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WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature by: conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

WWF was one of the first international non-government organisations to work in Vietnam. In 1995, WWF began working on a national conservation strategy; and since then has worked closely with the Vietnamese Government on a diverse range of environmental issues and implemented field activities across the country. Based in Hanoi, the WWF Indochina Programme expanded its operations into Cambodia (since 1993) and Laos (since 1997). In 2006, WWF-Thailand joined to form WWF-Greater Mekong. In 2014, WWF-Greater Mekong opened office in Myanmar. WWF-Vietnam is the implementing arm for projects in Vietnam.

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THE CARBON SINKS AND **BIODIVERSITY PARTNERSHIP** CARBI



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FOREWORD

WWF-Greater Mekong and its partners' CarBi programme is an unprecedented trans-boundary conservation economy assignment, which aims to protect and restore more than 240,000 hectares of unique forest in one of the world's biodiversity hot spots, focused on the Central Annamite Mountains joining Laos and Vietnam. It brings together development partners, national, provincial and district governments, as well as local communities to conserve and restore the forests and their unique species, and to protect and enhance the livelihoods of the people whose existence depends on the ecosystem services provided by these forests. CarBi is focusing its value offering on the contiguous Protected Area (PA) network in its planning domain, complemented by Forest Restoration in priority buffer zones, Payment for Forest Environmental Services (PFES), Timber Trade Governance, and a multitude of community engagement interventions, constituting an integrated high impact strategy.

CarBi demonstrated how it significantly strengthened PA management and improved the understanding of its biodiversity and ecosystem services through progressive and science based monitoring, addressing threats and drivers through focused and best practice law enforcement, drafting of progressive PA and Restoration Management Plans, capacity building at government and community levels, as well as providing sustainable alternative livelihood opportunities for communities in the buffer zones through community based forest restoration, PFES (as a sustainable funding mechanism), whilst also focusing on community engagement towards positive attitude/ behavior change. We also addressed trans boundary timber trade matters through the application of cutting edge methodology to ensure a solid understanding of the leakage of timber, and the levels of adaptive management and policy transformation required to also inform and enrich the Forest Law Enforcement, Governance and Trade (FLEGT) process in Laos and Vietnam, strengthening the respective governments' commendable change management in this regard.

CarBi's strong belief in creating a sound governance platform in close partnership with its highly valued government counterparts, also providing strong guidance, implementation support and oversight through an effective Project Management Unit system, further strengthened the momentum towards high impact results. The CarBi Family's passionate and energized commitment to succeed as a collective, balanced with consistent honest reflection on lessons learned and concomitant adaptive management, allowed us to bring about significant change, but also reminded us that we still need to continue this journey towards the desired destination.

These stories will highlight how the CarBi Family succeeded in significantly improving PA management effectiveness, how PFES was used to stimulate financial sustainability, the rediscovery of some of the world's rarest ungulates... and even a new snake species, a world class Forest Guard system destroying more than 100,000 snares, creating in excess of 170,000 person days employment, supporting integrated and high impact forest restoration, achieving more than 80 newspaper articles and reaching more than one million people through Facebook, and also attracting significant co-financing from a broad spectrum of donors, which also ensured collective value fore money.

If you want to go fast, go alone. If you want to go far, go together. CarBi intentionally decided to take the latter route to ensure high impact at scale, sustainably. Although these stories are only small windows into some of the more significant CarBi interventions, we trust that you will share the rays of sunshine and warmth of hope with all the inhabitants of this unique, but fragile environment we are privileged to support.

Fanie Bekker

Trans Boundary Director: CarBi

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RECONNECTING FRAGMENTED FORESTS WWF'S AMBITION FOR THE CENTRAL ANNAMITES

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The landscape of the Central Annamites contains some of the last relatively intact evergreen forests in the Indochina region. Considered a biodiversity hotspot, the area is widely known for its globally outstanding biodiversity. In the last century, only six large mammal species were discovered worldwide, and three of them are endemic to the Annamite range: the Saola, Truongson Muntjac and the Giant Muntjac.

Due to this amazing forests, unique species diversity, and life-supporting ecosystem services, the Central Annamites have always been the highest priority for WWF-Vietnam. Working in Vietnam since the early 1990s, WWF was the first organisation to support local government to develop the Central Annamite Conservation Initiative, which focused on protecting habitats and their endangered species, especially the Saola – a WWF regional flagship species.

"Our ambition is to connect a contiguous forest area from central Vietnam to southern Laos, establishing an integrated series of protected areas. This will become a green corridor, creating a safe enabling environment for returning species to thrive in," said Dr. Van Ngoc Thinh, Country Director of WWF-Vietnam.

In the 1990s, the Vietnamese government started to classify forests into 3 categories, including productive, protection and special-use forest. In this context, WWF, in close consultation with local governments, started to propose specific areas for protection. This was to support local governments in identifying and preserving forests that are important habitats. In 2000, with support from WWF, the Song Thanh Nature Reserve (Quang Nam), totaling 93,249 hectares, was established. This was followed in 2002, by the establishment of Phong Dien Nature Reserve (Thua Thien Hue), with an area of 41,509 hectares.



Forest Guards and Rangers are setting up a camera trap, illustrating one of the biodiversity monitoring activities in Saola Nature Reserves.



An initiative to conduct joint patrolling by CarBi's Forest Guards and the Government's Forest Ranger force, shows law enforcement in action at the Saola Nature Reserves.

In this period, evidence of Saola presence was clearly visible in both Thua Thien Hue and Quang Nam through two captures of live individuals, as well as skulls and horns that were found in local hunters' houses. Unfortunately, traces of the animals started to become more infrequent during the early 2000s. Urgent protection interventions to conserve this species were undeniably needed. In response, WWF started working with both provincial governments to focus special attention on this highly endangered and unique species.

Saola Nature Reserve Management Board, and assigned more than 15.500 hectares to the reserve.

A year later, the successful operation of the Thua Thien Hue Nature Reserve convinced Quang Nam Province to establish its own Saola Nature Reserve, with WWF offering the same level of financial and technical support. The Quang Nam Saola Nature Reserve Management Board was established in 2011 to manage 15,380 hectares of forest.

"Our ambition is to connect a contiquous forest area from central Vietnam to southern Laos, establishing an integrated series of protected areas. This will become a green corridor, creating a safe enabling environment for returning species to thrive in," —said Dr. Van Ngoc Thinh, country director of WWF-Vietnam

In 2008, the Ministry of Agriculture and Rural Development approved the extension of Bach Ma National Park by a further 15,000 hectares to connect to the core CarBi project to conserve more than 240,000 hectares, of the Saola habitat zone. The map of the green corridor was gradually filled in with protected areas. However, there were still vast forest areas from A Luoi to Tay Giang that were ideal habitats for the Saola and other species, but had not been connected to the corridor.

