

MONTHLY BULLETIN
OCTOBER 2026 ISSUE NO: 14

ARDB ACE-GFA RESEARCH WORKING GROUP

"From Forests to Finance: How Cambodia Leads in Global Carbon Markets"

GREEN CARBON IN CAMBODIA UNDER REDD+ PROJECT

- Keo Seima Wildlife
- Southern Cardamom

Green carbon refers to carbon that is captured by land-based ecosystems, primarily forests, grasslands, and agricultural landscapes. Trees, shrubs, grasses, and crops absorb carbon dioxide from the atmosphere through photosynthesis. This carbon is stored in their trunks, branches, leaves, roots, and in the surrounding soil.

Prepared by:
Salim LY, Bora PIECH, Boudthorng PHAY



ARDB ACE-GFA

APRACA Center of Excellence – Green Finance to Agriculture of Agricultural and Rural Development Bank (ARDB ACE-GFA), established on August 8, 2024, continues to play a pivotal role in advancing sustainable development within Cambodia's agri-food and financial sectors under the framework of APRACA. The Center focuses on fostering green and climate finance solutions, strengthening institutional capacity through research and training, and promoting knowledge exchange and policy dialogue.



1. INTRODUCTION

REDD+ **Reducing Emissions from Deforestation and Forest Degradation, plus conservation, sustainable management of forests and enhancement of forest carbon stocks** — is an approach that provides financial incentives for reducing greenhouse-gas emissions from forests while supporting biodiversity conservation and local communities.

Cambodia has been one of the early countries in Southeast Asia to develop forest-carbon projects. Two important examples are the **Keo Seima REDD+ Project** in Mondulkiri Province and the **Southern Cardamom REDD+ Project** in southwestern Cambodia.

Both projects combine forest protection with carbon finance, biodiversity conservation, law enforcement, community participation and livelihood development. Cambodia's Carbon Registry records both projects among the REDD+ initiatives that have generated paid emission reductions. In 2017–2018, the registry reports 1,804,031 tCO_2e and 439,129 tCO_2e of paid results for Keo Seima, and 3,982,378 tCO_2e and 3,946,277 tCO_2e for Southern Cardamom, respectively.

What is REDD+?

REDD+ (Reducing Emissions from Deforestation and Forest Degradation) is a United Nations climate initiative launched in 2005 under the **UN Framework Convention on Climate Change (UNFCCC)**. It aims to reduce greenhouse gas emissions by providing financial incentives to developing countries for protecting forests, promoting sustainable forest management, and increasing forest carbon storage.

The original vision was for industrialized countries to purchase REDD+ carbon credits to offset their emissions and meet climate commitments under the Kyoto Protocol. However, a global forest carbon market never fully developed because of concerns over whether forest carbon credits represent real, permanent, and verifiable emissions reductions. As a result, both the **EU Emissions Trading System (EU ETS)** and the **Kyoto Protocol's Clean Development Mechanism (CDM)** excluded REDD+ credits.

A. Keo Seima Wildlife Sanctuary, Mondulkiri Province

The Keo Seima REDD+ Project is located in Keo Seima Wildlife Sanctuary (KSWS), Mondulkiri Province, eastern Cambodia. The project is implemented through cooperation between the Royal Government of Cambodia, particularly the Ministry of Environment, and the Wildlife Conservation Society (WCS).

The REDD+ project began on 1 January 2010, with a 60-year crediting period extending to 2069. The project uses the VCS VM0015 methodology and has also been validated against the Climate, Community & Biodiversity (CCB) Standards.





Keo Seima is internationally important for biodiversity. It provides habitat for threatened species including the black-shanked douc, southern yellow-cheeked crested gibbon, Asian elephant, banteng and other wildlife. The project therefore links carbon conservation with protection of a highly valuable forest ecosystem.

2. Project Timeline

1999–2009
WCS expanded conservation activities in the Seima landscape.

