



Sustainable Development Verified Impact Standard

THE SOUTHERN CARDAMOM REDD+ PROJECT – PROJECT DESCRIPTION

Document Prepared by Wildlife Works Carbon LLC



Project Title	The Southern Cardamom REDD+ Project
Version	3.5
Date of Issue	25-08-2021
Project Location	Cambodia, Koh Kong Province
Project Proponent(s)	Royal Government of Cambodia, Ministry of Environment Contact Name: HE Dr. Choup Paris, Deputy Secretary General, National Council for Sustainable Development Email: paris.ncgg@gmail.com Phone: (+855) 17 31 33 66
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Project Lifetime	01 January 2015 – 31 December 2044; 30-year lifetime
History of SD VISTA Status	This is the first validation for the Project.
Other Certification Programs	The project has been validated and verified under both the VCS and CCB standards. The project ID is 1748.
Expected Future Assessment Schedule	The initial SD VISTA verification is happening concurrently with the validation. It is estimated that the Project will verify every 2 years subsequently.

CONTENTS

1	SUMMARY OF SDG CONTRIBUTIONS	4
2	PROJECT DESIGN	15
2.1	Project Objectives, Context and Long-term Viability	15
2.2	Stakeholder Engagement	32
2.3	Project Management	46
3	BENEFITS FOR PEOPLE AND PROSPERITY	55
3.1	Condition of Stakeholders at Project Start	55
3.2	Expected Impacts on Stakeholders	59
3.3	Stakeholder Monitoring Plan.....	80
3.4	Net Positive Stakeholder Well-being Impacts.....	93
4	BENEFITS FOR THE PLANET	94
4.1	Condition of Natural Capital and Ecosystem Services at Project Start	94
4.2	Expected Impacts on Natural Capital and Ecosystem Services	106
4.3	Natural Capital and Ecosystem Services Monitoring Plan	111
4.4	Net Positive Natural Capital and Ecosystem Services Impacts.....	119
5	OPTIONAL: CLIMATE MODULE.....	121

1 SUMMARY OF SDG CONTRIBUTIONS

TABLE 1: SUMMARY OF PROJECT SDG CONTRIBUTIONS

Row number	Estimated Project Contribution by the End of Project Lifetime	SDG Target	SDG Indicator(s)	Net Impact on SDG Indicator	Section Reference	Claim, Asset or Label
1)	Over the 30-year lifetime of the project 1,890 families will access the project's microfinance scheme.	1.4	Number of families accessing microfinance loans	Implement activities to increase	3.3, SIA045	Claim
2)	Over the 30-year lifetime of the project 20,000 families will receive training on income generating activities.	1.4	Number of people who have received training on income generating activities, informing them on available economic resources, technologies for managing businesses and methods for starting businesses, through the Southern Cardamom Forest Protection Project.	Implement activities to increase	3.3, SIA046	Claim
3)	Over the 30-year lifetime of the project 210 land use planning meetings will be held to assist in	1.4	Number of land use planning meetings held with participation and	Implement activities to increase	3.3, SIA001	Claim

	community members receiving secure land tenure.		support from local authorities.			
4)	Over the 30-year lifetime of the project 3,000 people will receive agricultural training on improved methods and equipment, helping the farms be more resilient to extreme events, and increasing agricultural yields and income to reduce vulnerability to social and economic shocks.	1.5	Number of community members who have undergone agricultural training	Implement activities to increase	3.3, SIA047	Claim
5)	Over the 30-year lifetime of the project 3,000 people will receive agricultural training on improved methods, equipment and crop varieties to increase crop yields and sustainability.	2.4	Number of community members who have undergone agricultural training	Implement activities to increase	3.3, SIA047	Claim
6)	Over the 30-year lifetime of the project 25 demonstration gardens will be established in community areas displaying improved methods, equipment and varieties.	2.4	Agricultural demonstration plots established in community areas	Implement activities to increase	3.3, SIA048	Claim

7)	Over the 30-year lifetime of the project 5 healthcare facilities will be built or equipped to help improve access to quality healthcare services by project community members.	3.8	Number of health facilities built or equipped to provide essential health services to project communities.	Implement activities to increase	3.3, SIA037	Claim
8)	Over the 30-year lifetime of the project 20 health workers will be employed by the Project to help improve access to quality healthcare services by project community members..	3.8	Number of health workers employed	Implement activities to increase	3.3, SIA038	Claim
9)	Over the 30-year lifetime of the project 125 students will be provided with a bursary for tertiary education, including university	4.3	Number of students benefiting from bursary schemes for tertiary education, including university	Implement activities to increase	3.3, SIA035	Claim
10)	The Project will have equal male/female representation for the education bursary scheme and project run education events.	4.5	Percent of female/male participation in education bursary scheme and project run education events.	Implement activities to increase	3.3, SIA035	Claim
11)	Over the 30-year lifetime of the project 15 schools will be constructed, repaired or equipped.	4.a	Number of schools constructed, repaired or equipped.	Implement activities to increase	3.3, SIA032	Claim

12)	Over the 30-year lifetime of the project 20 teachers will be financially supported	4.c	Number of teachers financially supported.	Implement activities to increase	3.3, SIA033	Claim
13)	The Project will strive to have at least 50% of community meeting attendees be women, and 50% of participants in micro-finance and income generating activities be women.	5.5	Percent attendees in community meetings that are women and percent of participants in micro-finance and income generating activities that are women.	Implement activities to increase	3.3, SIA045	Claim
14)	The Project will work to have project employees be at least 50% women.	5.5	Percent of Project employees that are women	Implement activities to increase	3.3, SIA044	Claim
15)	Over the 30-year lifetime of the project 3,000 people will receive agricultural training on improved methods, equipment and crop varieties to increase crop yields and sustainability, which will increase water-use efficiency.	6.4	Number of community members who have undergone agricultural training learning methods and improved crop varieties to increase crop water use efficiency.	Implement activities to increase	3.3, SIA047	Claim
16)	The Project will avoid the projected deforestation and degradation of the Project Area, therefore protecting the water-related ecosystems, including mountains, forests, wetlands, rivers,	6.6	Area (ha) of avoided deforestation in the Project Area	Implement activities to increase	4.2.1, 4.3.1	Claim

	aquifers and lakes present in the watershed of the Project Area.					
17)	Over the 30-year lifetime of the project 1,890 families will access the project's microfinance scheme, providing access to financial services that will promote productive activities, decent job creation, entrepreneurship, creativity and innovation.	8.3	Number of community members and percent of which are women who have accessed a microfinance scheme	Implement activities to increase	3.3, SIA045	Claim
18)	Over the 30-year lifetime of the project 6,000 people will receive training on income generating activities promoting productive activities, decent job creation, entrepreneurship, creativity and innovation.	8.3	Number of people and percent of which are women who have established Income Generating Assistance from the Project	Implement activities to increase	3.3, SIA046	Claim
19)	Over the 30-year lifetime of the project 500 families will participate and derive income from eco-tourism and sustainable tourism.	8.9	Number of families participating and deriving income from eco- tourism activities (CBET)	Implement activities to increase	3.3, SIA016	Claim
20)	Over the 30-year lifetime of the project over 100,000 tourists will visit the Project eco-tourism facilities,	8.9	Number of tourists visiting the community eco-tourism facilities (CBET)	Implement activities to increase	3.3, SIA020	

	creating jobs and promoting local culture and products.					
21)	Over the 30-year lifetime of the project 1,890 families will access the project's microfinance scheme receiving affordable credit.	9.3	Number of community members who have accessed the microfinance scheme	Implement activities to increase	3.3, SIA045	Claim
22)	Over the 30-year lifetime of the project 3,000 people will receive agricultural training on improved methods, equipment and crop varieties, increasing crop yields and sustainability, which lead to increased resource-use efficiency and greater adoption of clean and environmentally sound technologies.	9.4	Number of community members who have undergone agricultural training	Implement activities to increase	3.3, SIA047	Claim
23)	Over the 30-year lifetime of the project 25 demonstration gardens will be established in community areas displaying improved methods, equipment and varieties. This will help lead to increased resource-use efficiency and greater adoption of clean and environmentally sound technologies.	9.4	Number of agricultural demonstration plots established in community areas	Implement activities to increase	3.3, SIA048	Claim

24)	The Project will strive to have at least 50% of community meeting attendees be women, and 50% of participants in micro-finance and income generating activities be women, ensuring equal opportunity and reduce inequalities of outcome in project communities	10.0	Percent attendees in community meetings that are women and percent of participants in micro-finance and income generating activities that are women.	Implement activities to increase	3.3 and 2.2.3	Claim
25)	Over the 30-year lifetime of the project 210 land use planning meetings will be held supporting participatory, integrated and sustainable human settlement planning and management in all countries.	11.3	Number of land use planning meetings held with participation and support from local authorities	Implement activities to increase	3.3, SIA001	Claim
26)	The Project will reach over 30,000 people with sensitization and awareness events, providing environmental education and awareness for sustainable development and lifestyles in harmony with nature.	12.8	Number of people reached through awareness and sensitization events.	Implement activities to increase	3.3, SIA023	Claim
27)	Over the 30-year lifetime of the project 500 families will participate in eco-tourism and sustainable tourism. This demonstrates the sustainable development impacts for sustainable	12.b.	Number of families participating in eco-tourism activities (CBET)	Implement activities to increase	3.3, SIA018	Claim

	tourism and how it is creating jobs and promotes local culture and products.					
28)	Over the 30-year lifetime of the project over 100,000 tourists will visit the Project eco-tourism facilities, creating jobs and promoting local culture and products.	12.b	Number of tourists visiting the community eco-tourism facilities (CBET)	Implement activities to increase	3.3, SIA020	Claim
29)	Over the 30-year lifetime of the project it will avoid the loss of 442,870.85 ha of forest in the Project Accounting Area. This will strengthen the resilience and adaptive capacity to climate-related hazards off the local area by maintaining a healthy, dense, native forest.	13.1	Area (ha) of avoided forest loss in the Project Area.	Implement activities to increase	3.3	Claim
30)	Over the 30-year lifetime of the project it will result in an estimated 107,894,271 t CO _{2e} of net emission reductions.	13.0	Reduction in CO _{2e} emissions from deforestation compared to the reference level	Implement activities to increase	4.2.1, 4.3.1	Labeled
31)	The Project will reach over 30,000 people with sensitization and awareness events, providing environmental education and	13.3	Number of people reached through awareness and sensitization events.	Implement activities to increase	3.3, SIA023	Claim

	education on sustainable development.					
32)	Over the 30-year lifetime of the project it will avoid the loss of 442,870.85 ha of forest in the Project Area, ensuring the conservation of forests, wetlands, mountains and drylands.	15.1	Area (ha) of avoided forest loss in the Project Area	Implement activities to increase	4.2.1, 4.3.1	Claim
33)	Over the 30-year lifetime of the project 210 land use planning meetings will be promoting the implementation of sustainable management of forests and stopping deforestation.	15.2	Number of land use planning meetings held with participation and support from local authorities	Implement activities to increase	3.3, SIA001	Claim
34)	Over the 30-year lifetime of the project it will avoid the loss of 442,870.85 ha of forest in the Project Area, which covers the majority of the Southern Cardamom mountain range This helps ensure the conservation of this mountain ecosystem, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.	15.4	Area (ha) of avoided forest loss in the Project Area	Implement activities to increase	4.2.1, 4.3.1	Claim

35)	The Project will employ 200 rangers conducting daily patrols to protect the forest and biodiversity of the Project Area.	15.5	Number of rangers employed and trained	Implement activities to increase	4.2.1, 4.3.1, SIA025	Claim
36)	The Project will protect the 16 globally Critically Endangered or Endangered species as listed by the IUCN Red List are present in the Project Area	15.5	Number of species preset in the Project Area listed as Critically Endangered or Endangered by the IUCN	Implement activities to increase	4.2.1, 4.3.1	Claim
37)	Over the 30-year lifetime of the project it will reduce the percent of families in the Project Zone participating in the illegal wildlife trade to zero in order to take urgent action to end poaching and trafficking of endangered flora and fauna and address the supply of illegal wildlife products.	15.7	% families engaging in illegal wildlife trade through selling wildlife meat products	Implement activities to decrease	4.2.1, 4.3.1, BIA006	Claim
38)	Over the 30 year lifetime of the Project it will mobilize \$ 5 million USD and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.	15.a	15.a.1 Amount of investment leveraged from external sources including Government and private sector for financing community ventures	Implement activities to increase	4.2.1, 4.3.1, BIA012	Claim

39)	The Project will stop the poaching of wildlife from the Project Area.	15.c	Number of poacher cases resulting in convictions.	Implement activities to decrease	4.2.1, 4.3.1, BIA010	Claim
40)	The Project will stop all forest crimes, reducing illicit financial flows and combating organized crime who derive revenue from illegally harvested timber and poached wildlife.	16.4	Number of legal cases submitted against forest criminals by SCRП patrol rangers	Implement activities to decrease	3.3, SIA007	Claim
41)	The Project will work to adopt and implement investment promotion regimes for least developed countries by providing 1,890 families with microfinance over the 30-year lifetime of the project.	17.5	Number of community members who have accessed the microfinance scheme	Implement activities to increase	3.3, SIA045	Claim
42)	Over the 30-year lifetime of the project 3,000 people will receive agricultural training on improved methods, equipment and crop varieties promoting the development, transfer, dissemination and diffusion of environmentally sound technologies.	17.7	Number of community members who have undergone agricultural training	Implement activities to increase	3.3, SIA047	Claim

2 PROJECT DESIGN

2.1 Project Objectives, Context and Long-term Viability

2.1.1 Summary of Project Sustainable Development Objective(s)

The Southern Cardamom REDD+ Project (SCRP) is an initiative designed to promote climate change mitigation and adaptation, maintain biodiversity and create alternative livelihoods under the United Nations scheme of Reducing Emissions from Deforestation and forest Degradation (REDD+). The 493,582.6 ha SCRPP Project Area encompasses parts of Southern Cardamom National Park and Tatai Wildlife Sanctuary and will protect a critical part of the Cardamom Mountains Rainforest Ecoregion – one of the 200 most important locations for biodiversity conservation on the planet. The SCRPP Project Accounting Area as defined by the VCS methodology is 442,871 ha. The SCRPP is part of the Indo-Burma Hotspot, one of the world's 34 biodiversity hotspots, and is a critical watershed for the Gulf of Thailand, with a mosaic of habitats from dense evergreen and pine forests on its ridge tops to lowland melaleuca wetlands, flooded grasslands, lakes and coastal mangroves in its lowlands. This mosaic of habitat supports at least 52 species of IUCN Threatened birds, mammals, and reptiles including Siamese crocodile and one of Cambodia's two viable populations of Asian elephant. The landscape has also been identified by the Royal Government of Cambodia as an opportunity for tiger reintroduction.

More specifically, the SCRPP has 20 major waterways that feed 3,800 villages in over 6 provinces. The Project will directly support the livelihoods of 21 villages in nine communes around the perimeter of the project area. These communities represent approximately 2,475 families and 10,550 individuals. Wildlife Alliance has been assisting the government in the management of the Cardamom Rainforest Landscape since 2002.

Despite its global importance, uncontrolled small-scale land conversion of forest to agricultural land by migrants and conversion to agro-industrial plantations by the private sector make the Southern Cardamom region one of most threatened forest landscapes in South East Asia. Rural communities depend on small-scale agricultural production to support their livelihood. A lack of sufficient employment opportunities for the growing rural population combined with a lack of knowledge regarding improved agricultural techniques drive the local population to clear forests for cultivating commercial crops.

In response to the threats to the Southern Cardamom landscape, Wildlife Alliance (WA) with the Ministry of Environment (MOE), decided to create the SCRPP. The protection of the SCRPP will be achieved by continuing and intensifying patrolling of the Project Area, as well as by providing additional project activities to the communities that are designed to mitigate the drivers of deforestation. Two important project activities are agricultural intensification and community-based ecotourism. These will help create greater financial security in the communities, and therefore less need to perform unsustainable resource extraction from the Project Area. A fund will also be provided to support scholarships for

children from project communities in order to directly address one of the critical drivers of deforestation identified during stakeholder workshops (i.e. low education rates and limited opportunities for post-primary school education). This fund will be available for community members from an additional 8 villages in four communes in addition to those directly benefiting from the project. These project activities, in addition to mitigating the drivers of deforestation, will provide significant local contributions to 15 of the 17 United Nations Sustainable Development Goals (SDGs) and help provide long-lasting benefits to the communities and natural biodiversity in the project zone.

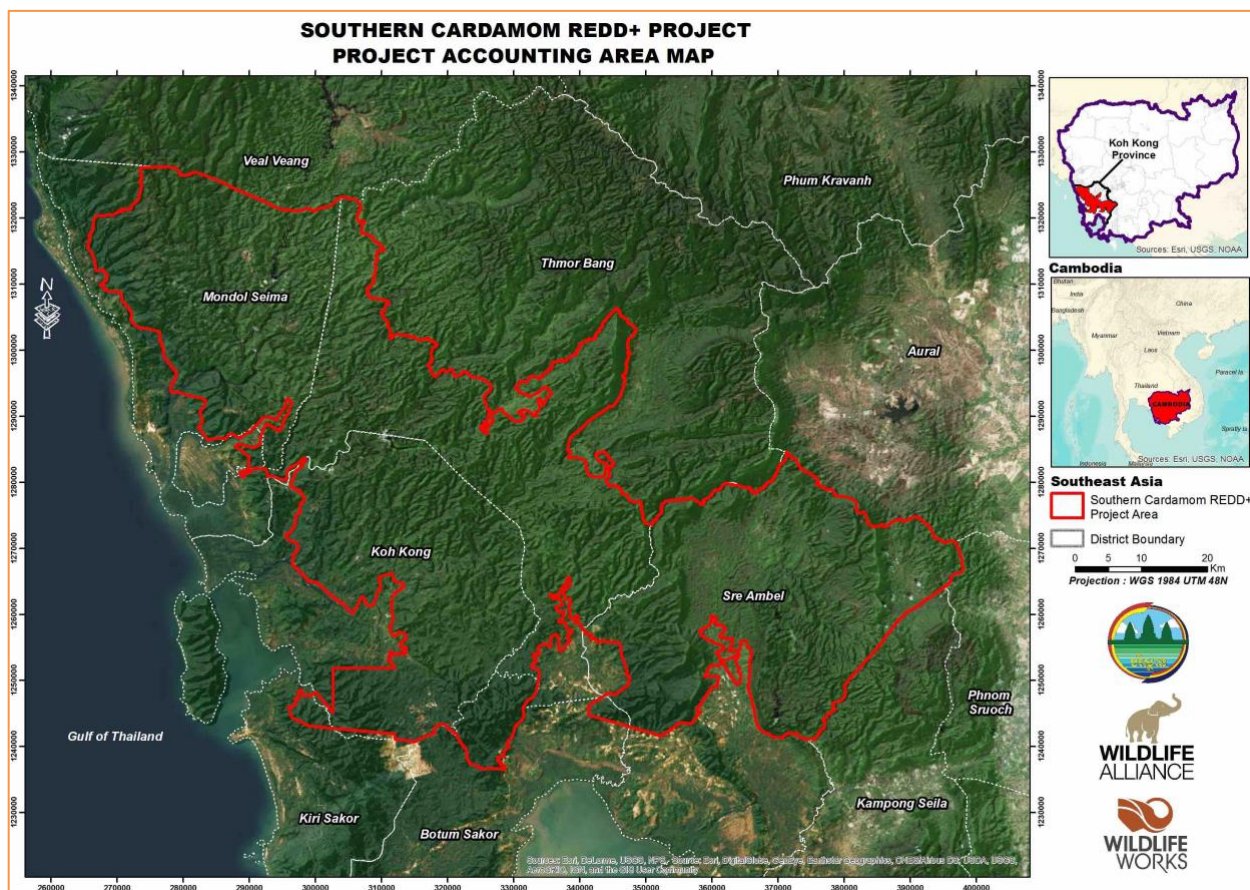


FIGURE 1: THE SOUTHERN CARDAMOM REDD+ PROJECT

The Project's climate benefits include the average annual avoided emission of 3,946,277 t CO₂e, for a total of 23,785,963 t CO₂e during this first monitoring period. The Project will generate substantial community and biodiversity co-benefits. New and sustainable livelihood opportunities, such as direct employment, alternative income generating activities (IGAs) and initiatives to stimulate investment in businesses will be designed to reduce pressure on the environment while significantly increasing community well-being. Additional programs will address food security, improve health and education facilities, as well as raise environmental awareness. Biodiversity co-benefits will be achieved through greater protection of the ecosystem predominantly by means of increased security and improved monitoring. The Project will also be protecting critical habitat for significant populations of many IUCN red-listed species, including Asian elephant, Asiatic black bear, Malayan sun bear, large spotted civet,

clouded leopard, and dhole, as well as the critically endangered reptiles Siamese crocodile and Southern river terrapin.

2.1.2 Description of the Project Activity

To enable a participatory project development process stakeholder two Social Impact Assessment (SIA) workshops were held with key community, governmental and other local leaders in the ministry of environment meeting hall, Koh Kong Town, Koh Kong Province. At these SIA workshops a facilitated process was utilized to first identify the community groups and stakeholders that would be impacted by the project and the potential project impacts and then problem flow diagrams were created. Then with the problem flow diagrams the project focal issues were identified and results diagrams produced. Based on the Problem Flow Diagrams (Section 2.1.9) developed for each of the three Focal Issues identified (improved livelihoods, forest destruction and land encroachment, and wildlife poaching), several strategic project entry points were agreed upon as the most likely strategies/activities to address root causes of the problems faced by the SCRP. These would thus constitute the project activities for the SCRP that if implemented would follow the theory of change logic developed in the Results Chains (Section 2.1.9) to lead to the desired outcomes. These proposed project activities were further enriched by the knowledge and experience of the project partner WA, who has been engaging with local communities in this landscape for the last decade to identify their needs. As such, the project communities have been variously engaged in designing these Project activities.

While the project partner WA has been successful in implementing some of these activities, the effectiveness and scope of their implementation has been limited by a lack of sustained funding. Therefore, the Project Partner WA deems it most effective that the SCRP maintains and expands these on-going project activities. Supporting these operations will be the most direct way to deliver benefits to the communities in a timely fashion. It is envisioned that several new activities, directly supporting the sustainability of the REDD+ Project while simultaneously providing alternative means to the local communities, will also be possible with carbon revenue. Specific existing activities and envisioned new activities are described below, followed by detailed Results Chains (Section 2.1.9) and a description of the key activity areas that will serve as a framework for activity implementation. The SCRP project is in the country of Cambodia, which is implementing a jurisdictional REDD+ program. Therefore, all of the project activities listed below are located in a jurisdiction that will be included within the national REDD+ jurisdictional program.

1. **Training on Agricultural Methods and Intensification:** The Project has provided technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. These practices often fail and require vast amounts of land. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. Additionally, the Project will build and support produce storage facilities and value-added technologies to take advantage of market price fluctuations and aid in achieving high sale prices.