In 2010, with further commitment from WWF to provide financial support and technical assistance to co-manage the Saola Nature Reserve during its first few years, Thua Thien Hue People's Committee approved the establishment of the

At the same time, KfW, the German Development Bank, with further support from WWF-Germany, funded the including 4 protected areas of trans-boundary forests, located in central Vietnam and southern Laos. The project's activities in Vietnam were to focus on assisting Bach Ma National Park, the 2 newly established Saola Nature Reserves in central Vietnam, and Xe Sap National Biodiversity Area in Laos. The assistance consisted of protected area management, law enforcement, forest restoration, and livelihood diversification, as well as supporting the governments of Laos and Vietnam in addressing the illegal trade in wildlife and timber.



CarBi staff classifying leech samples to support DNA analysis for enhanced species identification.

MAINTAINING A SAFE AND THRIVING FOREST – THE FIRST TASK

Speaking about the initial conditions, Le Ngoc Tuan, Director of Thua Thien Hue Saola Nature Reserve recalled: "We had 12 in our team, including cleaners and drivers. Most of my team came from forestry companies, knowing little about biodiversity or law enforcement skills."

Things were not much better at Quang Nam Saola Nature Reserve, where the team started with five people. Both Saola Reserves had to rent small, local houses for their offices.

"To manage the vast area of more than 15,000ha, where the Ho Chi Minh Highway runs through the reserve creating multiple easy access opportunities, we need at least 30 rangers. We were incredibly short of human resources," Le Hoang Son, Director of Quang Nam Saola Nature Reserve explained. "We're lucky that CarBi is helping to fill some important gaps."

Under CarBi, 20 forest guards were recruited for each reserve, and together with 8 government rangers, patrol the forest 16 days per month removing illegal logging and hunting camps, and the snares/ traps they leave behind. After 6 years of dedicated patrolling, evidence of species through camera traps, and traces found on patrols have been growing steadily. There are also fewer forest violation cases recorded each year; the forests are in safer hands than ever before.

OUTSTANDING METT SCORES - FROM SUCCESSFUL CO-MANAGEMENT MODEL

The most crucial technology introduced by CarBi to support the management of the reserves is SMART (Spatial Monitoring and Reporting Tool) - a software for managing and improving the effectiveness of law enforcement patrols and other site-based conservation activities. Data collected by the forest guard teams on their patrol routes is sent directly to headquarters for robust analysis. This has enabled the management boards to receive more effective information, which has led to improved planning of law enforcement practices.

Indeed, news of SMART's effectiveness has travelled beyond the reserves. Both Thua Thien Hue and Quang Nam provinces have requested their other protected areas to use the software. Following training from the Thua Thien Hue Reserve, Quang Binh have committed to use SMART across the whole province.

Since CarBi began supporting the nature reserves in 2011, various methods have been developed and deployed to study species populations, such as camera traps, leech collecting and DNA analysis, and observations from forest guard patrols. Results have been breathtaking: an image of a Saola was captured by a CarBi camera trap in 2013, and the presence of numerous rare and endangered species, such as the Striped Rabbit and the Asiatic Black Bear, has been confirmed.

"I was delighted. Finally, there was some live evidence of the Saola in Quang Nam, rather than just skulls and horns," recalled Dang Dinh Nguyen, former Director of Quang Nam Saola NR.

At the end of 2015, Quang Nam and Thua Thien Hue Saola NRs achieved a Management Effectiveness Tracking Tool (METT) score of 65 and 62% respectively. This is an internationally recognised method to measure the effectiveness of protected area management. These scores has increased 103.1% (Quang Nam Saola NR) and 67.6% (Thua Thien Hue Saola NR) since 2010 when they were first measured, clearly showing the significant impact of CarBi on these Protected Areas. Considering that the average METT score of protected areas worldwide is around 49%, the 2 Reserves' progress could be considered to be exceptional.

A WILDLIFE RECOVERY LANDSCAPE BY THE CARBON SINKS AND BIODIVERSITY PARTNERSHIP - CARBI BUILDING INFRASTRUCTURE - FOR A BETTER DAILY LIFE AND WORK Having to rent local houses as offices, for both working and living, the two NRs got support from CarBi to build 4 forest ranger stations (2 in each NR) and 2 ranger outposts for rangers to work and rest while on patrol missions. In 2014, boundaries between the 2 NRs and surrounding areas were clearly demarcated by 25 boundary markers for Thua Thien Hue NR and 22 for Quang Nam NR, supported by CarBi. These markers help improving law enforcement, acting as a pre-warning for those who would want to enter the Reserves illegally.

"We are thankful that the nature reserves placed their trust in WWF during their first few years. In view of the reserves' notable achievements and CarBi's commitment to continue their support in the coming years, we hope to receive local government approval in extending the area of the reserves still further," said Dr. Thinh, concluding on a proud and positive note. •

Thanh The Vinh / WWF-Vietnam

MAKING THE DIFFERENCE: FOREST GUARDS IN CENTRAL ANNAMITES

In 2010, the world mourned the loss of the last with five people to patrol the area of 15,000ha **■** Javan Rhino in Vietnam when it was killed in Cat Tien National Park. While more than one factor contributed to this tragedy, one of the most important was the ineffectiveness of the park's protection system—a system which is used in Right from the outset, forest guards were focused protected areas across the country.

When in the same year the Saola Nature Reserve was established in Thua Thien Hue, and a year later the neighbouring Saola Nature Reserve in Quang Nam, an important question was posed: How could the Saola and the other iconic species, such as the Red-shanked Douc, the Annamite Striped Rabbit, and the Serow, be protected adequately if the protection system couldn't prevent the Javan Rhino's extinction in Vietnam?

WWF conducted an analysis of the situation, and aided by various studies undertaken across Vietnam, set out to develop an alternative protection system. And so, the Forest Guard Model was born. With the establishment of the Saola Nature Reserves, WWF was presented with the opportunity to turn the Forest Guard Model into reality. What had previously existed as a concept was about to be tested by the realities of working in the field.