2002
Biodiversity Conservation Area
Seima Biodiversity Conservation Area established.

2009
Protection Forest
Area became Seima Protection Forest.

2010
1 January
Keo Seima REDD+ Project launched; project start date was 1 January 2010.

2013
Free, Prior and Informed Consent (FPIC) process completed with participating villages.

2015
CCB
First full CCB validation completed.

2016
Royal Government and WCS signed signed the official REDD+ Project Agreement; first major carbon sale was initiated initiated.

2016 onward
WCS WCS Keo Seima Wildlife Sanctuary
Management of the protected area transferred to the Ministry of Environment and the area became Keo Seima Wildlife Sanctuary.

2019
Village-level Cash for Communities agreements were signed to support performance-based benefit sharing.

2020
COVID-19
Wildlife monitoring continued despite COVID-19 restrictions.

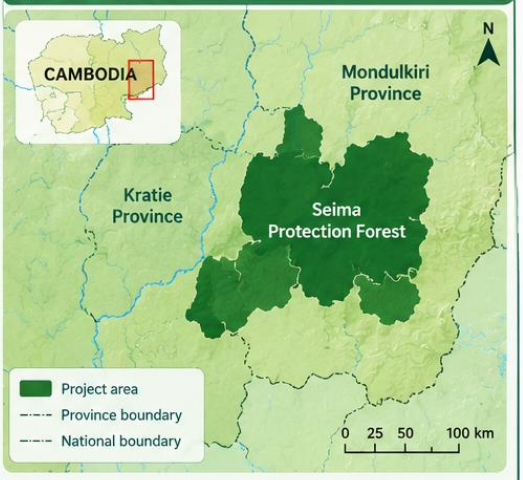
2025
WCS reported progress in recognition of Indigenous Communal Land Titles in the sanctuary.

Sources: WCS, Keo Seima project documents and project history.

3. Project Overviews

Project Overview

Location



Mondulkiri Province, with a small portion extending into Kratie Province, Cambodia.

Area
166,983 ha
of forest within the Seima Protection Forest.

Start Year
2010
— project start date: 1 January 2010.

Villages
20 villages
within the project area.

Community Forests
20 community forests / community forest areas
associated with the project (project documentation commonly refers to community forest management across the 20 participating villages).

Households
~2,000+ households
(figures vary between project/community documents; the project directly covers more than 12,000 Indigenous Bunong and Stieng people).

Standards
Verra VCS using **VM0015** methodology + **Climate, Community & Biodiversity (CCB) Standards.**

Expected Carbon Credits
Approximately **14.0 million tCO_2e over the first 10 years** (2010–2020) according to the project summary; other project documentation estimates **14.27 million tCO_2e** for 2010–2020.

B. SOUTHERN CARDAMOM REDD+ PROJECT

The Southern Cardamom REDD+ Project protects tropical rainforest in southwestern Cambodia, including areas associated with the Southern Cardamom landscape.

The current project website reports approximately 493,000 hectares of tropical rainforest, 29 forest communities, and more than 66 threatened or near-threatened wildlife species within the project area.

The project is a partnership involving the Royal Government of Cambodia/Ministry of Environment and Wildlife Alliance, with carbon-market technical support historically involving Wildlife Works Carbon.

The project uses the VCS VM0009 methodology and the Climate, Community & Biodiversity (CCB) Standards.

2. Project Timeline

2008–2012



Community ecotourism established in Chi Phat; green carbon feasibility studies conducted.

2015–2016



Official project start (January 1, 2015); Southern Cardamom National Park legally designated in 2016.

2018–2019



Full verification achieved; commercial credit sales begin funding ranger patrols and community infrastructure.

2021–2023



Expansion of ranger stations, clean water wells, sanitation, health centers, and schools.

2024–2025



Social safeguard review conducted; Verra lifts administrative hold in 2025 following independent audits.