2. **Improve Health Facilities and Care:** Proceeds from the Project will be used to enhance the delivery of health care through increased support to health care workers, hiring of additional health care employees and improvements of facilities such as rainwater collection, solar systems, sanitation and support for outreach (hand washing stands at local schools, etc.).
3. **Community-based Eco-Tourism Development:** Proceeds from the Project will be used to facilitate the participatory process of community engagement, capacity building in hospitality, accounting, English, computers, and nature guiding. Developing ecotourism infrastructure that could include trails, night camps, guesthouses, homestays, visitor center, and equipment such as mountain bikes, kayaks, and camping gear.
4. **Micro-finance:** The Project has utilized a revolving micro-finance fund and family savings system to support access to capital and markets. It will continue to use such approaches and other best practices in micro-finance such as micro-loans, micro-insurance and other small and medium enterprise development practices, thus providing more sustainable and valuable alternatives to current destructive forest practices.
5. **Participatory Land Use Planning:** Unsecure land use rights and ineffective land use in the project induces deforestation in the project area. Local farmers feel unsafe to control their current agricultural land, and outsiders/immigrants come to the project area and start clearing forest land, especially in the protected area and permanent forest estate. Outsiders/immigrants often perceive that protected areas or permanent forest reserves are open to long-term use. To thwart this problem, the SCRP will strengthen land tenure security by supporting the creation and distribution of land titles. The SCRP will work closely with local authorities, community members, and relevant provincial departments to implement this program.
6. **Strengthening Community Organizations:** The project will support capacity building for community groups and institutions directly involved in the management of natural resources for improved Community Protected Area (CPA) organization and functioning. It will help to train local stakeholders in natural resource governance, land tenure and land rights, responsibilities, forest and fuelwood management and natural resource management education. This will include providing locations for meetings, materials, travel support, bringing in subject-matter experts (such as conservation agriculture) and other logistical and organizational support.
7. **Enhanced Security and Law Enforcement:** Although a current ranger/community member force exists, its scope and scale are currently inadequate to address the threats to the Project Area landscape. Proceeds from the REDD+ Project will be used to directly hire and train additional rangers/community members, focusing on conservation principles and biodiversity monitoring. To increase motivation, the existing performance incentive program will be enhanced. The current ranger/community member force suffers from inadequate equipment and training. The Project will provide invaluable support to this vital program.
8. **Sensitization and Awareness Raising:** The project will have a dedicated outreach department that will use diverse means to educate and sensitize the communities about the environment and conservation in general, but also on the SCRP in particular, its goals and

how they are involved. This will be in the form of continuous FPIC program for the project's lifetime.

9. **Education Improvement:** Proceeds from the project will be used to improve education standards in the communities through increased support to schools, hiring of additional teachers, improvement of education infrastructure (buildings and/or other equipment), and a dedicated school bursary scheme.
10. **Direct Employment and Training on Income Generating Activities (IGAs):** One important use of the revenue from the carbon credit sales will be directly employing personnel to run the project at different capacities. As far as will be possible, most hires will be directly from the communities in the Project Zone.

TABLE 2: THE SCRP PROJECT ACTIVITIES AND THEIR EXPECTED POSITIVE IMPACTS TOWARDS THE THREE PRIMARY ACTIVITY AREAS.

Activity Area 1: Poor Community Livelihoods

Defined Activities
Training on income generating activities (IGAs) and direct employment
Micro-finance implementation
Improving health facilities and care
Strengthening community organization and specific promotion of female education
Support teacher salaries and bursaries for students
Expected positive impacts
Reduced dependence on extractive forest resources
Increased employment and income from legal IGAs
Increase in stability of income flow
Reduced risks through livelihood diversification
Improved community well-being
More access to education

Activity Area 2: Forest Destruction and Land Encroachment

Defined Activities
Employment of a larger ranger force and increasing their motivation
Training on income generating activities (IGAs) and direct employment
Increasing environmental awareness
Strengthening community organization
Training and support for sustainable eco-charcoal techniques
Training on agricultural methods and intensification
Expected positive impacts
Reduced dependence on extractive resources
Enhanced ecosystem integrity and ability to provide for wildlife
Ensured maintenance of ecosystem services
Stabilization of water flow and quality for downstream producers
Increase in perception/ recognition of the value of forests resources

Activity Area 3: Wildlife Poaching

Defined Areas
Employment of a larger ranger force and increasing their motivation
Raising environmental awareness
Training on IGAs and direct employment
Strengthening community organization, esp. female involvement and empowerment

Training on agricultural methods
Tree planting and habitat restoration
Expected positive impacts
Reduced poaching activities and associated impacts
The safeguarding of High Conservation Value Species
Enhanced ecosystem integrity and ability to provide for wildlife
Increase in perception/ recognition of the value of forests and wildlife

2.1.3 Implementation Schedule

Date	Milestone(s) in the Project's Development and Implementation
2002 - Present	<u>Forest Protection</u> : WA began supporting law enforcement activities in the Southern Cardamoms in 2002. This includes working with the RGC to develop a law enforcement strategy for the landscape and providing financial and technical support for all law enforcement operations. Two fully-equipped ranger stations were implemented in 2002. As of, 2017, WA has been operating nine ranger stations.
2003-present	<u>Land-use Planning</u> : WA has worked with the RGC and provincial, district, and commune authorities since 2003 to develop clear spatial land-use plans for the Southern Cardamom. This includes securing community land tenure across 11 communities, thereby helping to ensure community rights and assisting in the management of legal agricultural land.
2004 - Present	<u>Community Development</u> : WA conducted a participatory rural appraisal (PRA) in the Project Zone, creating community agricultural programs for 200 families in 2004 and establishing community-based ecotourism in Chi Pat in 2008. This activity has expanded to a second cluster of 8 villages (Chay Areng) in 2017.

2010 - 2012	<u>REDD+ Project Exploration:</u> ONFI and WA conduct preliminary carbon stock assessment, VCS draft pd writing
April 2012 - August 2012	<u>REDD+ Feasibility:</u> WWC conducts a REDD+ feasibility study for the Southern Cardamom REDD+ Project
1 January 2015	Project start date
2015 – Present	<u>Project Implementation:</u> Attract investors and gain government approval for the Project – continue forest protection and community development activities
January 2017 – May 2017	Project carbon stock measurement
July 2017 – August 2017	Proxy Area carbon stock measurement
December 2017 – January 2018	Leakage Area Assessment
April 2018	Project Validation and Verification
May 2018	Project Registration
November 2018	First Project VCU issuance
November 2019 – March 2020	Second monitoring period forest inventory and monitoring
December 2020 – April 2021	Project 2 nd Verification (M ₂)
December 2020 – April 2021	Project SD VISTA Validation and Verification

2.1.4 Project Proponent

Organization Name	Royal Government of Cambodia, Ministry of Environment
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Role in the Project	Project Proponent
Contact Person	H.E. Dr. Choup Paris
Title	Deputy Secretary General, National Council for Sustainable Development
Address	Morodok Techo Building (Lot 503) Tonle Bassac, Chamkamorn, Phnom Penh, Cambodia
Telephone	+855 017 313 366
Email	Paris.ncg@gmail.com

2.1.5 Other Entities Involved in the Project

Organization Name	Wildlife Alliance
Role in the Project	Partner to MOE in the implementation of SCRP
Contact Person	Suwanna Gauntlet
Title	Founder and CEO
Address	No. 86, Street 123 Toulthompong I Precinct Chamcamon District Phnom Penh, Cambodia
Telephone	+855-23-211-604
Email	cambodia@wildlifealliance.org

Organization Name	Wildlife Works Carbon
Role in the Project	Technical Advisor with responsibilities including implementation of the VCS and CCB standards and carbon accounting
Contact Person	Jeremy Freund

Title	Vice President, Carbon Development
Address	242 Redwood Highway
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Email	+1 415 332 8081

2.1.6 Project Type

The SCRP falls under the VCS sectoral scope 14: – Agriculture, Forestry, and Other Land Uses (AFOLU), under the category Reduced Emissions from Deforestation and Degradation (REDD). Specifically, the project falls under the REDD+ category Avoided Unplanned Deforestation (AUD). The project is eligible under this category by the definitions provided in the VCS AFOLU Requirements version 3.5 published 19 October 2016 by virtue of the fact that it prevents emissions that would have otherwise taken place through unplanned deforestation.

The SCRP is not a grouped project.

2.1.7 Project Location

Extent Boundary	Location (Easting, Northing UTM Zone 48N)
Northern Extent GPS Point	275375.34 m E, 1325396.78 m N
Eastern Extent GPS Point	394814.98 m E, 1267579.35 m N
Southern Extent GPS Point	326489.87 m, 1238701.74 m N
Western Extent GPS Point	297403.96 m E, 1269075.36 m N



The baseline scenario as identified as the conversion of native ecosystems from a natural forested state to a non-forest (agricultural) state. The baseline scenario outlined in the VCS Additionality Tool in the Project's VCS/CCB PD Section 3.1.5 demonstrates that the entire PAA would be been converted to subsistence agriculture in the absence of the SCRPs.

According to the Asian Development Bank (2014), the poverty line in rural Cambodia was \$25.69/month per capita, and 25% of the rural population lived below this poverty line. Based on the national socio-economic survey (2016), rural households increased their income 14% from 2014 to

2015 but they are also holding more debt to support themselves and the majority of the debt is owed to banks. Mountainous regions of Cambodia suffer the highest rates of poverty and the remote villages of the Cardamom mountains are no exception. The further villages are from Koh Kong town or major roads the higher the rate of poverty (Killeen, 2012). Most households in the mountains derive their livelihood from agriculture and its related sub-sectors, as well as illegal logging and firewood cutting (National Institute of Statistics, 2016). Manufacturing is varied but is not very extensive and is mostly conducted on a small-scale and informal basis. The service sector is heavily concentrated in trading activities and catering-related services.

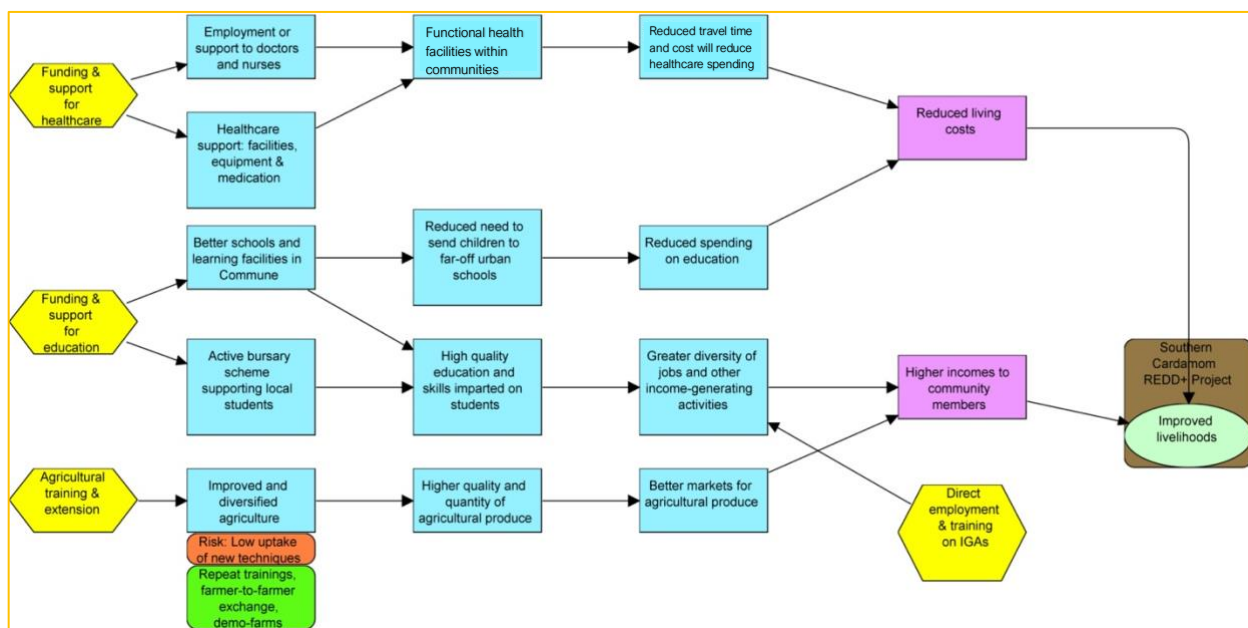
The Cardamom Mountains rainforests are amongst the most significant landscapes for biodiversity conservation in mainland South East Asia. The Cardamom Mountains region form part of the Indo-Burma biodiversity hotspot (Myers et al. 2000) and is a ridge-to-reef conservation landscape comprising 18,000 km² of largely contiguous forest cover. The landscape forms a Global 200 Ecoregion (Cardamom Mountains Rain Forests), a secondary Endemic Bird Area (i.e. an area containing at least one restricted-range endemic bird species) and was listed as a Level I Tiger Conservation Unit by Wikramanayake et al. (1998). The length of the Cardamom Range is approximately 300 kilometers. It is separated from the nearest other rainforest by the vast, dry Khorat Plateau in central Thailand to the north and east and by the Gulf of Thailand in the west.

2.1.9 Causal Chain(s)

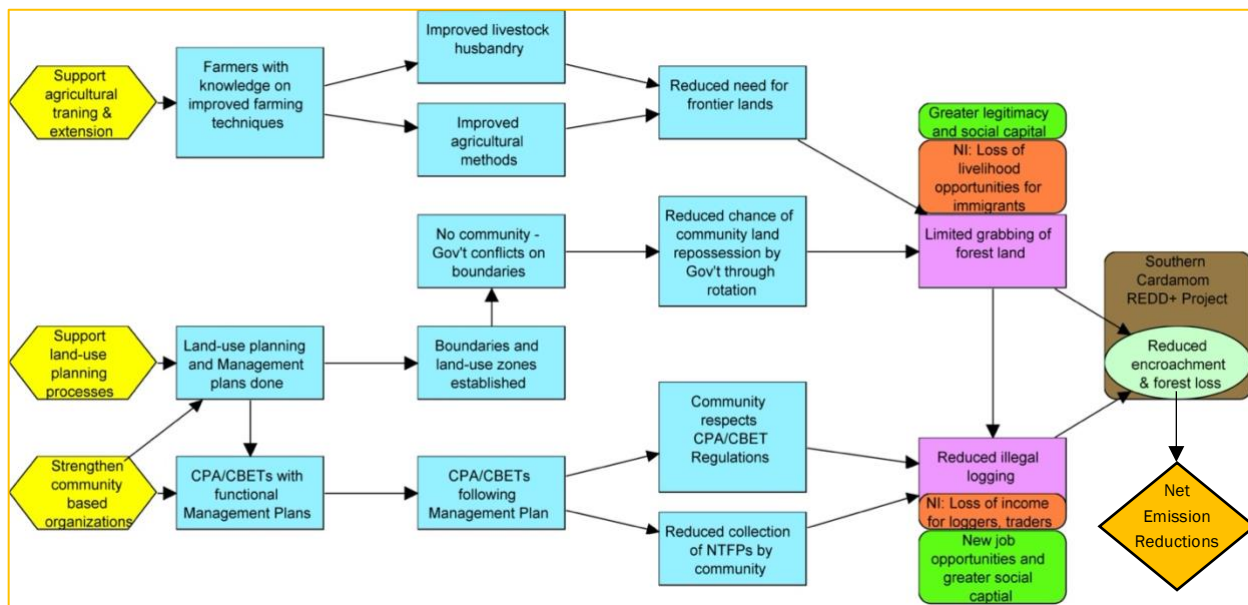
During the SBIA community workshop process at project development, after the working groups had identified and prioritized the Focal Issues, they then analyzed them further to establish the causal logic leading to the problems and produced a Problem Flow Diagram (also termed Conceptual Model) for each of the Focal Issues (Figure 3). A Problem Flow Diagram (PFD) is a situation analysis of the issue that represents stakeholders' understanding of what drives the existence of the focal issue; it identifies economic, political, institutional, social and/or cultural factors that contribute to existence of the issue. The development of the causal model was completed in accordance of the process as defined in Richards and Panfil (2011)¹.

¹ Richards, M. and Panfil, S.N. 2011. Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects: Part 1 – Core Guidance for Project Proponents. Climate, Community & Biodiversity Alliance, Forest Trends, Fauna & Flora International, and Rainforest Alliance. Washington, DC. <https://www.forest-trends.org/publications/social-and-biodiversity-impact-assessment-sbia-manual-for-redd-projects/>

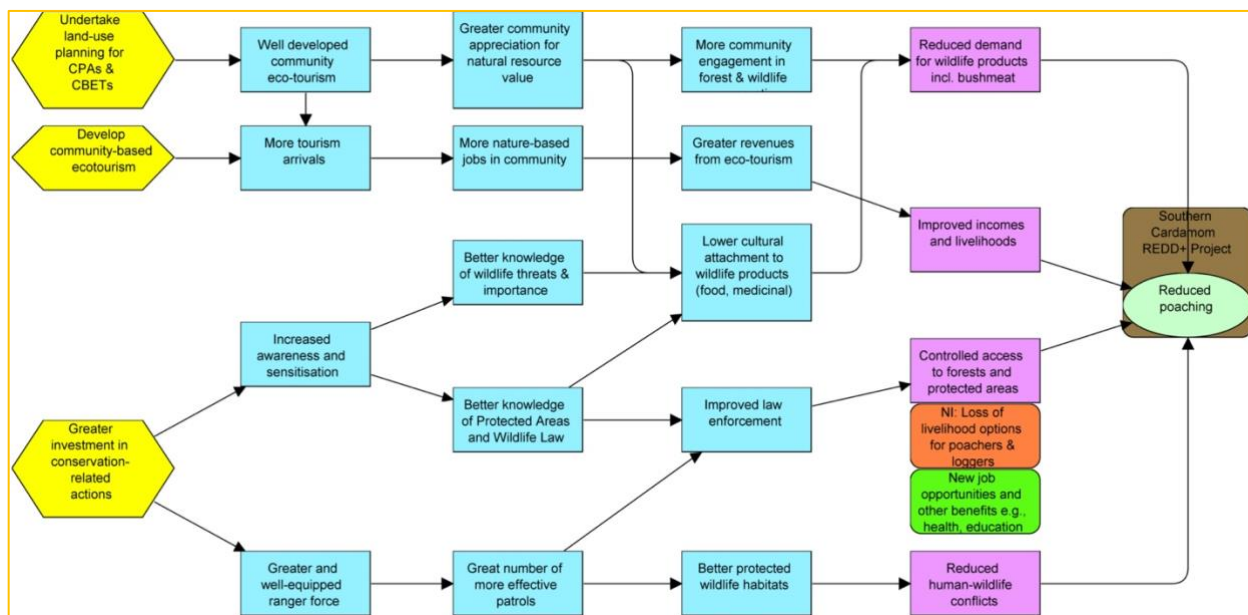
a) Focal Issue 1: Improved Livelihoods



b) Focal Issue 2: Forest destruction and land encroachment



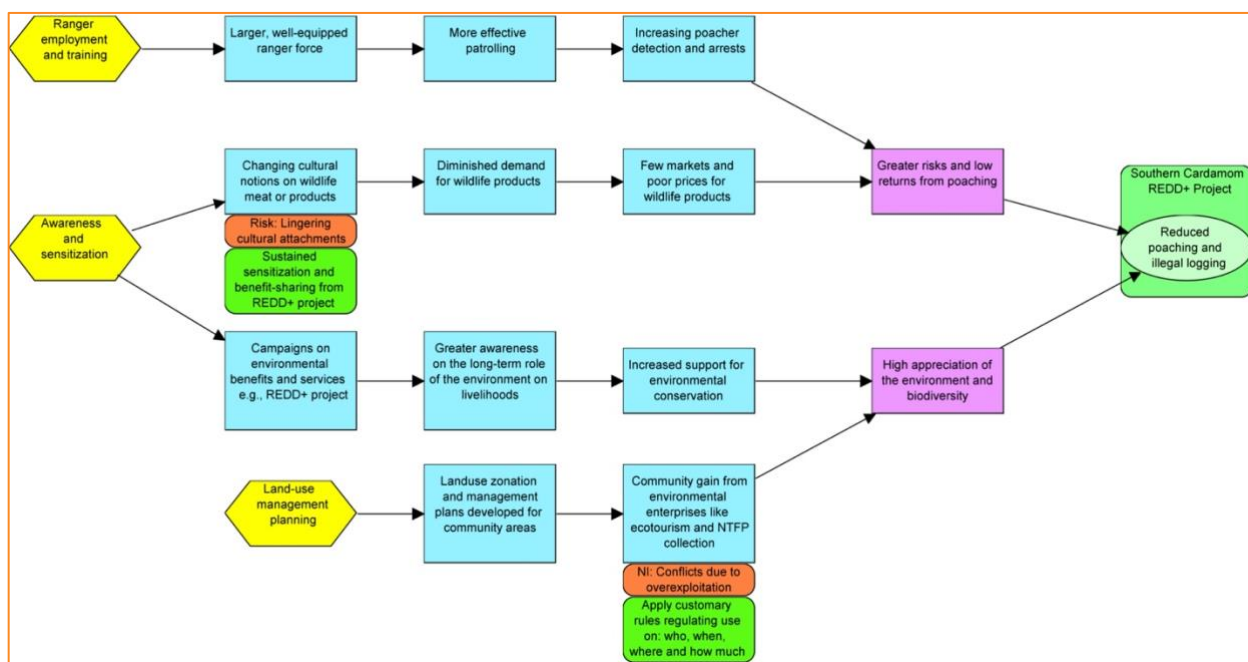
c) Focal Issue 3: Wildlife poaching



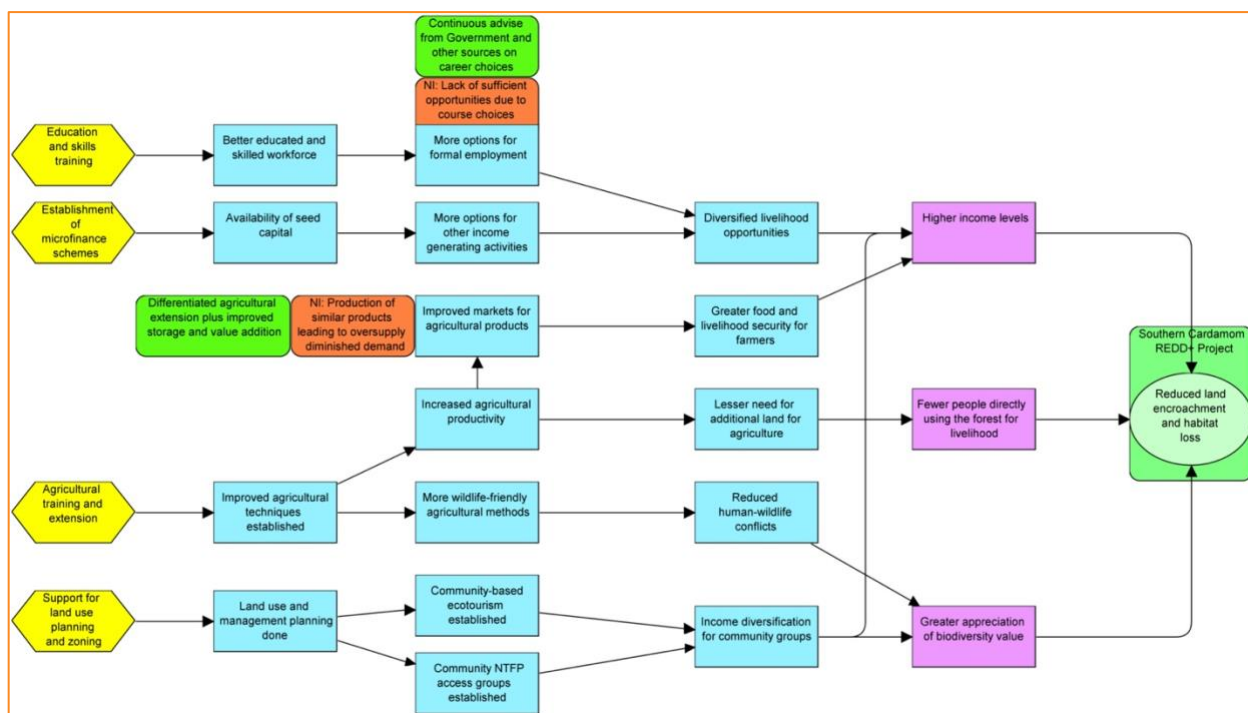
Legend Table						
						
Strategy	Mitigation for Risk or NI	Risk or Negative impact	Intermediate Result	Threat Reduction Result	SD VISTA Claim	Target

