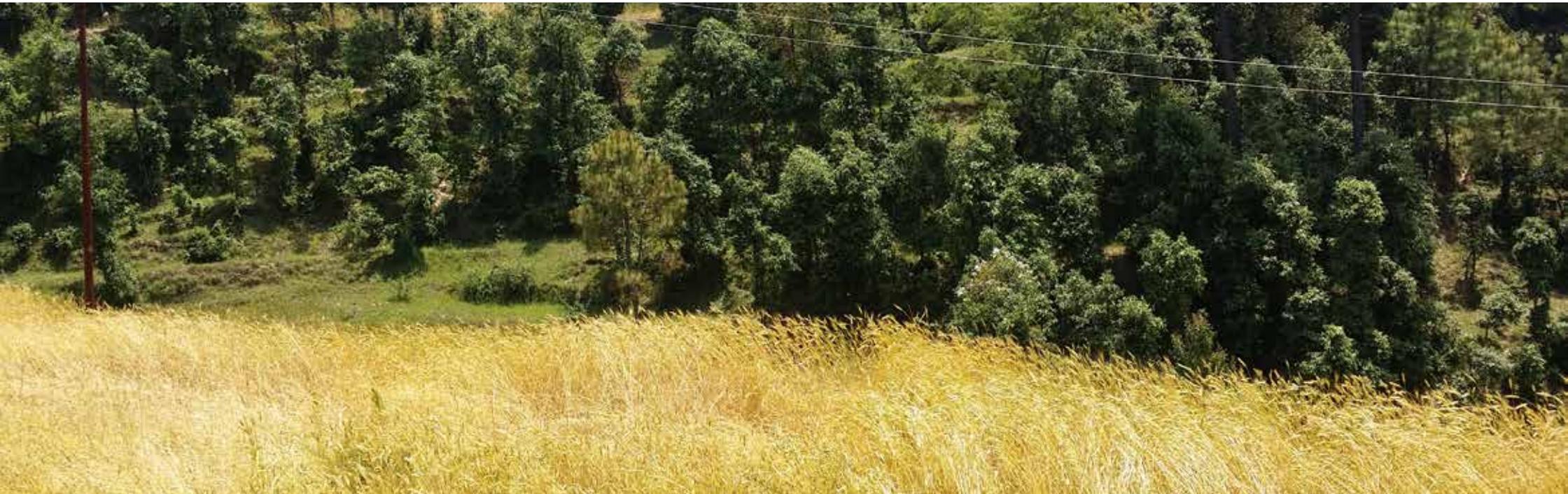


# **Subnational REDD :Strengthening the adaptive capacities of smallholder farmers and communities by reducing emissions from deforestation and forest degradation in National Protected Areas-DPV and XBN in Svannakhet and Salavan Provinces of Southern Laos**



## Project Implementation

The Lao People's Democratic Republic (Lao PDR) is a land-locked and least developed country, ranking 141 out of 188 in the 2015 Human Development Index. With 6.8 million people living mainly in rural areas, the country is ethnically diverse with 49 officially recognized ethnic groups. Lao PDR also has an abundance of biodiversity.

Human activity has been changing Lao's ecosystem for a long time. Modification and conversion of natural ecosystems, overexploitation of biological resources and destructive harvesting techniques, and knock-on effects or externalities from other production processes are main contributors to the changes in distribution and abundance. In addition livelihoods in Lao PDR are sensitive to availability of land, with the country being a predominantly agrarian society. Around 80 percent of the rural population are subsistence farmers, who rely heavily on rice-based agriculture and livestock raising. Only 30 percent grow additional crops such as maize, cassava, sweet potatoes or industrial tree crops. As a result, agricultural productivity is low for smallholder farmers and leads to low food availability during the lean seasons.