3. Project Overviews

Location



Southwestern Cambodia, mainly within the **Cardamom Mountains / Phnom Kravanh National Park**, including parts of Southern Cardamom National Park, Padum Sagar National Park and Tatai Wildlife Sanctuary.

Details

Area
493,582.6 ha
project area;
442,871 ha
VCS project accounting area.

Start Year
2015
— project start date:
1 June 2015.

Villages
29 villages/communities in the Project Zone.

Community Forests
29 forest communities/ **community groups** are identified in the project; community forests are among the stakeholder groups supported by the project.

Households / Families
Approximately **4,121** families according to the recent project portal; earlier project monitoring documents report **4,719** families benefiting around the project area.

Standards
Verra VCS (Verified Carbon Standard);
Climate, Community & Biodiversity (CCB) Standards – Double Gold;
SD VISta (Sustainable Development Verified Impact Standard).

Expected Carbon Credit / Emission Reduction
The project is designed to prevent **more than 3 million tCO_2e per year;** project documentation estimates **over 108 million tCO_2e** of avoided emissions over the project lifetime.

4. Project Objective

PROJECT Keo Seima Wildlife Sanctuary

- Reduce deforestation and forest degradation.
- Maintain and increase forest carbon stocks.
- Protect threatened wildlife and important habitats.
- Improve forest governance and law enforcement.
- Support Indigenous and local communities living around the sanctuary.
- Strengthen community land tenure and sustainable land-use planning.
- Generate long-term financing for conservation.

The project's conceptual framework connects climate objectives with biodiversity and community objectives. The management objectives of KSWS include maintaining forest cover and maintaining carbon stored in vegetation to reduce CO_2 emissions.



SOUTHERN CARDAMOM

- Prevent deforestation and forest degradation.
- Protect the Cardamom rainforest ecosystem.
- Reduce carbon emissions.
- Protect threatened wildlife.
- Strengthen forest law enforcement.
- Improve livelihoods of local communities.
- Support community-based ecotourism.
- Improve land-tenure security.
- Create a sustainable financial mechanism for long-term conservation.



5. Project Activities

KEO SEIMA Wildlife Sanctuary,

Forest and wildlife protection

- Forest patrols and law enforcement.
- Monitoring and prevention of illegal logging and hunting.
- Wildlife population monitoring.
- Protection of important wildlife habitats.
- Forest-cover monitoring and carbon monitoring.

Community development

- Community consultation and FPIC.
- Support for Indigenous communal land tenure.
- Community-based conservation.
- Livelihood development.
- Performance-based community payments.
- Sustainable agriculture and natural-resource management.

Biodiversity conservation

- Monitoring of threatened species.
- Protection of wildlife corridors and important habitats.
- Support for conservation of globally important primate and elephant populations.

SOUTHERN CARDAMOM PROJECT

Forest and wildlife protection



- Recruitment and training of forest rangers.
- Forest patrols.
- Illegal logging prevention.
- Wildlife poaching control.
- Ranger-station construction and improvement.
- Forest monitoring.
- Wildlife monitoring.

Community development



- Community-based ecotourism.
- Training in hospitality, guiding and tourism services.
- Scholarships.
- Water wells.
- Toilets and sanitation.
- Health and education facilities.
- Land registration and tenure-related activities.
- Sustainable livelihood development.

Biodiversity conservation



- The Southern Cardamom landscape provides habitat for many threatened species. Project information identifies more than 66 IUCN-threatened or near-threatened birds, mammals and reptiles.

6. Expected Benefits

KEO SEIMA WILDLIFE SANCTUARY & SOUTHERN CARDAMOM REDD+ PROJECTS



Environmental Benefits

The project is expected to:

- Reduce greenhouse-gas emissions from deforestation.
- Maintain large areas of natural forest.
- Protect biodiversity and threatened species.
- Protect biodiversity and threatened species.
- Preserve ecosystem services such as water regulation and soil protection.
- Maintain long-term forest carbon stocks.

Project documentation estimated approximately 14 million tCO_2e of emission reductions over the first 10 years from avoided unplanned deforestation.