FIGURE 3: RESULTS CHAINS UNDERLINING THE THEORY OF CHANGE LOGIC FOR THE THREE FOCAL ISSUES IDENTIFIED DURING COMMUNITY SIA WORKSHOPS FOR THE SCRP.

a) Awareness, Education & Training / Reduced poaching and logging



b) Alternative Livelihoods / Reduced land encroachment



c) Ranger employment & training

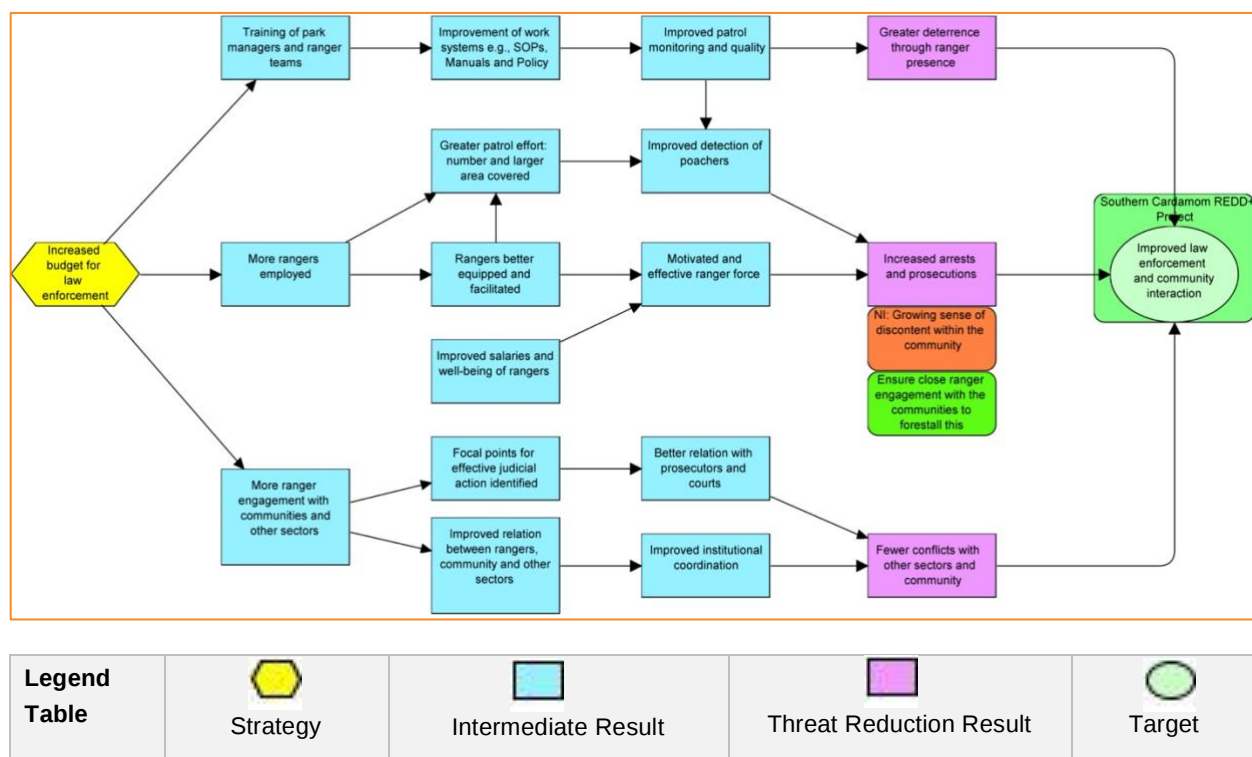


FIGURE 4: RESULTS CHAIN DIAGRAMS PRODUCED FOR THE FOCAL ISSUES DURING THE BIA WORKSHOP FOR THE SCRP.

2.1.10 Threats to the Project

Human-Induced Risks:

1. Slash and Burn / Unsustainable Agriculture

The greatest human induced risk to the Project's benefits is continued deforestation. The Project Zone is undergoing large pressures for new agricultural land from both the expanding population and ongoing immigration into the area. Therefore, slash and burn agriculture is a primary risk to the SCRP benefits and thus the Project's sustainability.

Mitigation for this risk is through the Project Activities, mainly in the form of increased protection of the Project Area, creation of new income generating activities and through the promotion of improved agricultural methods as described in Section 2.1.2.

2. Charcoal Production and Illegal Logging

Within the Project Area there are extractive activities, including the production of charcoal and illegal logging. These are additional threats of deforestation and degradation in the SCRP Project Area and pose a significant risk to the Project's climate, biodiversity, and ecosystem services benefits. Law enforcement and community members patrol the Project Area permanently and attempt to halt such activities. It has been recognized, however, that these law enforcement units are limited because of the size of the Project area. The SCRP therefore

provides financial, political and human capacity support to maintain and enhance law enforcement. This is achieved by employing more rangers, increasing ranger motivation and providing rangers with more equipment, training and technology

3. Anthropogenic Fires

Another human induced threat is frequent fires; these can occur multiple times a year in the area. Many are set intentionally with the goal of clearing trees and brush for agriculture, or some may be the unintentional result of illegal activity, such as charcoal production. SCRP staff monitor the Project Area for the occurrence of fire, and work to reduce the risk of fire. In addition, the Project aims to reduce illegal incursions of people into the Project Area, thus mitigating anthropogenic fire potential. Furthermore, the Project Proponent will monitor fire events and other potential contributions to reversals as part of their annual monitoring efforts and is required to report on and account for any major loss of carbon in the Project Area. It is the goal of the Project to work with communities to understand the value of the forest, thus decreasing their willingness to destroy their forest resources, as they begin to realize tangible carbon benefits.

Political/Policy Risks:

In all countries, there exists a slight risk of shifting legislation or the potential of new policies that could potentially affect natural resource management and/or land tenure. There have been cases in Cambodia where the RGC has allowed protected forest lands to be cleared for agricultural or development purposes. That said, the likelihood of such changes occurring is considered to be extremely small, especially given that the Project Area is currently under government ownership and under protective status (It is both a national park and wildlife sanctuary). As a highly visible international REDD+ project, the likelihood that the RGC would allow the SCRP Project Area to be converted is low. Additionally, as the intent is to nest this Project into a future jurisdictional/national program, the Project's visibility will only increase as well as its importance to the RGC.

1. Risk of reversal

Risk of project reversal due to community opposition is considered minimal, as they have openly and widely been consulted through numerous outreach and information-sharing meetings throughout project development. As a project governance policy, all stakeholders are always able to seek further information or air grievances if desired. The Project will continue to engage the surrounding communities, provide education and support for community social services, and improved livelihood opportunities.

All these factors build and enhance community support for the project and make them authentic stakeholders, thereby reducing the risk of opposition to the project and its goals.

2. Insufficient Revenues

The majority of REDD+ credits are currently sold on the voluntary market, posing a risk to recurring, sustainable income flow. If credits are not sold, there will be no revenue, and thus no monetary support for the Project over its 30-year lifetime, save initial investment. Nevertheless, the Project Proponent believes that the Project will be successful in attracting sufficient buyers of carbon credits. The Project has been developed as a cooperative effort between Wildlife

Alliance and the Ministry of Environment, it is one of the largest projects in Southeast Asia, making it an attractive Project to the greater Southeast Asian region. In addition, it is a vital forest resource to Cambodia, and is a critical watershed for the Gulf of Thailand, an important part of Cambodia's economy because of its contributions via hydroelectricity, tourism, and fisheries. The intention of the Project Proponent is to nest the Project into the potential future Cambodian jurisdictional/national REDD+ scheme. In the future, this will allow for the sale of larger credit volumes, on a recurring, sustainable basis, to sovereign nations and large multi-national buyers in the international market created by the Paris Accord. Therefore, the Project Proponent believes that the risk of insufficient revenues to the Project's benefits is low.

Natural Risks:

The region in which the Project is located is not generally susceptible to severe or destructive natural events. The primary types of natural events that could occur would be geologic events, pests or disease, flooding or fire. The area is not prone to any geologic activity and poses little to no risk to the Project. As the Project Area is a native and biodiverse ecosystem the risk from pests or disease that result in significant emissions reversal is low. The primary mitigation for this risk is to maintain the forest and ensure through monitoring that the trees and ecosystem remain healthy and intact. There can be minor seasonal flooding from the annual monsoons. However, the species of this area are all adapted to the hydrological cycles and are not liable to monsoonal flooding. The Project Area is mountainous and there is a medium risk of erosion or landslides. Due to the Project activities that protect forests the risk of erosion or landslides is minimized. The risk of fire has the most potential to cause damage to the forests of the Project Area. However, the risk of significant emissions reversal is low. The evergreen and semi-evergreen forest types are of a dense, evergreen, moist forest type that is not prone to forest fires. There have been no catastrophic fires in forests of this type in this region. Therefore, natural events have low risks to the Project's benefits.

2.1.11 Benefit Permanence

Southern Cardamom REDD+ Project activities are all designed to enhance the SDVISta benefits beyond the Project's Lifetime. Community activities are designed to transform local economies over the life of the Project. In this regard, the focus of the SCRP is developing local business and income-generating activities that are critical components of a long-term low carbon economy. Project activities that meet this overarching objective focus on education, sustainable agriculture, community-based ecotourism and sustainable management of natural resources. These activities will reduce the necessity for community members to deforest and degrade the Project Area. During the Project Lifetime, this will be achieved, for example, by improving education by training farmers in sustainable agriculture, as well as creating long-term eco-tourism programs. These activities are outlined in more detail in Section 2.1.2.

2.2 Stakeholder Engagement

2.2.1 Stakeholder Identification

The process of Community and Stakeholder identification was conducted through a series of key informant/expert interviews, workshop discussions, an analysis of rights and a literature review. Through these methods it was possible to obtain a well-informed and comprehensive understanding of all communities and community groups in the Project Zone. Consultations with each group were integral to the Project design, in particular during the SIA training and workshops with the Project partner WA, local government officials and local community decision makers.

The SIA training and workshop utilized theory of change logic to hypothesize how the SCRP intends to achieve its objectives. In other words, through the SIA training and workshop WA, local government officials and key community leaders created a roadmap of how the SCRP plans to get from Point A (project activities) to Point Z (project impacts). First the participants created a Project Vision Statement. Secondly, they identified and prioritized the Project's focal issues, from which they created a problem statement and vision statement for each focal issue. With these problem and vision statements they created a problem flow and results chain diagram for each focal issue. Next the participants conducted a risk analysis and negative impact assessment for each focal issue, and finally a theory of change statement. Once these items were created for each issue, a list of mitigating activities and indicators were created for the life of the Project. This process, described above, demonstrates how key community members and project stakeholders were involved in every step of the Project's design process. This stakeholder identification process was held during the initial development of the project for the VCS and CCB standard, no new stakeholder groups have been identified during the 2nd monitoring period or during the development of the SD VISta documentation.

Key informants

Key informants are of value for providing inside information of the area and its communities because they have been based in the area for decades, and therefore possess substantial local knowledge and experience. Key informants consulted include:

Mr. Jeff Silverman: REDD+ Technical Advisor of the Wildlife Conservation Society (WCS) and who has been working in the area of REDD+ for more than 10 years. Jeff has been presented his successful experience in providing technical expert to the successful Seima REDD+ Project in Cambodia.

Mr. Hort Sokun: Rainforest Technical Manager of the Wildlife Alliance (WA) and who has been working in the Southern Cardamom since 2001. Sokun has conducted community development activities with all Project stakeholders.

Mr. Chhun Delux: Chief of Forest and Climate Change Office at the Forestry Administration, Mr. Chhun Delux, one of the most experienced REDD+ practitioners in the Royal Government of Cambodia, provides his technical expertise as forest policy and community engagement expert to the SCRP.

TABLE 3: KEY INFORMANT INTERVIEWS CONDUCTED DURING PROJECT DEVELOPMENT.

Key Informant	Position	Date
Mr. Jeff Silverman	REDD+ Technical Advisor	2/14/17
Mr. Hort Sokun	Southern Cardamom Community Engagement Specialist	2/18/17
Mr. Chhun Delux	Chief Forest and Climate Change Office	2/18/17

Focus group discussion at Social Biodiversity Impact Assessment (SBIA) training

SBIA workshops were held from August 15-17 and August 23-25, 2017 at the MOE district office in Koh Kong. A total number of 73 local government staff and local decision makers from the SCRP attended. During this workshop, discussion focused on the agents and drivers of deforestation, as well as on the communities and community groups. Through the expert knowledge provided by the local government officers and decision makers in these discussions, a comprehensive list of the categories of people expected to be affected by the project were identified. This provided valuable background information for subsequent investigations and research.

Analysis of rights

An analysis of user rights helped provide a straightforward insight into which communities, community groups and stakeholders are present in the area. The analysis focused on customary rights and ownership to the land. The Project Area is comprised of government owned protected areas, but communities have rights to communal land which is present in the Project Zone. This process aided in identifying communities and stakeholders. This analysis was carried out using expert knowledge and also drew on Wildlife Works' experience in REDD+ Project development.

Literature review

To provide a listing of all potential stakeholders in the SCRP a comprehensive review of the literature, including academic papers, published reports and any available open-source Internet resources was completed. This process provided further insight into local dynamics, cultural migration, and historic government land policy. These resources provided both specific information on local stakeholders in the project and general guidance for identifying and describing stakeholders in REDD+ projects.

Identified community groups and stakeholders

Through the process listed above, community groups and stakeholders have been identified in the project. The table below (Table 4) outlines their current impact on the land, the effects of the project on these activities and the relationship with other stakeholders. This allows the Southern Cardamom REDD+ Project to understand the complexities within the social structure and generates insight into

potential conflict areas. This in turn informs where exceptional care is needed and helps to target project activities more directly.

2.2.2 Stakeholder Description

The stakeholders in the SCRPP were identified through a participatory process as documented in the SCRPP VCS/CCB PD Section 2.3.7. For the purposes of the SD VISta standard these detailed stakeholder sub-groups were placed into more general stakeholder categories, as seen in Table 4. The project activities are available equally to all of the stakeholder sub-groups within each stakeholder category, and each sub-group will experience the project benefits and impacts in a very similar manner. As such, the more general stakeholder category will be used to document project impacts on stakeholders in section 3.2.

TABLE 4: THE STAKEHOLDERS IN THE SOUTHERN CARDAMOM REDD+ PROJECT.

Stakeholder Category	stakeholder sub-group	Current impact/ activities in landscape	Effect of project on their activities	Relationship with other stakeholders (Partnership/conflict)
Project Zone Communities	Project Zone Communities: conducting legal agriculture, NTFP collection including ethnic minorities the Chong and Cham.	Legal cultivation inside the Project Zone; NTFP collection from inside the Project Area	No expansion of agricultural land into the Project Area; support for value chain addition for NTFP production	Potential conflict with Landless-migrants due to land incursions; potential conflict with local authorities over illegal land allocation to forest land speculators
	Project Zone Communities: ecotourism service providers (current and potential)	Providing community-based ecotourism services in a sub-set of Project Zone communities	Further support and expansion of community-based ecotourism	Partnership with MOE and local authorities for implementing legal ecotourism
	Charcoal producers	Extraction of wood for charcoal making, often	Prohibition of charcoal making in the Project	Conflict between charcoal burners and MOE and rangers if

		from protected Project Area	Area, loss of income generating activities, increased law enforcement and potential prosecution	illegally trespassing into Protected Forest.
	Women	Limited legal economic opportunities in many Project Zone communities so involved in illegal wildlife trade.	Providing greater economic opportunities and training particularly through Community Based Ecotourism	Partnership with MOE and local authorities for implementing project activities. Potential conflict with 'traditional' men if some gender roles challenged
	Youth	Limited legal economic opportunities in many Project Zone communities so involved in illegal wildlife and timber trade.	Providing greater economic and scholarship opportunities through project activities and Community Education Fund	Partnership with MOE and local authorities for implementing project activities.
	Commercial hunters	Intrusion into Protected Project Area for killing of wildlife	Greater law enforcement and abatement of hunting activities, persecution.	Potential conflict between hunters and MOE and ranger teams
Non-Community Stakeholders	Wildlife and Timber Traders	Middlemen facilitating the purchase and transportation of illegal harvested timber and wildlife	Stronger law enforcement increases risks and reduces rewards for	Potential conflict with MOE and ranger teams

		from protected forest within the Project Area	illegal wildlife and timber trade	
	Forest Land Speculators	Illegal clearing protected forest within the Project Area (in collusion with local authority) for future sales	Increased law enforcement reducing ability to illegal clear and sell land	Potential conflict between land speculators and MOE and ranger teams
	Landless – Migrants	Living on land without secure land titles, often practicing subsistence agriculture. Often employed by land speculators to clear land	Cooperation to engage in agricultural training activities, though legal titles needed	Potential conflict between landless and rightful landowners, such as the RGC.
Government / Authority	Local authority (district and commune, villages)	Provide intervention and assistance for land titling and sales	Cooperation with MOE to ensure protection and sustainable use of forest and forestland security. Regulate ecotourism	Differences with MOE on extent of land which can be sold to forest land speculators. Potential conflict with MOE as obtaining benefits from illegal activity in Project Zone.
	Police and military	Cooperate with MOE to crack down on forest illegal activities	Secure maintenance of forest resource	Potential conflicts with loggers and land grabbers. Potential conflict with MOE as obtaining benefits from illegal activity in Project Zone.

2.2.3 Stakeholder Consultation

Informational Meetings with stakeholders:

Information regarding the Southern Cardamom REDD+ project was communicated through a series of community meetings that took place in a culturally-appropriate setting. Meetings were conducted by appointed FPIC officers and were called at public locations or usual places of gathering, such as houses of commune chiefs or village chiefs, pagodas and schools. The existing network of WA contacts across the Project Zone, particularly local government officials, were used to publicize the FPIC events and ensure representative community participation. In addition, two of the FPIC officers were from Project Zone communities and thus used their extensive networks to publicize the events. It is common in Cambodia to provide drinking water and snack at formal meetings and some sort of supports for travelling and this custom was also adhered to at these community consultations. The FPIC officers used posters to explain the concept of REDD+, climate change, project activities and conflict resolutions and bring across the project's anticipated benefits as well as costs and risks. An open discussion and Q & A session followed, which often revolved around land tenure, customary use of timber and non-timber forest products, costs and benefits as well as risks and their concern about implementation of the Southern Cardamom REDD+ Project. All meetings were conducted in the Khmer language, ensuring that the information was communicated to and understood by all attendees. No specific channels for communication exist for marginalized and/or vulnerable groups, however all project communications and meetings are planned to the greatest extent possible to make them accessible to all groups, especially marginalized and/or vulnerable groups. This includes selecting meeting locations and times that consider harvest schedules, childcare and other specific limitations that these groups may face.

Community Costs, Risks, and Benefits

The SCRP has been designed through engagement of relevant communities and stakeholders and has involved them in decision-making and implementation from the outset. Collaboration amongst the Project Partners with the goal of initiating a carbon-crediting scheme began in 2012. The role of the Project Partners is central to the SCRP, due to their relationship with the communities. These communities are already familiar with the Project Partners and open communication channels were established prior to the start of the Project's design phase. The SCRP builds on these structures, which makes it possible to disseminate information to the communities in a quick and timely manner as well as to encourage their involvement in the Project. During the last year, Project Partners have conducted a Social and Biodiversity Impact Assessment (SBIA) and suite of community meetings focused on Free Prior and Informed Consent (FPIC). These meetings were the basis for which Project costs, risks and benefits to communities have been communicated.

A Project Sub-Office was established in the Koh Kong MoE office branch in late 2017, and a REDD+ office was created. This office serves as an information hub for SCRP and is open to all community members and stakeholders who wish to gain information about the Project and/or submit comments or grievances. The primary communication method to stakeholders and communities is through the Project Partner's existing channels of communication to the respective communities in their area. Meetings were mainly announced through phone calls or by informing the leader of a specific community group (women's groups, youth groups, etc.) in a timely fashion, who in turn would communicate the information to the members of that group.

Project Partners have been kept up to date with regular communication and dissemination of project documentation. Community members are encouraged to visit these headquarters where they have full access to any such material. The Project Office constructed seven signboards that were installed at strategic points around the Project Zone for posting of project information. The SBIA community meetings took place August 15-17 and August 23-25, 2017 in the MoE offices, Koh Kong province. In addition, community FPIC meetings have occurred over 3 rounds. Round one community FPIC meetings took place from August to October 2017 with 24 meetings being held. During that period, a half day meeting was held in each targeted village. Significant time was given between the initial consultation and the second round of consultations. Round two occurred from December 19, 2017 to March 2, 2018 with an additional 27 meetings held in 27 of the 29 targeted villages. At this second round, one full day was allotted to each targeted village with a half day meeting and a half day posting and disseminating awareness materials. Significant time was given between the initial consultation and any deadlines for decisions. During the period 2018-2020 (m₂) additional FPIC meetings were held so as to maintain communication between the project and communities and to ensure that communities are fully informed about the Project (see Table 6 of the joint VCS/CCB 2nd Monitoring Report for the list of meetings held during m₂). Details on all FPIC meetings, including the dates, locations and number of attendants, are provided in the SCRP VCS/CCB monitoring report for the 2nd monitoring period Section 2.3.7 Tables 5 and 6.

2.2.4 Continued Consultation and Adaptive Management

The Southern Cardamom REDD+ Project has a plan for continued community and stakeholder consultation and for the adaptive management of the project. The project has a strong commitment to continued consultation with communities. The first aspect for this is the comment and grievance mechanism, that enables all community members and project stakeholders to submit comments and/or grievances to the project, which are handled in an transparent manner and with which a resolution equally amenable to the project management and the individual or group is sought. Additionally, the project has continued to hold community meetings and perform community outreach activities. At such events the project staff provides further education and information on REDD+ and the project and seeks input and consultation from the community on the project and the project activities. The Project is committed to continuing to hold such meetings throughout the Project Zone during the Project Lifetime. Based on these 2 elements the Project management will continue to assess the Project's activities and whether they are being successful and continue to be in line with Project goals and community needs. Using an adaptive management approach the project management will modify activities, project activity locations or implementation timeline to ensure that they are meeting the project needs.

2.2.5 ANTI-DISCRIMINATION

The SCRP is committed to fair treatment and equal opportunity for all Project stakeholders, community members and employees. The Project, nor any agent of the Project, will discriminate against any person for any reason, including, but not limited to, gender, religion, nationality, tribe, or sexual identity. The Project has established an equal opportunity policy that ensures that the Project will not engage in or be complicit in any form of discrimination. The SCRP is committed to providing a workplace and

programs that are safe and free from all sexual harassment or unwelcome sexual advances. The Project has drafted a document outlining a sexual harassment policy, defining sexual harassment and describing the recourse that any employee who feels that they have suffered sexual harassment should take. Additionally, the Project has established a grievance system that will provide all Project employees, stakeholders, community members and participants to have a recourse method in the event that any discriminatory actions or sexual harassment does occur.

2.2.6 Worker Training

The SCRP considers local employment a priority and local sourcing is strongly encouraged at all levels of the Project, from casual workers up to management positions. The SCRP recognizes that local hiring, especially women, marginalized and vulnerable community members, is a major benefit to the implementation and operation of the Project due to the knowledge and familiarity local people possess of the landscape, its communities and its biodiversity. Their involvement will also ensure the sustainability and continuity of the Project throughout the Project's Lifetime and beyond. To date 975 families have been trained in ecotourism management and hospitality and guiding skills in Chi Phat and Chay Arieng. While 430 families have been trained in sustainable agriculture techniques. In addition, 450 forest rangers have been trained in law enforcement, health and safety, patrolling, and legal skills whilst 24 community members from the Project Zone have been trained in biomass inventory for the Carbon plots.