"When we started, we had 12 people: a few rangers, a driver, cleaners and me. To patrol a vast area of 15,500 hectare forest was a challenge that we could not handle alone. And the budget we got each year for patrolling is just enough to do perhaps 18-20 patrols." said Le Ngoc Tuan, Director of Thua Thien Hue Saola Nature Reserve. CarBi, supported by KfW, was to help Hue Saola Nature Reserve in this by providing additional staff and equipment, as well as Quang Nam Nature Reserve that faced similar problems,

of forest. As project implementer, WWF started to develop a protection system in which forest guards would make all the difference. Forest Guards do not have the same role as rangers do. on searching for and removing threats, including snares and traps, and illegal poaching and logging camps. Forest guards are trained to detect and remove snares, and rescue trapped animals.

"I was surprised when I got the call from WWF-Vietnam 5 years ago offering me an opportunity to work as a forest guard for CarBi. I was so happy," said Mr. K' Thanh Thinh, a forest guard Team Leader, recalling his first contact with WWF-Vietnam. Under CarBi, WWF-Vietnam recruited 20 forest guards for each reserve. One of the important factors that make forest guards so effective is the rigorous training they receive. As K' Thanh Thinh explained, "We received frequent on-the-job training, learning how to identify different species and how to rescue and give first aid to trapped animals." CarBi also trained guards to detect and remove traps, to navigate using GPS, and how to report what they encountered or observed. In fact, this type of reporting is one of the backbones of the improved protection system. Using a computerised data storage system called SMART, patrol data is used to analyse the frequency and location of illegal activities, which feeds into planning for subsequent patrols.

And patrol they do: another important feature of improved patrolling is consistently and frequently visiting the protected area, covering the whole area as much as possible. Forest Guards typically spend some 16 days of the month in the forest.

THE HARD WORK PAYS OFF

K' Thanh Thinh and his colleagues have worked tirelessly to remove snares and traps. In fact, during five years patrolling both Saola Nature Reserve, around 102,000 traps have been removed, and more than 1,800 poaching and logging camps destroyed. This was no walk in the park; the guards have logged more than 57,000 patrol days in the forest.

What CarBi and the nature reserves wanted to know is whether all that hard work made a difference. Looking at a sheet full of numbers couldn't give a definitive answer. CarBi commissioned a statistical analysis which found that, indeed, snare numbers had fallen, but it remains work in progress towards the target of zero snares. We can conclude with confidence that in terms of reducing numbers of snares and traps, the Forest Guard Model works.

"This is something that my team and I are so proud of. Each trap that we removed meant an increased chance that animal would survive" -K' Thanh Thinh, Forest Guard Team Leader

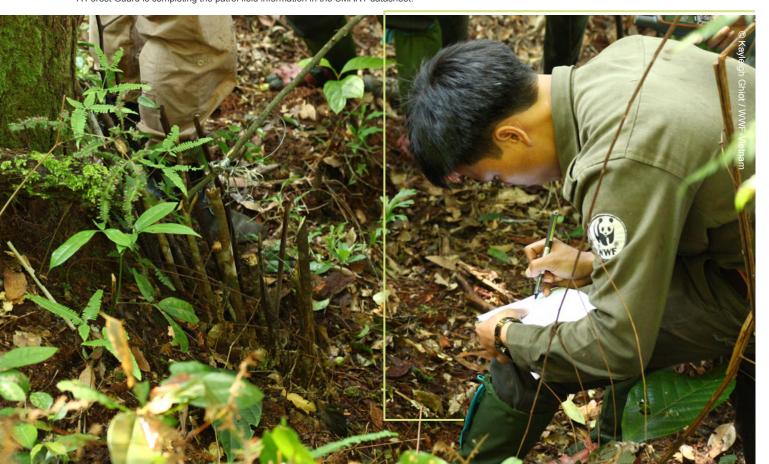
A SHIFT IN FOCUS: TREATING THE CAUSE

Although CarBi could show that numbers had fallen, the actual quantity of snares in the reserves remains high. A good many factors play a role, but being unable to catch the perpetrators is a crucial factor.

Forest guards are not authorised to apprehend suspects, but rangers are, which is why they accompany Forest Guards on patrol. However, government partners and CarBi dug deeper into the issue and found that there was a lack of knowledge on how and when to apprehend suspects. To address this, CarBi has been supporting the government through the development of an Arrest Action Planning System.

The Arrests Action Plan, which also attracted solid political support from both provinces, consisted of three major steps: (i) a compilation and analysis of existing legislation and policies on local, provincial and national level, (ii) 2 provincial workshops to discuss the results and agree on the next step(s), and (iii) strengthening

A Forest Guard is completing the patrol field information in the SMART datasheet.





K' Thanh Thinh (second from right) and his team are planning their next patrol.

law enforcement on the basis of the findings of the legal analysis by provincial authorities. The outcomes were legal documents in both provinces that strengthened law enforcement, a guide book that compiles cases of forest violations which can be consulted as needed, and training both in the classroom and, critically, in the field, learning through real-life scenarios.

The development of the Arrests Action Plan represents a shift in focus. Instead of focusing solely on the detection and removal of snares and traps, an additional emphasis is placed on apprehending and penalising those that set them. And it's not just the forest guards and rangers who are involved; local communities' levels of awareness are also raised. A crucial aspect of the protection system is that local people are given clear guidance on which activities are illegal, as well as information on the penalties stipulated for violations. This is also linked to CarBi's efforts to support alternative livelihoods through its restoration and PFES Components.

MOTIVATED FOREST GUARDS

K' Thanh Thinh is satisfied with the training and good salary he receives. When asked why he sticks with the job, even though it can be difficult and dangerous, he replied, "We do have to face dangers, such as flooding, falls, and

"I try my best at work, and I'm grateful that this is rewarded not just with money, but also with opportunities to learn new skills and knowledge." —K' Thanh Thinh, Forest Guard Team Leader

snake bites. But we are well taken care of."

Indeed, unique in Vietnam, CarBi has introduced modern health and safety protocols, including emergency evacuation plans. Memoranda of Understanding with district hospitals ensure that in emergencies, guards receive the best available care as quickly as possible. Over the last five years, emergency evacuation plans have been triggered no less than ten times.

The experience of the CarBi project clearly demonstrates the importance of investing in local people. By providing the necessary knowledge and skills, paying good salaries sufficient to support their families, and looking after their wellbeing, forest guards are committed and motivated in their work. As for K' Thanh Thinh, he knows very well how important his work is to his family and his community: "I always want to be a forest ranger. I am glad that my kids are proud of what I do." \blacklozenge

ALL IN A DAY'S WORK

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D"lam tac" (an illegal forest intruder)," Nguyen Huu Hoa said, laughing as he began his story. Hoa grew up near the same forest he now patrols as a forest guard, so he knows the area like the back of his hand.

