

Southern Cardamom REDD+ Project

Impact Report

Q1-Q2
2022



**EVER
LAND**



**WILDLIFE
ALLIANCE**

Southern Cardamom

REDD+ Project

 Cambodia

Developer: Wildlife Alliance

Key Partners: Royal Government of Cambodia
& Ministry of Environment

Standards: VCS, CCB

Region: Cardamom Mountains

**EVER
LAND**

The Southern Cardamom REDD+ Project has undertaken numerous construction projects throughout surrounding communities in Q1-Q2 2022, including 43 wells to provide clean water to >3600 people as well as 25km of road and drainage culverts to connect a remote village to a market center and medical facilities. The Community Anti-Poaching Unit at Chi Phat has recorded the return of wildlife to the area as a result of relentless protection of the eco-tourism and wildlife release site. However, human-elephant conflicts have resurfaced in other areas of the project due to the continued fragmentation of forests in surrounding areas, ending peacefully through the proactive intervention from local rangers.

The Cardamom Rainforest Landscape is one of the last unfragmented rainforests remaining in Southeast Asia and is a critical part of the Indo-Burma Biodiversity Hotspot. This area is globally significant for ecosystem servicing, wildlife conservation, and community livelihoods and serves as the region's most important watershed, climate regulator and carbon sink.



27.6

MILLION
tCO2e emissions
avoided to date

*through the protection
of 497,000 ha of
tropical rainforest*

52

IUCN REDLIST SPECIES
under protection measures

*including Forest elephants,
Sunbears, Pangolins,
Banteng, Cloud leopards*

500

community members
employed in project activities

*including biodiversity
monitoring, ranger enforcement
and eco-tourism*

Highlight 1

New, modern wells provide clean water to over 3600 people

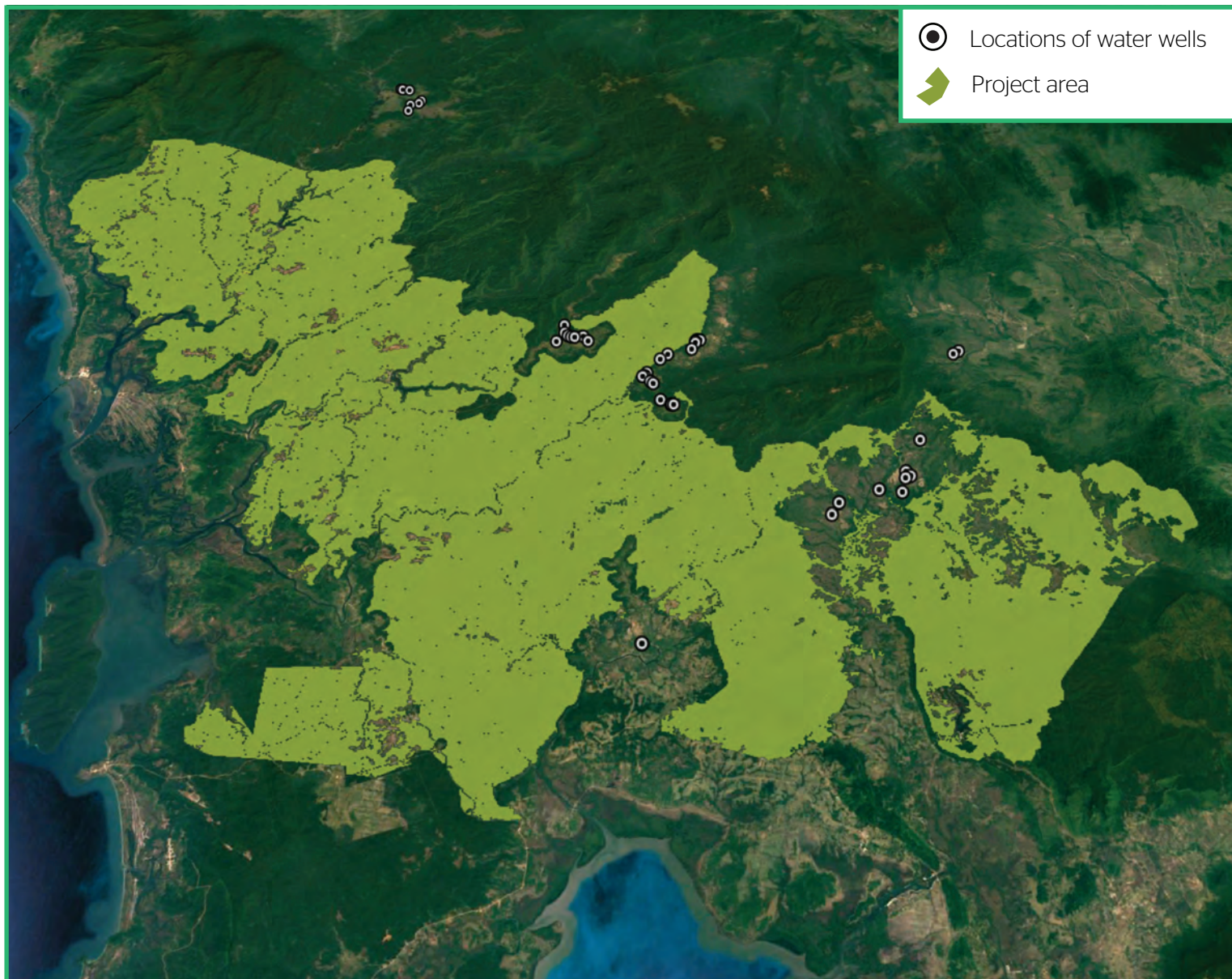
The SCRP planned to provide a total of 43 water wells to the local villages in 2021. However, the Covid pandemic resulted in a complete lockdown and many travel restrictions countrywide. These restrictions included limiting village visits from outsiders without written authorisation, making it nearly impossible for the team and construction crew to enter many of the participating villages to plan and build water wells. Even when visits were permitted, food provisions were difficult to come by with the closure of shops and restaurants. Such conditions challenged the project's goal of achieving the 43 water wells, resulting in many delays.

