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Asian Elephant Conservation: Too Elephantocentric? Towards a Biocultural Approach of Conservation

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Introduction: The urge to save Asian elephants

Among the emblematic species found on the Asian continent, the elephant (*Elephas maximus*) occupies a central place. For thousands of years, pachyderms flourished in the lowlands of Asia before being subjected to aggressive state-led agricultural expansion (Santiapillai & Jackson 1990; Elvin 2008). Until the 20th century, herds spread in large numbers across the region, which is now one of Asia's last remaining elephant strongholds. While this area is characterized by environmental challenges and human population movements, its history has undoubtedly and in part been facilitated by the ecosystemic engineering of free-ranging elephants. As remind by anthropologist Paul G. Keil (2016), by creating wide and open routes, allowing better access and offering advice in mountain areas, pachyderms have played a role in the social and political dynamics of Asia.

In an effort to characterize the long-lasting relationships human societies have shared with elephants in Asia throughout ages, Thomas Trautmann (2015) insisted on the predominant role that dominated form of power have also played for the species persistence within the continent. Trautmann's history on the '*long durée*' on human-elephant relationships distinguished three eras. The first is the period of war elephant which refers to Ancient times, starting from India and spreading tough out South and Southeast Asia; the second is related to the emergence of colonial Empire throughout the continent. During this period, elephant have substituted their military function to a more economical one due to their essential role in the exploitation of natural resources, notably for timber work. As said by Trautmann, war elephants became timber elephant (Trautmann 2015).

Since the second half of the twentieth century, due to global environmental concerns, most Asian Nation-States have banned logging activities, making thousands of elephants and their owners across the continent jobless. Such situation induced another shift regarding animal's role and employment: the development of touristic activities. The environmental crisis also

made the emergence of new actors in elephant's conservation: environmental non-governmental organization (NGOs). Being National or International, the latter are playing a more and more decisional role in the species conservation. And Asian elephant conservation has gradually been governed at the International level (Lainé 2015). The species (*elephas maximus*) being listed in the IUCN red list since 1988. On a global scale, major's threats related to the decline of the species includes the impact of demography and population growth; the intensification of agriculture and shifting of land use; the shrinking of habitats which increase human-wildlife conflict; as well as poaching (Chourdhury et al. 2008).

Despite Asian elephants live in a plurality of contexts, influenced by ecological, socio-economics, or even religious. While it appears important to define the various drivers that impact on biodiversity erosion, in particular elephants, any particular contexts or situations does not gather all of them, or at least not at the same level. Despite the various realities in which such animals are engaged, measures and/or project towards their conservation appears to be apply indifferently in any of the 13 range countries where the species is still living today.

Focusing on Asian elephant conservation, this article focusses on the Laotian context. It primary intends to reveal the *elephantocentric* vision adopted by mainstream conservation projects in direction to the species. Based upon a monospecific approach such ethics not only exclude humans or any anthropocentric pressures from the animal life, it also impacted negatively on the life of humans, elephants, plants, and the entire living beings present within their shared and co-constructed landscapes. I will then present some ethnographic notes collected among local populations, the Tai-Lue, who daily live and work with pachyderms in Northwestern Laos adopting an ethno-ethological¹ (Brunois 2014) approach. While in conservation debate (Kopnina et al. 2018), anthropocentrism often appears to be a -legitimate-criticism to any attempts of outpasting anthropogenic pressures in biodiversity conservation, etho-ethnology no longer gives primacy of knowledge about biodiversity to humans alone. Such approach therefore gives a significant place to interspecific interactions, in terms of dynamics and reciprocity. Being mutually constructed, knowledge is no longer the result of human thought erected as exceptionalism. Epistemologically it is a matter of conducting an "*ethnography of how individuals perceive and conceive, in the course of their interaction with them, the behaviour of living beings and how they react to these behaviours*" (Brunois 2005, p. 34). Such approach, more ecocentric², will open up to an enlarge vision of the species conservation, highlighting the crucial role of Asian elephant in the balance equilibrium encompassing villages, forests and all living beings gather into a complementary network of life. By doing so, I will highlight the necessity to maintain the fragile links between biological and cultural diversity (i.e between humans, animals and plants).

¹ Such approach has been developed by French anthropologist Florence Brunois, following a long investigation into the ecological knowledge of the Kasua of Papua-New Guinea. For the Kasua, their knowledge had been borrowed from other nonhuman beings, whether spirits or animals (Brunois 2014). Access to pachyderm knowledge about their environment is then being possible through the mediation of knowledge and the way these behaviors are perceived by mahouts.

