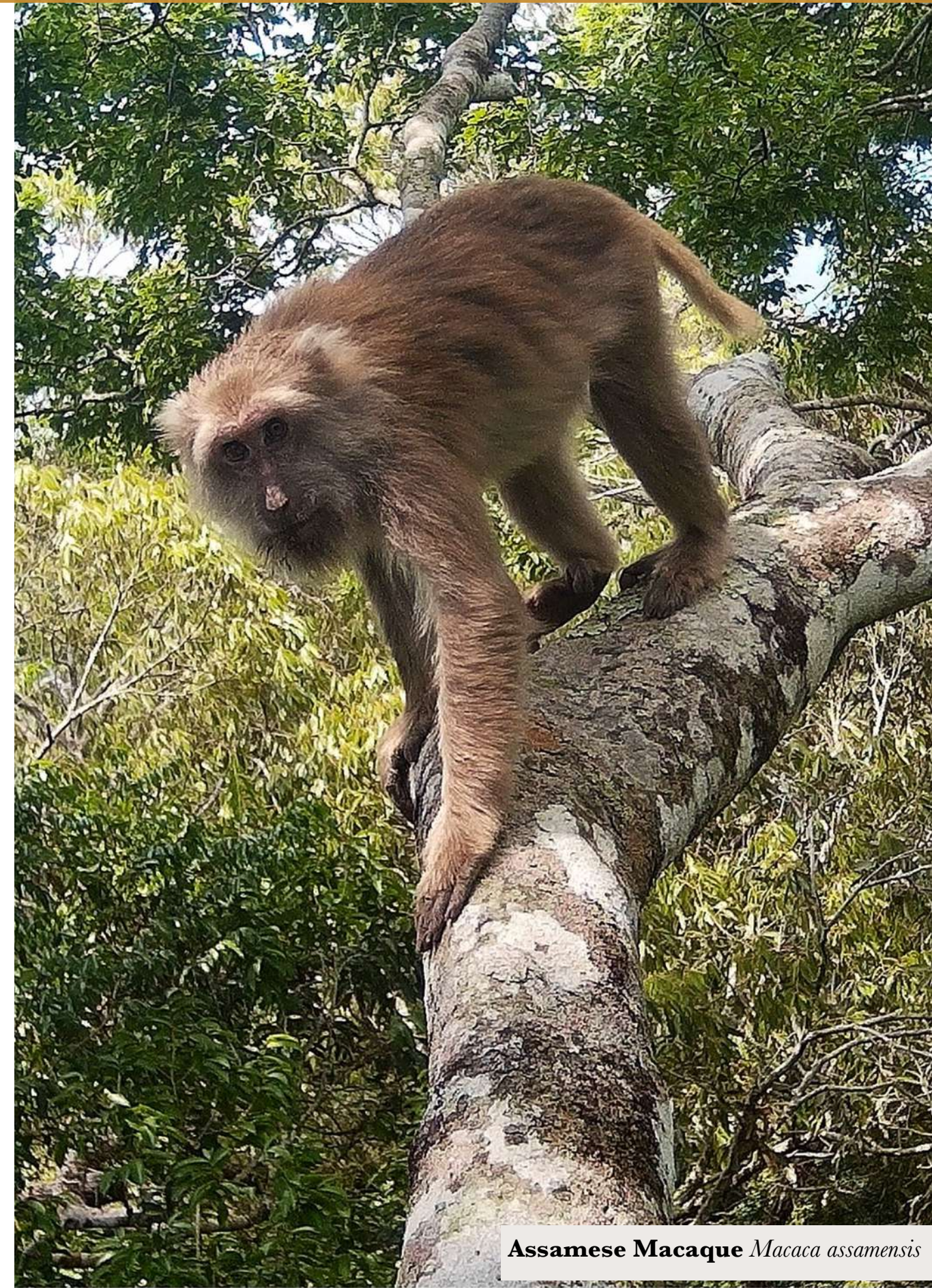




Great Hornbill *Buceros bicornis*



Slow Loris *Nycticebus bengalensis*



Assamese Macaque *Macaca assamensis*

CH94

04/23/2021 11:25:53 PIRT 12



Pig-tailed Macaque *Macaca leonina*



Black Giant Squirrel *Ratufa bicolor*



White-cheeked Gibbon *Nomascus sp.*



Red-shanked Douc *Pygathrix nemaeus*



Giant Flying Squirrel *Petaurista* sp.

CH94

05/03/2021 01:13:53 PIRT 22

22°C 71°F



Binturong *Arctictis binturong*

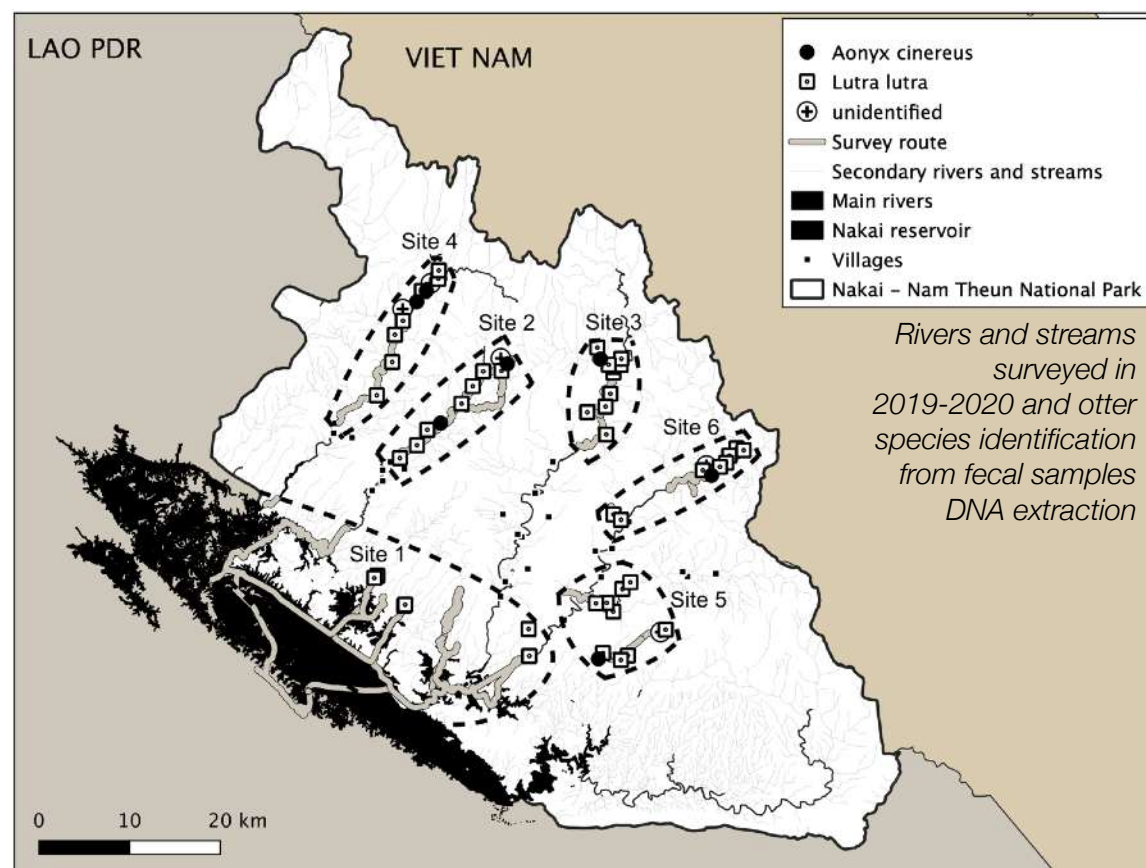
04.04.2021 18:12:42

23

022°C 07

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.**



Coudrat and Klinsawat, *in prep.*

In 2019 we initiated a collaboration with [Conservation Ecology Program](#), School of Bioresources and Technology, King Mongkut's University of Technology Thonburi, Thailand, to survey otters in Nakai – Nam Theun National Park as part of a broader research project to gather genetic information from otter species across mainland Southeast Asia, based on the collection of fecal samples from which DNA is extracted.