"Before graduating from university, like many other men in the village, I often went to the forest and harvested non-timber products such as bamboo and rattan. I often saw trapped animals, either injured or to my manager, Nguyen Viet Hung, who nominated me, dead. They were helpless and I felt sad that I couldn't do anything for them," Hoa recalled. "That's one of the reasons I decided to study at the Agriculture and Forestry University. I felt blessed when I joined the forest guard team; now I can finally do something to stop the suffering." Hoa couldn't hide the emotion in his voice, even after 5 years as a forest guard.

Nguyen Huu Hoa started leading Forest Guard Team No. 1 at Thua Thien Hue Saola Nature Reserve in January 2011. Under his leadership, they received the 'Best Forest Guard Team' award in both 2013 and 2014.

Hoa and his people have successfully released some of the rarest and most endangered species of the mighty Annamite forests, including a grey-shanked douc langur, and a number of serows, macaques and ferret badgers. "I can't remember how many animals we have saved, too many to keep track of," Hoa said. "Every time we successfully release an animal, I feel like we are saving a life."

efore joining WWF, you would have called me a to receive the Dedication for Wildlife Protection Award, which is presented to honor outstanding individual contributions to wildlife.

> Hoa couldn't believe it when he received a phone call from Education for Nature (ENV), a local NGO and the award organiser: "I was on patrol, and was very surprised, because I knew nothing about this award, let alone that I had won it." With a broad smile, Hoa explained, "I felt so grateful and to all the colleagues who gave me their support." The award was established by ENV, in partnership with the government and other conservation organisations.

> Hoa, who is newly married, is a bit shy when talking about his personal life. "I spend most of my time in the forest with only 8 days at home each month, so all I want to do when I get home is helping my family," Hoa said. "My family often worries about me when I'm on patrol, so I try to reassure them telling them everything was fine, even if it had been raining hard or there had been floods." Although Hoa faces real risks while on patrol, his only concern is for his family's peace of mind.

For Hoa, although the difficulties and dangers at work, such as flash floods and accidents are real, nothing dulls the joy of saving animals and seeing the work of Forest Guard Team No. 1 pay off. "Now I see fewer traps compared to when I first started the job, so I know that our efforts are having a real impact." With forest guard teams led by men such as Hoa, hope remains for the In 2015, Nguyen Huu Hoa was one of only seven people endangered species of the Central Annamites. •



Nguyen Huu Hoa is releasing a trapped endangered Red-shanked Douc Langur in the forest.



PROTECTING WILDLIFE SPECIES

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The Central Annamites—a region well-known for its unique and outstanding biodiversity—is home to a network of protected areas: Thua Thien Hue and Quang Nam Saola Nature Reserves, and Bach Ma National Park in Vietnam; and Xe Sap National Biodiversity Area in Laos. To conserve and restore the region's biodiversity, these protected areas need long-term wildlife conservation plans. But how do you develop a conservation plan if you don't know the size of wildlife populations? This was the problem that CarBi set out to solve right from the start.

In 2012, CarBi began surveying selected areas in Xe Sap, including systematic camera trapping. These initial surveys were later strengthened by a strong partnership with the Leibniz Institute for Zoo and Wildlife Research (IZW), resulting in further surveys in both Saola Nature Reserves as well as Bach Ma National Park Extension. CarBi also conducted intensive camera trapping to search specifically for the elusive Saola and other large mammal species. This opportunistic camera trapping serves to confirm the presence of species of conservation importance, and CarBi was rewarded when the Saola was caught by camera in 2013—the first recorded sightings of Saola in Vietnam in more than 15 years!

CarBi and its partners also began to pioneer a novel survey technique involving the collection more than 45,000 haematophagous (blood-sucking) leeches. Genetic analysis is carried out on the blood to detect which species the leeches have been feeding on, which in turn enables the identification of the some mammals present in the forests.

CarBi also conducted surveys on two specific species—the Southern Yellow-cheeked Gibbon and the Crested Argus Pheasant. These species were selected because their numbers indicate the degree of hunting pressure (with rifles and with snares and traps) for the forest as a whole. The results of three surveys in 2012, 2014 and 2016 are

currently undergoing interpretation. Forest guard teams have also been trained in species identification, and took photos whenever possible to support monitoring efforts.

Results from these methods are incredible. On the Vietnamese side alone, 31 mammal and 34 bird species were recorded. In Xe Sap, 33 mammal, 226 bird, 28 amphibian, and 42 reptile species were recorded, including a new snake species, which will be named after the CarBi Project. Add to this, the discovery of a new species record of frog and lizard on the Laos side of the mountain range, and the unique nature of the region is brought stunningly into view.

Of the species surveyed, 18 are classified by the IUCN as vulnerable, and 6 as endangered, such as Owston's Palm Civet and the Southern Yellow-cheeked Gibbon. Four species are critically endangered, including the Saola, Pangolin, Grey-shanked Douc and Bournet's Box Turtle. Notable species include the vulnerable Asiatic Black Bear, the Chestnut-eared Laughingthrush, and the Impressed Tortoise. There is also the Annamite Striped Rabbit, endemic to the Annamites, and a number of impressive birds, such as the Mountain Hawk-eagle and the Wreathed Hornbill.

These surveys help identify wildlife hotspots, which assists the management boards of the protected areas, in collaboration with CarBi, to develop patrol plans and other law enforcement interventions. Continued monitoring helps to identify whether patrolling and law enforcement are effective, and looks for trends in threatened species populations, which also informs specific management interventions. When management authorities see such trends, they can operate within a framework of reliable data and information, ensuring management decisions that are focused for maximum impact. With this growing body of knowledge to hand, protection efforts are beginning to have a significant impact.

ON THE TRAIL OF THE ELUSIVE ANNAMITE STRIPED RABBIT

worked in a special landscape, studying unique animals and working alongside inspiring and talented individuals from WWF. Despite a lifetime of memories from this time, one experience in particular stands out. It's the first memory that comes to mind when I think about my time in Vietnam, my second home.