² Taking its roots along with the biology of conservation (see Soulé 1985), ecocentrism is the recognition of intrinsic natural value. It emphasizes the interconnection of life forms within a complex and harmonious whole. Among others, a recent call for embracing such ethic in conservation has been made by a collective of researchers (see Piccolo et al. 2018)

1. Current elephant conservation project in Laos

1.1 Discourses and Practices

Formerly known as the land of one million elephants, *Lan Xang*, Laos today has hardly more than 900 elephants (Khoubouline 2011). Despite the Revolution of 1975, the animal remains closely associated with royalty (Kremmer,1998), but also with religion and the country of which it is a national emblem. However, like in all the 13 elephant range countries across Asia, the elephant population in Laos is now highly threatened. A recent study estimates that Laos elephants will be extinct in 112 years (Suter 2014).

Like other Asian countries, mahout and elephant's owners have undergone significant socio-economic changes since the late 19th century. The first change in Laos was linked to the country's opening up to the market economy in the late 1980s. From that period, elephant work has been specialized into the lucrative forest industry. After a rapid growth helped by technical progress (machinery), new forestry regulations on timber exploitation generate the decline of such activity from 2000s onwards. At that time, new activities involving humans and elephants emerged. All of these activities (e. g. elephant rides, creation of parks or festivals dedicated to these animals) have contributed to the development of the tourism industry and take part in a process of animal heritage.

The most emblematic example of this heritage process is undoubtedly the annual elephant festival, which has been held in Sayabouli province since 2007. In the same province, in 2011, the Elephant Conservation Center (ECC) opened. Presenting itself as the leader and main actor of pachyderm conservation in the country, this complex has the particularity to gather in one place a breeding program of the species, a veterinary clinic, a park for visitors (mainly foreign tourists), a museum devoted to elephants and a training school for mahouts. More recently, a caravan consisting of twenty elephants (*caravan xang*) crossed the North of the country for 45 days between November and December 2015, with the aim of sensitizing local populations and the international community to the urge to save the country's last remaining elephants³. This caravan ended its journey in the city of Luang Prabang, where it was directly associated with the celebrations for the twentieth anniversary of the city's inscription as a UNESCO World Heritage Site.

Regarding current conservation project, supported by the authorities, the main program currently in the country at making the village elephant population returning to the wild. The ECC has just launched a reherding program. Inspired by rewilding⁴, the idea is to create an artificial elephant herd in order to release it in protected areas⁵. The first step of this long-term

³ A similar initiative was carried out in 2002.

⁴ This conservation model emerged in the late 1990s. With regard to the Asian elephant, such programs have been undertaken by NGOs in India, where there have been wild elephant translocation exoduses for a decade now, as well as in Sri Lanka and more recently in Laos, where the main conservation project is also aimed at creating an artificial herd to be set free (see D. Nogués-Bravo *and al.*, 2016).

⁵ As pointed out by a team of ecologists, rewilding appears to be the new " Pandora's box" for biodiversity conservation, so it is advisable to be very cautious when embarking on such a program. Indeed, the existence of significant ecological and socio-economic unknowns requires a prior assessment of their consequences (biodiversity, invasions, biocontrol, economics, societal conflicts, ecosystem services), which has not been done in Laos, where implementation has been entrusted to NGOs and practitioners. Researchers in the humanities and social sciences insist on the long-term

program is to remove elephants from the villages from which they live and belong. As such, there was a campaign, named " *Elephant Rescue* " launched by ECC in 2016. By appealing to the generosity of Western donors, the ECC hoped to raise up to \$50,000 to prevent these animals from enduring a " *life of suffering*⁶ " if they stay in the village with their owner. More crucially, until the animals would be finally released, the daily management of the centre is organized according to the western zoological model.