The Project is designed to focus on the employment and training of local people, with a focus on women and marginalized and vulnerable community members, with a goal to increase local participation in the Project and build local capacity, knowledge and a robust skills base. This includes hiring local community members as rangers to monitor their community forests for illegal activities, with special attention paid to the hiring of women and/or vulnerable and marginalized community members. The SCRP advertises open positions broadly, with special attention paid to the recruitment of villagers and youth living in the Project Zone. Women are highly encouraged to apply for these positions. The Project has a policy of providing priority in the hiring process will be given to women who are qualified and willing to commit to a period of work with the Project.

MOE/WA will train local community members in the latest monitoring techniques, data collection methods, and laws in order to conduct effective enforcement. Training will be conducted on an ad-hoc basis as turnover happens to the community-rangers in order to maintain a pool of trained local rangers. Local community members will also be hired and trained to support and manage other activities including IGAs, agricultural intensification, and biodiversity monitoring. In all positions, informal training will happen for each position and local community members will have first priority on being hired.

The primary training of the sampling team occurred January 17th through 23rd 2017. The training was conducted by WWC team members Jeremy Freund, VP of Carbon Development, and Brian Williams, Director of Asia. All members of the plot sampling team and several key Project management staff, including Thomas Grey and Romica Grosu of WA, were present for this training. The training consisted of both classroom and field components and included the training in the biomass sampling and proxy

area sampling SOPs, general field procedures, methods for proper equipment use, and field safety procedures. Further training and technical support was provided to the field sampling team specifically on the biomass plot sampling process via email and phone calls. A second field-based training of the plot sampling team was held by WWC's Brian Williams on December 2nd through 3rd, 2017. All members of the plot sampling team and several key Project management staff, including Thomas Grey and Romica Grosu of WA, were present for this training. This training focused on the leakage plot measurement SOPs and field equipment use. Additionally, as with the biomass lot sampling process, with the other field sampling throughout the Project development process WWC provided on-going technical support to the plot sampling team on ad-hoc basis through email and telephone calls when questions arose, or additional expertise was required. For the m₂ biomass and leakage plot data collection 2 additional trainings were held. The first was held April 24-29th 2019 and was focused on refreshing and retraining the plot sampling team. A second training was held April 18-19, 2020 and was focused on the refreshing and retraining on the leakage plot sampling SOP. Both trainings were led by the SCRP biomass inventory manager, Romica Grosu, and held on-site in the Project Area.

Educating communities and employees in different areas related to the carbon Project will also be on-going. To date the Project has held trainings for the 2 CBET committees (Areng & Chi Phat) on accounting, cooking, hospitality, online booking management and trail guiding. Capacity building on aspects revolving around carbon measurement, accounting, climate change and carbon offsets will continue to take place in the form of meetings, workshops or training days. To date the primary training on REDD+ Project management and carbon measurement has been focused on WA staff and management based in Koh Kong town. Future trainings will be planned to ensure the participation of marginalized and/or vulnerable groups. It is anticipated that future training will no longer require externally source experts, but will be carried out by locally sourced employees who were trained in the initial stages of the Project.

2.2.7 Equal Work Opportunities

The SCRP has developed an Equal Opportunity Policy. Based on this policy future SCRP job positions will be openly advertised through the Project Office within the Project Zone. The Project has the responsibility for the fair treatment of all, representation for all Project Zone groups, and encouraging diversity within project staff and management. SCRP policy stresses equal opportunity for all groups, including members of ethnic minorities, various socio-economic groups, genders and sexual orientations, for all employment positions and for inclusion in REDD+ program activities. The selection of potential employees is held on a democratic and neutral basis, providing equal opportunity to all applicants. The SCRP operates a strict non-discrimination policy such that women and vulnerable groups of people will receive equal chances regardless of the type of work.

Job applicants are selected for an interview based on their skills and experience required for the advertised positions. The Project Office will be closely involved during the selection process in conjunction with a committee from the Project Office and the Head of the relevant department for which the vacancy is advertised. Employment vacancies are publicly advertised through the same channels that other project news is publicized, such as through posters at villages and sign boards. Successful candidates are selected in a democratic, non-discriminatory manner in accordance with the

Project's equal opportunity policy. Preference is given to applicants who live in the local communities in the case where two applicants show the same capacity for a given position whereas one is local and the other one not. Unsuccessful candidates are provided with an explanation for why they were not selected in order to assist them to improve if there is another vacancy in the future.

All capacity building activities in the local communities in the Project Zone will be open to all villagers, including women and vulnerable populations. As such, it is important that their capacity and skills are strengthened equally as the men. These trainings will not be limited solely to climate change and the REDD+ project, but a wide range of subjects which will ensure the successful implementation of the SCRP. This includes agricultural training and other technical skills to improve the livelihood of their families and community including English language, cooking, and hospitality training for Community Based Ecotourism service providers. An assessment of the needs for capacity building with the forestry community members and other stakeholders in the project zone will be conducted with their participation and consultation to identify their priorities and needs.

The SCRP will enact a policy on staff turnover where employee contracts will ask them to inform the Project at least two months before their resignation from their position. Announcement of recruitment for new staff will then be made at least two months before their final work date. This will allow them to have sufficient time for training and on the work and activities of the position, and to learn any lessons learned related to the position and the SCRP. A training session will be conducted with the participation of the new staff member, to introduce the Project, and the officers responsible for each project components will present the work and activities that they are responsible for.

A project management structure has been developed with clear lines of communication between project staff to ensure direct communication and solidarity. New staff will be informed of this structure so that they will have good communication for which to ask for information, knowledge and experience of the project staff to improve their performance.

2.2.8 Workers' Rights

The SCRP abides by all relevant Cambodian workers' rights, laws and regulations. The Project ensures that any project employment is in conformance of the Core Labour Conventions of the International Labour Organization (ILO).

The following conventions of the ILO have been ratified by the Government of Cambodia and are judged to be "In Force" in Cambodia by the ILO:

- C029 - Forced Labour Convention, 1930 (No. 29)
- C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- C100 - Equal Remuneration Convention, 1951 (No. 100)
- C105 - Abolition of Forced Labour Convention, 1957 (No. 105)
- C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

- C138 - Minimum Age Convention, 1973 (No. 138)
- C182 - Worst Forms of Child Labour Convention, 1999 (No. 182)
- C122 - Employment Policy Convention, 1964 (No. 122)

The SCRP works to exceed all local labor requirements, and ensure that the project employees have a safe, equitable and fair work environment. The law governing employment in Cambodia is the Labor Law, first passed in 1997, and amended 2007. This law provides regulations on the relationship between employees and employers, and the socio-legal rights and obligations resulting from a labor relationship. All people engaged in work in Cambodia, including Cambodian citizens and foreign nationals, are subject to the regulations of the Labor Law (Peng et al., 2012).

In addition to the Labor Law Cambodia there are several international legal standards that cover labor rights in Cambodia, this includes 13 International Labor Organization conventions that Cambodia has ratified (Peng et al. 2012). Also, there are many government labor regulations, including royal decrees, sub-decrees, prakas, decisions, circulars, and notices that have been issued by the Royal Government of Cambodia, and particularly by the Ministry of Labor and Vocational Training. The Project Proponent and Project partner WA will ensure that any relevant international convention or government regulation is fully followed.

All employees of the Project will be informed about their rights at the point of their employment during employee orientation. Additionally, a hard copy of the relevant laws will be kept at the Project Office and any worker is free to consult these any time during working hours. An employee manual is provided to all employees that details their rights, the Project's equal opportunity policy and the project grievance policy through which all employees have a recourse mechanism.

2.2.9 Occupational Safety Assessment

The SCRP abides by all relevant Cambodian workers' rights, laws and regulations. Workers will be informed about their rights at the point of their employment during employee orientation. Additionally, as described in the Health and Safety plan, during the employee orientation workers will be informed about the potential safety risks of their job and of methods to mitigate the risks. A hard copy of the relevant laws will be kept at the Project Office and any worker is free to consult these any time during working hours.

The SCRP ensures that workers' health and safety are protected to the best of the Project's ability always and across all sites. Risks are identified, mitigation strategies produced, and appropriate measures adopted to minimize any risks.

Given the nature of the Project and its geographical surroundings, it is recognized that certain occupations inherently present a risk to the health and safety of workers, in particular occupations that require spending long periods walking in difficult environments. These include, though not exclusively, plot samplers and forest protection rangers, who are faced with challenging terrain as well as the risk of encountering illegal logger, illegal forest land clearer, and wildlife hunter. In addition, forest fires may also pose a safety risk if they spread rapidly and unexpectedly. The Project has created a comprehensive Health and Safety Plan that ensures that all workers' health and safety is protected,

and that all workers are fully informed about workplace risks and safe practices to mitigate those risks. These include training in safe working practices, first aid training for some staff members as well as the enforcement of requirements for safe handling of equipment and other materials. This Health and Safety Plan additionally provides a comprehensive list of the measures that will be taken to inform employees of their rights, to assign roles and responsibilities to supervisors and workers and provide a safe workplace culture. This document will be revisited regularly and revised as needed to ensure that it contains current information and includes all job categories and potential risks. A copy of the plan has been provided to the verifier and will be kept at the Project Office and be readily available for any consultation. In addition, SCRP will set up a Health and Safety Fund, which will be sourced through a contribution from the sale of SCRP credits. The fund will be used to compensate project workers for an accident during their working hours/work mission. The SCRP will ensure a detailed orientation of newly recruited employees so that they are fully aware of their rights as well as responsibilities. All law enforcement rangers and full-time WA project staff will be provided with full health and life insurance.

2.2.10 Feedback and Grievance Redress Procedure

The SCRP strives to minimize the possibility of conflicts and grievances by maintaining close linkages between and working proactively with communities and stakeholders throughout the Project Zone. The Project additionally has an open-door policy, encouraging community members, stakeholders and employees to visit the Project Office and Project Sub-Office, which is located at the Ministry of Environment branch office in Koh Kong town and Community Based Ecotourism offices in Chi Phat and Areng, and discuss any issues or feedback directly with project staff. The Southern Cardamom REDD Facebook Page (<https://www.facebook.com/WildlifeAllianceREDD/>) also allows comments and feedback which are followed up upon by project staff. Facebook is an insidious presence across Cambodia and used by many rural and forest communities as the main source of information and news. A project phone number has also been disseminated to communities.

If conflicts or grievances arise, the SCRP has a feedback and grievance redress policy and process, the purpose of which is to provide an efficient, fair and accessible mechanism for resolving complaints and conflicts, and ensure that the process is transparent and comprehensive. The SCRP feedback and grievance redress process has been publicized to communities and a copy provided to the project validator.

The full grievance policy has been submitted to the validator and is available to anyone upon request. In summary, community members and project stakeholders are encouraged to submit grievances, comments or feedback to the Project Office through several channels, with all communication methods receiving the same level of response. The primary method for communication will be through the Project Office or Sub-office which is located at the Ministry of Environment branch office in Koh Kong town, the MOE Ranger stations, which are located throughout the Project Zone and the Community Based Ecotourism offices in Chi Phat and Areng.

Two types of issues accounted for in the grievance process include:

- Issues or conflict between the community or other project stakeholder and MoE, and

- Concerns regarding project employee rights, work practices, and employee safety raised by MOE or WA employees or contractors.

This procedure applies to the MOE/WA and activities under the SCRP. If a Project Stakeholder(s) has a complaint or grievance, the first step should be taken up with a commune chief as soon as possible after the occurrence. The complainant could communicate this verbally or in writing to their nearest Ranger post. In 2017 there were eight ranger posts spread out around the Project Zone. In addition, the MOE/WA has published an email address, phone number, and Facebook page that project stakeholders can use to make comments or voice grievances.

This grievance policy is outlined in the document “Southern Cardamom REDD+ Project Grievance Redress Mechanism.” This grievance process was described in general at community meetings, and the document has been provided to key locations in the Project Zone. In addition, a summary of the grievance policy was translated to Khmer and posted on the Project information boards located in the Project Zone.

In summary, once the commune chief has received a grievance, through any of the described channels, they are required to respond to the aggrieved person(s) within 7 working days. The commune will maintain full records of all grievances received, communications made between the commune chief and the aggrieved person(s), and the agreed resolutions. If the commune chief and the aggrieved person(s) cannot resolve the grievance to a mutually satisfactory manner, the aggrieved person(s) may raise complaints and grievances to the Provincial Project Committee (PPC) or its members either verbally or in writing (using Complaints and Grievances Form provided). At his level, the MOE/WA Project Management Unit (PMU) is obliged to (1) record every complaint and keep track of the status, and (2) keep complaints and grievances confidential unless otherwise directed by the aggrieved person (s). If there is reason to believe that the PPC will not provide an objective review of the concern, the matter may be taken up directly to PBC further review and decision-making. The PPC has to respond complaint within 7 working days since the date of the complaint has been submitted.

The PMU will maintain a record book of all grievances received and their resolutions, which can be viewed upon request from project stakeholders or auditors. The PMU will update and present the record of recorded cases to the PBC during the annual PBC meeting.

2.2.11 Feedback and Grievance Redress Procedure Accessibility

Please see 2.2.10 directly above for an explanation of how accessibility of the feedback and grievance redress procedure is publicized and made publicly available.

2.2.12 Stakeholder Access to Project Documentation

- The Project Office and Project Sub-Office maintains a full printed version of the PD in English for public viewing.
- The executive summary has been translated into Khmer is posted in public places in communities throughout the Project Zone.

- The full PD version and the executive summary of the PD in English and Khmer version are made available on the project webpage ([http:// www.wildlifealliance.org/](http://www.wildlifealliance.org/)) and official Wildlife Alliance Facebook page.
- The executive summary has been translated into Khmer and is posted in public places in communities throughout the Project Zone.
- In addition to the executive summary, a poster/flyer in Khmer advertising the Project, and providing a contact email address was posted in communities.
- For VCS and CCB validation, a poster/notice in Khmer advertising the public comment period, and the validation field visit was posted in communities throughout the Project Zone. It included details on how a comment to the CCB can be made.

2.2.13 Information to Stakeholders on Assessment Process

The project partner WA has actively communicated to community members and stakeholders about the start of the Public Comment Period and the methods with which they can submit comments on the Project as well as how to view full project documentation. This was accomplished by communicating the Project Public Comment Period and Validation and verification field visit dates to previously identified stakeholders, community leaders, leaders of the faith communities and public officials. They were then requested to pass that information onto their communities.

The Project partner WA will arrange for community meetings with all stakeholders during the validation and verification site visit. During these meetings the auditor will be able to independently ask questions of all stakeholders regarding FPIC and SIA consultations.

2.3 Project Management

2.3.1 Avoidance of Corruption

To provide avoidance of corruption, a separate limited liability corporation has been created by MOE and WA to manage the funds of the Project. This company, called the Cardamom Carbon Company (CCC), is based in the United States and under the management authority of Wildlife Alliance. There are two agreements, the CCC Agency of Delegation Agreement and Southern Cardamom Project Agreement, that outline project benefit sharing and ensure transparent financial transactions of the Project. These documents were shared with the validator.

2.3.2 Statutory and Customary Rights

Within the Project Zone there are several land use and tenure systems, which are recognized in both customary and statutory rights regimes. Below is an overview of statutory property rights in Cambodia.

The Land Law of 2002 classifies the various types of property and ownership rights in Cambodia: (i) State Public Property, (ii) State Private Property, and (ii) Private property:

1. **State Public Property:** According to the Articles 15 & 16 of this law, State Public Property is land held by the State which carries a public interest use. State Public Property includes properties

of a natural origin, such as the Permanent Forest Reserve. State Public Property cannot be sold or transferred to other legal entities, although it may be subject to rights of occupancy or use that are temporary in nature (such as a logging concession in the Permanent Forest Reserve).

2. **State Private Property:** Under Article 17, State Private Property is land that is owned by the State or public entities that do not have a public interest use (i.e., owned by the state or public entity but does not fit the definition of State Public Property as mentioned above). In addition, State Private Property can be described as excess or idle land that is held by the State or public entities. State Private Property may be sold or transferred to other legal entities, such as use for social or economic land concessions.
3. **Private Property:** Private property is property owned by natural persons or legal entities other than the State or public entities. Private property can be owned by individuals, collectives or business organizations/associations.

The Project Zone is composed of the three property types listed above. The entirety of the Project Area is State Public Property comprised of protected areas managed by the Ministry of the Environment. Parts of the Project Zone outside the Project Area are both state private and private property. The state private property in the Project Zone includes social and economic land concessions. Private Property in the Project Zone comprises land legally allocated to community members (some of which has been sold to land speculators and outsiders).

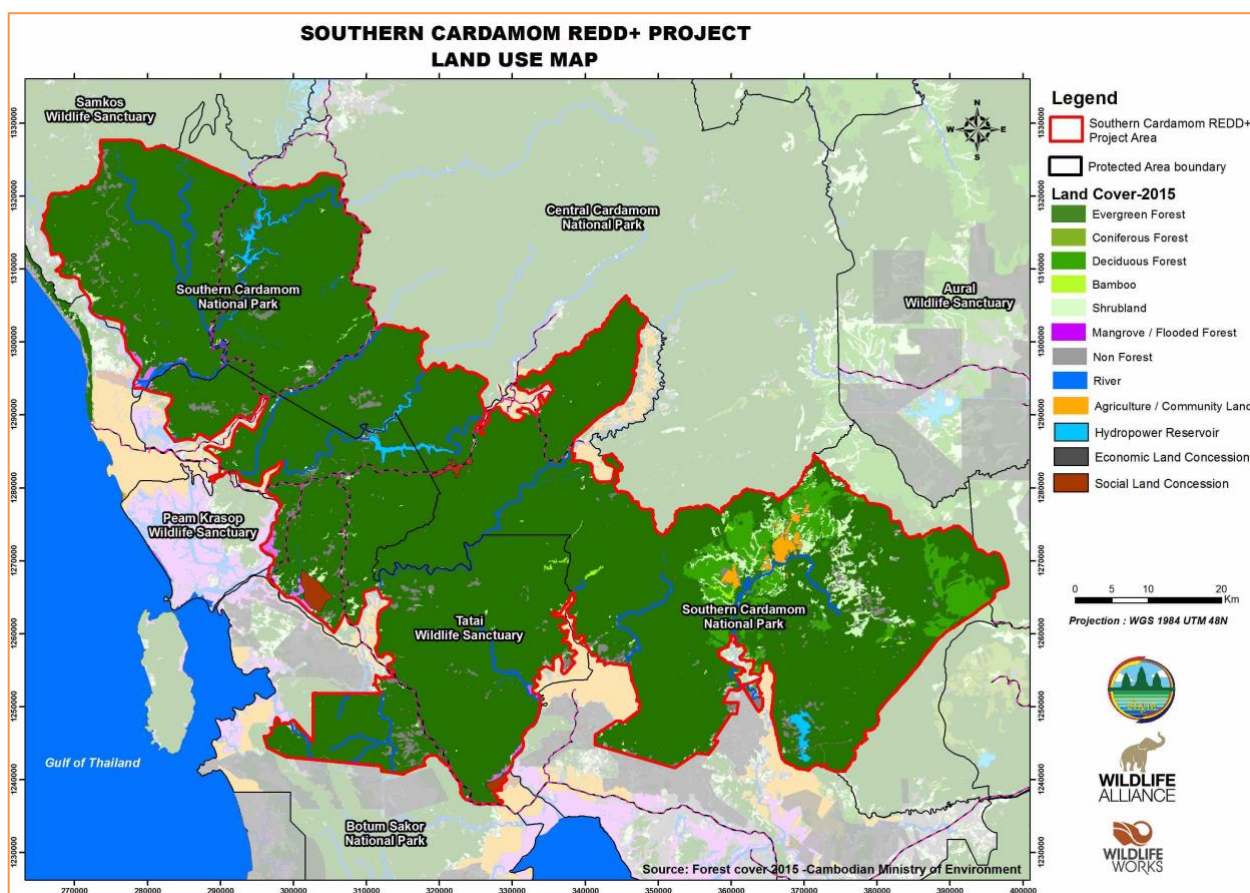


FIGURE 5: THE SOUTHERN CARDAMOM REDD+ PROJECT AREA WITH THE LAND USE TYPE AND LAND TENURE SHOWN.

2.3.3 Recognition of Property Rights

Under Order 01 all land in the Project Zone has been titled and all property clearly delineated. As such, the project works with communities to clarify property zones and demarcate boundaries between separate property types. This is an important Project activity that avoid land tenure conflicts.

2.3.4 Free, Prior and Informed Consent

The project will not encroach uninvited on private property, community property or government property. Tenure of the Project Area is outlined in Section 2.3.2. Furthermore, Section 2.2.3. outlines the comprehensive procedure of FPIC activities which ensures that all stakeholders and communities are consulted. For more detail on the FPIC process please see Section 2.3.13 of the Project's VCS/CCB monitoring report for the 2nd monitoring period.

2.3.5 Restitution and/or Compensation for Affected Resources

Generally, the project stakeholders and other community members will have net positive outcomes as a result of the Project. Three main community groups are predicted to suffer potential costs from implementation of project activities. The SCRP will mitigate for these negative impacts as follows:

- Poachers and illegal loggers: although these are illegal activities for the large part, those genuinely undertaking them for basic livelihood support will be offered or considered for direct employment when job opportunities arise e.g., as eco-guardians. Nonetheless, they will also enjoy the other general community benefits like access to community educational grants schemes, improved health access and agricultural training to help move them away from illegal activities.
- Traders, middlemen and employers: while this group might see diminished profits in the short term, we believe they will enjoy greater stability in the long-term from conducting legitimate business, reduced run-ins with the law, employees and community, and overall greater social capital and license to operate in the area.
- Immigrants: similar to the traders above, this group might suffer some costs in the short term through increased scrutiny and fewer chances for accessing 'free' land and jobs, but will also gain from greater stability by being recognized and accepted as legitimate members in the community once they come in through legal avenues.

2.3.6 Property Rights Removal/Relocation of Property Rights Holders

The Project does not require involuntary removal or relocation of communities or any activities important for their livelihood and culture.

2.3.7 Identification of Illegal Activities

The Project Area is comprised of parts of three protected areas under the jurisdiction of the MOE, and as such, once zoned, the Core and Conservation Zones of these protected areas are protected from deforestation activities. Under the Cambodian Protected Area Law, these zones should be protected

from resource extraction or conversion to other land uses. However, these activities commonly occur anyway within protected areas, including illegal logging, charcoal production, poaching for meat, and rampant conversion of forestland through slash and burn to agricultural land. These activities are all illegal under current law, and despite the MOE's best efforts at controlling them to date, they are still widely and openly occurring.

All the above-listed illegal activities would have negative effects on the SCRP's climate and biodiversity goals. The SCRP has included expanding the ranger force, strengthening community organizations, agricultural intensification, microfinance, strengthening forest land use planning and secure forest land tenure, eco-charcoal and income generating activities in the project design to mitigate these illegal activities. This will include firstly increased protection in the Project Area, and enforcement of the boundary against illegal incursions. Additionally, increased efforts to confiscate chainsaws and other logging equipment being used illegally within the Project Area will reduce the illegal activity. The strengthening of community organizations will give local organizations the ability to protect community lands and stop the flow of migrants into the Project Area. By conducting training on agricultural intensification, providing micro-finance, and supporting local businesses, the SCRP's goal is to generate alternative income to abate illegal activities within the Project Area. Accordingly, income diversification should shift the local economy over time toward sustainable land use.