This research has several objectives:

1. To identify species and population-level genetic diversity of otter species in Nakai–Nam Theun National Park, Lao PDR
2. To investigate the evolutionary relationships of otter species within Mustelidae family
3. To determine sex-ratio based on molecular sexing of otter species
4. To investigate level and patterns of recent gene flow level among nearby populations based on microsatellite markers to monitor impacts of human disturbance on population dynamics and long-term survival
5. To use these data to develop follow up projects for the conservation and ecological study of otter species in Southeast Asia

The data collection was conducted in 2019-2020. Data started in 2020, which resulted in the identification of two species: Eurasian Otter *Lutra lutra* (this is the first confirmation of the species in the national park) and Asian Small-clawed Otter *Aonyx cinereus*.

In **2021**, we continued on data analysis and prepared a manuscript for publication which will present some aspects of the results of this research (e.g. molecular-based species identification of sympatric otter species in Nakai – Nam Theun NP and insights into evolutionary history of some otter species). The manuscript will be completed and submitted in 2022.

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)^[1]: Xe Sap National Protected Area (in Sekong and Salavan Provinces), located along the Annamite Mountain range.

We apply the same camera-trap monitoring protocols which were also used during CarBi's phase one (in Vietnam), and that Association Anoulak has been implementing in Nakai – Nam Theun National Park, with a systematic survey design that allows us to monitor trends in populations of wildlife over time, and at the landscape level. This systematic camera trapping assignment is also building on CarBi's collaboration with the Leibniz Institute for Zoo and Wildlife Research (IZW), Germany, one of Association Anoulak's long-term partners as well.

Xe Sap National Protected Area is located within two southern provinces in the Annamite Mountains of Laos. The assignment is therefore being implemented in close collaboration with CarBi's Government partners from both Sekong and Salavan Provinces.

The surveys started in 2021 and will continue in 2022.

[1] The Carbon and Biodiversity Programme (CarBi II) is implemented by WWF through KfW, and part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative on the basis of a decision adopted by the German Bundestag.



Association Anoulak team with WWF team in Sekong province, April 2021





Anti-poaching patrols in 2021

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).

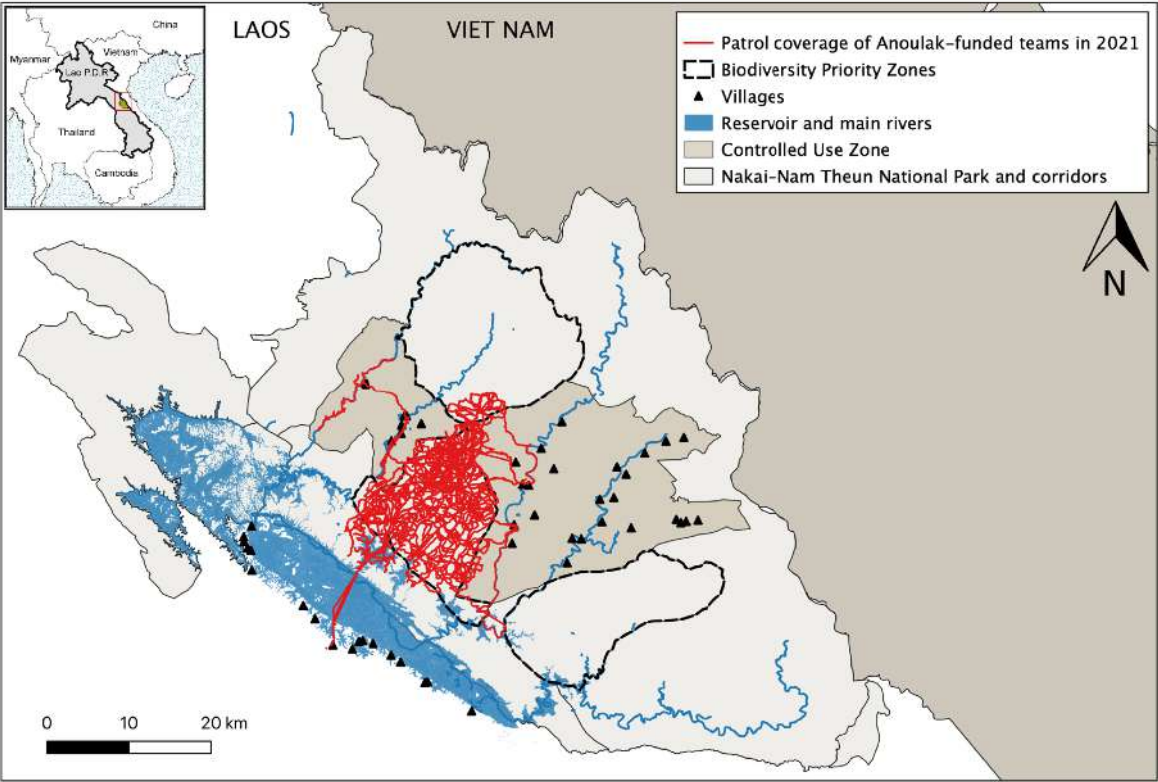
Association Anoulak financially supports 6 anti-poaching patrols (i.e. 36 trained villagers from the local community) deployed mainly in the Nam Chae Biodiversity Priority Zone

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 km²) 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 2021



Patrol coverage from GPS tracklog of the six (6) patrol teams combined financially supported by Association Anoulak, for the year 2021.