The management of elephants in such manners have direct impact on the knowledge and relationships share between mahouts and elephants. For example, during a visit conducted at the Elephant Conservation Center (ECC) in Sayabouri Province in Laos, I came to know that mahouts had to sign a specific contract with the owner of the park (usually a foreigner) where it is mentioned that they should have a proper discourse when interacting with visitors, especially foreigners, and not use improper tools with animals. The latter should, for example, avoid the use of *chor* (a long spine stick⁷) to control their elephant, neither the *chorbeit* (a sort of leash attached to the elephant's ears). For security reason, they are only allowed to keep a traditional long knife (*dao*), a tool that is not specifically associated to elephants, but which is largely employed by any Laotian in village for several purposes. This way, visitors would not worry whether such tool may be employing to control the animal. In front of tourists, mahouts should also avoid shouting loud to their elephant. Something which is an integral part of their relationships, based on a mixed of care, trust and sometimes corrective's manner when necessary, as noted by Lainé (2016) regarding timber elephant in Northeast India. Thus, mahout told me that when an elephant is not listening and does not responds properly, if it is not corrected immediately after, it will become uncontrollable even when visitors are not there and when back to village. It clearly appears that the imperatives of touristic ventures and recent concerns with animal welfare from western visitors are guiding the management of elephants in such institution which are economically dependent of foreign visitors to exist. For example, when it was created in 2011, the Elephant Conservation Center of Sayaboury was proposing elephant's trekking, but due recent visitors concern, the Center is no more proposing such activity today. The current manager of ECC currently claims to make « ethical tourist » as a way to distinguish its center with others in the country⁸. More recently, the center become member of the Asian Captive Elephant Working Group⁹ (ACEWG), a regional conservation and welfare group on elephant which aims at improving the quality of life of captive elephants in all range states of Southeast Asia. Among the program, elephant rides is not something encouraged¹⁰. On the contrary, elephants must be presented without chains or any markings indicating their past lives in the village. For example, mahouts are not allowed

unpredictability of such programs and emphasize the multiplicity of practices and concepts to which the term rewilding refers (see Lorimer *and al.* 2015). Thus, in the eyes of the scientific community, the re-herding program acts as a real laboratory on life.

⁶<www.generosity.com/animal-pet-fundraising/elephant-rescue-mother-and-calf> (consulted on 27/04/2018)

⁷ *Chor* correspond to *ankus* in the indian world from where it is originated and then spread throughout South and Southeast Asia (see Trautmann 2015)

⁸ The group has recently published a report regarding the welfare of elephant in tourist camps (see AESAN 2015).

⁹ This group was initially known as ASEAN *Captive Elephant Working Group*.

¹⁰ Banning elephant trekking in the name of their welfare is something also observed in other elephant range countries. For example, Thailand which has also changed the way tourist's camps are adapting themselves and communication toward visitors (see chapter 9 «Elephants in Tourism. Sustainable and Practical Approaches to Captive Elephant Welfare and Conservation in Thailand » in Malikhao 2017).

to use their hooks to control their animals if necessary, nor are they allowed to climb behind the neck of the pachyderm.

Regarding medicine, while Western (allopathic) veterinary medicine is mainly applied to elephants working in tourist camps, as we will see in the next part, mahouts working in neighboring villages were more reluctant to call and consult a vet, even though in Laos, medical treatment is provided free of charge for them following ElefantAsia¹¹ initiative (Suter 2010). In parks and camps, elephants are cared for by veterinarians or behaviorists, thus relaying mahouts and owners to the simple rank of animal drivers. Having become park residents, elephants become "patients", they are fed vitamins and drugs that are not unanimously accepted by mahouts and owners. Some complain about the monotonous or inadequate diet provided to their elephants in these areas¹². Others told me that their animals could not select the plants themselves for self-medication. Actually, and as we will see in the second part, while conducting fieldwork in village, mahouts interviewed strongly affirmed that elephants were able to cure themselves via self-medication by selecting plants and roots by their own. They took it as a proof that camp location and facilities did not provide such a variety of food, which according to them explained why camp elephants got more frequently sick than those who lived in the village¹³. They do not pretend to act on any aspect of elephant life. For example, as part of their ordinary life and activities in which they are engaged, elephant changing shape, especially after 4-5 days of timber logging; but once they released the elephant in the forest, within one week or so, the animal easily gained weight and became healthy again.

1.2 Discussion: Trouble between animal/environmental ethics and ecological bias

When focusing on actions and discourses employed by ECC in Laos to mobilize public attention and gather funds for their projects, a nuanced but very important aspect appears. While pretending to act on the species survival, the focus mostly remains on individual's animals and on elephant itself, without considering neither the animal impact on an ecosystem, neither their share relationship with humans. For these reason, current elephant conservation project in Laos can be understood as *elephantocentric* only.