In the first two quarters of 2022, the project's Community Livelihoods Development Team worked tirelessly to make up ground - ultimately finalizing the construction of 39 wells across Kampong Speu, Pursat and Koh Kong provinces (18 of which began construction in 2021). These wells benefit a total of 733 families (3627 people, 2131 of whom are women), providing water for drinking, agriculture, livestock and local wildlife. They use modern technology - including a solar powered motor - ensuring the wells operate efficiently with low maintenance requirements.



New, modern wells provide clean water to over 3600 people

- January 2022: 8 wells in Pur Beung village (Dang Peng commune), benefiting 202 families (796 people, 477 female)
- March 2022: 4 wells located in Preik Svay village (Thmor Daunpov commune), benefiting 30 families (143 people, 85 female)
- March 2022: 4 wells located in Koh village (Thmor Daunpov commune), 27 families (132 people, 79 female).
- May 2022: 4 wells located in Chrak Russey village (Chumnoab commune), benefiting 50 families (209 people, 93 female)
- May 2022: 4 wells located in Chumnoab village (Chumnoab commune), benefiting 55 families (223 people, 119 female)
- August 2022: 1 big scale well located in Kamlot village (Chi Phat commune), benefiting 179 families (765 people, 459 female)



Highlight 2

New road, new market and new opportunities for the community of Pur Beung



The construction process of 25 km road retrofitting and 29 water drainage culverts was completed with the aim of linking the remote Pur Beung village to the Bak Angrut market village. The construction started on November 1 2021 and was completed on May 16 2022, investing in 609 families living in the area.

Historically, Pur Beung village was inaccessible during the rainy season, with the flooding of many road segments and bridges, making transportation in the area difficult and dangerous. The Ministry of the Interior has provided support to improve these conditions, however due to the lack of funding available, this has been limited to unstable wooden bridge structures which get washed away in heavy rain rather than stable concrete structures.

The funding from REDD+ has provided the necessary resources to build a proper network of concrete drainage culvert. With these improvements, villagers can now safely travel to local clinics (including the Dang Peng commune health center) and bring their agricultural products to the Sre Ambel village regardless of the season. Prior to the new road development, the travel time from Pur Beung to Bak Angrut was 5-6 hours; this has been lessened to 2-2.5 hours following the road completion.

In the coming months, the project has identified areas to build 112 wildlife crossing culverts along 18km of road. This continued work will ensure that wildlife can cross the new road network at multiple points, reducing the risk of being trapped in road trenches or injured while crossing small culverts.