Patrol effort from 1st Jan 2021 to 31st Dec 2021

Patrol team	Number of Patrols	Number of Days	Distance (km)
Thaiphai banh Team	12	171	1726
Makfuang Team	10	140	1396
Fangdeng Team	9	129	1731
Navang Team	9	133	1892
Korbong Team	7	98	1057
Nakang Team	7	101	1182
Total	54	772	8984



Total number of poachers encountered

	Observed Only	Escaped	Written warning	Confiscated items	Arrested
Total	11	44	37	44	0

Total number of snares collected

	Snares (all types)
Total	482

Total number of firearms collected

	Semi Automatic	Hand-made guns
Total	0	0









Community sustainable livelihoods in 2021

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

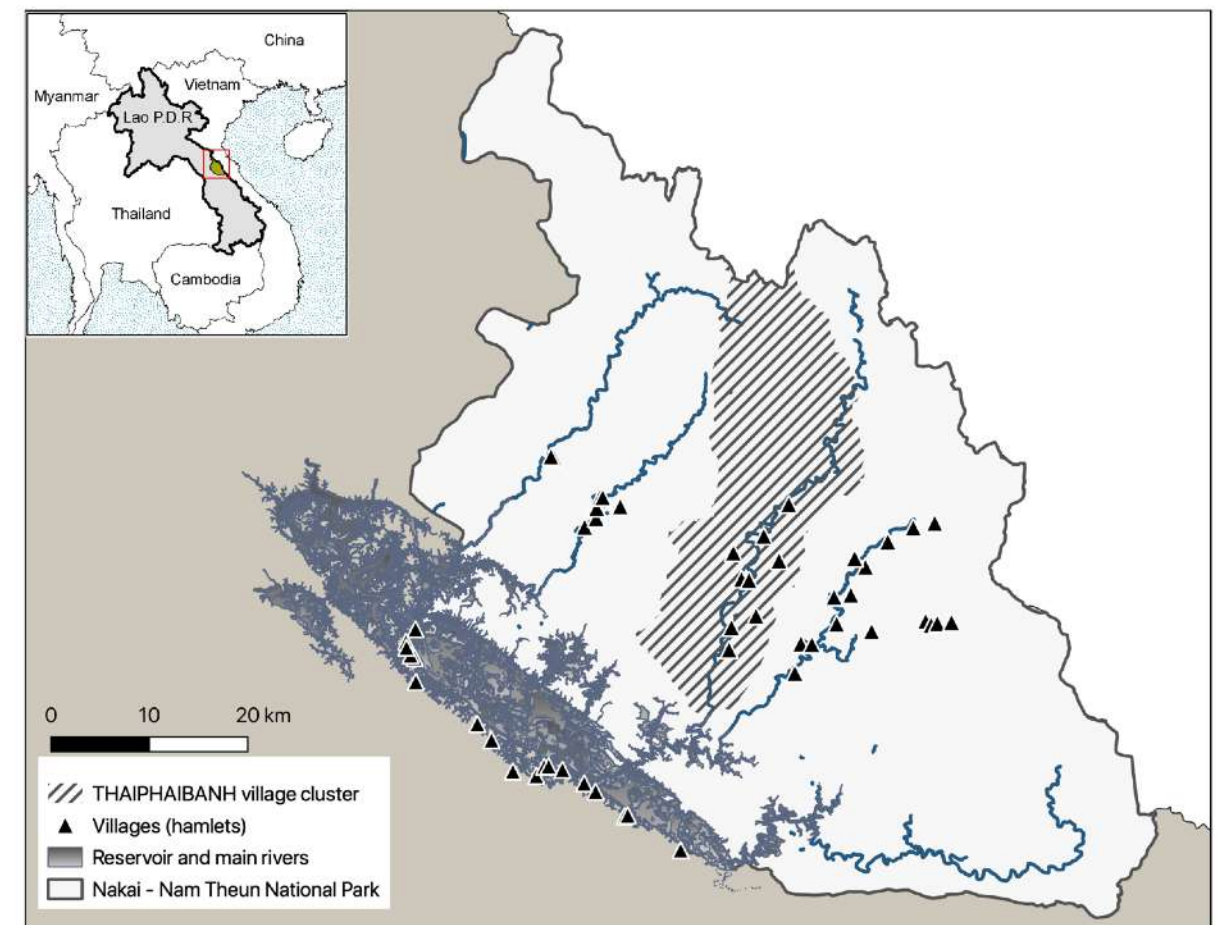
Since 2019, Association Anoulak initiated the project *Community Resilience and Biodiversity Conservation in Nakai District, Lao PDR*.

Project overall aims

- Support the local communities in implementing innovative and sustainable approaches to bring alternative incomes and to preserve local traditional crafting skills and cultural integrity
- Reduce reliance on natural resources 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.



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

Project approach

Our project supports villagers in the development of their **handicraft value chain strategy**. It will not only provide **alternative income** to villagers but also **promote, transmit and preserve their traditional knowledge and crafting skills**. Along the process, **natural resource management** is fully incorporated into the strategy to ensure sustainability and community awareness and ownership.

Association Anoulak's team provide **technical support, coaching and training to the villagers** on a **step-by-step capacity development**:

- **Securing marketing demand**

- Market studies
- Village groups set-up
- Traders contracts
- Value chain

- **Securing production process**

- Resources collection
- Raw material processing
- Handicrafts production
- Business plan, marketing and value chain

- **Securing natural resources**

- Resources mapping
- Resources availability and status
- Resources management
- Resources monitoring



This year **2021**, our team alongside villagers have progressed significantly (despite the challenges faced amidst the COVID-19 pandemic, which involved strict restrictions in Laos in 2021).

Through our **monthly Monitoring, Evaluation and Learning missions** to target villages to follow up the implementation of the village action plans (developed by the villagers in 2020), we were able to:

- Discuss about the alternative income from handicraft production
- Design the products based on villagers' experience and market demand
- Set a product supply production management including quality control
- Conduct a training on crafting skills from elder villagers to the younger generation
- Purchasing directly from the villagers the handicrafts made

In **March 2021**, our team facilitated a training during which the elder generation trained the younger generation on traditional crafting skills.

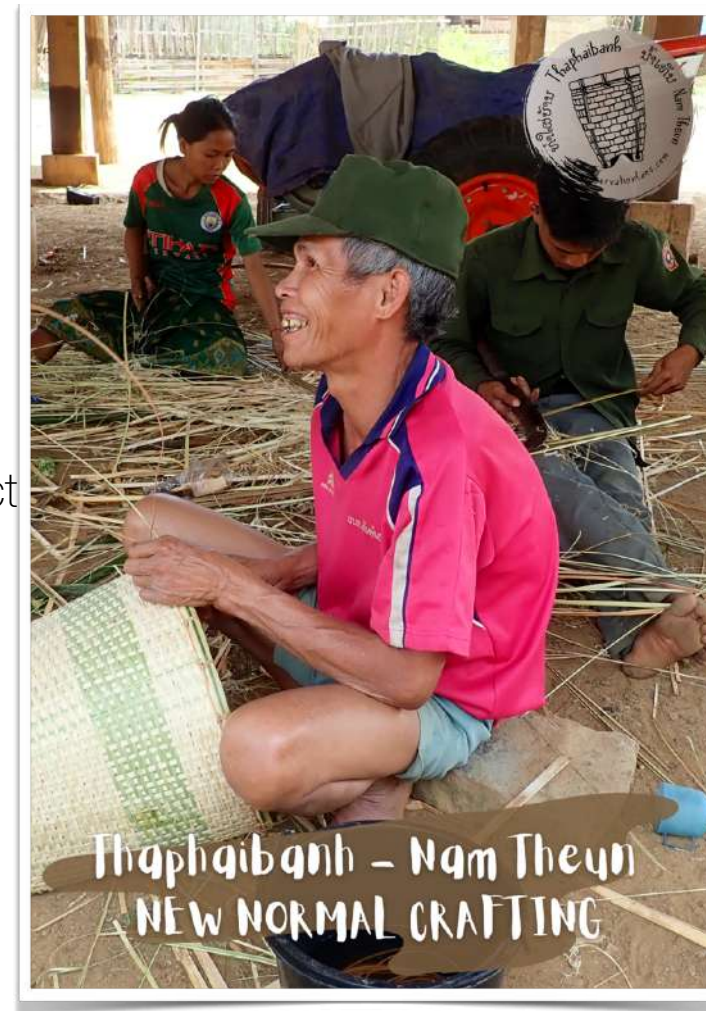


In addition, this year **2021** Association Anoulak has been developing a marketing strategy and sales including:

- The design of the **label** for all the project's handicraft products
- The conception of a dedicated **Facebook page** '[Thaphaiban new normal crafting](#)' to promote the project and manage online sales of handicraft products
- Promote the project with the design of a [leaflet in Lao-English language](#) which will be distributed widely in the country
- Design and set-up the [Nakai handicraft shop](#) at Association Anoulak's project office in Nakai town, and display handicraft products to sale to visitors
- **Finding markets** for handicraft products in Khammouan province and Vientiane Capital

From **30 October to 07 November 2021**, our team participated in the **National Lao Handicraft Festival 2021**, which was this year organized online due to the COVID-19 restrictions.