In conservation ethic nevertheless, protecting individual and conserving a species is something clearly separate both epistemologically and pragmatically. As remind by Milton (2000), the animal issue differs from the environmental one, and even sometimes opposes it. Indeed, whereas the protection of nature and the environment focuses its attention and actions on animals as species – notably by supporting their role within ecosystems and forming an integral part of biodiversity dynamics -, on the other hand, animal protection focuses more on individuals as sensitive/sentients beings, arguing their exploitation by humans. Actually, as

¹¹ Implanted in the country since 2001, ElefantAsia concentrated its efforts on the registration of captive elephant, reproduction and veterinary. Runs by two French nationals, the team is mainly composed by French veterinarians coming as part of a voluntary contract. In order to get trust from local mahouts and owners, they provide free care to elephant as well as distribute "Elephant first aid kit" (Suter 2010). The NGO was also at the initiative of the Elephant Festival annually held in Sayabouri Province since 2007.

¹² For example, in most elephant parks, tourists are invited to feed the pachyderm with bananas (*kwai*) or sugarcane (*oidam*). As several mahouts have told me outside the parks, these foods are to be fed in an exceptional way to the pachyderms, because they quickly take strength and become uncontrollable. In addition, bananas can cause many digestive problems (constipation) if consumed in large quantities.

¹³ This point is also an argument use by elephant's owners which prefer not renting their elephant to tourist camps and continue working with them in forests (see Lainé 2017).

observed by anthropologist V. Manceron noted about animalist rights activists in France, campaigns tend to subjectivize animals as individuals (“*animaux-individus*”) leading to create trouble in identification and a double continuity between humans and nonhuman animals, both in biological terms and in their interiority (Manceron 2012). Animal’s rights activists are guided by an animal ethic perspective. Such ethic focusses on individuals intending to improve their welfare, or in their more radical form, to liberate individuals animals¹⁴ (Vilmer 2008). Actually, as we will see in the next part, from an indigenous point of view, acknowledging an individuality to elephants is actually not something surprising at all. For example, in Indian (Lainé 2014) or Laotian villages or in Laos, village elephants (*xang ban*) are individually known and recognized. They are considered to be an integral part of a household, and each individual differs according to their own conducts and character.

A part from this trouble between practices and discourses, which may reflect a certain needs to adopt a particular discourse in a time of neo- liberal/colonial conservation (Duffy 2014) - seen as ‘market-based’ approach on conservation (Kopnina 2016)-, the will to liberate and recreate artificial elephant herds rely on a monospecific (Asian elephant) and naturalistic¹⁵ view of nature. Such view based on a nature/culture dualism underestimate the complex dynamics and relationships shared between local populations, elephants, and the entire ecosystems they share and co-produce. Simply, in such view, the presence of elephant among local populations rises several ethical issues, as they are often perceived and apprehended only in terms of domination or exploitation, stating that such animals have nothing to do with human. Assuming such a radical anti-anthropocentrism excludes *de facto* local knowledge in conservation issue.

The second part purposes to present various ethnographic notes collected among the Tai-Lue population in Laotian villages. Drawing from an ethno-ethological (Brunois 2014) approach of mahout-elephant relationships will not only help in revealing the cosmo-ecological view of elephant, but also by apprehending knowledge in their interactives and reciprocal influence will outpast an anthropocentric view. This will open up to an enlarge vision of elephant conservation, based on biocultural diversity.

2. Elephant’s life at the village

2.1 An ethnography of mahout-elephant relationships

The elephant’s life at the village level differs from the one offer in conservation camps in many aspects. The most prominent is probably the one related to the management of the animal’s health and care. Unlike modern veterinary medicine, which prevails in camps, at the

¹⁴ For a boarder discussion on the emergence, goal, and differences between animal and environmental ethic, as well as an attempt to link them, see Callicott (1988). For a reverse perspective on their linkage, see Sagoff (1984).

¹⁵ In his book *Beyond nature and culture* (2013), French anthropologist Philippe Descola shows that the opposition between nature / culture is not universal, but reflects a Western cosmological conception, namely naturalism. Such view postulates the uniqueness of nature on which unfolds the diversity of cultures, and a clear distinction of what belongs to ‘nature’ and what belong to ‘culture’. In such ontological schemes, only humans have subjectivity. Phillipe Descola puts forward 4 ontological schemes that allow comparing non-human and humans: naturalism (same interiority/same exteriority), animism (same different interiority/physicality), analogism (different interiority, different physicalist) and totemism (same interiority/same physicality).