Highlight 3

Increased wildlife around Chi Phat

The Chi Phat community was once reliant on poaching and illegal logging but is now actively engaged in protecting the rainforest and wildlife therein through alternative livelihood options developed by Wildlife Alliance. The Community Anti-Poaching Unit (CAPU) is part of Chi Phat Community-Based Ecotourism (CBET).

The goal of the CAPU patrolling activities is to keep the forest around Chi Phat and the Wildlife Rehabilitation and Release Station free of hunting snares, active poaching and logging activities. There has been a history of poachers waiting along the sidelines of the release site to recapture the rescued wildlife, knowing that the closest ranger station was more than 5km away - demonstrating how vital the establishment of the Chi Phat CAPU has been at this particular location.

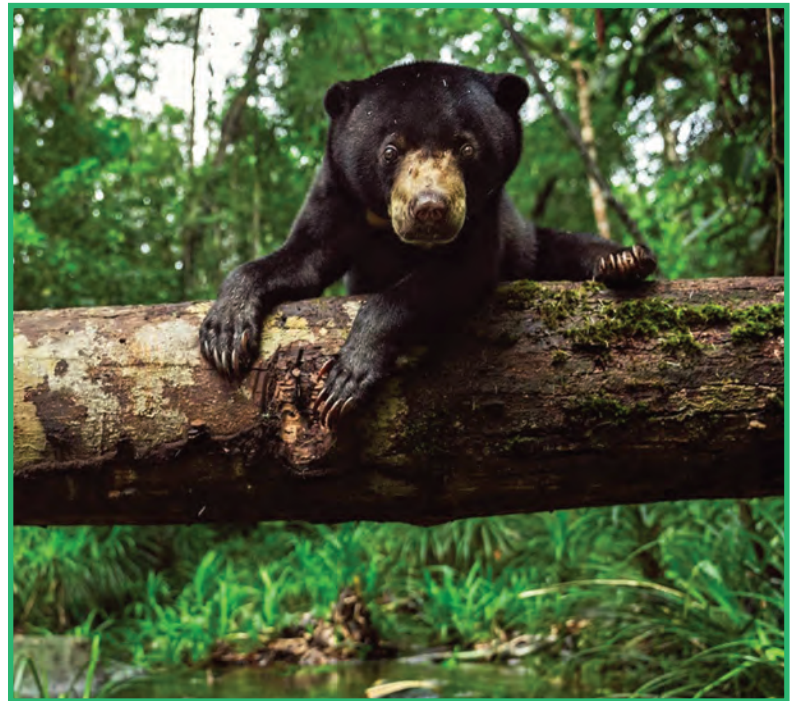
CAPU Rangers have been patrolling around Chi Phat since 2008, with some off periods depending on available funding. Therefore, the funding from SCRP has enabled CAPU rangers to continuously operate and expand their regular patrols into surrounding regions; with particular focus on the nearby clouded leopard and asian elephant corridors.