In early 2016, the joint WWF-IZW biodiversity monitoring teams worked for several months in the forests of the Saola Nature Reserves. One night, deep in the forests of Quang Nam, I had an encounter with one of the most elusive and little-known species in the Annamites: the Striped Rabbit. The rabbit was caught by one of our Katu guides, Bet, and brought back to camp. I admired the rabbit, awe-struck. I reached out and touched its fur; its hair was as fine as down. The colouration was more spectacular than I had noticed from our camera trap pictures. Its pale sandy base was grizzled with darker tan overtones. Most striking was the striped patterning from which it gets its name: A single jet black streak started at her nose and ran like a racing stripe down her back before dissolving at the base of the tail. Two more stripes spilled from her eyes and up to her ears, and then continued in thicker streams down along her flank. A final slash streaked diagonally downwards near her hind legs. It was as if evolution had taken a course in calligraphy. It was the most beautiful animal I had ever seen.

But physical descriptions don't do it justice. This animal is much more than the sum of its parts. It's rare to see

or the past four years I have been blessed to have animals in the dense tropical rainforests of Vietnam. To see even a very common mammal is remarkable. But to come face-to-face with this elusive species, an animal biologists know virtually nothing about, a species that few scientists have ever seen—that is a like winning the lottery. But more than that, I was struck by the fact that here was all the mystery and splendor of the Annamites in condensed form: unknown, secretive, unique. This is exactly why I came to these distant forests; why I fell in love with this landscape. This rabbit also epitomized the fragility of this biological hotspot. From our camera trapping, we know that the Striped Rabbit is rare, sometimes nonexistent in areas with even moderate levels of hunting. It was also a symbol of hope and inspiration, and a reminder of why we must work together to protect this unique ecosystem.

> After we'd taken photographs of this beautiful animal, we released her back into the forest. She disappeared into the thick undergrowth. Then we all smiled, chatted a few minutes about the experience, and retired to our hammocks for the night. I tried to sleep, but couldn't. My mind was racing with excitement, full of hope and passion. The memory of my encounter with a striped shadow will stay with me always."

> A story told by Andrew Tilker, a doctoral student at the Leibniz Institute for Zoo and Wildlife Research (IZW) and Global Wildlife Conservation. Andrew has been working in the Annamites with WWF since 2012, mostly in the Thua Thien Hue and Quang Nam Saola Nature Reserves, conducting mammalian biodiversity surveys. •



The Striped Rabbit, one of the Central Annamite forests' conservation treasures.

VOLUNTEERING FOR THE COMMUNITY: THE PRIDE AND THE PASSION

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Walked up to Le Quoc Thien, a CarBi staff member, at a high school reunion in 2016 and asked whether there was anything we could do to bring back the animals to the forest," said Nguyen Thanh Toan, the 26 year-old leader of the Awareness Raising Group for Endangered Species in A Roang commune, A Luoi district.

Thien and Toan grew up together in A Luoi district. Like other kids they knew the forest well, spending their days exploring and playing among the trees. They learnt to make use of the rich resources all around them; they harvested honey, picked fruit, and collected wood for cooking. But mostly, they just delighted in their closeness to nature. The forest was their backyard, and they felt that their playing days would last forever.

But everything changed as deforestation began to take a heavy toll. "Before 2008, encountering wild pigs, macaques and other animals was common," Toan explained. Since then, sightings of animals have become increasingly rare. He decided to begin working with the CarBi project.

THE A ROANG COMMUNITY WILDLIFE CONSERVATION GROUP

The day after he met with his old school mate, Toan began working with staff from the Thua Thien Hue Saola Nature Reserve and the CarBi project. The goal was to form a volunteer group with a single mission: to connect local people through their compassion for the animals that share their forest home.

Toan couldn't wait to share his ideas: "Messages, content, activities, were racing to get out of my head." After numerous meetings and excited discussions with Thien and his team, the A Roang Community Wildlife Conservation Group was formed. Made up mostly from young people of Tà Ôi ethnic minority, the voluntary group made their debut on 25 April 2016 with a cycling parade. One of their very first messages centered around the Saola—the soul of the Central Annamites.

The group realised that they needed to get local people involved, so made sure their activities were attractive and entertaining. "We wanted people to have fun and really engage with our messages," explained Toan, the leader of the group. With support from CarBi, Toan and his team organised art, music, dance and other creative events every month, often attracting people from surrounding villages. While people engaged with the activities, the group's core messages focused on the importance of forest animals, and what can be done to help them thrive.

To grab people's attention is one thing; to change behavior established over generations is quite another. As Thien explained, "The community here, they look at each other and behave accordingly, so if they see their neighbours set a good example, they will follow." Also, it's easier for people to face change if it comes from trusted, familiar sources. "It makes people feel more comfortable if it's their neighbours or children telling them not to set traps in the forest, rather than being confronted by rangers," Thien continued.



Members of the Community Wildlife Conservation Group are practicing their communication skills during training provided by HSBC.

"All of us love what we are doing now, and being trained in the skills we need, helps us do our work better."

 $- Pham\, Thanh\, Toan, leader\, of\, of\, the\, Awareness\, Raising\, Group\, for\, Endangered\, Species\, in\, A\, Roang\, commune,\, A\, Luoi\, district.$

The group continues to go from strength to strength. There is no shortage of volunteers: the group's messages have even lead to a hunter giving up his hunting gear to join the group!

THEIR WORK IS JUST BEGINNING

The biggest challenge for the group is to ensure its future. Although they received financial support from CarBi when they set out on their mission, they need to become self-funding, and have been busy raising funds. At a local fair September, 2016, they even cooked food to sell. While just a small amount of money was raised, they are well on the way to securing their future.

Another challenge for the group was the members' relative lack of skills in developing and communicating their messages effectively. In October 2016, HSBC conducted a training course for the group on basic communication skills. "All of us love what we are doing now," Toan shared, "but being trained in the skills we need, helps us do our work better." With their newly acquired skills, passion and confidence, the volunteers of the A Roang Community Wildlife Conservation Group are making a real difference, and the group is looking forward to replicating their model in other communities around the Saola Nature Reserves. Their work is just beginning.





FOREST REGENERATION

FOR IMPROVED LIVELIHOODS AND FORESTS

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Pham Thanh Trung and his family migrated to the buffer zone of the Saola Nature Reserve in Thua Thien Hue two decades ago. In 2013, he was given a piece of forest to take care of, but at that time had little motivation to make a go of it.

Together with another family, Trung was delegated co-owner of 41ha. "The Government gave us the protected forest to stop us from destroying it," he explained, "but we couldn't see any benefit in protecting such poor and empty forest."

In 2014, Trung was paid as part of a Government program—Payment for Forest Environmental Services (PFES)—to patrol and protect the forest twice a month. Although the patrols prevented the forest from further destruction, there was little effort to improve its poor condition.