Community Benefits

Potential and reported community benefits include:

- Improved livelihood opportunities.
- Support for community land-use planning.
- Improved land-tenure security.
- Performance-based payments.
- Performance-based payments.
- Support for sustainable agriculture.
- Greater participation of Indigenous and local communities in forest management.

The project has particularly important implications for Indigenous communities living within and around KSWS.

Economic Benefits

Carbon finance provides a long-term source of funding for conservation activities that would otherwise depend heavily on conventional donor funding.

A Cambodian assessment reported approximately US$3.8 million in carbon revenue generated by the Keo Seima REDD+ Project at the time of that assessment.



Environmental Benefits

The project aims to:

- Prevent forest loss.
- Avoid millions of tonnes of CO_2 emissions.
- Maintain tropical rainforest.
- Protect wildlife habitat.
- Reduce illegal logging and hunting.
- Maintain ecosystem services.

The project states that its activities are designed to prevent more than 3 million tonnes of carbon emissions annually.

Community Benefits

Reported benefits include:

- Community-based ecotourism jobs.
- Training and skills development.
- Scholarships.
- Health and education support.
- Support for land registration.
- Community participation in forest conservation.

For example, project information reports the construction of water wells and toilets, support for a primary school and health centre, and scholarships across beneficiary communities.

Economic Benefits

Carbon finance provides an additional source of funding for:

- Forest patrols.
- Ranger salaries and operational support.
- Community development.
- Conservation infrastructure.
- Sustainable livelihood programs.

The project therefore attempts to connect forest conservation with local economic development.

7. Carbon Finance

Carbon finance is the central mechanism connecting REDD+ conservation activities with long-term financial resources.

Under a REDD+ project, a baseline or reference scenario estimates the emissions that could occur without the project. Actual emissions are then monitored. Where verified reductions are demonstrated, carbon credits can be issued under the applicable carbon standard.



Keo Seima

Keo Seima uses the **VCS VM0015** methodology.

Cambodia's Carbon Registry records paid emission reductions of:

2017	1,804,031 tCO_2e
2018	439,129 tCO_2e

These figures represent results for which Cambodia received payments, rather than necessarily the project's total lifetime credit issuance.



Southern Cardamom

Southern Cardamom uses **VCS VM0009** together with **CCB** standards.

Cambodia's Carbon Registry records paid results of:

2017	3,982,378 tCO_2e
2018	3,946,277 tCO_2e

The project reports that carbon revenue has helped finance forest protection, ranger programs and community development.

Carbon finance is therefore **not simply a source of income**; its intended role is to make conservation **financially sustainable** over a long period.



Carbon finance is the central mechanism connecting REDD+ conservation activities with long-term financial resources.

Under a REDD+ project, a baseline or reference scenario estimates the emissions that could occur without the project. Actual emissions are then monitored. Where verified reductions are demonstrated, carbon credits can be issued under the applicable carbon standard.





8. Challenges

Both projects demonstrate that REDD+ is complex and involves environmental, social, financial, and governance challenges.

Keo Seima Wildlife Sanctuary.

- Illegal logging and forest conversion.
- Wildlife hunting and trafficking.
- Pressure from infrastructure and economic development.
- Securing long-term conservation finance.
- Managing the rights and needs of Indigenous and local communities.
- Maintaining accurate carbon and biodiversity monitoring.
- Ensuring equitable distribution of carbon-related benefits.

Southern Cardamom REDD+.

- Illegal logging and wildlife hunting.
- Pressure on forest resources and land.
- Balancing conservation restrictions with local livelihoods.
- Maintaining long-term financing for rangers and conservation activities.
- Complex land-tenure issues.
- Ensuring effective participation and protection of community and Indigenous rights.
- Maintaining confidence in the integrity of carbon credits.

Southern Cardamom Controversy and Key Lessons.