To supplement food availability and livelihoods, rural communities depend on forests to collect nutrient-rich food. However, since the last two decades of the twentieth century, the loss of forest land in Lao PDR rapidly increased due to various land-use practices, such as shifting cultivation, commercial logging and commercial agriculture. The national forest cover declined dramatically between 1992 and 2002, at an average rate of 134,000 hectares per year (equivalent to 1.2 – 1.3%). During this period, dense forest declined from 29% to 8.2%, while open forest

increased from 16% to 24.5%. While the rate of deforestation has declined dramatically between 2002 (41.5% forest cover of the total land area) and 2010 (40.29%), several studies show high spatial variation in deforestation due to regional variation in soil type, elevation and socio-economic factors.

Annual emissions from deforestation and forest degradation are estimated at around 51 million tonnes of CO<sub>2</sub> equivalent (DOF, 2010). In terms of climate change, Lao PDR will experience pronounced changes in rainfall and temperature patterns by 2050 with significant ramifications for ecosystems, and communities and the livelihoods that support them. Future climate projections (up to 2050) indicate rainfall together with more frequent heavy rainfall events in southern Lao PDR, which will increase flood risk. At the same time, this region will also face higher temperatures in the dry season, further increasing the magnitude of dry spells and droughts. The combination of more rainfall and higher temperatures will affect crop suitability of paddy, coffee, cassava and maize. On average, 14% of the rural population is food insecure. In addition to changing climate patterns, a household's access to food is constrained by poverty, declining land availability, volatile farm-gate prices, and low agricultural productivity. Malnutrition remains a major challenge with stunting affecting 37.6% of boys and 33.6 percent of girls%. The annual economic cost of under nutrition is estimated at 2.4% of the country's GDP or US\$ 197 million a year. Causes of malnutrition include poverty, low education levels, insufficient access to potable water, poor sanitary conditions, geographic isolation, lack of basic health care, disease treatment and prevention, and traditional gender norms.

Prime Carbon Co Ltd is the first company to develop a reforestation project under the Clean Development Mechanism (CDM) project in Lao PDR and to validate and verify the first reforestation project under Verified Carbon Standard (VCS) in Lao PDR. Prime is providing their technical assistance for a mangrove reforestation project in Myanmar. They have several forest carbon/ REDD related project activities in Lao PDR, Vietnam, Cambodia and Myanmar. Prime's expertise include forests and emission assessments, reference emission level assessments, developing MRV for projects, biodiversity conservation, forest conservation, land use planning, sustainable agriculture, hydropower projects and overall environmental protection.



## Project Objectives

- Increased adaptive capacity of smallholder farmers and their families by increasing their resilience and reducing the risk derived from climate change.
- Improved Sustainable Forest Management and Reduced Emissions from Deforestation and Forest Degradation in DPV and XBN NPAs in Svannakhet and Salavan Provinces of Southern Laos.
- Generate sustainable income through VCS Programs.
- To certify the project as a carbon reduction/offset project to sell as carbon credits. The sale of these credits will go towards project monitoring and maintenance.