Community Forest Guards are patrolling in their PFES forest area.

WWF GIVES A HELPING HAND

In October 2014, under CarBi, Trung signed on for tending 2.41 ha of regeneration forest, receiving a land use certificate valid for 50 years. And this time, as well as patrolling his land, he also carried out forest enrichment activities.

village have received hands-on training on how to regenerate and enrich their forest, including techniques like cutting bush and creepers, and marking targeted regenerated trees for tending and protecting. "Those techniques were new to us. Most of us have known the forest since childhood, but we knew little about how to take care of it. Through the training, CarBi gave us the know-how to nurture the land," said Trung. At the end of 2016, Trung received 100 Rattan and 100 Morinda officinalis seedlings to plant in his forest. These are plants CarBi uses to diversify forest species, while at the same time providing additional income for local people. "I'm confident nurturing my forests now," Trung said with a broad smile, "I've already planted all of them. In 5 to 7 years' time, I'll be able to harvest them."

Fanie Bekker, Trans Boundary Director of CarBi in Vietnam and Laos, recognises the importance of sustainable livelihoods for local people: "Forests used to be the main source for local people's livelihoods. When the Saola Nature Reserves were established, people in the buffer zone areas important source of income. One of our programme's and that's a great feeling."

"We need to give back, to nurture and plant trees instead of just taking things out of forest. We can now do it, and that's a great feeling." —Pham Thanh Trung, A Roang, A Luoi, Thua Thien Hue

aims is to improve and enrich the forests around Trung and the other 15 households of Huong Phu the communities to not only create alternative, sustainable livelihood opportunities, but also to restore the critically important ecosystem services which they and others depend on."

> At the end of each year, CarBi evaluates the regeneration efforts of Trung and his fellow villagers before they get paid. Payment goes directly to farmers' bank accounts instead of being transferred to a government partner. Since the transfer of money is fast and transparent, farmers like Trung feel more motivated. As Trung said, "Almost all of us passed the evaluation, and we are happy in our work."

> With time and effort it is hoped that the lessons learnt from the achievements of CarBi's forest restoration work, together with the commitment of people like Trung, will ensure the protection of forests across the country.

We'll leave Trung to end the story in his own words: "What I learnt after all of these activities is why the forest was poor and empty. We need to give back, to nurture and plant trees instead of were banned from entering the forest, losing an just taking things out of forest. We can now do it,







TRANSBOUNDARY CO-OPERATION: CRUCIAL FOR CONTROLLING TIMBER AND WILDLIFE TRADE IN BORDER AREAS OF VIETNAM AND LAOS



THE INTERNATIONAL TIMBER TRADE LEAKAGE STUDY **SETTING THE TONE**

"Timber exported from Laos to Vietnam and China, is consdered as originating from legal sources, however, when exporting products made from this timber to the global market, it is difficult to prove its origin and legal status. Therefore, it is crucial to control and trace the origan of the imported timber," said Nguyen Anh Quoc, Central Annamite Landscape Manager of WWF-Vietnam.

From November 2012 to June 2015, CarBi and its government partners embarked on an extremely complex, but accurate and detailed analysis of the extent and nature of timber trade in its planning domain, as an integral part of the Leakage Study contemplated in the approved project documents. Besides the application and analysis of offically available data at national levels, CarBi also conducted some fine scale research in two approved concession areas on the Laos side, working with, and enabling the resepctive government agencies to get a factual and scientific understanding of the complexities involved in timber concession management, and also to support specific adaptive management strategies towards enhanced timber governance.

2 construction projects in Laos: a limestone quarry in Saravan province and a road building project in Sekong province. Notably, these two provinces share borders with Thua Thien Hue and Quang Nam provinces in Vietnam respectively. Sekong and Saravan are the custodians of the unique and diverse

biodiversity hosted by Xe Sap National Biodiversity Area. Together with the 2 Saola NRs in Quang Nam and Thua Thien Hue, and the Bach Ma Extension, Xe Sap forms part of the contiguous trans-boundary landscape of more than 240,000 hectares which constitutes the CarBi's planning domain. Stopping any deforestation in and around these NRs would impact significantly on the protection of these unique forest areas and its concomitant ecosystem srevices.

 $The \, Car Biteam \, and \, its \, Laos \, government \, counterparts$ at provincial and national levels, worked tirelessly, applying best practice data analysis techniques and technology, including ultra high resolution remote sensing and robust ground-truthing, combined with extensive research into official records of timber flows from the relevant Laos provinces. The extensive results of the leakage study as well as proposed adaptive management interventions were also presented to relevant provincial and national government agencies in an international workshop hosted by the GIZ and the Laos Department of Forest Inspection in July 2015.

"It is the most in-depth and scientifically robust analysis thus far of the nature and extent of timber exports from the study area" said Fanie Bekker, The research specifically focused on the logging of the Trans Boundary Director of CarBi in Vietnam and Laos. "The findings confirmed the significant challenges experienced in timber trade governance, but fortunately also highlighted the required pragmatic steps, as well as the political will to ensure appropriate adaptive management and necessary levels of basic policy transformation."

"It is the most in-depth and scientifically robust analysis thus far of the nature and extent of timber exports from the study area." -said Fanie Bekker, the Trans Boundary Director of CarBi in Vietnam and Laos.



Growing acacia forest toward FSC certification in Quang Nam.



Measuring FSC certified timber in Quang Nam.

"CarBi has been humbled by the Laos Government's, and especially the new Prime Minister's very constructive approach to change the business as usual approach,.."—said Fanie Bekker, the Trans Boundary Director of CarBi in Vietnam and Laos.

HOW DID THIS UNLOCK SOME CONSTRUCTIVE GOVERNMENT ACTION?

In May 2016, The Prime Minister of Lao PDR issued Order No. 15 (PMO 15), titled Enhancing Strictness on the Management and Inspection of Timber Exploitation, Timber Movement and Timber Business.

"CarBi has been humbled by the Laos Government's, and especially the new Prime Minister's very constructive approach to change the business as usual approach, through the promulgation of PMO 15 and constructive compliance management towards enhanced timber trade and governance, providing the strong leadership slip stream for tangible action on the ground, and the sound enabling environment for the operationalisation of the intervention strategies required to bring about the requried levels of transformation proposed in the CarBi's report," said Bekker. "Cognisance is also taken of the Vietnam government's very constructive engagement through the FLEGT / VPA negotiation process, and CarBi."