The Southern Cardamom project faced human-rights and social concerns. Although a Verra review cleared the project and lifted its hold, the controversy highlights the need for: Strong safeguards, Transparent benefit sharing, Effective grievance systems, and Independent monitoring in

Safeguards | Benefit sharing | Grievance systems | in REDD+ projects.

9. Lessons Learned

1 Carbon finance should support, not replace, good conservation

Carbon credits can provide important funding, but effective conservation still requires strong government institutions, rangers, community participation, monitoring and law enforcement.



2 Community participation is essential

REDD+ projects affect people who depend on forests. Communities should be involved from project design through implementation and benefit sharing.

The Keo Seima experience shows the importance of FPIC, community agreements and land-tenure work.

The Southern Cardamom experience similarly demonstrates the importance of community consultation and livelihood programs.

















10. Conclusion

The Keo Seima and Southern Cardamom REDD+ projects illustrate Cambodia's experience with using carbon finance to support forest conservation. Both projects combine emission reduction, biodiversity conservation, forest law enforcement, and community development.

Their experience also shows that the success of REDD+ cannot be measured only by tonnes of CO_2 reduced. Long-term success depends on credible carbon accounting, secure land rights, meaningful community participation, fair benefit sharing, strong safeguards, biodiversity protection, and transparent governance.

Together, the two projects provide useful lessons for the future development of REDD+ and other forest-carbon initiatives in Cambodia and the wider Southeast Asian region.



11. KEY References

Cambodia Carbon Registry.
"REDD+ Results." Royal Government of Cambodia. Cambodia Carbon Registry — REDD+ Results: https://ccr.gov.kh/redd-plus-results

Royal Government of Cambodia / Keo Seima REDD+ Project.
REDD+ in Keo Seima Wildlife Sanctuary, Cambodia. Project documentation. Keo Seima REDD+ Project Document: https://lib.ncdd.gov.kh/storage/app/public/test_library/CAT_21425_1/2015-REDD-plus-KeoSEIMA-en.pdf

Wildlife Conservation Society Cambodia.
Keo Seima REDD+. WCS Cambodia — Keo Seima REDD+: https://cambodia.wcs.org/Keo-Seima-REDD.aspx

Wildlife Conservation Society Cambodia.
"Signing Ceremony of Keo Seima's REDD+ Carbon Project Agreement," 12 August 2016. WCS — Keo Seima REDD+ Agreement: https://cambodia.wcs.org/about-us/latest-news/articletype/articleview/articleid/9178/signing-ceremony-of-keo-seimas-redd-carbon-project-agreement.aspx

National Council for Sustainable Development / Cambodia REDD+ Documentation. REDD+ in Keo Seima Wildlife Sanctuary, Cambodia. https://cambodia.wcs.org/Keo-Seima-REDD.aspx

ASEAN Biodiversity / Cambodia REDD+ Lessons Learned. Lessons Learned from REDD+ Implementation in Cambodia.
https://www.aseanbiodiversity.org/wp-content/uploads/2023/05/Lessons-Learned-from-REDD-Implementation-in-Cambodia.pdf

Southern Cardamom REDD+ Project. Official project website.
Southern Cardamom REDD+ Project: https://southerncardamomredd.com/

Southern Cardamom REDD+ Project. SD VISta Monitoring Report.:
https://southerncardamomredd.com/wp-content/uploads/2025/05/SCRP_M3_SD-VISta-Monitoring-Report_v2.1-2.pdf

Wildlife Alliance. Open Letter to Stakeholders — Southern Cardamom REDD+ Project.
https://www.wildlifealliance.org/open-letter-from-wildlife-alliance-to-its-stakeholders/

Wildlife Alliance. "Wildlife Alliance Statement: Verra Lifts Hold on Southern Cardamom REDD+ Project."
Wildlife Alliance — Verra Review of Southern Cardamom REDD+:
https://www.wildlifealliance.org/wildlife-alliance-statement-verra-lifts-hold-on-southern-cardamom-redd-project/