On the **11 December 2021**, Association Anoulak participated in the **Christmas Market organized by the French Institute of Laos in Vientiane**. Association Anoulak set up a booth among over 20 other booths that were displaying and selling handicrafts and local products from diverse regions of the country.





In **2021**, we have seen a **tremendous progress** in the program's activities through the **engagement and commitment of the local community** in the pilot villages. The villagers have seen the **direct benefit** that the program provides with an **alternative income**. Since the beginning of the program, **local communities have sold their handicrafts** for a total of about **10,000 USD**. This is a **welcome alternative source of income for the local communities**, who rely heavily on natural resources for their livelihoods and still face annual rice shortage for their local consumption.



Christmas Market at the French Institute of Laos in Vientiane, December 2021



As part of our program, we initiated from **August 2021** a **participatory Natural Resources Management plan**. The handicrafts produced are made of **bamboo, rattan and pandanus leaves** collected in the forests surrounding the villages. **The Natural Resources Management plan is a crucial part of the program to ensure its sustainability**. The process will involve several steps over the next few years, including:

- An **assessment of local knowledge** (from the elders and from the youth) on natural resources management (for target species: bamboo, rattan, pandanus)
- An **assessment of local knowledge on landscape management**
- Development of a **natural resource management plan** adapted to each target village
- **Knowledge exchange and study tours** with other handicraft projects in Laos
- **Experimental field management plans** for target plant species (in common and private land areas), including best practice harvesting techniques, restoration and plantation
- **Involve the different generations** of the community in these activities (notably engaging the local schools and teachers)



Participative natural resource management plan, Nov. 2021



Participative natural resource management plan, Nov. 2021



Participative natural resource management plan, Nov. 2021



Conservation awareness in 2021

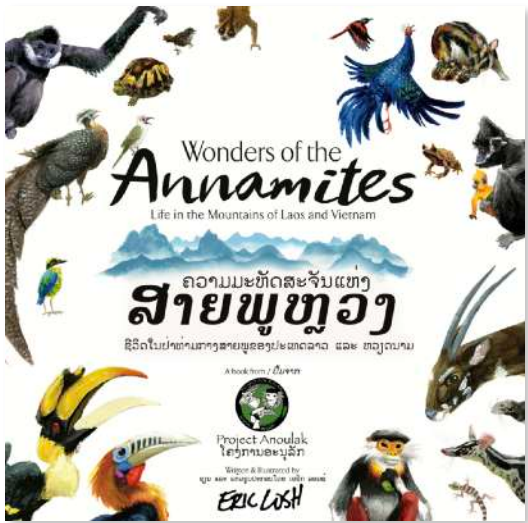
Conservation awareness published books and posters

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.



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



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.





In 2021, we started a collaboration with [Mongabay Kids](#) with a new series of posts published on their website called **Adventure in the Annamites!**

Mongabay Kids is a platform for kids, families, caregivers, and educators (and a partner site of the well known global environmental science news platform [Mongabay.com](#))

This series will take you into the remote and wonderful world of the Annamite Mountains, following the activities and projects that Association Anoulak is conducting there. From discovering about the different animal species, to learning about the characteristics of some little known species we are studying, to learning about the threats on the biodiversity and how to involve local communities in the protection of the forest, ecosystems and species, Adventure in the Annamites! aims to raise awareness among children (and adults!) about the importance of biodiversity conservation in the Annamite Mountains.

All the posts are linked on our website in our [Kid's Corner: Adventure in the Annamites!](#)

This series started in 2021 with the first two posts, keep following our Kid's Corner to not miss the next posts!

Let's start the adventure!...

POST 1: [You may not have heard of the Annamite Mountains before ... but this is a place worth discovering!](#)

You may not have heard of the Annamite Mountains before ... but this is a place worth discovering!

Come on, join us as we journey into the Annamites and learn about the hidden animals of the forest!

Our hosts on this epic adventure are scientist Camille Coudrat and the team at Association Anoulak. We're joining them on a trek to their field camp in Laos.

POST 2: [Today, we're at camp learning about river otters!](#)

Today, we're at camp learning about river otters, like these ones:



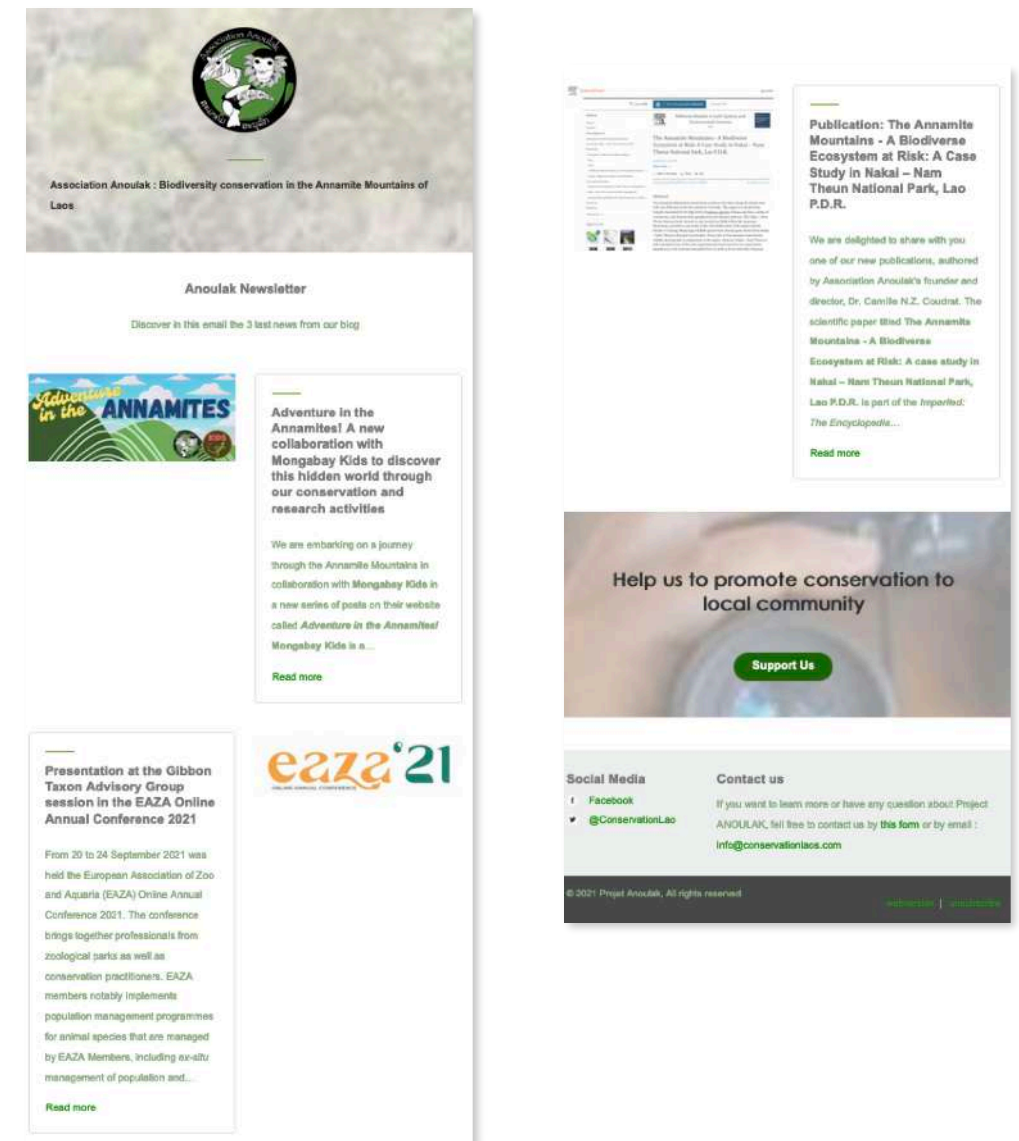
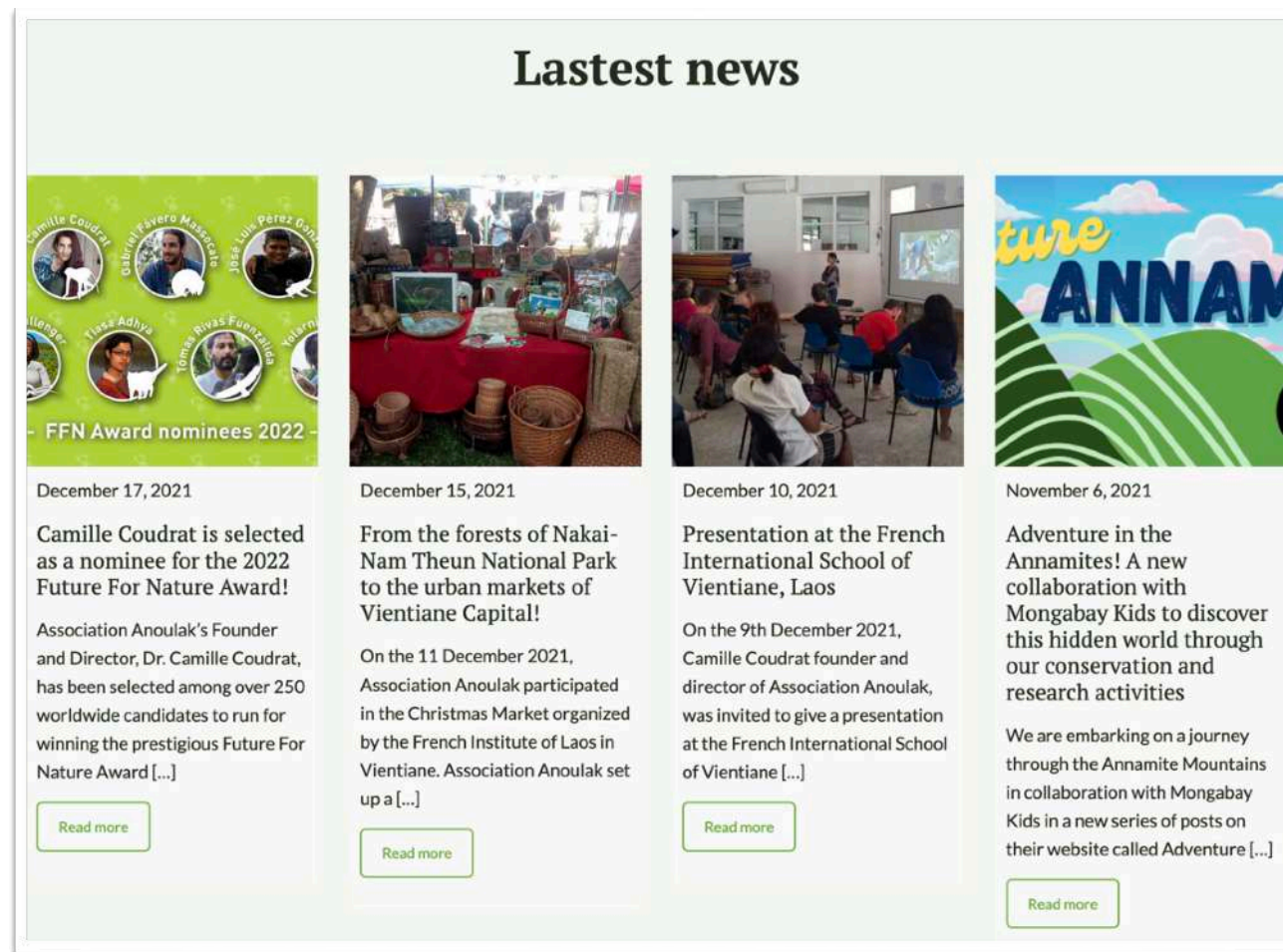


Media communication and publications in 2021

On our Website and Email Subscribers List

Number of Blogposts
in 2021 =
20

Number of
Anoulak Newsletters sent
in 2021 =
7



In the Media

- [Globally threatened species recorded in Lao national park.](#)
Vientiane Times (issue of March, 9 2021).



In the Media

- Coudrat, C. N. Z. (2021). Association Anoulak, Annamite Mountains. A guest contribution to the Small Wild Cat Conservation Foundation Newsletter..

A detailed painting of a tiger resting on a rock. The tiger has a light-colored coat with dark, vertical stripes. It is looking towards the viewer with a calm expression. The background features tall grass and some foliage, suggesting a natural habitat. The style is realistic with fine detail in the fur and environment.