In the first 6 months of 2016, exports of round wood from Lao PDR to Vietnam dropped by 84% (compared to the first 06 months of 2015), according to a publication by Forest Trends in August 2016. For the same period, exports of sawn timber from Lao PDR to Vietnam went down by 62.5%. This provides another concrete indicator of positive change in the Laos timber trade governance arena.

PROMOTING GAME CHANGING TRANS-BOUNDARY CO-OPERATION

Beside the leakage study, CarBi also deployed emonorous efforts to bring Laos' and Vietnam's authorities from national to provincial levels together in meetings and workshops to enhance transboudary co-operation in Protected Area Management (PAM), REDD+, as well as Timber and Wildlife Trade.

"In conservation, we work on the whole region for the ultimate impacts. CarBi's project site covers one of the most unique and rich biodiversity hotspots in the world. Therefore, co-operation between these provinces [of Laos and Vietnam] are crucial." Said Nguyen Anh Quoc.

Besides the CarBi facilitated trans boundary workshops on PAM and REDD+ in 2011 and 2012 respectively, CarBi also harmonised timber and wildlife trade planning between the two countries' 4 CarBi provinces in February 2014, and more recently in March 2017, when Thua Thien Hue and Saravan, as well as Quang Nam and Sekong, signed Memorandums of Understanding (MOUs), committing to work together in controlling and combating illegal timber and wildlife trade, as well as improving forest management in their respective areas. These MOUs were signed under a bigger agreement between the two countries, and CarBi is also poitive that, in the event of a potential CarBi Phase 2, it will strongly support the actual implementation of protection interventions in priority areas to enhance timber and wildlife trade harmonisation between the two countries.



PAYMENT FOR FOREST ENVIRONMENTAL SERVICES - A BREAKTHROUGH FOR FOREST MANAGEMENT

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Payment for Forest Environmental Services (PFES) is a breakthrough for forest management improvement in terms of both quality and quantity, and providing incentives for forest owners in exchange for their protection interventions. It is a voluntary transaction between service users and service providers that is conditional on agreed rules of natural resource management. In Vietnam, the transaction is not voluntary but mandatory, where users are water supply companies, hydropower plants, or tourism companies; and providers are forest owners.

In 2010, Vietnam became the first Asian country to formally legalise the application of PFES nationwide. Quang Nam and Thua Thien Hue provinces started to implement the Decision in 2012 and 2013, respectively, and like many other provinces, they encountered numerous gaps and challenges in endeavoring to apply this new mechanism, especially in terms of their limited human resources, in line with the specific guidelines and legal requirements of the Provincial Forest Protection and Development Fund (FPDF).

It is fortunate that part of CarBi's work coincides with the objectives of PFES, which aim at preventing local people from degrading the forest. And so, when CarBi was asked for support, it was possible to prioritise the launching of PFES activities in CarBi's project areas. PFES is also seen by CarBi as a sustainable funding mechanism to ensure that some forest protection activities can be continued after the project ends, and is already used to subsidize a number of CarBi Forest Guards.



Community Forest Guards are patrolling in their PFES forest area.



BUILDING AWARNESS AND CAPACITY

Since PFES is a relatively new model, one of CarBi's priorities is to conduct capacity building for all stakeholders. From July to December 2016, 18 courses were conducted for a total of 616 participants. Staff from the provinces' FPDF were given training on online financial databases and financial guidelines, as well as technical skills in analysing satellite images to assess both forest cover and illegal activities. Specific training also provided basic but crucially important skills on how to enhance the participation of local people in forest protection activities.

Awareness raising campaigns were also on the agenda. Thua Thien Hue FPDF, with CarBi's financial support, organised six communication campaigns in priority PFES areas (Nam Dong, Phong Dien, Phu Loc and A Luoi) for forest owners and local people to enhance their understanding of PFES, including their rights and responsibilities.

FILLING THE GAPS OF QUALITY ASSURANCE, REGULATIONS AND GUIDELINES

Even though implemented nationwide as early as 2010, PFES still lacks a comprehensive Monitoring and Evaluation (M&E) framework. Since June 2016, CarBi worked closely with Vietnam Forest Protection and Development Funds (VNFF) and other organisations to finalise the indicators for the new developing Vietnam PFES M&E framework. With the Asian Development Bank's support, these indicators will now be tested in CarBi's working sites in Thua Thien Hue and Quang Nam, and feedback from piloting will be proposed to finalise the national M&E framework, which will later be applied nationwide.

Another significant contribution of CarBi is the development of a technical guideline for forest owners in drafting plan submissions to PFDF to request and access PFES funding through the official structures. Although this task has been supported by provincial Forest Protection Department the potential second phase of CarBi.

in the short-term, CarBi consulted relevant government counterparts and forest owners to create a manual/ handbook, guiding them step-by-step when working with their FPDFs. This handbook is an easy to use version of all guidelines developed by Thua Thien Hue's FPDF.

PILOTING BEST PRACTICE IN A ROANG COMMUNE

When communes suddenly receive funding support through the PFES system, most do not know how to use it. A Roang, a commune located next to the Thua Thien Hue Saola Nature Reserve, found itself in that exact same situation. Since A Roang's forests are close to the nature reserve, keeping them healthy is important, which is why CarBi stepped in to help the commune create a model of how to best use PFES funding. Local people were supported to plan how to use the funding to protect the forest effectively. An annual action plan was developed and used to train local people in how best to protect and nurture the forest. The results have been very encouraging; after training in patrolling skills, the A Roang patrol team has destroyed illegal camps and snares.

In addition to the training activities, CarBi also provided selected local communities with around 1,500 and 262,000 of medicinal plant and rattan seedlings respectively for enriching their forests. Crucially, after 6 - 7 years the plants will provide additional income to local people.

Awareness and understanding of PFES have improved thanks to communication activities, such as games and art performances, which have been used to convey key messages. In A Roang, people's increased understanding has led to their support for PFES, and this has already resulted in a reduction in recorded forest violations.

PFES is expected to be rolled out to additional communes adjacent to the two Saola Nature Reserves in



Community forest guards at A Roang, A Luoi, Thua Thien Hue are confronting an illegal forest intruder.



WE WILL REMEMBER

? . .

H is two children, 5 and 3, are too young to understand what "death" means. All his five-year-old daughter can understand is that: "It's just like my father has gone to play in the forest; I will rarely see him now, very rarely." But she will remember well what her father told her about the forest and how it had become a major part of his life; and was now forever a part of hers.

Van Trong Thanh was born and bred in the shade of the forest. This was a time when the forest was still dense with trees, and wild animals could be easily spotted. It was also a time when people could feel the strong bond between their lives and the rhythms of the forest. Because of the bond he felt, Thanh decided to dedicate his youth to its protection.