2.3.8 Ongoing Conflicts or Disputes

There are some minor conflicts or disputes in the SCRP Project Zone between the communities. Some communities have had minor conflicts or disputes over the land, territory or resources in the Project Area during the last 20 years, all based on uncertain land tenure rights. This has been especially true in the project community of Teuk Laak. Additionally, illegal land clearing and intrusion by outsiders has, and continues to, occur causing some levels of conflicts between specific local individuals and MOE.

The Project has committed to working with these communities to identify the boundaries of their lands, and to assist them in acquiring official tenure to them. One of the Project Activities (Section 2.1.2) that has been implemented is specifically targeted at helping these communities do this. These activities are designed to enable communities to gain the evidence needed to prove ownership of their lands and gain tenure, therefore there is no potential for the project to prejudice any decision or outcome of a dispute through its activities. As the determination of land tenure and resolution of any disputes over tenure is made by the relevant RGC land registry ministry in accordance with national and local laws.

2.3.9 National and Local Laws and Regulations

The SCRP meets all local, national and international laws that are relevant to this project. These laws include the aforementioned Employment laws, as well the additional laws outlined below.

Law on Environmental Protection and Natural Resources Management (1996)

The Objective of this law is to protect and upgrade the environment quality and public health by means of prevention, reduction and control of pollution; to assess the environmental impacts of all proposed projects prior to the issuance of decision by the Royal Government; to ensure the rational and

sustainable preservation, development, management and the use of the natural resources of the Kingdom of Cambodia; to encourage and provide possibility to public to participate in the protection of environment and the management of the natural resources.

The mechanism for implementing this law is through the National Environmental Plan.

The Land Law (2002)

The Land Law classifies the different types of property and ownership rights in Cambodia: (1) State Public Property, (2) State Private Property, and (3) Private property:

1. State Public Property: According to the Articles 15 & 16 of this law, State Public Property is land held by the State which carries a public interest use. State Public Property includes properties of a natural origin, such as the Permanent Forest Reserve. State Public Property cannot be sold or transferred to other legal entities, although it may be subject to rights of occupancy or use that are temporary in nature (such as a logging concession in the Permanent Forest Reserve).
2. State Private Property: Under Article 17, State Private Property is land that is owned by the State or public entities that do not have a public interest use (i.e., owned by the state or public entity, but does not fit the definition of State Public Property as mentioned above). In addition, State Private Property can be described as excess or idle land that is held by the State or public entities. State Private Property may actually be sold or transferred to other legal entities, such as use for social or economic land concessions.
3. Private Property: Private property is property owned by natural persons or legal entities other than the State or public entities. Private property can be owned by individuals, collectives or business organizations/associations.

The Forestry Law (2002)

The Forestry Law is an important sector-specific law that defines the management framework for harvesting, use, development, conservation, and protection of forests in Cambodia. It aims to ensure sustainable forest management and customary user rights of forest resources for indigenous and local communities. Reaffirming the Constitution, the Forestry Law provides that all forests (referred to as the Permanent Forest Estate), belong to the State, noting that there is currently a lack of proper demarcation of Cambodia's forest estate. The Permanent Forest Estate is divided as follows:

Permanent Forest Reserves are State Public Property and fall under the jurisdiction of the Forestry Administration (FA) which is housed the Ministry of Agriculture, Forestry and Fisheries (MAFF). According to the Forestry Law, the Permanent Forest Estate is defined as all forested land within the Kingdom of Cambodia. Generally, all categories of forests fall within the definition of the Permanent Forest Reserves - including forests that occur on private lands, flooded forests, wetland forests and mangrove forests. However, while all these forests are under the jurisdiction of the FA, wetland and mangrove forests outside the Protected Areas (PA) are under the jurisdiction of the Fisheries Administration (FA) of the MAFF. Permanent Forest Reserves consist of three sub-categories:

1. Production Forests,

2. Protection Forests and
3. Conversion Forests. Production Forests are forests that are managed primarily for the sustainable production of timber and non-timber forest products. In these forests, protection is a secondary objective.

The Production Forests include Forest Concessions and Community Forests. Areas under Production Forests include those forests where harvesting is permitted (e.g. annual bidding coupes for domestic wood supply), degraded forests, forests to be rehabilitated, and forests reserved for regeneration or plantation. The government may grant an area of production forest, not under use, to a forest concession through public bidding consistent with the National Forest Management Plan and after consultation with concerned ministries, local authorities and communities. However, from January 2002, the RGC issued a Declaration on the Suspension of Forest Concession Logging in the country. Community forests are forests owned by the state that have been allocated to communities under a 15-year renewable agreement. The primary goal of community forests is to protect and rehabilitate forests and to enhance the sustainable use of forest resources by local communities.

Private Forests are those that are individually owned, and these forests are managed by the owners for a range of benefits. The owners have the free will to utilize these forests the way they deem fit and in addition, forest carbon in private forests belongs to the owners. Land within the Permanent Forest Estate can also be zoned as a Protected Area. Protected Areas fall under the jurisdiction of the Ministry of Environment (MOE); applicable law includes the Protected Area Act 2008 and the Environmental Protection and Natural Resource Management Law 1996.

Protected Area Law (2008)

Provides the Ministry of Environment the authority to manage all protected areas in Cambodia. It lists the type of protected areas under MOE's purview as:

1. National Park
2. Wildlife sanctuary
3. Protected landscape
4. Multiple use area
5. Ramsar site
6. Biosphere reserve
7. Natural heritage site
8. Marine park

It also states that protected areas shall be defined by a sub-decree, the process by which protected areas can be created or altered. This law also defines which activities are permitted in the various zones of the Protected Area:

1. Core Zone
2. Conservation Zone
3. Sustainable Use Zone
4. Community Zone.

The entirety of the Project Area will be within Core and Conservation Zones under this law.

The Cambodian Community Forestry Sub-Decree (2003)

The National Forestry Program aims to register 1000 community forestry groups nationally and cover two million hectares by 2030. To achieve this target the government adopted various guidelines and policies to support the development of community forests such as the community forestry sub-decree, community forestry guideline, and national community forestry program.

Declaration on Classification and List of Wildlife Species NO: 020 PR.MAFF (2007)

This declaration lists and classifies all wild species in Cambodia. The decree groups species into three main categories, endangered, rare and common. The decree also declares that all wild species are technically owned by the State and are protected under this provision.

Code of Criminal Procedure adopted by COM

The purpose of the criminal code is to define the rule of law in Cambodia. It distinguishes what is a criminal and civil action and set the rule of law in Cambodia. The Project Proponent uses it to enforce protection of forests in the SCRP.

2.3.10 Project Ownership

State-owned Forest Land

The SCRP accounting area (PAA) is State owned land, under the mandate of the Ministry of Environment (MOE) in accordance with the Protected Area Law of 2008. It is comprised of three protected areas: Botum Sakor National Park, Southern Cardamom National Park, and Tatai Wildlife Sanctuary. They were all formally designated as a part of the Permanent Forest Estate in 1994.

Botum Sakor National Park

Of the three protected areas, Botum Sakor National Park is the oldest and was established by a government regulation ('prakas') on June 3, 1994 (No. 1033 1994) signed by the Minister of Environment. It has been a National Park since and the Nature Conservation Department was the government body responsible for managing it. This department has since been renamed to the General Department of Administration for Nature Conservation and Protection (GDANCP). The sub-decree has eight objectives, which are listed below:

1. Prohibit the construction of sawmills, charcoal ovens, brick kilns, tile kilns, limestone ovens, and tobacco ovens in the protected natural areas.
2. Prohibit hunting or the placement of hunting traps, or the fishing of mammals, amphibians, reptiles and aquatic animals. Also prohibited is the collection of any tusks, bones, feathers, horns, leathers and blood.
3. Prohibit deforestation for land use in the protected natural areas.
4. Prohibit the exploitation of minerals and the use of explosives in the protected natural areas.
5. Prohibit the bringing of the domestic animals such as dogs into the protected natural areas.

6. Prohibit water pollution activities such as the use of explosives, poisons, chemicals, electricity and dumping waste into the water surface or onto the land.
7. Prohibit the use of machineries and heavy cars, which could cause smoke, pollution, and use of microphones, which could cause noise pollution in the protected natural areas.
8. Research and experiments in the protected natural areas shall be approved by the Secretariat of Environment.

Tatai Wildlife Sanctuary

Southern Cardamom Protected Forest was first made a conservation area in 2004 by a government regulation ('prakas') that was signed by the Minister of Agriculture, Forestry and Fisheries. The land status of the area was reclassified to Protection Forest on October 6, 2004 by the endorsement of a sub-decree (No. 65) by the Council of Ministers and Prime Minister Samdech Hun Sen, thus enhancing its conservation status. This legal action created the Southern Cardamom Protection Forest and reaffirmed MAFF, through the FA, as the government body responsible for managing it. This Sub-Decree established a forest protected area for biodiversity conservation, protection of an elephant corridor and a wildlife rehabilitation center in Koh Kong province and aims to:

1. Protect and conserve plants and wildlife, especially endangered and critically endangered wildlife species
2. Protect the elephant corridor in the southwest of Cambodia
3. Rehabilitate wildlife
4. Maintain natural balance in forests which are habitat and breeding ground for wildlife
5. Conduct scientific and technical study to develop and conserve watershed and biodiversity
6. Prevent erosion, flood, land fertility, regularity of water resource, and water quality
7. Raise educational awareness and develop local community to participate in poverty reduction of people
8. Participate in maintaining cultural and scientific heritage and develop eco-tourism in the area

In April, 2016, Southern Cardamom Protected Forest was transferred to the jurisdiction of the Ministry of Environment by the Sub-Decree 69. Then on May 9, 2016 Southern Cardamom Protected Forest was changed to Tatai Wildlife Sanctuary by the Sub-Decree No. 80 signed by the Minister of the Environment. The sub-decree has three objectives:

1. Ensure the protection of wildlife habitat and ecosystems, and to ensure the necessary conditions for any type of fauna, flora and biodiversity.
2. Provide natural products and services for sustainable uses of natural resources
3. Promote the participations of local communities as well as public in contribution to management and conservation of biodiversity and natural resources in the areas.

Southern Cardamom National Park

The area that is now Southern Cardamom National Park was formerly production forest under the jurisdiction of the Ministry of Agriculture, Forestry and Fisheries. In April, 2016, the SCNP area was transferred to the jurisdiction of Ministry of Environment by the Sub-Decree 69. Then on May 9, 2016,

Southern Cardamom National Park was declared through Sub-Decree No. 89 signed by the Minister of the Environment. The sub-decree has three objectives:

1. Ensure the protection of wildlife habitat and ecosystems, and to ensure the necessary conditions for any type of fauna, flora and biodiversity.
2. Provide natural products and services for sustainable uses of natural resources
3. Promote the participations of local communities as well as public in contribution to management and conservation of biodiversity and natural resources in the areas.

The sub-decrees described in the above sections demonstrate title/right of use for the Ministry of Environment to develop and manage a REDD+ project within Botum Sakor National Park, Southern Cardamom National Park and Tatai Wildlife Sanctuary on behalf of the RGC as the land is government-owned.

The area outside of the Project Area and Project Accounting Area in the Project Zone is comprised primarily of privately owned land that is owned by members of the community or is held by the community members. The Project has not and will not encroach on this privately owned land.

2.3.11 Grouped Projects

The SCRP is not a grouped project. This Section is not applicable.

3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1 Condition of Stakeholders at Project Start

The SCRP Project Zone comprises of 29 communities bordering the project area, with a total of about 3,841 families with a population of 16,319. Based on the last national census, there are five peoples that inhabit the SCRP, the Samre, Cham, Thai, Khmer and Chong. Most of the Project area is inhabited by Khmer. The Samre and Chong originally spoke the same Pearic language, but their descendants in the Project Area no longer speak their ancestral tongue (Schliesinger 2015). The Samre are a small group of 150 inhabitants that live in Dai Tum Ngiep village of Trapaeng Rung district. The village is divided by the Anlong River and the majority of villagers have boat and rely on the river to maintain their livelihood (Schliesinger 2015).

There are differing reports as to whether the ethnic group in the Areng Valley, which calls itself to be Chong, is Chong (Schliesinger 2015). Media outlets reporting on the environmental conservation efforts of the Areng Valley people state that they call themselves Chong (Ford, 2018; Davidson, 2015; Mam, 2014). According to these reports, approximately 1,300 members of the ethnic Chong inhabit the northern village of Chhay Ariang, and their ancestors have lived in the area for centuries.

The Cham are an ethnic group of Austronesian origin in Southeast Asia. Cham were accomplished mariners and migrated via Borneo to mainland Southeast Asia 4,000 BP. Their population is centered in Kampong Cham province in Cambodia and Phan Rang, Ho Chi Minh City and An Giang Province in southern Vietnam. The Cham inhabit roadside villages along national road 48 along the southern border of the SCRP. These groups all comprise the project stakeholder Project Zone Communities.

The project stakeholder category Non-Community Stakeholders includes several sub-groups of people, whom all come from outside of the communities located in the Project Zone. These sub-groups include: Wildlife and Timber Traders, Forest Land Speculators and Landless – Migrants. Generally, these are individuals or groups of individuals who immigrate to the Project Area and illegally clear forest land for individual property. After clearing land they construct simple buildings and plant agricultural crops to legitimize their land claim. They will then sell the land to another party, mainly wealthy people who live in the cities or provincial towns. The land speculator will then look for new forest area where they will repeat the process. Generally, land speculators people who are not landless households and they will not settle in the area permanently. They then sell these land plots to landless households or to wealthy or powerful people who are live the cities, or provincial towns. Wildlife and timber traders are middle men facilitating the purchase and transportation of illegally harvested timber and wildlife from protected forest within the Project Area.

The project stakeholder Government / Authority includes the sub-groups Local authority (district and commune, villages) and Police and military. This stakeholder group generally facilitates the Project by ensuring protection of the Project Area, enforcing laws and working to limit illegal activity. Local

authorities additionally provide assistance for the securing of land titles. This stakeholder category therefore works with the Project communities stakeholder category closely to uphold land laws and property rights, and limit illegal activity.

According to the Asian Development Bank (2014), the poverty line in rural Cambodia was \$25.69/month per capita, and 25% of the rural population lived below this poverty line. Based on the national socio-economic survey (2016), rural households increased their income 14% from 2014 to 2015 but they are also holding more debt to support themselves and the majority of the debt is owed to banks. Mountainous regions of Cambodia suffer the highest rates of poverty and the remote villages of the Cardamom mountains are no exception. The further villages are from Koh Kong town or major roads the higher the rate of poverty (Killeen, 2012). Most households in the mountains derive their livelihood from agriculture and its related sub-sectors, as well as illegal logging and firewood cutting (National Institute of Statistics, 2016). Manufacturing is varied but is not very extensive and is mostly conducted on a small-scale and informal basis. The service sector is heavily concentrated in trading activities and catering-related services.

On education, male literacy rates are considerably higher than those of females, and higher in urban areas compared to rural areas. According to the 2015 Socioeconomic survey, 77% of the population in rural Cambodia are literate or numerate (National Institute of Statistics, 2016), with men (83%) being higher than women (71%). About two-thirds of the economically active persons in the area are males; unemployment rates have been found to be higher for females.

According to a United Nation's World Food Program 2008 study on food security in Cambodia, about 12.5 percent of the households in rural Cambodia are food insecure. Based on the 2015 national socio-economic census, the proportion of households with access to improved water sources (mainly piped water or water from tubed/piped borehole) which may be considered comparatively safer, was 52% for rural areas of Cambodia. On health, most of communities adjacent to the SCRP are serviced by 3 doctors and 7 nurses most of which are on the eastern border of the SCRP in Sre Ambel (Ministry of Health, 2013). Health Centers in the SCRP provide outpatient consultation, antenatal care, delivery and inpatient services.

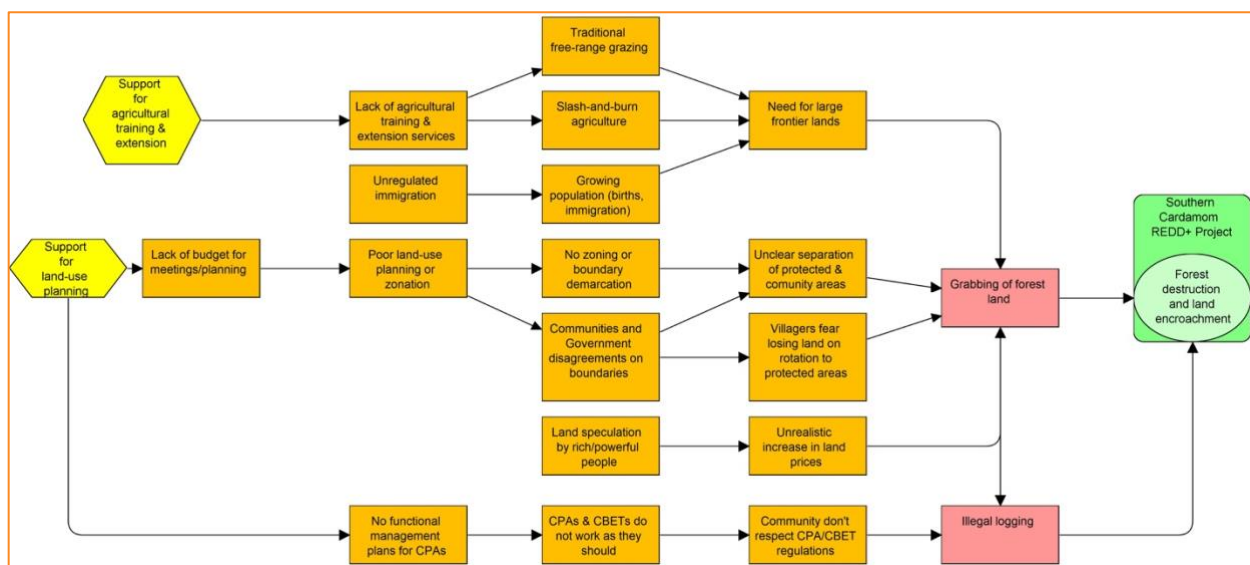
According to the Cambodia Socio-Economic Survey of 2015, the vast majority (92%) of rural households used firewood (86%) or charcoal (6%) as main fuel for cooking, with the proportion of households using charcoal (14%) and LPG (56%) being higher in urban areas. Most of households in the area use kerosene lamps for lighting, with less than a half of households having access to electricity.

Based on the 2013 inter-censal survey of Cambodia, the number of migrants, i.e., those who had their previous residence outside the place of enumeration, stood at 23%. Most of the migrants had moved from other areas within the same province (55%) while about 42% had move from another province. About half of the migrants said they had changed their residence because their "family moved" e.g., due to transfer of workplace, while about a half said they were "in search of employment".

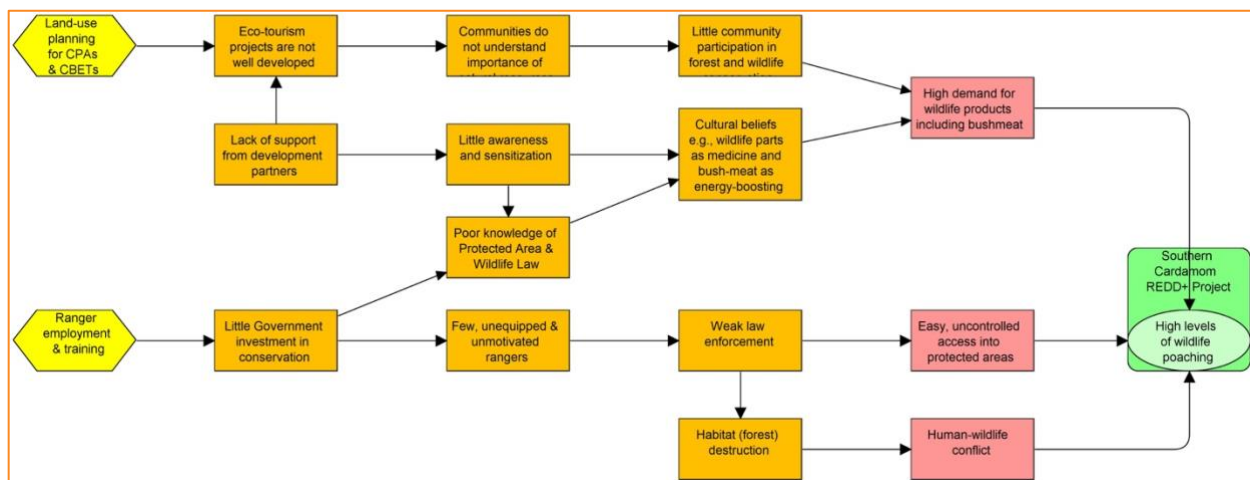
During the SBIA community workshop, after the working groups had identified and prioritized the Focal Issues, they then analyzed them further to establish the causal logic leading to the problems and

produced a Problem Flow Diagram (also termed Conceptual Model) for each of the Focal Issues (Figure 3). A Problem Flow Diagram (PFD) is a situation analysis of the issue that represents stakeholders' understanding of what drives the existence of the focal issue; it identifies economic, political, institutional, social and/or cultural factors that contribute to existence of the issue.

a) Forest destruction and land encroachment



b) Wildlife poaching



c) Poor community livelihoods

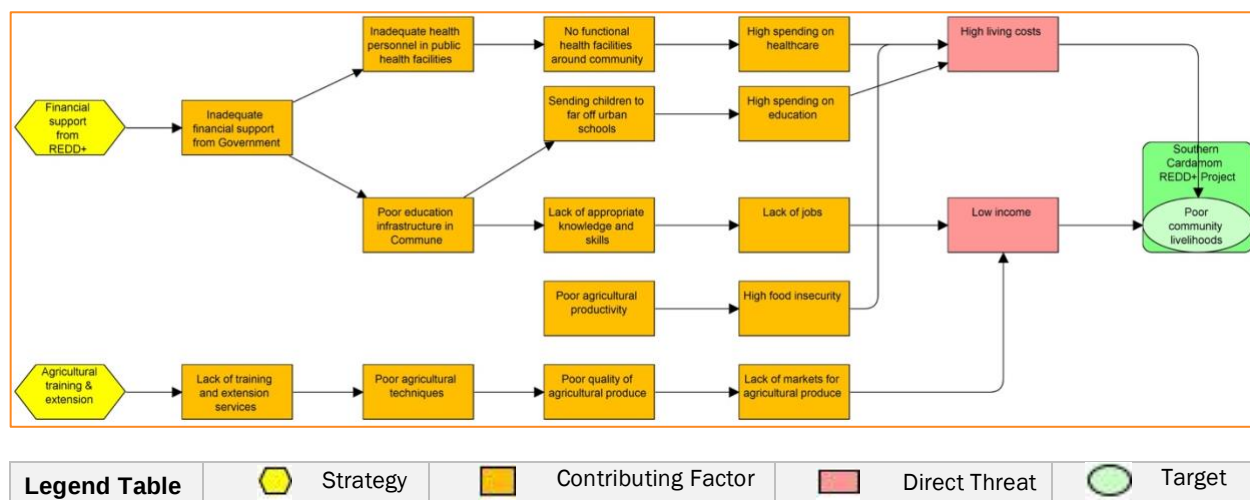


FIGURE 6: PROBLEM FLOW DIAGRAMS PRODUCED FOR THE FOCAL ISSUES DURING THE SIA COMMUNITY WORKSHOPS IN THE SCRP

3.2 Expected Impacts on Stakeholders

The major project activities can be grouped into the following ten areas (see details in 2.1.9). All the community-focused activities which the project plans to implement were identified during SIA community workshops described earlier (see Section 2.2.1). Most of these are designed to help create greater awareness, capacity and financial security in the communities, reducing the need to undertake unsustainable resource extraction from the Project Area. They include:

1. Direct employment, and job creation through alternative income-generating activities
2. Participatory land-use planning: will lay the basis for land demarcation and land tenure security
3. Strengthening community organizations for management of natural resources
4. Community based eco-tourism initiatives
5. Stimulating investment and micro-credit (microfinance) schemes
6. Sensitization and awareness raising
7. Enhanced security and law enforcement
8. Health improvement through employment of medical staff or provision of supplies
9. Education improvement through employment of teachers, bursary schemes, and infrastructure
10. Improvement and intensification of agriculture including training and market access.