An ontology is understood as a stable inference mode (a mental operation at the basis of all reasoning) defining the properties of the beings encompassing in the environment.

village level these aspects mainly rely on local knowledge. There, elephant's health and care, is primarily the responsibility of the owner of the animal. Obviously, the elephant's health condition also depends on their work, which varies throughout the year. Apart from seasonal jobs such as logging, village elephants (*sang ban*) perform a multitude of daily tasks. For example, during the rainy season, at the time of transplanting rice in paddy field, they help carrying the owner's family to go to the fields located on the edge or a few kilometers from the village. Each year, Tai Lao and Tai Lue take up residence for several weeks in their farms. The presence of elephants is essential for transporting seeds and equipment's to the paddy field. Occasionally, animals also help to weed or clean up plots and grounds. Moreover, in the most rural and remote areas, they remain a very useful means of transport, especially during periods of heavy rainfall.

Actually, in the villages, in many ways, what French sociologist Jocelyne Porcher (2010) called 'good life offered to animal' can be found in regard to elephants. Each village elephant is considered as belonging to the household of its owner, of which it is a full member, in the same way as the entire household composition¹⁶. Also, each village elephant is protected by the spirit of its owner's home, the *phi huean*. And each time he leaves his home for several days, notably to go to work with the animal in the forest, every owner informs his *phi huean* seeking protection for him and his elephant. In addition to its protective role, *phi huean* has the ability to act on the health or behavior of pachyderms. During the investigation, a Tai Lue owner from the village of Viengkeo told me, for example, that he had been unable to find his elephant in the forest for several days. After consulting the ritual specialist (*mo*) of his village, he was told that the *phi huean* had deliberately hidden the animal, depriving the family of income, because the wife and her husband were constantly quarrelling. It was only after making the promise to their spirit -through a ritual ceremony and offerings-, that they would no longer argue, that he was finally able to find his elephant back.

Similarly, according to the animist¹⁷ system that prevails in Tai Lue and Tai Lao, elephants possess spirits in their interiority, the *phi*, and like human (Zago 1972), they are animated by a vital force (*kwaan*), which they have in common with the other large mammals (*sat*). This belief implies a strong ritualization of the daily relationships between mahouts and elephants. This is expressed, for example, every evening when mahouts leave their elephants in the forest after a day's work. At this time, the mahouts have to inform the spirit of the forest (*phi pa*) and the god of the soil and earth of the specific territory (*chao don chao dee*) and ask them to take care of the animal, to protect it in case of attack by other animals (such as snakes), but also by evil spirits (*phi phai*).

This ritualization of their daily life involves the presence of ritual specialists to ensure the health and well-being of pachyderms, the *mo xang*. The latter are first called at the time of elephant training at the age of 4 or 5 years. Then, throughout the animal's life, in case of an attack of a bad spirit, the mahogany consults the *mo xang* which acts as an exorcist. Through incantations (*khatha*), this ritual specialist will come into contact with the *phi phai* that he will hunt from the elephant's body. Likewise, every year, the owners also use *mo xang* to carry out the elephant baci at the Lao New Year's Eve (*Pi mai*), usually held after the April's moon. Such ceremony aims at gathering the *kwaan* of the animal to guarantee good health. This

¹⁶ For example, during my investigation, in every elephant's owners house visited, I noticed photographs of their elephants appeared alongside the portraits of the different family members.

¹⁷ As part of the four ontological schemes emphasized by Descola (see note *infra.*), animism give to non-human an interiority similar to human. Plants and animals are like "persons" have a social life similar to that of humans, but differs in the body (same interiority, different physicality).

same ceremony can be held during the year to thank the animal for the work and services rendered to humans.

In the village, apart from the *mo xang*, which can be considered as practicing rituals medicine, there are other local healers to ensure the well-being and health of pachyderms, *mo ya*, practicing remedies medicine. The latter care for humans and animals using medicinal plants, in support of manuscripts, called *thamla ya*¹⁸. There is a whole set of preparation in these manuscripts for treating pachyderms, for example: to treat abscesses, tied to the ropes for work, if the elephant has lost his appetite and is sad, if he has low or high tension (preparation to lower tension), there are also recipes for females if they do not have milk for their offspring to treat benign wounds, or if they have sore legs, to treat diarrhea. When male elephants are in *musth (gnoi nya)* period. For each of these ailments, there is a variation of concoctions. These manuscripts also indicate vitamin preparations for the pachyderms, named *ya bam loung* which are quite known to the mahouts, whose preparation requires more than 15 ingredients, most of which are available in the village. Literally 'vitamin plant balls', these preparations are made in large quantities before each departure to the forest.