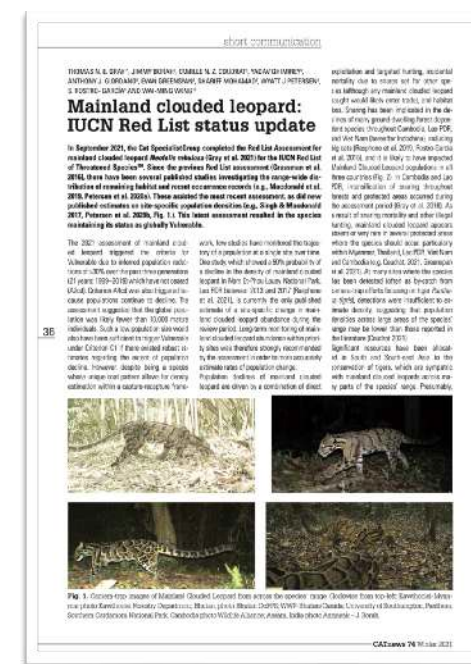
Association Anoulak is dedicated to biodiversity conservation in the Annamite Mountains of Laos: a biodiversity hotspot, home to numerous endemic and little studied species, and under severe threats. One of the target sites where we work is Nakai-Nam Theun National Park, one of the identified Key Biodiversity Areas within the Indo-Burma biodiversity hotspot and ranked as one of the highest priorities for its National and Global biodiversity importance. Association Anoulak implements activities on (i) biodiversity research and monitoring, (ii) community anti-poaching patrols; (iii) community sustainable and alternative livelihoods, and (iv) conservation awareness. Development of community-based programs for the long-term sustainability and impact of conservation programs are vital. For example, our program on community sustainable and alternative livelihoods ultimately aims to reduce the reliance on natural resources for the biodiversity preservation in the region. Our project supports villagers in the development of their handicraft value chain strategy. Handicraft sales not only provide alternative income to villagers but also contribute to promoting, transmitting and preserving their traditional knowledge and craftsmanship. Natural resource management is fully incorporated into the strategy to ensure sustainability and community awareness and ownership.

Association Anoulak



Project Reports and Scientific Publications

- Coudrat, C.N.Z. (2021) The Annamite Mountains – A Biodiverse Ecosystem at Risk: A Case Study in Nakai–Nam Theun National Park, Lao P.D.R. **Imperiled: The Encyclopedia of Conservation. Elsevier, Oxford.**
<https://doi.org/10.1016/B978-0-12-821139-7.00080-5>
- Association Anoulak. (2021). Camera-trapping in Nakai – Nam Theun National Park – Report for surveys conducted in 2018-2019 and 2020. Vientiane, Lao PDR.
- Alexiou, I., Abrams, J.F., Coudrat, C.N.Z., Nanthavong, C., Nguyen, A., Niedballa, J., Wilting, A. & Tilker, A. (In press). Camera-trapping reveals new insights in the ecology of three sympatric muntjacs in an overhunted biodiversity hotspot. **Mammalian Biology.**
- Gray, T., Borah, J., Coudrat, C.N.Z., Ghimirey, Y., Giordano, A., Greenspan, E., Petersen, W., Rostro-García, S., Shariff, M. & Wai-Ming, W. (2021). *Neofelis nebulosa*. **The IUCN Red List of Threatened Species 2021:** e.T14519A198843258. <https://www.iucnredlist.org/species/14519/198843258>
- Gray, T. N. E., Borah, J., Coudrat, C. N. Z., Ghimirey, Y., Giordano, A. J., Greenspan, E., Mohamad, S., Petersen, W.J., Rostro- García, S., Wong, W.-M. (2021). Mainland clouded leopard: IUCN Red List status update. **Cat News, 74, 8–10.**





**Partner meetings,
presentations, public
talks and events in 2021**

Government Partners Meeting

Annual Reporting for Years 2019-2020

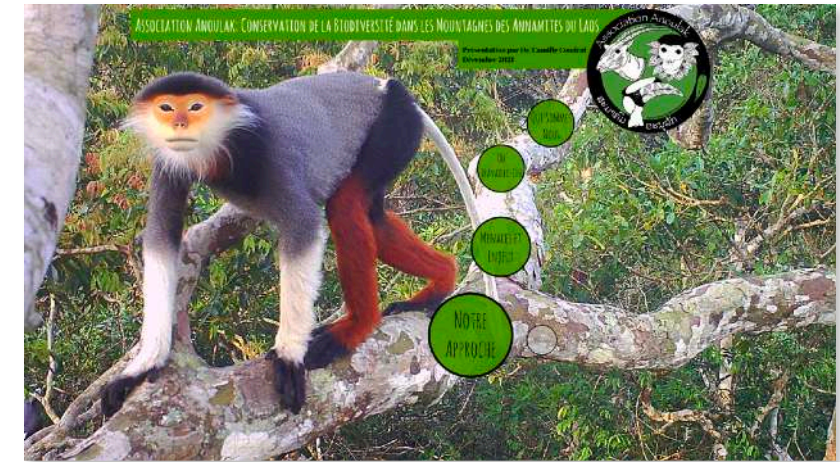
The 21st January 2021 we convened our key government partners and stakeholders to report on Association Anoulak's activities implemented during the year 2019 and the year 2020. Attendees to the meeting included representatives from the Nakai – Nam Theun National Park Authority; Department of Forestry, Ministry of Agriculture and Forestry; Ministry of Foreign Affairs; Provincial Office of International Non-Government Organizations.

This meeting had the objective to present Association Anoulak's [Annual Report 2019](#) and [Annual Report 2020](#), discuss our next work plan and issues to address with Government stakeholders.



Partners meetings and Presentations

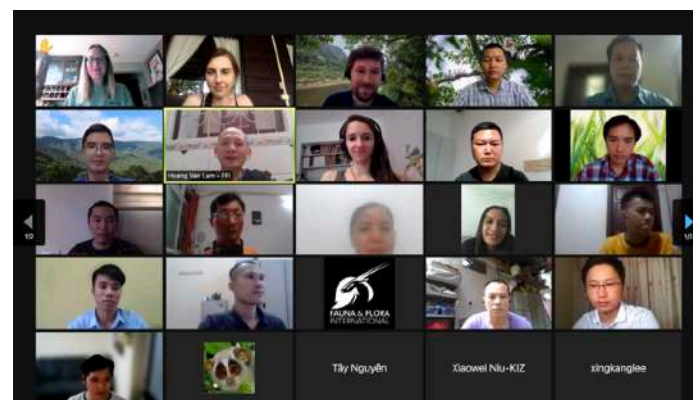
- **28 January 2021:** Presentations and exchange meeting of French NGOs at the French Embassy in Laos, chaired by French Ambassador Mme Florence Jeanblanc-Risler. *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Conservation de la biodiversité dans les montagnes des Annamites du Laos*



- **28 April 2021:** Saola Working Group Partner Meeting (online). *Oral presentation by Camille N.Z. Coudrat: Potential synergies with the Saola Working Group missions*



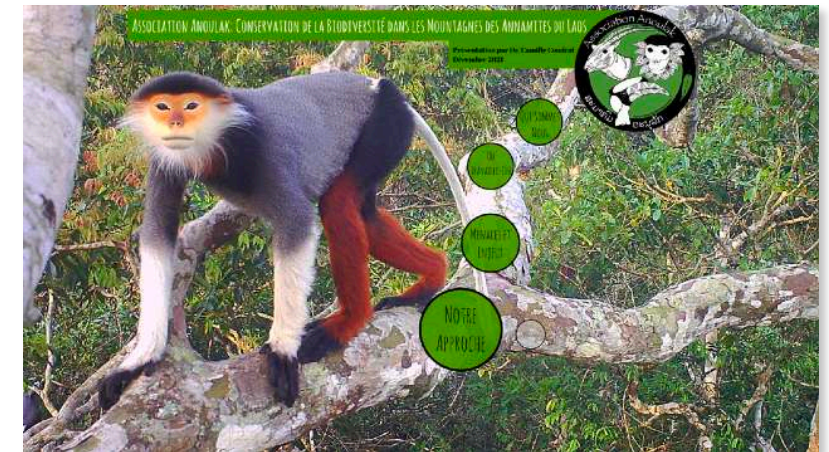
- **15 - 17 September 2021:** International Sharing Workshop for Western Black Gibbon (*Nomascus concolor*) (online). *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Biodiversity Conservation in the Annamite Mountains of Laos - Focus on current White-cheeked Gibbon research (Survey methods and distribution range)*