## Location & Key Focus Areas

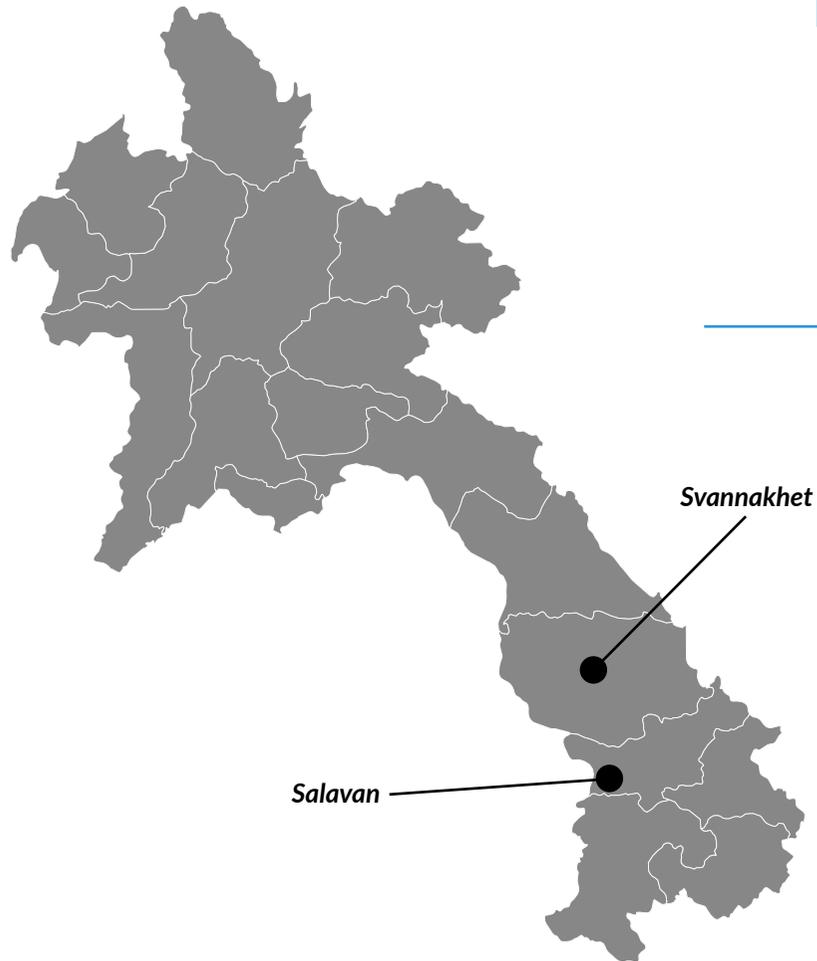
Implementation Partner  
**Prime Carbon Co Ltd**

Approx. Area  
**300,000 ha (hectares)**

Duration of the Project

**10 Years**

Estimated Emission Reductions  
(10 years):



1st verification	1,50,000 tCO <sub>2</sub>
2021	1,05,000 tCO <sub>2</sub>
2022	1,67,500 tCO <sub>2</sub>
2023	1,67,500 tCO <sub>2</sub>
2024	1,67,500 tCO <sub>2</sub>
2025	1,67,500 tCO <sub>2</sub>
2026	1,67,500 tCO <sub>2</sub>
2027	1,67,500 tCO <sub>2</sub>
2028	1,67,500 tCO <sub>2</sub>
2029	1,67,500 tCO <sub>2</sub>
2030	1,67,500 tCO <sub>2</sub>
2031	1,67,500 tCO <sub>2</sub>

*Location: DPV and XBN NPAs in Svannakhet and Salavan Provinces, Southern Laos*



### **Enhancement of carbon stock through mitigation of Climate Change**

One of the many goals of the project is to reduce greenhouse gas emissions through afforestation

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### **Gender Equality**

Both men and women given equal opportunities to take part in the project and grow through training and work

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### **Enhanced Capacity for Sustainable Forest Management**

Better capacity for planning, managing and monitoring (MRV) forest resources

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### **Enhanced forest law enforcement**

Activities will focus on strengthening the capacity for effective forest law enforcement in the NPA

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### **Knowledge building**

Participatory land-use planning, dissemination of climate change information, weather advisory and increased environmental awareness

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### **Livelihood benefits**

Diversifying livelihood opportunities by developing alternative income sources and creating market linkages

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### **Innovative community-and landscape-based climate change adaptation measures that contribute to food security**

Resilient agricultural systems that contribute to improving degraded land and increasing soil fertility in the longer term, and contribute to food security

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### **Carbon sequestered in trees and soil**

Due to afforestation there will be an increase in carbon dioxide sequestered from the atmosphere

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## SDGs addressed by the project

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## VNV ADVISORY

VNV Advisory Services has been at the forefront of working with climate change and livelihoods. Our decade-long experience has seen us develop low-carbon projects that support these communities in getting their basic needs while adapting to and mitigating the harsh impacts of climate change. We work in areas of clean cooking, social forestry, sustainable agriculture, rural energy access and many other related community based technologies. With support from over 45 NGOs and implementation partners, our work encompasses over 5 million rural households and 50,000 hectares of forest areas under management across the South Asian (India, Bangladesh, Nepal, Laos, Myanmar and Sri Lanka) region. We have also been able to engage with businesses to address issues of Social Responsibility, Environmental Sustainability and Carbon Neutrality.





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