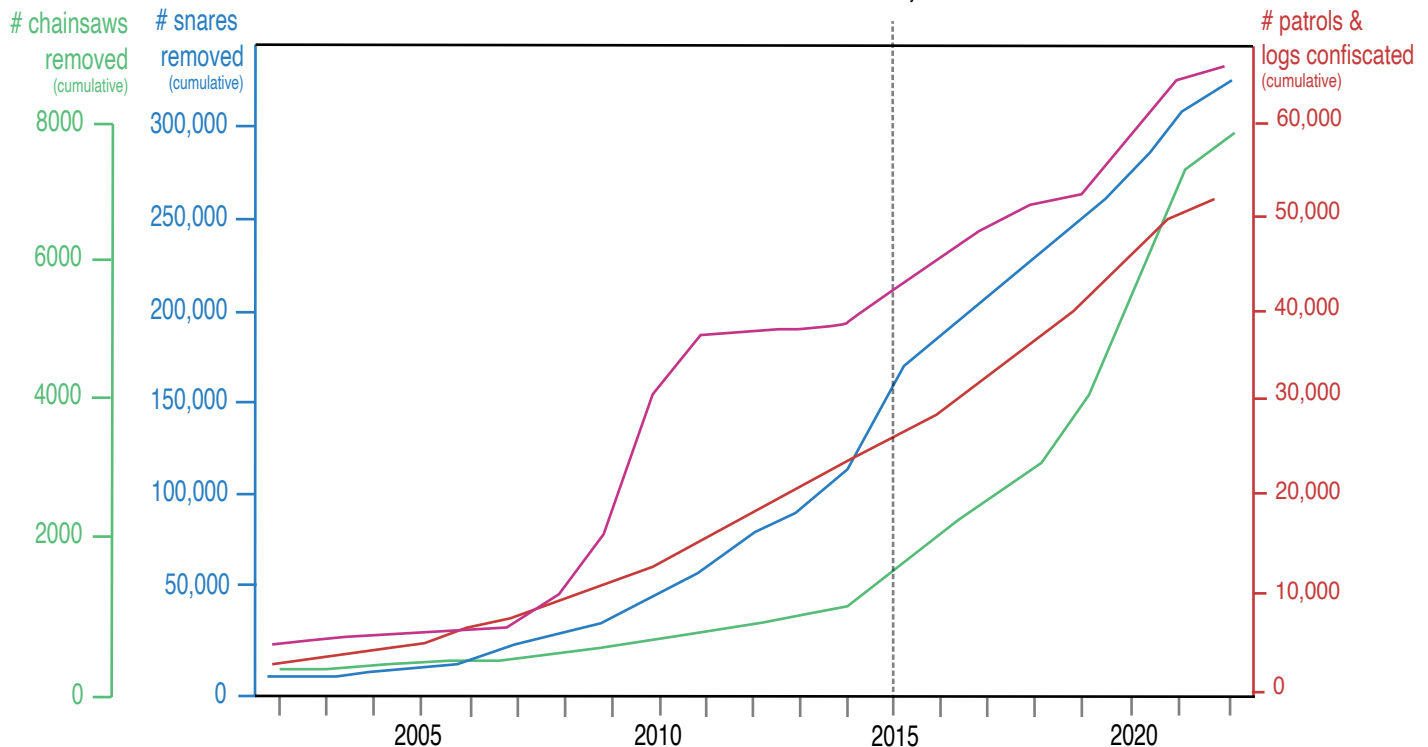
Increased wildlife around Chi Phat

The CAPU is currently made up of 12 members of the community who work alongside Ministry of Environment (MoE) officials. The MoE officials are vital to the team as they have a thorough understanding of Cambodian law and the legal authority to apprehend poachers in possession of wildlife, dismantle hunting camps, and remove people from the forest carrying illegal logging and hunting equipment.

The improved protection of wildlife has increased the diversity and density of species within the Chi Phat area, having the added benefit of attracting more visitors to the eco-tourism site, thereby ensuring a sustainable income for the local community. As a result of the CAPU patrols, the return of endangered species has been documented, including dhole, sun bear, clouded leopard, gibbon, red muntjac, sambar deer, civet, monitor lizard, macaques, and wild pig.



REDD+ Project start



Challenge 1

Durian production impacted by strong wind and fungi

Within the project area's buffer zone near a sugar cane economic land concession, 20ha of former slash-and-burn land was allocated for village agricultural activities with guidance from SCRPs Community Orchard Program team. The area is under the management of the Ministry of Environment, but has been reserved as community land for agricultural purposes. Many species are grown within the orchard, including the prized and extremely valuable durian fruits - which retail for \$7/kg (compared to \$0.50/kg for mangoes) and provide an important source of household income for local communities

Unfortunately, Q1 2022 was a particularly challenging period for durian production due to the presence of heavy rain followed by periods of extreme wind - uprooting mature fruit-bearing durian trees, damaging recently planted adolescent trees and reducing the pollination of durian flowers (resulting in low fruit production). As a result, approximately 40% of the durian fruits were lost within the first few months of the year.

As the year progressed, the conditions were favorable for a widespread outbreak of fungi, which attacked the fruits of many trees within the orchard, resulting in the loss of >3700 fruits. SCRPs funds were mobilized to conduct fungi control measures, containing the outbreak. To avoid the complete loss of fruits due to the fungi, the team cut open the spoiled fruits to select good flesh sections and packed them for the market.



Durian production impacted by strong wind and fungi

Despite the compounding issues, the Orchard Team was able to produce 31,176 fruits thus far this year, an increase of 38% compared to the previous year (22,485 fruits). However, the income from sales was below the estimated amount, likely due to fruit quality following the difficult growing season.

To prevent such issues from occurring next year, the project has invested in the purchase of bamboo which will be used to support the durian trees. This will ensure the trees are protected from extreme weather conditions while the trees are flowering and ready to welcome young fruits.