Theory of Change Statements

Based on the extensive experience of the Project partner WA in working on biodiversity conservation and community projects in the SCRP landscape, a literature review, and from information obtained from

the SIA workshops held, we applied the theory of change approach to justify our project rationale and to produce indicators for the CCB monitoring plan. The theory of change is a hypothesis about how a project intends to achieve its stated objectives, or a roadmap of how it plans to get from project activities to project impacts (Richards & Panfil, 2011). As such, we developed a theory of change for each of the three Focal Issues (see details in the Result Chains under Section 2.1.9, Figure 3).

The assumptions we make about the cause-and-effect relationships were made explicit in the Result Chain diagrams developed by community members during the SIA workshops, from which the theories of change statements are based. Indicators were developed for key results and assumptions; monitoring of assumptions was included to enable us identify points of deviation early enough. In other words, the indicators outlined in the Monitoring Plan (see 3.3) will enable measuring progress towards achieving the desired project activity outcomes and impacts from project activities and strategies.

- Focal Issue 1: Poor Community Livelihoods: IF there are adequate and functional health facilities, IF education is improved through better facilities and access through bursary schemes, and IF there is improved food security from sustainable intensified agriculture, THEN the communities will have higher incomes and improved livelihoods.
- Focal Issue 2: Forest Destruction and Land Encroachment: IF participatory land use planning is conducted and land tenure security strengthened, IF immigration and land allocations are strictly controlled, and IF the Community Protected Area (CPA) is developed following proper processes, THEN land grabbing, illegal logging and NTFP collection will be strictly controlled and the forest well preserved.
- Focal Issue 3: Wildlife Poaching: IF community-based eco-tourism is developed, IF the sensitization and awareness-raising is conducted among communities around the project area, and IF security and law enforcement are strengthened, THEN the both poaching and demand in wildlife and bush-meat will decline as will habitat loss, thereby leading to improved wildlife populations in the SCRP.

Please note that impact #'s 16, 30, 32, 34, 35, 36, 37, 38, and 39 are presented below in Section 4.2.1 "Expected Biodiversity Changes"

Impact #1	All members of the project zone communities will have access to micro-finance loans. (SDG 1.4)
Type of Impact	This is a positive impact, that is actual and direct
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project will utilize a revolving micro-finance fund and family savings system to support access to capital and markets. It will continue to use such approaches and other best practices in micro-finance such as micro-loans, micro- insurance and other small and medium enterprise development practices, thus providing more sustainable and valuable alternatives to current destructive forest practices. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing access to micro-finance. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #2	All members of the project zone communities will have equal rights and access to economic resources. (SDG 1.4)
Type of Impact	This is a positive impact that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The project will provide education on and support in creating new income generating activities (IGAs) to project area communities. This will include informing community members on available economic resources, technologies for managing businesses and methods for starting businesses, ensuring equal rights to and knowledge of economic resources and methods to generate income. The project will as well directly employ personnel to run the project at different capacities and provide on the job training. Most hires will be directly from the communities in the Project Zone. This will have a large positive impact on the project stakeholder Project Zone communities, by helping increase economic literacy and understanding. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

Impact #3	All members of the project zone communities will have secure land tenure. (SDG 1.4)
Type of Impact	This is a positive impact that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	A significant number of local community members do not have secure land tenure, leading to economic uncertainty and an inability to plan for the future. the SCRP will strengthen land tenure security by supporting the creation and distribution of land titles. The SCRP will work closely with local authorities, community members, and relevant provincial departments to implement this program. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing access to micro-finance. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #4	Project Zone communities will have increased resilience to climate-related extreme events and other economic social and environmental shocks and disasters by increasing farm income and knowledge of improved methods and varieties. (SDG 1.5)
Type of Impact	This is a positive impact that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	The Project has provided technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. These practices often fail and require vast amounts of land. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. Additionally, the Project will build and support produce storage facilities and value-added technologies to take advantage of market price fluctuations and aid in achieving high sale prices. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing their resilience to effects of climate change. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #5	Project Zone Communities will utilize sustainable food production systems and implement resilient agricultural practices that increase productivity and production and that progressively improve land and soil quality (SDG 2.4)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	The Project has provided technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. These practices often fail and require vast amounts of land. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. Additionally, the Project will build and support produce storage facilities and value-added technologies to take advantage of market price fluctuations and aid in achieving high sale prices. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the sustainability and resiliency of food systems. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #6	The Project Zone Communities will adopt resilient agricultural methods that strengthen capacity in project zone communities for adaptation to climate change, extreme weather, drought, flooding and other disasters. (SDG 2.4)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project will implement demonstration gardens throughout the project zone to demonstrate agricultural best practices, new and improved crop varieties and new agricultural technologies. These demonstration gardens will serve to show the results and potential yields that can be achieved through the use of the new methods and practices and improved crop varieties. The demonstration plot is open for visits, and community members and groups visit to learn these methods and to observe the results that can be achieved. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the sustainability and resiliency of food systems. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

Impact #7	Project Zone communities will have universal health coverage, with access to quality health-care facilities within reasonable distances from their communities, reducing cost of transport and of access for healthcare. (SDG 3.8)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the Project will be used to enhance the delivery of health care by building 5 healthcare facilities in the project zone over the life of the project. This will serve to reduce the distance traveled to reach healthcare facilities, reducing the cost of transport and increasing access to healthcare services. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing healthcare access. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #8	Project Zone communities will have access to quality essential health-care services and safe, effective, quality and affordable essential medicines and vaccines for all. (SDG 3.8)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the Project will be used to enhance the delivery of health care by employing 20 health workers by the end of the project life to help improve access to quality healthcare services by project community members. By increasing the number of well trained and high-quality health workers community members will have greater access to healthcare. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the quality of local healthcare. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

Impact #9	There will be equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. (SDG 4.3)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the project will be used to provide a dedicated school bursary scheme for students in the project zone to support education costs. This will have a large positive impact on the project stakeholder Project Zone communities, by enabling recipients who otherwise most likely could not afford school tuition to receive an education. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #10	In the Project Zone communities there will be no gender disparities in education and there will be equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations. (SDG 4.5)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	Proceeds from the project will be used to improve education standards in these communities through increased support to schools, hiring of additional teachers, improvement of education infrastructure (buildings and/or other equipment), and a dedicated school bursary scheme. The project will ensure that women have at equal opportunity to receive bursaries and to attend education programmes and that they have at least equal representation as men. The project will also work to ensure that persons with disabilities, indigenous peoples and children in vulnerable situations also have equal opportunity for all project educational programmes. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal access to education. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #11	All education facilities will be child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all. (SDG 4.a)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the project will be used to improve education standards in these communities through increased support to schools, hiring of additional teachers, improvement of education infrastructure (buildings and/or other equipment), and a dedicated school bursary scheme. The project will work to build new schools in the project zone or upgrade facilities and / or infrastructure of existing schools to create high quality school facilities that are disability and gender sensitive and good learning environments. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal access to quality education. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #12	There will be sufficient qualified teachers in the Project Zone communities to provide high quality education. (SDG 4.c)

Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the project will be used to improve education standards in these communities through increased support to schools, hiring of additional teachers, improvement of education infrastructure (buildings and/or other equipment), and a dedicated school bursary scheme. The project will work to hire additional teachers to ensure that all children in the Project Zone have access to effective, quality education in their communities. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal access to quality education. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact 13	Women will have full and effective participation and equal opportunity for leadership at all levels of decision-making in political, economic and public life in the Project Zone. (SDG 5.5)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities
Resulting Change in Well-being	The Project has anti-discrimination policies and equal opportunity policies in place to ensure that all people will have opportunities to participate in the project and the project activities. Additionally, the Project works to ensure that women receive equal representation in all leadership and decision making for the project and in the project benefits. This will be accomplished by ensuring that community meetings and project activities are open to their participation and that they are planned in a manner to enable women's participation. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal participation and opportunity by women in public process. It will have no impact on the project stakeholder non-community stakeholders. It may have a small positive impact on the stakeholder government/authorities due to the increased engagement and participation of women in public process.

Impact 14	Women will have full and effective participation and equal opportunity for leadership at all levels of decision-making in the management of SCRP and project activities. (SDG 5.5)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities
Resulting Change in Well-being	The Project has anti-discrimination policies and equal opportunity policies in place to ensure that all people will have opportunities for employment by the project. By increasing the number of women employed by the project and women in leadership positions the Project can set a local example of gender equality and help women receive full and effective participation at all levels in the political, economic and public life in the Project Zone. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal participation and opportunity for employment by women in the project. It will have no impact on the project stakeholder non-community stakeholders. It may have a small positive impact on the stakeholder government/authorities due to the increased engagement and participation of women in public process.
Impact #15	Water-use efficiency in agriculture will increase in Project Zone communities from improved agricultural methods. (SDG 6.4)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	The Project will provide technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. These practices often fail and require vast amounts of land. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. This will lead to an increase in the water use efficiency per unit of crops grown, reducing the water needs locally and reducing the potential for polluted water sources. This will have a large positive impact on the project stakeholder Project Zone communities, and contribute to the sustainability of water sources. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #17	The number of Project Zone communities using micro-finance for the formalization and growth of micro-, small- and medium-sized enterprises will increase. (SDG 8.3)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project has utilized a revolving micro-finance fund and family savings system to support access to capital and markets. It will continue to use such approaches and other best practices in micro-finance such as micro-loans, micro- insurance and other small and medium enterprise development practices, thus providing more sustainable and valuable alternatives to current destructive forest practices. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing jobs and other income generating activities available. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

Impact #18	Entrepreneurship, and the formalization and growth of micro-, small- and medium-sized enterprises will increase in the Project Zone communities through trainings on new income generating activities. (SDG 8.3)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The project will provide education on and support in creating new income generating activities (IGAs) to project area communities. The project will as well directly employ personnel to run the project at different capacities and provide on the job training. Most hires will be directly from the communities in the Project Zone. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing jobs and other income generating activities available. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #19	The number of families participating in eco-tourism activities and deriving income from them will increase. (SDG 8.9)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the Project will be used to facilitate the participatory process of community engagement, capacity building in hospitality, accounting, English, computers, and nature guiding. Developing ecotourism infrastructure that could include trails, night camps, guesthouses, homestays, visitor center, and equipment such as mountain bikes, kayaks, and camping gear. Through this the number of families participating in the eco-tourism industry and deriving income from it will be increased. This will have a large positive impact on the project stakeholder Project Zone communities by increasing the number of families directly deriving income from eco-tourism. It will have no impact on the project stakeholders non-community stakeholders and government/authorities.

Impact #20	The number of international and domestic tourists visiting the project eco-tourism activities will increase. (SDG 8.9)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the Project will be used to promote the area eco-tourism options, increasing the visibility of the area and increasing the number of tourists visiting the project zone from both domestic and international locations. The increase in the number of tourists will create more local jobs, both in the tourist lodges and other supporting industries and promote the local culture and products. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the number of families directly deriving income from eco-tourism. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #21	Project Zone communities will have access to affordable credit through micro-finance, and trainings to help integrate into value chains and markets. (SDG 9.3)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project has utilized a revolving micro-finance fund and family savings system to support access to capital and markets. It will continue to use such approaches and other best practices in micro-finance such as micro-loans, micro- insurance and other small and medium enterprise development practices, thus providing more sustainable and valuable alternatives to current destructive forest practices. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring access to micro-finance. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

Impact #22	There will be an increase in resource-use efficiency and greater adoption of clean and environmentally sound technologies in agriculture in the project area communities. (SDG 9.4)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project is providing technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. These practices often fail and require vast amounts of land. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. Additionally, the Project will build and support produce storage facilities and value-added technologies to take advantage of market price fluctuations and aid in achieving high sale prices. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the productivity of agriculture. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #23	There will be an increase in the use of improved crop varieties and agricultural methods in the Project Zone communities, increasing resource-use efficiency and the adoption of clean and environmentally sound technologies in agriculture. (SDG 9.4)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	The Project will implement demonstration gardens throughout the project zone to demonstrate agricultural best practices, new and improved crop varieties and new agricultural technologies. These demonstration gardens will serve to show the effectiveness of these methods and the potential crop yields that can be achieved, to help encourage adaption. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the productivity of agriculture. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #24	Female will have equal participation in project activities and there will be reduced inequality for women in employment and leadership opportunities. (SDG 10)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities
Resulting Change in Well-being	The project has strong anti-discrimination and equal opportunity policies in place. The Project has a strong grievance process where any project stakeholder can submit comments or grievances, and they will be addressed in a fair and transparent manner to the mutual satisfaction of the involved parties if there is any sense of gender discrimination. Additionally, the Project works to ensure that women receive equal representation in all leadership and decision making for the project and in the project benefits. This will be accomplished by ensuring that community meetings and project activities are open to their participation and that they are planned in a manner to enable women's participation. This will have a large positive impact on the project stakeholder Project Zone communities, by ensuring equal participation and opportunity by women in public process. It will have no impact on the project stakeholder non-community stakeholders. It may have a small positive impact on the stakeholder government/authorities due to the increased engagement and participation of women in public process.

Impact #25	Through increased secure land tenure the Project Zone communities will have more inclusive and sustainable development and greater capacity for participatory, integrated and sustainable human settlement planning and management (SDG 11.3)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Unsecure land use rights and ineffective land use in the project induces deforestation in the project area. Local farmers feel unsafe to control their current agricultural land, and outsiders/immigrant come to the project area start clearing forestland especially in the protected area and permanent forest estate. Outsiders/immigrant often perceive that protected areas or permanent forest reserves are open to long-term use. To thwart this problem, the SCRP will strengthen land tenure security by supporting the creation and distribution of land titles. The SCRP will work closely with local authorities, community members, and relevant provincial departments to implement this program. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the number of families with secure land tenure. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #26	Project Zone communities will have the relevant information and awareness for sustainable development and lifestyles in harmony with nature. (SDG 12.8)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	The project will have a dedicated outreach department that will use diverse means to educate and sensitise the communities about the environment and conservation in general, but also on the SCRP in particular, its goals and how they are involved. This will be in the form of continuous FPIC programme for the project's lifetime. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing awareness and knowledge of sustainable development and climate change and its affects. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #27	The number of families participating and deriving income from the eco-tourism programs will increase. (SDG 12.b)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Proceeds from the Project will be used to facilitate the participatory process of community engagement, capacity building in hospitality, accounting, English, computers, and nature guiding. Developing ecotourism infrastructure that could include trails, night camps, guesthouses, homestays, visitor center, and equipment such as mountain bikes, kayaks, and camping gear. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the number of families directly deriving income from eco-tourism. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #28	The number of domestic and international tourists visiting the eco-tourism programs, creating local jobs and promoting local culture and products, will increase. (SDG 12.b)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future

Resulting Change in Well-being	Proceeds from the Project will be used to promote the ecotourism in the Project Accounting Area and increase the number of tourists visiting annually. As well as developing ecotourism infrastructure that could include trails, night camps, guesthouses, homestays, visitor center, and equipment such as mountain bikes, kayaks, and camping gear. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the number of families directly deriving income from eco-tourism. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #29	The resilience and adaptive capacity of the Project Area to climate-related hazards and natural disasters will be increased reducing risks and costs to communities. (SDG 13.1)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities
Resulting Change in Well-being	Through the protection of the Project Area forest the Project Zone communities will have increased levels of resilience and adaptive capacity to climate related hazards and natural disasters. Through protection of the forest there will be better regulation of the water resources, reducing incidence of flooding and drought, stabilization of the soil, reducing chances of soil erosion and landslides, and local climate regulation. This will have a large positive impact on the project stakeholder's Project Zone communities and government/authorities, by increasing the resilience to disasters and decreasing their potential impacts. It will have no impact on the project stakeholder non-community stakeholders.
Impact #31	Project Zone communities will have increased knowledge and awareness of climate change and its effects, climate change mitigation, adaptation, and impact reduction. SDG 13.3)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities

Resulting Change in Well-being	Improve the awareness of climate change and conservation and increase capacity on climate change mitigation in the Project Zone communities. This will have a large positive impact on the project stakeholder's Project Zone communities and government/authorities, by improving the understanding of climate change mitigation and adaptation, which will help these stakeholders decrease the costs of climate change and any resulting reduction in the standard of living. It will have no impact on the project stakeholder non-community stakeholders.
Impact #33	The sustainable management of all types of forests will increase and deforestation will be stopped. (SDG 15.2)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	Unsecure land use rights and ineffective land use in the project induces deforestation in the Project Area. Local farmers feel unsafe to control their current agricultural land, and outsiders/immigrant come to the project area start clearing forestland especially in the protected area and permanent forest estate. Outsiders/immigrant often perceive that protected areas or permanent forest reserves are open to long-term use. The SCRP will strengthen land tenure security by supporting the creation and distribution of land titles. The SCRP will work closely with local authorities, community members, and relevant provincial departments to implement this program. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the number of families with secure land tenure. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #40	There will be a reduction in the amount of forest crimes in the Project Area, including illegal logging, poaching and other criminal activity. (SDG 16.4)
Type of Impact	This is a positive impact, that is actual and direct.

Affected Stakeholder Group(s)	Project Zone communities – present and future and government/authorities
Resulting Change in Well-being	Proceeds from the Project will be used to employ and train forest rangers to protect the Project Area. This will reduce the illegal logging and wildlife poaching in the Project Area and the resulting flows of illegal forest products. The rangers will help bring forest criminals to justice, disrupting and reducing the criminal activity. This will have a large positive impact on the project stakeholder's Project Zone communities and government/authorities, by reducing the amount of criminal activity and lawlessness. It will a negative impact, of potentially medium to large scale, on the project stakeholder non-community stakeholders for the loss of income that would have been derived from these illegal activities.
Impact #41	There will be an increase in investment in the Project Zone communities, providing community members greater access to capital. (SDG 17.5)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project has utilized a revolving micro-finance fund and family savings system to support access to capital and markets. It will continue to use such approaches and other best practices in micro-finance such as micro-loans, micro- insurance and other small and medium enterprise development practices, to promote investment and microfinance to increase sustainable development. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing access to microfinance. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.
Impact #42	There will be increased development, transfer, dissemination and diffusion of environmentally sound technologies. (SDG 17.7)
Type of Impact	This is a positive impact, that is actual and direct.

Affected Stakeholder Group(s)	Project Zone communities – present and future
Resulting Change in Well-being	The Project has provided technical assistance, equipment, and community agricultural development to communities. It will continue this work with the primary goal of providing alternatives to such destructive practices as slash and burn agriculture and unsustainable planting and harvesting techniques. Using the tenets of conservation agriculture, particularly increased cover cropping, zero tillage and an emphasis on soil health and moisture retention, the project aims to increase yields on existing farms and decrease dependence on the clearing of additional land for new field. This will have a large positive impact on the project stakeholder Project Zone communities, by increasing the productivity of agriculture. It will have no impact on the following project stakeholders: non-community stakeholders and government/authorities.

3.3 Stakeholder Monitoring Plan

The selection of appropriate indicators is invaluable to the impact assessment process, as they respond to the basic question: “what should be measured to show that the claimed net social benefits are real and additional?” (Richards & Panfil 2011). An ideal indicator from the perspective of showing attribution is one that measures an ‘intermediate state’ or assumption between an output and outcome or an outcome and an impact, clearly showing progress along a causal chain. Our theory of change logic provided us with a good basis for selecting indicators that factor in attribution. We selected a total of 46 indicators for monitoring the social impacts of the SCRP, including 19 Output, 23 Outcome and 4 Impact indicators.

We then decided on the best sampling methods to use to collect these data, keeping in mind the need to achieve acceptable levels of accuracy, precision and cost effectiveness, whilst retaining transparency and simplicity. From this, a monitoring plan was designed to collect information on the identified indicators. The SCRP shall use two major data sources for the selected indicators: Internal reporting systems and Household-level surveys. In addition, Focal Group Discussions during SIA workshops will be used to validate findings and obtain any further information/clarification, while Government departments will be visited for secondary data and general community statistics. In-house reporting will mainly collect input and output indicators (and some outcome too), while the other methods will mainly assess outcome and impact indicators.

The SCRP will disseminate the monitoring plan and the results of the monitoring within 12 months of validation. These documents will be made publicly available on the internet on CCB and VCS websites and linked to Wildlife Alliance website too. They will also be communicated to the communities and other stakeholders (including the Government and Local Authorities) using diverse media including

presentations, reports, brochures and orally during community awareness and sensitization meetings, and annual SIA workshops.