During eleven years as a forest guard, Thanh learned how to survive in the forest and, more importantly, how to fight to protect it. Tragically, the skills he had mastered were not enough to prevent the accident that took his life.



Van Trong Thanh's wife, little kids and father during WWF's condolences ceremony.

"It's just like my father has gone to play in the forest; I will rarely see him now, very rarely."

On Friday, December 26, Thanh and three other guards from the Forest Guard Unit at Thua Thien Hue Saola Nature Reserve were mobilised to support guards from the CarBi project. Together they formed an ad-hoc team for a three-day patrol to investigate a report that illegal loggers had been active in the area.

In late afternoon, the team discovered remnants of illegal logging activity. A large tree had been cut down and five logs had been prepared for transportation out of the forest.

On December 27, the team reached the loggers' camp, which by then had been abandoned; the loggers had already sensed danger. The guards gathered the remaining logs and destroyed them. Satisfied with a job well done, they set up camp and prepared to settle in for the night.

His colleagues describe Thanh as an active member of the team, skillful and supportive. He was also known and loved for his sense of humour. As usual, that night after telling

a joke, Thanh talked loudly about the text messages he'd just exchanged with his wife. A fellow guard, Bui Huu Vinh, who slept to the left of Thanh that night, recalled, "Thanh is an only son. His salary is needed to buy rice and medicine, and to send his children to school. Thanh's family relied on him both financially and spiritually."

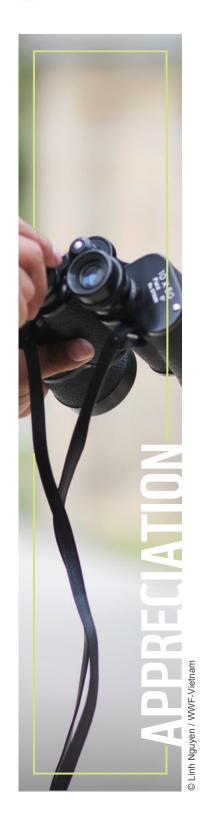
At around half past eight that evening, the noise from a falling tree woke everyone with a start. Thanh was found unconscious with bruises on his head and face. For two hours, Thanh's friends carried him through the forest in darkness and under heavy rain to reach the nearest road, where an ambulance carried him another 45 km to the nearest hospital. The doctors did all they could to save him, but Thanh's injuries were too severe.

Thanh was just 33 when he died.

On his mobile phone, the screen still shows the last message he sent to his wife: "Darling, I love you."

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THE GIFT

While Saola still remains elusive, the story of the Saola and its protectors from WWF and the Government of Vietnam has gained respect around the world, attracting countless donations in support of their intrepid conservation efforts. One such supporter is Ms. Merki, a lady from Switzerland. Ms. Merki and her husband, Mr. Jakob lived a quiet life in Zurich. Mr. Jakob sadly passed away in 2014, a year after the Saola was rediscovered by CarBi. Ms. Merki revealed that her husband was a nature lover with a keen interest in wildlife protection efforts. His beloved binoculars were always hanging around his neck whenever he ventured outdoors.

After Mr. Jakob's death, Ms. Merki knew exactly what she wanted to do with the binoculars. She traveled down to WWF's offices in Switzerland and told staff there that she wanted to give them to the forest rangers searching for the Saola in Vietnam.

And so, that is, how Doris Calegari, a conservationist from WWF-Switzerland, found herself formally presenting the binoculars to the forest guards at the Saola Nature Reserve on behalf of Ms. Merki, Mr. Jakob and WWF-Switzerland. She told the guards about Ms. Merki and Mr. Jakob's story, and that it was Ms. Merki's wish for them to use the binoculars in their efforts to protect the Saola.

The forest guards and WWF were honoured to receive the binoculars, knowing that they came from a true nature lover like Mr. Jakob. Even though he never visited the Saola Nature Reserve during his lifetime, Mr. Jakob has managed to make a lasting impact on nature conservation in Vietnam. Mr. Jakob and Ms. Merki represent the ideals of all WWF's supporters, who want to do their bit to help create a future in which humans live in harmony with nature. •

Mr. Jacob's binocular being used by CarBi's Forest Guards on patrol.





ABBREVIATION

Carbon Sinks & Biodiversity Partnership

CA Central Annamites

ENV Education for Nature-Vietnam

FLEGT Forest Law Enforcement, Governance and Trade

FPDF Forest Protection and Development Funds

GIZ The German Agency for International Cooperation

HSBC Hongkong and Shanghai Banking Corporation

International Union for the Consequention of Nature

INCN

International Union for the Conservation of Nature

Leibniz Institute for Zoo and Wildlife (Berlin, Germany)

KfW German Development Bank

METT Management Effectiveness Tracking Tool

MOE Monitoring and Evaluation
MOU Memorandum of Understanding

NP National Park
NR Nature Reserve
PA Protected Area

PAM Protected Area Management

PFES Payments for Forest Environmental Services

REDD+ Reducing Emissions from Deforestation and Forest Degradation

SMART Spatial Monitoring and Reporting Tool

WWF Vietnam Forest Protection and Development Fund
WWF The World leading conservation organisation

WWF-Vietnam The World leading conserevation organisation in Vietnam

SCIENTIFIC NAME OF SPECIES

 SPECIES
 SCIENTIFIC NAME

 Annamite Striped Rabbit
 Nesolagus timminsi

 Asiatic Black Bear
 Ursus thibetanus

 Bournet's Box Turtle
 Cuora bourreti

 Chestnut-eared Laughingthrush
 Garrulax konkakinhensis

 Giant Muntjac
 Muntiacus vuquangensis

grey-shanked douc langur Pygathrix cinerea
Impressed Tortoise Manouria impressa
Javan Rhino Rhinoceros sondaicus
Mountain Hawk-eagle Nisaetus nipalensis
Large Indian Civet Viverra zibetha

Leopard Cat Prionailurus bengalensis
Owston's Palm Civet Chrotogale owstoni

Owston's Palm Civet Chrotogale owstoni
Pangolin Manis sp

Pig-tailed Macaque Maccaca leonina

Red-shanked Douc Pygathrix nemaeus
Saola Pseudoryx nghetinhensis
Southern Yellow-cheeked Gibbon Nomascus gabriellae
Truongson Muntjac Muntiacus truongsonensis
Wreathed Hornbil Rhyticeros undulatus

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