Finally, if the health and well-being of village elephants are taken care of by specialists, the elephants themselves can wander through the forests on the edge of the village or rice paddies for self-medication. On this point, elephants sometimes lose weight after several days of working in the forest. However, all the mahouts have told me that if they let them rest, free to roam in the forest, it only takes them a few days to recover their healthy weight. While living in village, elephants have the possibility of self-care, which is not the case when they are employed in camps and tourist parks. As one elephant owner told me, who rents them seasonally: "*The elephants in the camps are very different, they are bigger and appear beautiful to be photographed. They don't seem to be what they really are in the village.*" Elephants like to be covered with mud and dust to protect themselves from heat and insects. He added: "*Camps are like prisons for elephants. They have no choice as to what they want to eat, they can't go out and move freely outside the camp gates*¹⁹."

This last quote opens up to an aspect of the work and presence of elephants in the village that is rarely taken into account when establishing conservation programs or projects. Today, one of the arguments put forward by camp owners, animal right activists and conservationists to remove elephants from village is based on the impact of logging on the forest and its habitat. The work of logging wood is decried, perceived as destructive. Conservation campaigns stipulate that by working in timber logging, elephants not only deplete themselves and are exploited, but also destroy their own habitat. Such conception underestimated the fundamental functions of elephants in their ecosystem, and probably over-estimated the habitat destruction made by pachyderms²⁰. As a key species, elephants are actively involved in forest regeneration. Indeed, in each of the environments they pass through, they spread seeds and thus contribute to the regeneration of biodiversity.

A recent study (Campos-Arceiz et S. Blake 2011) highlighted the unique role that elephants play in maintaining biodiversity in the forests they inhabit. While all animals are involved in ecosystem processes, elephants do so in a unique way. They modify the physical structure of

¹⁸ Most of these manuscripts are written in Tai, the oldest in Pali.

¹⁹ Interview conducted in Ban Phonxay on 22 August 2016.

²⁰ Let's remind that high scale of deforestation and biodiversity erosion have been induced by the appearance of machines, not the work of elephants. Elephants and their mahouts were the first victims of widespread bans in Asia (Lainé 2012). On a controlled scale, the forest industry can regenerate the forest while providing excellent working conditions for pachyderms.

vegetation when they feed, they mobilize large amounts of nutrients with their faces, they provide food and create habitats for a large number of vertebrates and invertebrates, and of course they disperse the seeds of most of the plants they eat. As a result, they maintain and regenerate forests. For such role, ecologist considered as ‘*mega gardeners*’ (Campos-Arceiz et S. Blake, 2011). There are indeed numerous ecological studies highlighting the importance of elephants as seed dispersal and forest regeneration (Haricha et al. 2016 ; McConkey et al. 2018). Nevertheless, due to their epistemological history and object of research, such studies never cross the forest boarder and get interested in village ecosystems. The importance of elephant as mega-gardener could indeed broader and extend to the village itself and its edge (for example paddy field). While sharing life at the village among humans and other congeners, elephants circulate between the different spaces, villages (*ban*) and forests (*pa*). Thus, the ecological role they play for the forests and mountains in which they work, can here be extended to the edges of villages, plains and rice fields through which they travel throughout the year. This way, village elephants contribute to the balance equilibrium of the village-forest ecosystem that is maintained by them.

Becoming a village elephant (*sang ban*), the animal maintains contact with its primary environment: it is a ‘domestic being’ that is released every day in the forest (in the evening, after working time), or seasonally, for example during the monsoon season. By leaving a male or a female elephant free to wander in the forest, it is hoped that he will find to mate with one of his congeners, who will give birth to a new individual. Later, by the capture of a young individuals and its integration into the village community, local populations create domestic elephant with wild one. And so on, in a perpetual movement of regeneration and maintenance of the species (Lainé 2018). Locally indeed, both forest and village elephants share inextricable links. Even though some are living under human habitats, they live in a permeable border between forest and village which allow them to actively contribute to maintain a high level of biodiversity²¹.