TABLE 5: THE SCRP SOCIAL IMPACT ASSESSMENT MONITORING PLAN

Focal Issue	Key results	SMART Objective	Code	Indicator	Indicator type	Data collection method	Who?	When?	Where?
Forest destruction and land encroachment	Decrease in illegal logging	By 2027, reduce the number of illegal logging incidents by half in the SCRP	SIA001	# of land use planning meetings held with participation and support from local authorities	Output	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA002	# participants in land use planning meetings	Output	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA004	Volume of timber and logs confiscated by SCRP patrol rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA005	# of chainsaws confiscated from loggers	Outcome	Internal report	Security	Annually	Project Accounting Area

			SIA006	# of illegal kilns and bags of charcoal confiscated by SCRIP patrol rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA007	# of legal cases submitted against forest criminals by SCRIP patrol rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
	Decrease in encroachment and land-grabbing	By 2027, have 2 CPAs in the REDD+ Project Zone zoned and demarcated	SIA008	# of demarcation posts installed zoning forest and community areas	Outcome	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA009	# of land use maps (including CPAs) created and made available to community	Outcome	Internal report	Community Outreach	Monitoring Period	Project Zone

			SIA011	# of forest fires in the SCRП extinguished by SCRП rangers	Outcome	Internal report	Security	Monitoring Period	Project Accounting Area
			SIA012	# of illegal fences and signs removed by SCRП rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA013	# of illegal settlements (houses) and forest camps built inside the SCRП project area and removed by SCRП rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA014	# of land encroachment cases stopped by SCRП rangers	Outcome	Internal report	Security	Annually	Project Accounting Area

			SIA015	# ha of forest within the SCRP cleared for cultivation or settlement	Impact	RS/GIS survey	Biodiversity Monitoring	Monitoring Period	Project Accounting Area
Wildlife poaching	Greater community participation in eco-tourism activities	By 2027, 25% more families join the two existing eco-tourism communities in Chi Phat and Stung Chhay Areng	SIA016	# of families participating in eco-tourism activities	Output	Household survey	Social Monitoring	Monitoring Period	Project Zone
			SIA017	# of trained tour guides	Output	Facilities' records	Community Outreach	Monitoring Period	Project Zone
			SIA018	# of tourism service providers	Output	Facilities' records	Community Outreach	Monitoring Period	Project Zone
			SIA019	# tourism promotion	Output	Internal report	Community Outreach	Monitoring Period	Koh Kong Province

				initiatives undertaken					
			SIA020	# of tourists visiting the community eco-tourism facilities	Outcome	Facilities' records	Community Outreach	Monitoring Period	Project Zone
			SIA021	Amount of revenue accruing from eco-tourism activities in the area	Impact	Facilities' records	Community Outreach	Monitoring Period	Project Zone
	Greater appreciation and awareness of wildlife benefits	By 2022, 25% more community members demonstrate greater appreciation for wildlife and conservation	SIA022	# of awareness and sensitization meetings	Output	Internal report	Community Outreach	Monitoring Period	Project Zone

			SIA023	# of community members attending awareness and sensitization meetings	Output	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA024	# households with greater awareness about importance or conservation	Outcome	Household survey	Social Monitoring	Monitoring Period	Project Zone
	Increase in wildlife populations including HCVs	By 2027, reduce the number of wildlife poaching incidents by half in the SCRP	SIA025	# of rangers employed	Output	Internal report	Human Resource	Annually	Project Zone
			SIA026	# and type of equipment provided including ranger outposts	Output	Internal report	Operations	Annually	Project Accounting Area

			SIA027	# patrols undertaken, including coverage and distances	Output	Patrol records	Security	Annually	Project Accounting Area
			SIA028	# of vehicles and home-made guns removed confiscated by SCRP forest rangers	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA029	# of snares removed from the SCRP Project Area	Outcome	Internal report	Security	Annually	Project Accounting Area
			SIA031	# and species of wildlife killed or confiscated from poachers	Impact	Internal report	Security	Annually	Project Accounting Area
Poor community livelihoods	Reduced cost of living	By 2027, 25% of community members with direct livelihood	SIA032	# schools constructed, repaired or equipped	Output	Internal report	Operations	Monitoring Period	Project Zone

		benefits from the SCRP							
			SIA033	# teachers employed	Output	Internal report	Human Resource	Monitoring Period	Project Zone
			SIA034	Amount of money allocated to bursary schemes	Output	Internal report	Accounts	Monitoring Period	Project Zone
			SIA035	# students benefiting from bursary schemes	Outcome	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA036	% of students not in school due to school fees	Outcome	Household survey	Social Monitoring	Monitoring Period	Project Zone
			SIA037	# health facilities build or equipped	Output	Internal report	Operations	Monitoring Period	Project Zone

			SIA038	# health workers employed	Output	Internal report	Human Resource	Monitoring Period	Project Zone
			SIA039	% community members benefiting from SCRP-related health schemes	Outcome	Household survey	Social Monitoring	Monitoring Period	Project Zone
			SIA040	# of functional schools in each Commune	Outcome	Government records	Social Monitoring	Monitoring Period	Koh Kong Province
			SIA041	Teacher:student ratio in SCRP supported schools	Outcome	Government records	Social Monitoring	Monitoring Period	Project Zone
			SIA042	# of functional health facilities in each Commune	Outcome	Government records	Social Monitoring	Monitoring Period	Koh Kong Province
			SIA043	Nurse/Doctor:population ratio in Project Zone	Outcome	Government records	Social Monitoring	Monitoring Period	Project Zone

	Higher income levels	By 2027, 10% of community members earning income directly from the SCRП and associated activities	SIA044	# of people directly employed by the SCRП	Output	Internal report	Human Resource	Annually	Project Zone
			SIA045	# community members who have accessed the microfinance scheme	Output	Scheme's records	Accounts	Monitoring Period	Project Zone
			SIA046	# of people who have established IGAs through SCRП assistance	Outcome	Scheme's records	Community Outreach	Monitoring Period	Project Zone

			SIA047	# community members who have undergone agricultural training	Output	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA048	# agricultural demonstration plots established in the community areas	Outcome	Internal report	Community Outreach	Monitoring Period	Project Zone
			SIA049	% increase in yields and sales in local and external markets	Impact	Household survey	Social Monitoring	Monitoring Period	Project Zone

3.4 Net Positive Stakeholder Well-being Impacts

Comparison between the 'Without Project' and 'With Project' scenario

- Focal Issue 1: Poor Community Livelihoods: The direct threats to poor community livelihoods were shown to be: i) low farm yields, and ii) low income. In the absence of the project, these are expected to worsen and thereby increase poverty and livelihood vulnerability. The Casual Chain Diagram (Section 2.1.9) details the theory of change logic and depicts how the SCRP aims to reduce poverty and improve overall livelihoods over the project's lifetime.
- Focal Issue 2: Forest Destruction and Land Encroachment: The direct threats to forest destruction and land encroachment are: i) forest clearing for agricultural and settlement, ii) commercial logging for timber and wood products, and iii) illegal logging. In the absence of the project, these are expected to worsen and thereby leading to forest loss and diminishment of associated ecosystem services to the communities. The Casual Chain Diagram (Section 2.1.9) details the theory of change logic and depicts how the SCRP aims to curb forest loss and improve overall livelihoods over the project's lifetime through enhanced ecosystem services.
- Focal Issue 3: Wildlife Poaching: The direct threats to wildlife poaching problem are i) high demand for wildlife parts ii) illegal, uncontrolled access to forest and iii) illegal logging. In the absence of the project, these are expected to worsen and thereby lead to wildlife declines and poor eco-tourism. The Casual Chain Diagram (Section 2.1.9) details the theory of change logic and depicts how the SCRP aims to reduce demand and supply of wildlife and forest products, leading to sustainable use and eco-tourism development for improved livelihoods over the project's lifetime.

Moreover, as demonstrated under Section 4.2.2 of the Project's VCS/CCB Project Document, all the potential costs or negative impacts from implementing the proposed project activities can be mitigated for (e.g., for poachers) or are either short term or affecting a minor segment of the communities in the SCRP Project Zone. Some stakeholders of the Project will face negative impacts, mainly through the loss of income or their livelihoods when these are linked to illegal activities in-side of the Project Area. However, the Project Activities are focused on increasing the incomes and encouraging new income generating activities in the project communities, mitigating these negative effects. The project will also seek to provide direct employment to people who were seeking income from illegal activities in the Project Area as to the best of its abilities as forest rangers or other positions to gain their expertise and knowledge of the forest and replace their lost income. Consequently, the anticipated net well-being impacts are overwhelmingly positive given the proportion of the population potentially impacted, the magnitude of the impacts and their long-term nature.

4 BENEFITS FOR THE PLANET

4.1 Condition of Natural Capital and Ecosystem Services at Project Start

The Cardamom Mountains region form part of the Indo-Burma biodiversity hotspot (Myers et al. 2000) and is a ridge-to-reef conservation landscape comprising 18,000 km² of largely contiguous forest cover. The landscape forms a Global 200 Ecoregion (Cardamom Mountains Rain Forests), a secondary Endemic Bird Area (i.e. an area containing at least one restricted-range endemic bird species) and was listed as a Level I Tiger Conservation Unit by Wikramanayake et al. (1998). The length of the Cardamom Range is approximately 300 kilometers. It is separated from the nearest other rainforest by the vast, dry Khorat Plateau in central Thailand to the north and east and by the Gulf of Thailand in the west.

Ecosystem Services

The SCRP Project Area provides several important ecosystem services to the communities in the immediate surrounding area, in the region and globally. These include but are not limited to: significantly as a vital carbon stock and continued contributions with atmospheric carbon sequestration, hydrological regulation, provision of clean drinking water, erosion control and regulation of the local micro-climate of the Cardamom Mountain region.

Location and general description

The mountain range rises from sea level to more than 1500 m to intercept and extract the moisture from the monsoon winds. The orientation of their topography along the Gulf of Thailand produces unusually wet conditions of 3000-4000mm annual rainfall on the southwestern slopes of these ranges; only a short dry season occurs. These ranges rise rapidly from the coast, leaving only a narrow coastal plain. They gently grade down into the interior lowlands to the north and northeast. Upper elevation areas above about 900 meters in the Cardamom and Elephant Mountains contain a distinct montane forest community. These forests are structured with dense evergreen tree canopies reaching up to 30 meters in height.

Topography

Three forces created the geologic patterns of Cambodia – ancient volcanic activity created its mountains, an ancient ocean laid sandstone deposits, and the action of its major drainages (the Mekong and Tonle Sap rivers) created alluvial plains and deposits (Cutter, 2014; McDonald, 2004).

The SCRP project area is located in Cambodia's southwestern highlands that are primarily Mesozoic sandstone formations laid down by the ancient ocean that is a predecessor to the Gulf of Thailand, within which there are localized areas of rhyodacite and basalt volcanic lava flows (Douglas, 2005). The Project area is typified by a hilly evergreen forest ranging from 10 m a.s.l along the coastal plain to 980 m a.s.l. on the boundaries with Phnom Samkos Wildlife Sanctuary. The project area's higher

forests are the catchment for the adjoining Gulf of Thailand and include seven watersheds that drain into the Koh Kong estuary, one of Southeast Asia's largest remaining intact mangrove ecosystem (Russell, 1987).

Soils

The ancient ocean along the southeast coast of Cambodia created siltstone-sandstone deposits within the project area (White and Oberthür, 1995). The weathering of these relatively young deposits has produced azonal soils or soils without well-developed profile characteristics. The montane slopes, which are a majority of the project area, are comprised of acid lithosols, a low fertility soil type that is not good for agriculture. In the riverbeds, there are brown alluvial soils, alluvial lithosols and alumisoils, that are moderately fertile. In the center of the project area there are two small volcanic deposits, that are comprised of latosols and plinthite podzols soils, which are highly fertile and prime locations for agriculture (Crocker, 1962; Sanchez et al., 1982).

Climate, precipitation and hydrology

The Asian monsoon is a principle climatic feature of Cambodia. Because of its location on the Southeast Asian peninsula, Cambodia is at the transition between the South and East Asian monsoon, as a result it receives rain from the South China Sea and Indian Ocean. Because of the monsoonal climatic pattern, there are two seasons during the year, the wet season, from May – November, and the dry season the rest of the year (Zhang et al., 2005). It is cooler during the wet season and hotter during the dry season, with an average annual temperature of 28° C, an average maximum temperature that exceeds 40° C in April and an average minimum temperature of 17° C in January (Heng, 2015). The topography of the Cardamom mountains influences the regional distribution of rain. The SCRP is a precipitation “hotspot” due to it being adjacent to the Gulf of Thailand and receives the highest rainfall of mainland Southeast Asia. The average annual rainfall is between 2500 - 4000 mm per year (Zhang et al., 2005). The SCRP's seven watersheds are of strategic national development because of their hydropower potential and support of freshwater and coastal fisheries. (Killeen, 2012). Its rainfall produces 11 rivers that flow into the Gulf of Thailand supporting 155 km of coastal fisheries and the largest intact mangrove representation in the Indo-Burmese Peninsula (Botum Sakor, Peam Krasop and Dong Peng Protected Areas), called the Coastal Cardamom.

Biodiversity and vegetation features

The Cardamom Mountains rainforests are amongst the most significant landscapes for biodiversity conservation in mainland South East Asia. The landscape supports numerous endemic bird (e.g. *Garrulax ferrarius*), amphibian (e.g. *Chiromantis samkosisensis*), reptile (e.g. *Cnemaspis neangthy*), and plant species (e.g. *Nepenthes holdenii*). While the largest megafauna has either been extirpated (i.e. tiger *Panthera tigris*, rhinoceros *Dicerorhinus* / *Rhinoceros* spp.) or heavily impacted by historic hunting (i.e. Asian elephant *Elephas maximus*, gaur *Bos gaurus*) populations of smaller carnivores (e.g. dhole *Cuon alpinus*, mainland clouded leopard *Neofelis nebulosa*, Malayan sun bear *Helarctos malayanus*, greater hog badger *Arctonyx collaris*, large-spotted civet *Viverra megaspila*) are significant (Gray et al. 2017) and the landscape supports the largest global population of the Endangered

pileated gibbon (*Hylobates pileatus*). A minimum of 35 IUCN Threatened species of bird (9), mammal (18), and reptile (8) occur within the Project Zone with globally significant populations of at least 11 and regionally (Cambodia, Laos, and Vietnam) significant populations of 18.

The elephant population in the Cardamom and Elephant ranges, though heavily impacted by hunting during the late 20th and early 21st centuries, is one of only two in Cambodia with >40 individuals.

Significant reptiles include Siamese crocodile *Crocodylus siamensis* and southern river terrapin *Batagar affinis* – both species are globally critically endangered and have confirmed breeding populations within the Project Zone. In 2009, FFI helped to identify 35 pure-bred Siamese crocodiles in a local wildlife rescue center and has since developed the first conservation breeding program in the country – a vital source of genetic diversity for the reintroduction of the species into new areas. In 2012, the Cambodian Crocodile Conservation Project launched a program to release pure-bred individuals back into the wild in suitable sites in the Cardamom Mountains, under the National Siamese Crocodile Reintroduction and Reinforcement Action Plan.

Five dominant vegetation types are present in the greater SCRP Project Area, while Evergreen Forest and Deciduous Forest are present in the SCRP Project Accounting Area:

- **Evergreen Forest** (Tropical Moist Broadleaf Forest) (405,865 ha): The main forest type in the Project Area and is dominated by Dipterocarps – Phdiek (*Anisoptera costata*), Chheutal bankuoy (*Dipterocarpus costatu*), Koki Khsach (*Hopea pierrei*), Koki msav (*Hopea odorata*), and Koki Phnom (*Shorea hypochra*).
- **Deciduous Forest** (Tropical Dry Broadleaf Forest) (21,982 ha): This type of forest is similar to the dry seasonal forest found in dryer climates of Indochina. Trees are relatively short (3-12 m), with mainly drought tolerant species with small leaves and thick barks. Dry deciduous forests form a transition to natural grassland, which are found on the very dry sandy sites. These forests are also dominated by Dipterocarps, with the four most abundant species being Meranti (*Shorea siamensis*), Phchoek (*Shorea obtuse*), Tbeng (*Dipterocarpus obtusifolius*), and Klong (*Dipterocarpus tuberculatus*).
- **Riparian Melaleuca Forest** (13,898 ha): This forest type occurs near rivers and streams, periodically inundated and remaining moist during the dry season. It is dominated by *Melaleuca leucadendron*.
- **Scrubland** (10,249 ha): This forest is a transition type to tall evergreen forest, and often with similar species composition, yet trees are significantly smaller.
- **Semi-Evergreen Forest** (2,043 ha): This forest type occurs near rivers and streams, periodically inundated and remaining moist during the dry season.

Types of threats

Poor law enforcement

Despite some level of formal protection, very few reserves in the region have effective management and workforces; they are essentially “paper parks”. Several are now under threat from illegal logging operations and from adjacent concessions that encroach on the unprotected protected areas. The wildlife trade has also resulted in widespread hunting throughout Cambodia, taking a heavy toll on endangered wildlife populations. The widespread presence of anti-personnel land mines continues to pose severe threat to both wildlife and humans.

Habitat reduction, degradation and fragmentation

Besides loss of forest which leads to habitat loss and fragmentation, for some of the water-dependent species like the crocodile, factors causing loss of habitat include: conversion of wetlands for agriculture, use of chemical fertilizers and pesticides in rice production, and an increase in the population of cattle in the landscape. Moreover, many river systems, including those in protected areas, have hydroelectric power dams approved or planned, which are likely to cause the loss of wetlands plus altered flooding cycles. Moreover, when populations fall to extremely small levels dependent on highly isolated habitats, as is the case for *C. siamensis*, they become too fragmented leading to both reduced reproduction (due to the difficulty of locating mates), and genetic problems from inbreeding.

Exploitation and fragmentation

Illegal poaching for meat and wildlife trade is still an important threat in these forests. For instance, capture of wild crocodiles for skins and to stock commercial crocodile farms remains an ongoing threat, as well as incidental capture/drowning in fishing nets and traps. Snares are perhaps the biggest threat to the Project Areas globally significant mammal diversity with WA supported forest rangers removing 21,589 in 2017. These indiscriminate killers have caused significant declines in many threatened species throughout South East Asia (Gray et al. 2017).

From the Biodiversity Impact Assessment workshop held for the proposed SCRP the leading threats identified across the greater SCRP landscape were:

- Human-elephant conflict
- Land encroachment and illegal construction inside Protected Areas
- Social and economic land concessions
- Poaching and wildlife trade
- Unsustainable hydropower production
- Illegal logging
- Pollution, e.g. from construction and agricultural waste
- Mining

4.1.1 High Conservation Values

The entirety of the SCRP Project Area is of High Conservation Value.

Globally significant – The Project Area is one of ~10 most important sites globally for the species listed;

Regionally significant – The Project Area is within one of ~10 most important sites in Indochina [Sensu Cambodia, Lao PDR, Vietnam) for the species listed;

Nationally significant – The Project Area is one of ~10 most important sites in Cambodia for the listed species.

The 35 species listed in Table 6 all make their home in the Project Area and are listed as significant by IUCN. Please refer to Table 6 below for HCV species listing and their associated IUCN statuses.

TABLE 6: IUCN ENDANGERED STATUS OF SPECIES IN THE SCRP PROJECT AREA

Aves (Birds)		
Sarus Crane <i>Grus antigone</i>	VU	National
Asian wooly neck <i>Ciconia episcopus</i>	VU	Regional
Masked finfoot <i>Heliopais personatus</i>	EN	Regional
Lesser Adjutant <i>Leptopilos javanicus</i>	VU	National
Great Slaty Woodpecker <i>Mulleripicus pulverulentus</i>	VU	National
Milky Stork <i>Mycteria cinerea</i>	EN	Regional
Green peafowl <i>Pavo muticus</i>	EN	Global
Giant ibis <i>Thaumatibis gigantea</i>	CR	Global
White-eared night heron <i>Gorsachius magnificus</i>	EN	Global
Mammalia (Mammals)		
Binturong <i>Arctis binturong</i>	VU	National
Greater hog badger <i>Arctonyx collaris</i>	VU	Global
Hog deer <i>Axis porcinis</i>	EN	Global
Gaur <i>Bos gaurus</i>	VU	Regional
Dhole <i>Cuon alpinus</i>	EN	Regional
Asian elephant <i>Elephas maximus</i>	EN	Regional
Malayan sun bear <i>Helarctos malayanus</i>	VU	Global
Pileated gibbon <i>Hylobates pileatus</i>	EN	Global

Hairy-nosed otter <i>Lutra sumatrana</i>	EN	Regional
Smooth-coated otter <i>Lutrogale perspicillata</i>	VU	Regional
Northern pig-tailed macaque <i>Macaca leonina</i>	VU	Regional
Mainland clouded leopard <i>Neofelis nebulosa</i>	VU	Regional
Sambar <i>Rusa unicolor</i>	VU	Regional
Sunda pangolin <i>Manis javanica</i>	CR	Regional
Bengal slow loris <i>Nycticebus bengalensis</i>	VU	Regional
Indochinese lutung <i>Trachypithecus germaini</i>	EN	Global
Asiatic black bear <i>Ursus thibetanus</i>	VU	National
Large-spotted civet <i>Viverra megaspilla</i>	EN	Global
Reptilia (reptiles)		
Asiatic softshell turtle <i>Amyda cartilaginea</i>	VU	Regional
Southern river terrapin <i>Batagar affinis</i>	CR	Global
Siamese crocodile <i>Crocodylus siamensis</i>	CR	Global
Southeast Asian box turtle <i>Cuora amboinensis</i>	VU	Regional
Yellow-headed temple turtle <i>Heosemys annandalii</i>	EN	Regional
King cobra <i>Ophiophagus hannah</i>	VU	National
Burmese python <i>Python bivittatus</i>	VU	Regional
Elongated tortoise <i>Indotestudo elongata</i>	EN	Regional

Additionally, both the Evergreen and Deciduous Dipterocarp Forests were recognized as HCV habitats and ecosystems during the BIA workshop as they harbor these species under threat, but also because they perform critical ecological functions, namely:

- **Water provision and hydrological cycle regulation:** The monsoon rains fall heaviest on the Cardamom Mountains' plateau, which is the source of several nationally significant rivers, some flowing into the Tonle Sap Lake and others into the Gulf of Thailand supporting agriculture and aquaculture.
- **Fisheries regulation:** especially as the backbone to the fisheries and aquatic life in the wider landscape.

- **Corridor function:** connects several protected areas in the region including Phnom Samkos, Peam Krasop, Phnom Aural and Tatai Wildlife Sanctuaries, Central Cardamom, Botum Sakor Kirirom and Bokor National Parks (Gray et al. 2016).

4.1.2 Without Project Scenario: Biodiversity and Natural Capital

A Biodiversity Impact Assessment (BIA) workshop was held in Phnom Penh on 31st October and 1st November 2017 to develop the monitoring plan based on a theory of change logic for the SCRP following CCB Guidelines. A total of 20 participants were involved representing both national and central Government (13), conservation non-governmental organizations (5), and academia (2) (Table 7). All participants had some prior experience of conducting biodiversity research work or executing environmental conservation projects within the SCRP landscape.

TABLE 7: PARTICIPANTS TO THE SCRP BIA WORKSHOP AND THE INSTITUTIONS THEY REPRESENTED

Stakeholder	Institution	# Representatives
Royal Government of Cambodia	General Department for Administration of Nature Conservation, Ministry of Environment	7
	Department for Education and Awareness, Ministry of Environment	1
	Department for Communities, Ministry of Environment	1
	Department for GIS and REDD+, Ministry of Environment	2
	Provincial Department of the Environment, Koh Kong Province	2
Conservation NGOs	Fauna and Flora International	1
	Conservation International	1
	Wildlife Alliance	3
Academia	Cambodian Fishing Cat Project	1
	Conservation Ecology Program, King Mongkutt University, Thailand	1

Focal issues

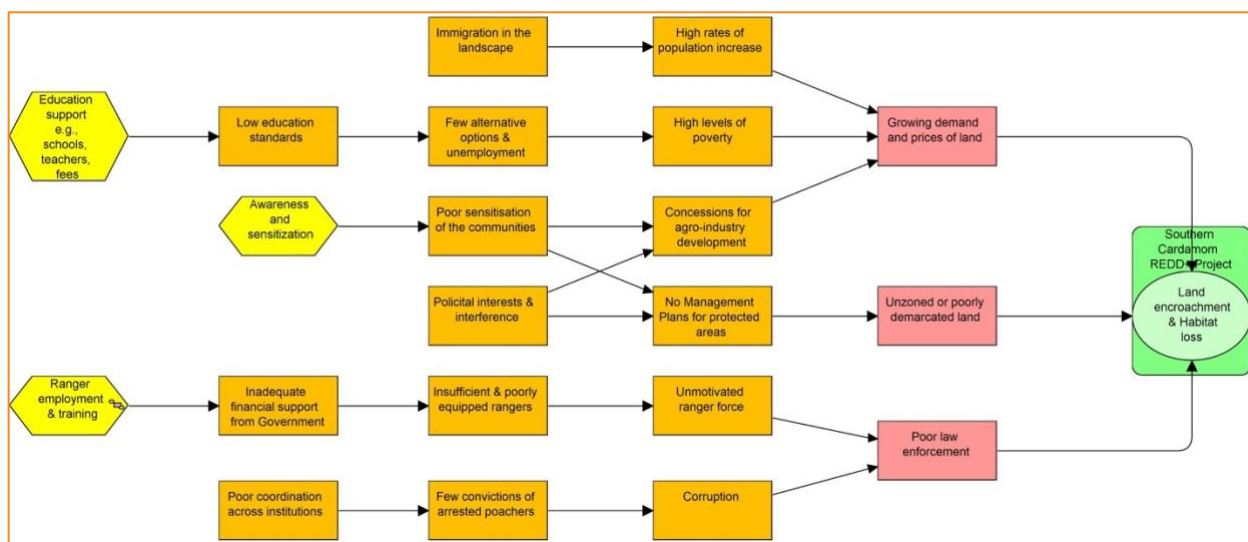
The BIA workshop started with an evaluation of the Background Conditions in the Project Area, including an identification of most important biodiversity and key threats, which enabled an examination of the main biodiversity-related problems that the REDD+ project needs to address, termed herein as Focal Issues. Focal issues are existing problems or challenges that should be addressed to ensure Project success. Here, they refer to biodiversity related factors that need to be addressed for project success, or factors that if the project does not address, project success is threatened. The workshop settled on three priority Focal Issues for the SCRP:

1. *Land encroachment and habitat loss*: Protected area and forested land is illegally converted to other land uses due to land-grabbing by middlemen and powerful people, often through payment to marginalized people, who clear forest for them.
2. *Wildlife poaching and trade*: Low rates of detection, capture, and prosecution of poachers, and high price of wildlife meat due to high demand from consumers, combined with low awareness and lack of alternative livelihoods for local people, leads to high reward with minimal risk for poaching.
3. *Illegal logging*: Population growth and poverty with limited alternative livelihoods mean people are motivated to obtain income from illegal logging and timber trade, abetted by poor law enforcement and high timber value due to high demand.