Given the high price of durian fruit, it is a common driver of land grabbing in Cambodia. Outside of the project area, there have been cases of people planting 1-year old durian trees overnight, as a means of unlawfully claiming land ownership. To combat this issue within the project area, ranger stations have been expanded across durian plantation hotspots to halt expansion into the protected land, particularly near the border of central Cardamom National Park.



Challenge 2

Human-Elephant conflict ends peacefully

The boundary between the Southern Cardamom National Park and Bokor National Park is a known elephant migration corridor, running adjacent to the Kampong Seila district; housing one of the largest Asian Elephant populations in Cambodia. Due to the proximity of people and wildlife in this location, human-elephant interactions occur every couple of years.

Asian elephants (*Elephas maximus*) are IUCN Red List species, classified as Endangered and decreasing in the wild with their historic range reduced by almost 90% over the past 75 years¹. Given their importance as a culturally relevant species in Cambodia, the government recently established an Asian Elephant Conservation Action Plan (2020-2029)² to protect the estimated 400-600 individuals currently living across the country's highly fragmented forest; 250-300 of which live within the SCRP area.

1. Hedges S., Fisher K., and Rose R. (2008) Range-wide mapping workshop for Asian elephants (*Elephas maximus*), Cambodia.

2. Gray T., Vidya T., Bharti S., and Sovanna P. (2014) Population size estimation of an Asian elephant population in eastern Cambodia through non-invasive mark-recapture sampling. *Conservation Genetics* 15:803-810



Wildlife Alliance Phnom Tamao Wildlife Rescue Centre

Human-Elephant conflict ends peacefully

In June a series of human-elephant conflict cases took place in the villages of Chamsrey and Veal (Kampong Seila commune, Kampong Seila district, Preah Sihanouk province). This area is 10 kilometers from the Project boundary, where communities have gradually encroached onto elephant territory. This encroachment has led to the fragmentation of forest, making it difficult for elephants to find sufficient food in the limited habitat remaining. As a result, more and more elephants are seeking food in villages. The project team undertook an assessment to understand the impact of this conflict, finding that while 9 families were involved, no villagers nor elephants were harmed. The situation was resolved peacefully thanks to the presence of rangers from Thmor Rung Station. This was possible because the rangers have developed an efficient communication network, allowing villagers to call the ranger station if they are concerned about the proximity of an elephant or herd; ensuring the rangers are able to intervene immediately when elephants enter agricultural areas to ensure the safety of the elephant herds until they return to the forest. Through accurately documenting the extent of conflict and liaising with local authorities, SCRP rangers are often able to diffuse the situation.

Beyond intervening during conflict events, the rangers help educate communities and local authorities on the penalties associated with elephant killings through awareness meetings, ensuring they understand the following:

- Elephants are endangered species
- Killing elephants is subject to 10 years in prison
- Frightening elephants (e.g. with guns) is dangerous as it can provoke an attack
- Cooperation with the patrol unit will protect the elephants who are friends of humans if they are left in peace

The project is in the midst of establishing a human-wildlife conflict compensation scheme to address this issue in the future. The scheme will also apply to human-tiger conflicts which are expected to rise with the reintroduction of tigers into the SCRP.



Opportunity

A visit from the Indian Tiger Experts

From March 5-9, 2022, Wildlife Alliance and the Ministry of Environment co-hosted the visit of an Indian Delegation comprising of senior forest officials, tiger conservation experts, and scientists from the Ministry of Environment, Forest and Climate Change, National Tiger Conservation Authority (NTCA), Global Tiger Forum (GTF), and Wildlife Institute of India (WII). This visit was part of a bilateral exchange between India and Cambodia to discuss the technical aspects of tiger reintroduction in the SCRP.

During this visit, the delegation met with the Minister for Environment of Cambodia and members of the Indian Embassy at Phnom Penh and visited the Cardamom Landscape to view the potential tiger reintroduction site and to discuss the following aspects with the senior forest officials:

- Protected area management
- Habitat interventions and prey recovery
- Legal provisions for reintroduction
- Protection and surveillance interventions

In September, Cambodia's Minister of Environment will take a trip to India to observe and experience the tiger conservation efforts on-the-ground. The trip will include meetings with his counterpart (Ministry of Environment, Forests and Climate Change, Government of India) and a visit to the Panna Tiger Reserve. Together, the ministers will start drafting the Memorandum of Understanding for tiger recovery in Cambodia with support from NTCA and GTF.