Such way to live with elephants have also a greater impact that may explain the reason why Asian elephant have never been domesticated. Born in the forest, pachyderms possess knowledge about the forest world (*pa*) to which they would no longer have access if they remained confined in the village: interacting with wild herds enables them to preserve such knowledge and to transmit it to the village. As seen above, elephants know how to choose the plants they need to take care of themselves), employed their own medicine by self-medication.

The complementarity between forest and village elephants as highlight by the Tai-Lue cosmoecology appears to be linked with their relations with other species. Such is the case with the domestic Asian water buffalo (*Bubalus bubalis*). Both species live in the village where they give complementary services. While water buffalo are freed into the forest during the dry season, they are called to prepare the fields before at the beginning of the monsoon. At this period, elephants roam freely around the village. Like elephants, water buffalo are not restricted into the village compound throughout the year. But their presence and belonging to the village community provides various ecosystemic services for the forest-village complex *milieu*. In this regard, dungs rejected and disseminated by elephants and buffalos benefit the ecosystems. For example, these dungs are used as habitat for certain insects (frogs as show by

²¹ Interestingly taking note of to the current re-herding conservation programs in Laos as seen in part I, which intends to (re)produce wild elements with domestic one, is in perfect contradiction with the way of which are thought and experienced the relations that the local populations.

Campos-Arceiz et S. Blake, 2011) also serve as food for a set of animals. While conducting fieldwork in rural Laos, I could often witness livestock being interested by elephant dung. More generally, elephant dung is largely employed as manure and fertilizers. During the dry season, at night, mahouts use paddy field as shelter for the animal. By letting their elephant sleeping there, they prepared the land by the deposit of their dung.

All in all, there is a complex network of interdependency, reciprocity and mutual benefits that does not address to humans only. The mentioned complementarity between buffalos and elephants is an illustration, while seed (for forest regeneration) as well as feces (both for manure in paddy field as well as food provider for other species) are another ones.

2.2 Discussion: the shared life of elephants, humans, and plants

In Laos, anthropologist Sarinda Singh (2012) has shown that elephants are integrated into complex ecological and political contexts. Nowadays, conservationists seek to remove elephants from villages and, for some, to artificially recreate herds of elephants. Such approach reflects the general vision of the species conservation throughout Asia. More generally, in the continent, conservation programs, tend to separate local people from animals. The future of elephants must be played out in these centers, where elephants do not work. For example, this is also the case in Thailand, where very few elephants live in villages (Emourgeon 2010). Such conceptions of biodiversity conservation not only deprived elephants from the village where they belong and live for years, but directly challenge the links and that local populations have forged with pachyderms for millennia. They do not seek to understand the complexity of their relationship or their history with these animals. It is surprising that no project today takes these cultural and pragmatic dimensions into account to work towards better conservation.

However, let us not forget that it is because local populations have lived and worked with elephants that elephants still exist today in the country and, more generally, in Asia. Today, mahouts and owners suffer from bad images unfairly relayed from discourses and campaigns aimed at " saving " elephants from exploitation by humans to lock them up in these places where it is a question of " rewilding the domestic " who, sometimes, has never been wild (some elephants were actually born in the village). However, if we leave behind this *elephantocentric* vision of species conservation, and focuses on elephant's management at the village level, we have seen that there is much more than one interest to maintain and keep the presence of elephants along with local populations. Primarily for the animal themselves, since contrary to their life in camps as described in Part I, village elephants keep constant contacts with forest congeners, continue to have direct access to forest, and are able to cure themselves by self-medication. Regarding animal welfare, the various attentions given by the local population provide them respect, protection and well-being under a sophisticated health systems including ritual medicine, plant medicine.

The indigenous Tai-lue cosmoecology as highlight above does not narrow to a dualistic relationship (human and animal) but encompass all living beings present in a certain milieu (including plants and other non-humans, as well as invisible beings (the phi). Tai-Lue mahouts and elephant's owner do not pretend controlling any aspect of the elephants they are living with, neither to any other living being. On the contrary, it is like if humans consider the complementary of each being in order to ensure an overall balance equilibrium which contribute to maintain a high level of biodiversity. Such complementary does not necessarily

give primacy from a living being to another one, When an elephant is removed from a village, it is not only an individual from a single species which is removed, it is also the entire 'world' that elephants make and coproduce with other species that disappear.