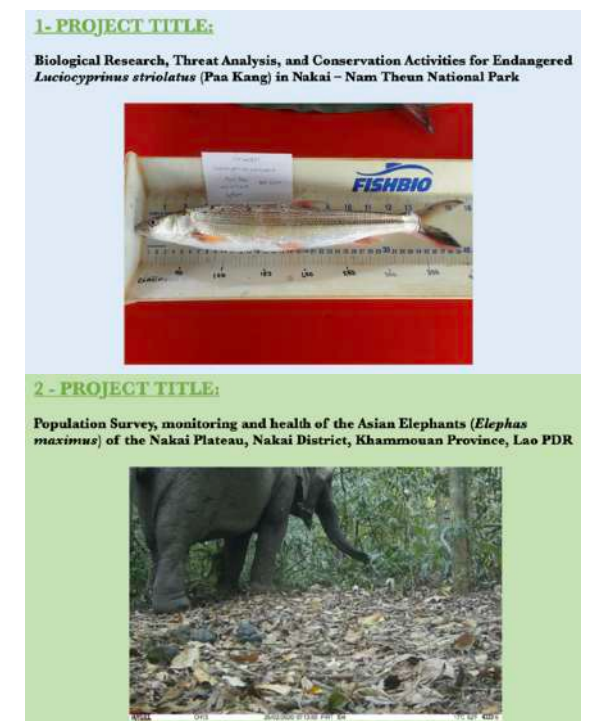
- **21 September 2021:** European Association of Zoo and Aquaria (EAZA), Gibbon Taxon Advisory Group session (online). *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Biodiversity Conservation in the Annamite Mountains of Laos - Focus on current White-cheeked Gibbon research (Survey methods and distribution range)*



- **14 October 2021:** Presentations and exchange meeting of French NGOs at the French Embassy in Laos, chaired by newly appointed French Ambassador Mme Siv-Leng CHHUOR. *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Conservation de la biodiversité dans les montagnes des Annamites du Laos*



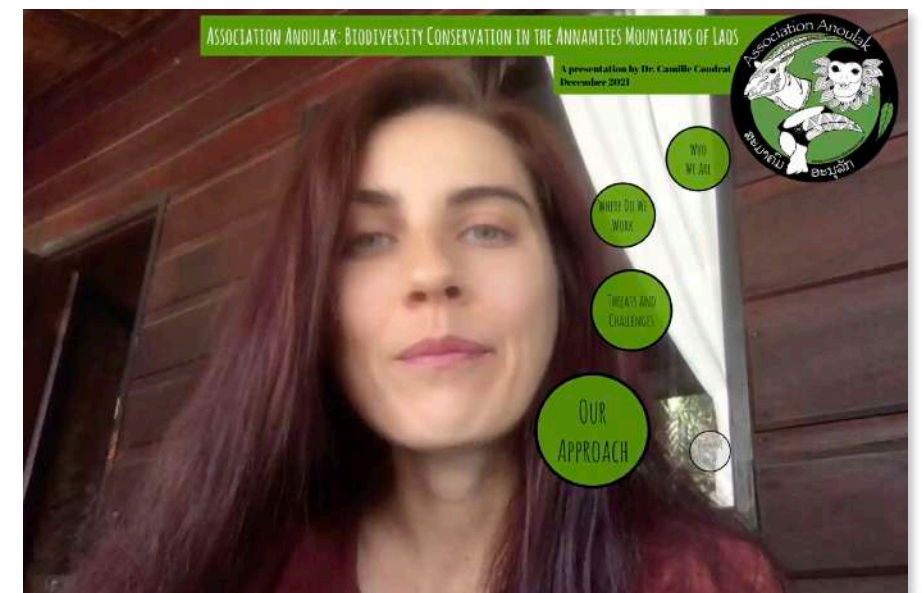
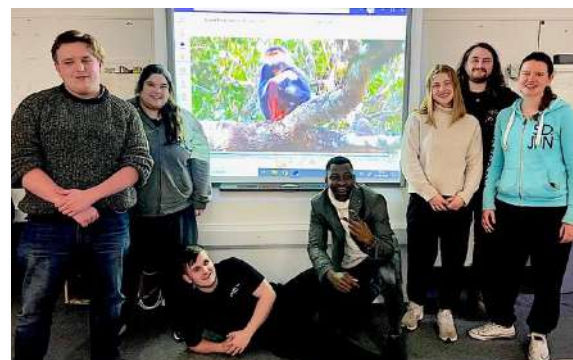
- **15 October 2021:** Research project collaborations between Nakai – Nam Theun National Park (NNT NP), Nam Theun 2 Power Company (NTPC) and Association Anoulak. *Oral presentation by Camille N.Z. Coudrat: Future research collaboration between NTPC, NNT NP and Association Anoulak: (1) Elephant survey, monitoring and health assessment; and conservation action plan; (2) Paa Kang (Luciocyprinus striolatus) survey and conservation action plan*



- **09 December 2021:** Presentation at the International French School of Vientiane to teachers and administrative staff. *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Conservation de la biodiversité dans les montagnes des Annamites du Laos*



- **17 December 2021:** Guest lecture (online) to the MSc Animal Welfare and Conservation - Writtle University College, Essex, UK. *Oral presentation by Camille N.Z. Coudrat: Association Anoulak: Biodiversity Conservation in the Annamite Mountains of Laos.*



Other Events

In May 2021, Camille was interviewed by independent artist [Solange Te Parle](#) to talk about her journey.

In this intimate discussion, Camille describes what led her to Laos, from her childhood interest in animals and nature, to an early fascination for non-human primates and her sense of engagement for nature conservation, to how she fell in love with the red-shanked douc (*Pygathrix nemaeus*), which eventually led her to Laos and start Association Anoulak, dedicated to biodiversity conservation in the Annamite Mountains of Laos.



From 3 to 11 September 2021 was held the **IUCN World Conservation Congress** in Marseille, France—a global event conveyed every four years. The congress brings together **Governments, Scientists, policy experts, business leaders and professionals** acting for the **conservation of the biodiversity** around the world.

Association Anoulak, was represented at our partner's booth, l'[Association Francaise des Parcs Zoologiques](#) (AFdPZ – The French Association of Zoological Parks), with the presentation to the audience of our published educative material and screening some of our videos.



Other Events

Association Anoulak's Founder and Director, **Dr. Camille Coudrat**, was selected among over 250 worldwide candidates to run for winning the prestigious [Future For Nature Award in 2022](#)! Working all across the globe, each of the nine selected finalists is dedicated to protect a species or ecosystem in need.

The final selection of the three winners of the Award will be announced in March 2022, stay tuned!

The Future For Nature Award is a prestigious international award that celebrates tangible achievements in protecting wild animal and plant species. Each year, the **Future For Nature Awards** three young, talented and ambitious nature conservationists committed to protecting wild animal and plant species.



(C) Eric Losh



Financial report for 2021

In **2021**, our association **spent a total of 182,070 USD** for our activities

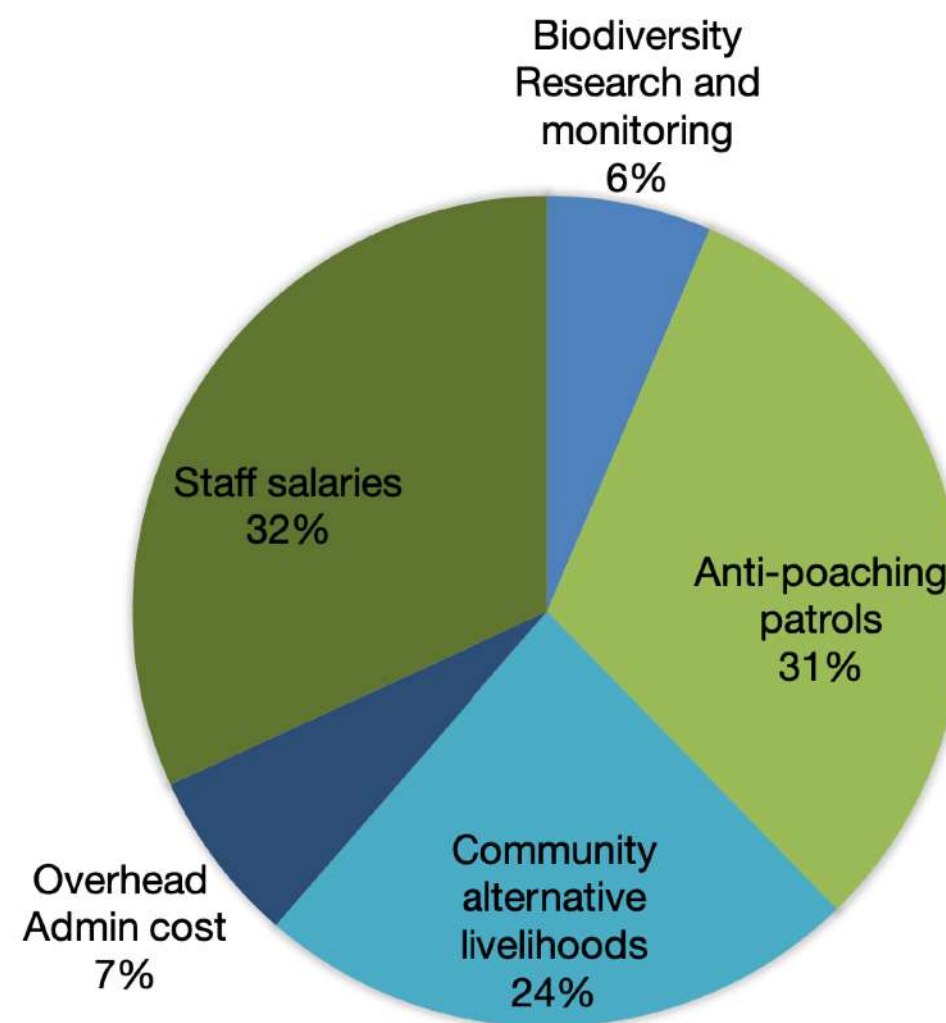
INCOME 2021

BALANCE ON 01 January 2021	USD 341,951
TOTAL DONATIONS in 2021	USD 286,932
TOTAL AVAILABLE IN 2021	USD 628,883

EXPENSES 2021

Programs/projects	Total spent	%
Biodiversity Research and monitoring	USD 11,670	6%
Anti-poaching patrols	USD 56,997	31%
Community alternative livelihoods	USD 43,077	24%
Staff salaries	USD 57,976	32%
Overhead/admin cost	USD 12,350	7%
TOTAL SPENT IN 2021	USD 182,070	100%

EXPENSES IN 2021 JANUARY TO DECEMBER





Workplan for 2022

Work Plan 2022 (tentative)

Project/Program	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<i>Biodiversity research and monitoring in NNT NP</i>												
Ground camera-trap monitoring in NNT NP												
Arboreal camera-trap monitoring												
Gibbon field research (AudioMoth recordings)												
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)												
Reptiles and amphibians surveys (pilot)												
Botanical surveys (pilot)												
<i>Biodiversity research consultancy</i>												
Camera-trap monitoring program in Xe Sap with WWF (field work by Anoulak team and Data processing and anamysis by Camille)												
<i>Anti-poaching patrols in NNT NP</i>												
6 teams monthly patrols (per diem for monthly 15-day patrols)												
<i>Community Livelihood Program in NNT NP</i>												
Program activities												
<i>Conservation Awareness</i>												
Video production about Association Anoulak activities and the Annamites												
Edition and publication of book on the Annamites												
Conference at French Institute, Vientiane and photo exhibition												

In **2021**, we signed an **amendment to our Memorandum of Understanding** with the Nakai – Nam Theu National Park Authority to implement **two new projects from 2022** that will significantly contribute to the **conservation of two Globally Threatened species** at the local (NNT NP) and global level: the **Endangered Asian Elephant** (*Elephas maximus*) and the **Endangered fish species** *Luciocyprinus striolatus* (local name: Paa Kang).

The research project on *Luciocyprinus striolatus* aims to develop scientific knowledge and understanding of the abundance, distribution, life cycle and threats of a data-poor endangered species (*Luciocyprinus striolatus*) in order to conserve and protect the population in Laos.

The **specific objectives of the project** 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

The project will be implemented with technical partner *Fishbio*.



The research project on **Asian Elephant** aims to design a long-term conservation action plan for the elephant population of the Nakai Plateau and surrounding areas

The **specific objectives of the project** include:

- To provide an estimation of the current status of the elephant population size, genetic diversity, social structure and health using a non-invasive genetic sampling survey of the population of Asian Elephants on the Nakai Plateau and surrounding areas
- To investigate the local communities' attitude towards and the threats faced by the population of Asian Elephants on the Nakai Plateau and surrounding areas using a social science approach
- To establish a long-term monitoring and conservation management plan for the Asian Elephants on the Nakai Plateau and surrounding areas



The project will be implemented with technical partners *Institut de Recherche pour le Développement*, *Nam Theun 2 Power Company* and others



Acknowledgements

WE ARE GRATEFUL TO OUR DONORS WHO SUPPORTED OUR ACTIVITIES IN 2021



Wildlife Reserves Singapore Group



Mandai
N A T U R E



Private individual donors: David Borchers; Douglas Bender; Depret-Rouffart; Catherine Billaud; Natacha Couvreur; Hr JC de Groot; Evolve Animal Services LLC; Gretchen Coffman; Jean-Michel Pavy; Troy Hansel; Helen Orton; Catherine Afonso; Andrew Moody; Paul Eshoo

THANK YOU TO OUR PROJECT PARTNERS IN 2021



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



**CONSERVATION
OPTIMISM**





New Year's Greetings

Happy New Year 2022



Camille.

July 2021

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

SUPPORT US



Association Anoulak

10 Rue des Pruniers

04100, Manosque, FRANCE

Association Loi 1901 n°W044006152

SIREN n°848 614 897

info@conservationlaos.com

www.conservationlaos.com