The presence of elephants in the villages along with local populations goes even further. In contrast to the campaigns run by the current Elephant Conservation Centre in Laos, in villages, animals do not work all year round. As members of the village community, they accompany human activities and participate directly in what makes society. Throughout the year, they have access to a variety of natural environments (mountainous when they draw wood during the dry season, in the plain, near rice fields, during the rainy season). These animals have access to a rich diversity of plants to feed and care for themselves. And it is often forgotten, but their seasonal movement also contributes to the regeneration of the forest by spreading seeds and plants in each of the environments they pass through. This is one of the fundamental ecological roles of the species that disappears when these animals are locked up in parks. Also, keeping the presence of elephants in villages along with local populations contributes directly to the conservation of biodiversity.

While addressing key issues regarding Asian elephant's conservation ethics, Helena Kopnina considers three various contexts in which different ethics should be applied: natural wilderness, mixed society, and industrial society (Kopnina 2016: 233). Among them, the "mixed society" reflects a human-elephant situation where both share space and needed (i.e. are highly dependent on ecosystems). In this last situation, the author suggested "*on creating symbiotic communities of humans, animals, and plants and on taking into account the interests of sentient beings and the welfare of ecosystems*" (Kopnina 2016: 234). Apparently, the shared life (Lestel 2013) between Tai Lue population of Laos along with elephants, plants, other nonhumans animals, as well as invisible beings (such as spirit) reflects such position.

Conclusion: For a biocultural approach of conservation

The management and conservation efforts towards elephants in camps, in contrast to the life shared in the villages with local populations shows that instead of narrowing efforts on the species or even on individual's animals only, engaging a broader perspective including any forms of life into a common network would reciprocally have beneficial impact on each of them. It is primarily assuming and valorizing the biocultural diversity²² (Maffi 2005) in one hand, and acknowledging the effective role of local knowledges in conservation projects in a second hand.

On a global scale indeed, local knowledge appears to play a major role for biodiversity management, for its knowledge and its conservation²³. Within international agency, there is a

²² Biocultural diversity considers the diversity of life in all of its manifestation (cultural, biological, and linguistic) is inter-related within a socio-ecological adaptive system (Maffi 2005).

²³ Since the last decades, the rights of indigenous populations and their role into biodiversity conservation is getting more and more recognized at the international level. It has started back in 1992 at the Rio Summit, which article 8J considers that the protection of nature and the conservation of biodiversity depends on the right of local populations to preserve their territories and ways of life, including within degraded areas and/or towards endangered species. More recently, the need of taken into account the local knowledge possesses and daily mobilizes by indigenous people in their contact and interaction with their surrounding environment has been highlighted in two prominent international text and agreement. It is firstly the case under the Nagoya Protocol (in force since 2014),

consensus on not to excluding local populations from conservation projects and policies rather to integrate their knowledge s within them. But, despite numerous called and acknowledgements, when we look at what happens locally, very little space and attention is actually given to the knowledge and know-how mobilized locally on how it can help to manage and adapt to global change. Such is the case in current re-herding elephant project in Laos as highlight in the present article. Actually, it is like if such recognition exists on the paper but remains on the paper only. Still today, indigenous people usually receive, often in full force, actions and policies relayed by governments or NGOs. More generally, as anthropologist Anna Tsing (2002) points out regarding the conservation history of the Global South, the place of local populations in the establishment of development projects or conservation policies is seen only as an *allegory* guiding environmental policies and agendas, with no effective impacts and considerations. Yet, as Anna Tsing points out, local knowledge appears to be crucial "*cultural node within global networks*" (Tsing 2003:164). Despite international agreements and conferences on the need to offer a larger consideration to local knowledge, the case under study in the present article shows that there is here a real opportunity to adopt an *Evidence-based conservation* (EBC) approach for the future of Asian elephant conservation. By revealing a co-evolution of several species in the same space and time ethno-ethology does not give any supremacy on a species to another one, and apprehends knowledge in their interactive and reciprocal influence. Such approach would definitely help in describing a much complex reality than the one offers by conservationists nowadays.

Conflict of Interest

The author declares that there is no conflict of interest.

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on access to genetic resources and fair and equitable sharing of the benefits, arising out of the Convention on Biological Diversity. Secondly, within the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an intergovernmental body which assesses the state of biodiversity and the ecosystem services it provides. While the recent IPBES framework is primarily dedicated to ecosystems services, it also recognizes the role of socio-economics activities in the fate of biodiversity.

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