Problem Flow Diagrams

After establishing the fundamental issues that the project should focus on to achieve the overarching REDD+ goals, the BIA workshop then delved deeper into these Focal Issues to establish the causal logic leading to the problems, and produced a Problem Flow Diagram (also termed Conceptual Model) for each of the Focal Issues (**Error! Reference source not found.7**). A Problem Flow Diagram (PFD) is a situation analysis of the issue that represents stakeholders' understanding of what drives the existence of the focal issue; it identifies economic, political, institutional, social and/or cultural factors that contribute to existence of the issue.

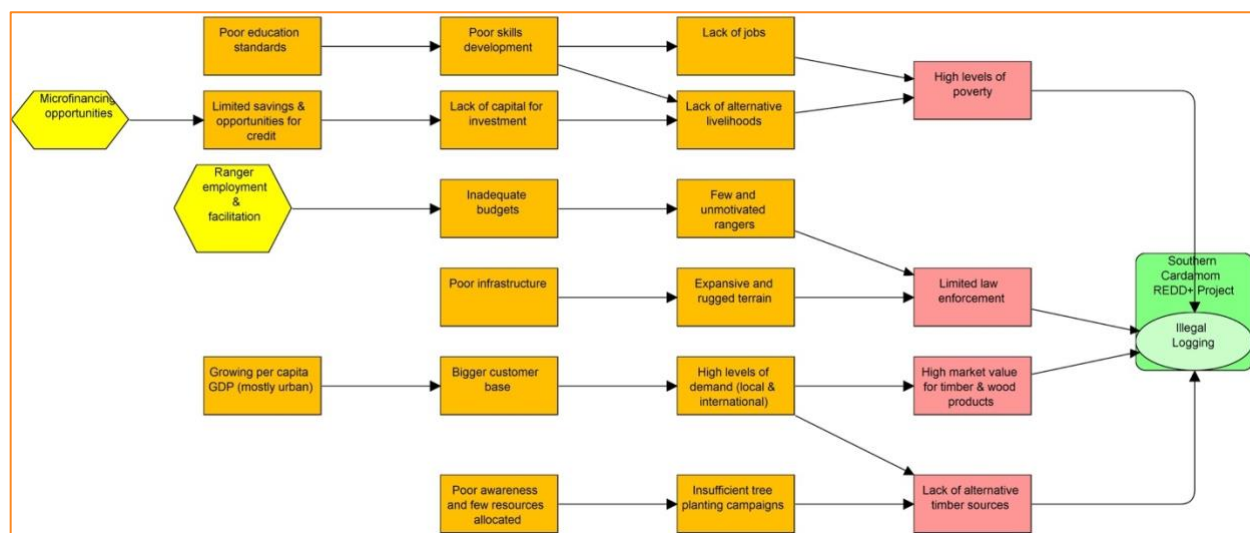
a) Land encroachment and habitat loss



b) Wildlife poaching and trade



c) Illegal logging



Legend Table	Strategy	Contributing Factor	Direct Threat	Target
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FIGURE 7: PROBLEM FLOW DIAGRAMS PRODUCED FOR THE FOCAL ISSUES DURING THE BIA WORKSHOP FOR THE SCRP

Without-project projections

Next, the workshop participants projected what would happen with the major direct threats (in pink on the PFDs) identified for each Focal Issue in the short-to-medium term (5-10 yrs.) in the absence of the REDD+ project (Table 8).

TABLE 8: FUTURE WITHOUT-PROJECT PROJECTIONS OF THE KEY CONTRIBUTING FACTORS TO THE FOCAL ISSUES IDENTIFIED DURING THE SCRP BIA WORKSHOP

a. Land encroachment and habitat loss

Direct Factor	In 5-10 years, will condition improve, worsen, or remain unchanged?	What will drive the change?
Poor law enforcement	Worsen	- Fewer rangers on patrol – fewer patrols conducted - Less budget for law enforcement implementation - Lack of capacity for implementing effective law enforcement - Less trust from international communities - Increased corruption
No Zoning or Protected Area Demarcation	Worsen	Increase pressures due to population growth and other drivers of deforestation and limited government budget support.
Demand for land and increasing land price	Worsen	- Population growth - Need for land for Industrial agriculture product (rubber, cassava, cashew) - Economic Development

b. Wildlife poaching and trade

Direct Factor	In 5-10 years, will condition improve, worsen, or remain unchanged?	What will drive the change?
High economic rewards for poaching	Worsen	- Increasing demand from increasing number of consumers - Lack of alternative livelihoods
Low risk of being prosecuted	Worsen	- Fewer poachers are detected and arrested due to poor law enforcement - Increased corruption

Lack of awareness of biodiversity value	Worsen	Lack of consistent and informative awareness and sensitization campaigns delivered by Government or NGOs
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c. Illegal logging

Direct Factor	In 5-10 years, will condition improve, worsen, or remain unchanged?	What will drive the change?
Poor law enforcement	Worsen	- Fewer rangers on patrol – fewer patrols conducted - Less budget for law enforcement implementation - Lack of capacity for implementing effective law enforcement - Less trust from international communities Increased corruption
Poverty	Worsen	- Population increase - Poor agriculture techniques - Unemployment and lack of alternative livelihoods
High demand for timber (both local and international)	Worsen	- Population growth leading increase in demand - Income of people increase lead to demand timber - High price of timber

4.2 Expected Impacts on Natural Capital and Ecosystem Services

4.2.1 Expected Biodiversity Changes

Based on the Problem Flow Diagrams developed for each of the three Focal Issues (see Section 4.1.2), several strategic project entry points were discussed and agreed upon during the BIA workshop, as the most likely strategies/activities to address root causes of the problems identified – these would mainly address the issues or factors projected in the preceding section as likely to get worse in the absence of the SCRP. These would thus constitute the project activities that if implemented would follow the theory of change logic developed in the Results Chains (see below) to lead to the desired outcomes. They include:

1. Enhance security and law enforcement: this could be achieved through increasing number, capacity and welfare (motivation) of rangers to enhance effectiveness of patrols and ensuing judicial action
2. Land Use Planning and Zoning: this includes creating buffer zones and Community Protected Areas, creating or enhancing protection of critical wildlife habitat and corridors across the SCRP
3. Capacity building of local communities: this would focus on provision of seed capital, alternative livelihoods and income-generating activities, plus agricultural training including effective livestock husbandry
4. Greater awareness and sensitization: this could focus on land tenure and land-use issues in the region, as well as importance and avenues for participating in biodiversity conservation including discouraging dependence on wildlife meat and timber for furniture needs

These strategies seek to build on and expand the Project partner WA's successful three-pronged conservation approach in this landscape: systematic ranger patrols to stop forest clearing and wildlife poaching, profitable alternative livelihoods with local communities so they no longer needed to depend on harvesting the forest and its wildlife, and persistent sensitization and advocacy.

Theory of Change Statements

Based on the extensive experience of the Project partner WA in working on biodiversity conservation and community projects in the SCRP landscape, a literature review, and from information obtained from the BIA workshop, we applied the theory of change approach to substantiate our project rationale and to produce indicators for the CCB monitoring plan. A theory of change is a hypothesis about how a project intends to achieve its stated objectives, or a roadmap of how it plans to get from project activities to project impacts (Richards & Panfil, 2011). As such, we developed a theory of change for each of the three major project activity areas identified: Security and law enforcement, Alternative livelihoods, and Awareness and sensitization.

The assumptions we make about the cause-and-effect relationships were made explicit in the Result Chain diagrams (see details in the Result Chains under Section 2.1.9, Figure 4) developed by during the BIA workshop, from which the theories of change statements are based. Indicators were developed for key results and assumptions; monitoring of assumptions was included to enable us identify points of deviation early enough. In other words, the indicators outlined in the Monitoring Plan (see Section 4.3.1) will enable measuring progress towards achieving the desired project activity outcomes and impacts from project activities and strategies.

- **Activity Area 1: Security and Law Enforcement:** IF budget is increased, IF number of rangers increase and capacity of rangers and managers is improved, IF there more patrols by well-motivated and equipped rangers, and IF relationships with prosecutors and the courts is improved THEN there will be increased numbers of arrests and prosecutions leading to reduced levels of logging, land encroachment, and poaching

- **Activity Area 2: Alternative Livelihoods:** IF community-based ecotourism and community NTFP groups are established, IF the local community is trained on modern agricultural techniques THEN there will be increased income to local communities and fewer people relying on direct access to the forest for their livelihoods, leading to reduced levels of logging, land encroachment, and poaching
- **Activity Area 3: Awareness and Sensitization:** IF there is a change in cultural behaviour of wildlife consumers, and IF there is increased knowledge and appreciation of biodiversity amongst local communities, THEN there will be reduced poaching and more people will be participating in conservation.

Impact #16	The water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes will be protected. (SDG 6.6)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration
Resulting Change in Well-being	Over the lifetime of the Project it is estimated to avoid the deforestation of over 315,000 ha in comparison to the project baseline. This will have a large impact on the natural capital and ecosystem services of Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration.

Impact #30	Urgent action to combat climate change and its impacts will be taken by protecting the Project Area and reducing the emission of CO ₂ e. (SDG 13)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration
Resulting Change in Well-being	The project is taking urgent action to combat climate change by avoiding significant emissions of CO ₂ e by stopping deforestation in the Project Area. This will provide a large impact to the natural capital and ecosystem services of forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration.

Impact #32	The forests, wetlands, mountains and drylands in the Project Area will be conserved and sustainably used. (SDG 15.1)
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Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration
Resulting Change in Well-being	The project will increase the proportion of forestland to total land area in Koh Kong province in comparison to the reference level. This will provide a large impact to the natural capital and ecosystem services of forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration.
Impact #34	Mountain ecosystems, including their biodiversity will be conserved in the Project Area, in order to enhance their capacity to provide benefits that are essential for sustainable development. (SDG 15.4)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration
Resulting Change in Well-being	The project will increase the protection of mountain ecosystems by stopping deforestation in the Project Area, which covers the majority of the Southern Cardamom mountain range. This will provide a large impact to the natural capital and ecosystem services of forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration.
Impact #35	The degradation of natural habitats will be reduced, the loss of biodiversity will be stopped. (SDG 15.5)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration
Resulting Change in Well-being	The Project will utilize carbon revenue to increase the protection of the Project Area to stop deforestation, the loss of biodiversity through habitat destruction and poaching. This will provide a large impact to the natural capital and ecosystem services of forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration.

Impact #36	All threatened species in the Project Area will be protected and safeguarded against extinction. (SDG 15.5)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	biodiversity, endangered species
Resulting Change in Well-being	The Project will utilize carbon revenue to increase the protection of biodiversity and preserving and protecting threatened species from extinction. This will provide a large impact to the natural capital and ecosystem services of, biodiversity, and endangered species.
Impact #37	Poaching and trafficking of protected species of flora and fauna will be stopped and the supply of illegal wildlife products from the Project Area will be reduced. (SDG 15.7)
Type of Impact	This is a positive impact, that is predicted and direct.
Affected Stakeholder Group(s)	biodiversity, endangered species
Resulting Change in Well-being	Proceeds from the Project will be used to implement activities to provide alternative income and food sources, reducing demand for wildlife products and to increase protection of the project area and the wildlife. This will reduce the amount of poaching and trafficked wildlife from the Project Area. This will provide a large impact to the natural capital and ecosystem services of, biodiversity, and endangered species.
Impact #38	Financial resources from all sources will be increased to conserve and sustainably use biodiversity and ecosystems. (SDG 15.a)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Forest ecosystems, biodiversity, endangered species, air quality, carbon sequestration

Resulting Change in Well-being	Using project resources and infrastructure it will Increase in funding from all sources to conserve biodiversity. This will increase the funding and resources available to protect the Project Area and its biodiversity. This will provide a large impact to the natural capital and ecosystem services of forest ecosystems, biodiversity, and endangered species.
Impact #39	The poaching and trafficking of protected species will be reduced by increasing the capacity of local communities to pursue sustainable livelihood opportunities (SDG 15.c)
Type of Impact	This is a positive impact, that is actual and direct.
Affected Stakeholder Group(s)	Biodiversity, endangered species
Resulting Change in Well-being	Proceeds from the Project will be used to implement activities to provide alternative income and food sources, reducing demand for wildlife products and to increase protection of the project area and the wildlife. This will reduce the amount of poaching and trafficked wildlife from the Project Area. This will provide a large impact to the natural capital and ecosystem services of, biodiversity, and endangered species.

4.3 Natural Capital and Ecosystem Services Monitoring Plan

4.3.1 Biodiversity Monitoring Plan (B4.1, B4.2, GL1.4, GL3.4)

Indicators are important in impact assessment because they respond to the basic question “what should be measured to show that the claimed net social benefits are real and additional?” (Richards & Panfil 2011) An ideal indicator from the perspective of showing attribution is one that measures an ‘intermediate state’ or assumption between an output and outcome or an outcome and an impact, clearly showing progress along a causal chain (Richards & Panfil, 2011). Thus, we used our theory of change logic in the Result Chain diagrams (section 4.2.1) as the basis for selecting indicators that factor in attribution. We then decided on the best sampling methods to use to collect these data to acceptable levels accuracy, precision and cost effectiveness whilst retaining transparency and simplicity. From this, a Monitoring Plan was developed to guide data collection.

When developing the overall project monitoring plans, we focused on the three SIA focal issues and started with the underlying issues/results/indicators developed during the SIA workshop. Then, we looked at the issues raised from the BIA workshop and any additional result/indicator not already mentioned during the SIA workshop and included in the social monitoring plan was included in the

biodiversity monitoring plan. In order to reduce repetition and streamline the project monitoring plans it was decided to utilize the overall framing of the key focal issues as determined from the SIA Workshop for both the social and biodiversity monitoring plans. This was possible as all three issues raised in the BIA workshop (i.e., Land encroachment, Illegal poaching and wildlife trade, and Illegal logging) were covered in the first two of the SIA Workshop focal issues and the third SIA focal issue (poor livelihoods) was an underlying theme to all of the BIA identified focus issues.

Further, the indicators will be analyzed based on the Pressure-State-Response framework, which also relies on a causal-chain logic, where threats negatively impact the status/condition of biodiversity, while responses or project interventions reduce pressure. Most Response indicators can be grouped under: Habitat improvement; Security enhancement; and Improvement of community livelihoods efforts. Pressure indicators fall under: Human population size and dynamics; Human-wildlife conflict (HWC); and Incidences including poaching, grazing, encroachment, charcoal and firewood collection amongst others. Finally, State indicators are grouped into three categories: wildlife (including species presence, diversity, distribution and movement); vegetation and land-use (including changes in various vegetation/habitat types, encroachment and fire). Most of the response and pressure indicators correspond to the social indicators developed in the community monitoring plan (See Section. 4.3.1), and so data collection follows the protocols outlined therein. On top, we determined 10 indicators not part of the social indicator set, also classified into three categories: Output 4; Outcome 4; and Impact. For these new indicators, two main strategies will be used to obtain the data: In-house reporting and Government records, mostly for output and outcome indicators, and surveys for most impact indicators. We envision three main aspects of state indicators to measure, each with a distinct set of monitoring protocols:

Wildlife: wildlife surveys and monitoring for all species – with a focus on HCVs – will be done using several methods: ranger patrols, camera traps, fecal-DNA analysis, and information from any independent research projects in the area

Vegetation and Land-use: carbon plot monitoring plots and remote sensing (based on LANDSAT imagery) and GIS techniques.

Biodiversity Impact Assessment: Monitoring Plan

TABLE 9: PROJECT BIODIVERSITY IMPACT ASSESSMENT FOR MONITORING PLAN.

Focal Issue	Key results	SMART Objective	Indicator Code	Indicator	Indicator type	Data collection method	Who?	When?	Where?
Forest destruction and land encroachment	Decrease in illegal logging	By 2027, reduce the number of illegal logging incidents by half in the SCRP		Six indicators included in the SIA Monitoring Plan (Indicators SIA001-SIA007)				Monitoring period.	
	Decrease in encroachment and land-grabbing	By 2022, two CPA are created, registered at MoE and their NTFPs can access markets		Seven related indicators included in the SIA Monitoring Plan (Indicators SIA008-SIA015)				Monitoring period.	
			BIA003	# and types of NTFPs	Impact	CPA records	Community outreach	Monitoring period.	Project Zone

				sold in markets					
			BIA004	Amount of revenue accruing from NTFP sales from the area	Impact	CPA records	Community outreach	Monitoring period.	Project Zone
Wildlife poaching	Greater community participation in eco-tourism activities	By 2022 >2000 tourists visit CBET sites established and registered by MOE and MOT		Six indicators included in the SIA Monitoring Plan (Indicators SIA016-SIA021)				Monitoring period.	
	Greater appreciation and awareness of wildlife benefits	By 2022, 25% more community members demonstrate greater appreciation for wildlife and		Three related indicators included in the SIA Monitoring Plan (Indicators SIA022-SIA024)				Monitoring period.	

		conservation							
			BIA005	# conservation-friendly groups or curricula created or developed	Output	Internal reports	Community outreach	Monitoring period.	Project Zone
			BIA006	% families engaging in illegal wildlife trade through selling wildlife meat products	Impact	Household survey	Social monitoring	Monitoring period	Project Zone
	Increase in wildlife populations including HCVs	By 2027, reduce the number of wildlife poaching incidents by half in the SCRP		Six related indicators included in the SIA Monitoring Plan (Indicators SIA025-SIA031)				Monitoring period	

			BIA007	# ranger training sessions undertaken	Output	Internal reports	Security	Monitoring period	Project Area
			BIA008	# ranger exchange programs undertaken	Output	Internal reports	HR & Security	Monitoring period	Project Area
			BIA009	# rangers trained or involved in exchange programs	Output	Internal reports	HR & Security	Monitoring period	Project Area
			BIA010	# poacher cases resulting in convictions	Outcome	Government records	Security	Monitoring period	Project Area
			BIA011	Presence, Abundance and Distribution of key HCVs	Impact	Patrols, Camera traps & Indirect e.g., Fecal	Biodiversity monitoring	Monitoring period	Project Area
Poor community livelihoods	Reduced cost of living	By 2027, 10% of community members with direct		12 indicators included in the SIA Monitoring				Monitoring period	

		livelihood benefits from the SCRП		Plan (Indicators SIA32-SIA043)					
	Higher income levels	By 2027, 10% of community members earning income directly from the SCRП and associated activities		Six related indicators included in the SIA Monitoring Plan (Indicators (SIA044-SIA049)				Monitoring period	
			BIA012	Amount of investment leveraged from external sources including Government and private sector for financing community ventures	Outcome	Internal reports	Accounts	Monitoring period	Project Zone

4.3.2 Development of a plan for assessing the effectiveness of measures to maintain or enhance biodiversity HCVs

Biodiversity HCVs, such as critically endangered species, key threatened ecosystems and ecosystem services, biome, and corridor function, are captured in the Monitoring Plan above.

4.3.3 Biodiversity Monitoring Plan Dissemination

The SCRP will disseminate the biodiversity monitoring plan and the results of the monitoring within 12 months of validation. These documents will be made publicly available on the internet on CCB and VCS websites and linked to Wildlife Alliance website too. They will also be communicated to the communities and other stakeholders (including the Government and Local Authorities) using diverse media including presentations, reports, brochures and orally during community awareness and sensitization meetings, and annual SIA workshops.

4.4 Net Positive Natural Capital and Ecosystem Services Impacts

Comparison of without-project and with-project scenarios

Based on the situation and without-project analyses (Section 2.1.8) most of the Direct Factors across the three Focal Issues were projected as being likely to worsen in the absence of the SCRP, including:

1. Limited law enforcement
2. Demand for land and increasing land prices
3. High economic reward for poaching wildlife
4. Minimal risk of being prosecuted for poaching wildlife
5. Lack of understanding or capacity to show appreciation for biodiversity value
6. High demand for timber (both local and international).

Thus, the project activities planned under Section 2.1.2 will result in clear biodiversity and ecosystem services benefits compared to a without-project scenario where all these key factors get worse.

Gold Level for climate change adaptation benefits

The tropical monsoon climate in Cambodia is characterized by two major seasons: May to October monsoon season has heavy rains, high humidity and strong winds, while November to April is the dry season, with little rain, low humidity and not much wind. While modelling climate impacts is complex and difficult to do with any precision, it is clear is that the climate in Cambodia will be increasingly variable and that the impacts of climate change will be evident primarily through extremes in the water resource sector, which will have significant implications for other sectors (Johnston et al. 2010).

According to the Cambodian Ministry of the Environment, the direct impacts of climate change will be reflected in changes to the natural rainfall pattern, higher temperatures and the rising sea level, which result in flooding or drought. The direct impacts of climate change – rising temperatures, changing rainfall patterns and sea level rise – generate secondary effects on ecosystems and natural resources (MoE 2002, 2006).

Cambodia's forests will also be affected by climate change impacts. The likely increase in temperature has the potential to change the extent and composition of forests, such as a decrease in wet forests and an increase in moist forests (MRC 2010). Changes to forest composition may lead to changing availability of forest resources for rural livelihoods. Shifting seasons and rainfall patterns may lead to reduced forest productivity and increased risk of forest fires, while mangrove forests in coastal zones may be submerged by rising sea levels. Collectively, these effects could lead to the degradation and/or loss of forests, leading to decreased income security for forest-dependent communities.

Similarly, wildlife dependent on these forest and aquatic habitats would be adversely affected by these changes. Thus, the project directly helps the biodiversity by both mitigating for these effects by reducing emissions, but also adapt to these anticipated changes by maintaining some habitats in good condition for these species, including corridors that make it possible for the wide-ranging species to move in case of drastic changes.

4.4.1 High Conservation Values Protected (B2.4)

Three forms of biodiversity-related HCVs were identified above (Section 4.1.1) for the SCRP.

- Wildlife under threat, i.e., on the IUCN Red List
- Threatened ecosystems – both forests and wetlands
- Critical ecological functions – mainly corridor and watershed services.

By protecting the Southern Cardamom Forest Landscape, the SCRP will be directly protecting vital wildlife habitats, safeguarding critical water resources and maintaining landscape connectivity by keeping the corridor intact and unfragmented. As such, all the high conservation values (at the species, ecosystem or functional levels) will be much better in the 'With Project' versus 'Without Project' scenario for the reasons noted above (Section 4.2).

4.4.2 Species Used (B2.5)

All Project Activities that include any planting or reforestation within the Project Zone shall utilize native or naturalized tree/plant species that will be nurtured in nurseries on-site. No non-native species will be used in the Project Accounting Area. All agricultural areas in the landscape have been excised from the Project Accounting Area *a priori*.

5 OPTIONAL: CLIMATE MODULE

Prior to seeking validation and verification under the SD VISTA, SCRP has been validated and verified under both the VCS and CCB standards, with 23,785,963 tCO₂e verified emissions reductions and removals to date. The project plans to continue verifying greenhouse gas (GHG) emissions reductions and removals under the VCS standard. Please see SCRP's joint VCS and CCB monitoring reports and project description document (available on the Verra project portal or the Wildlife Alliance website) for more information on project methodology, monitoring, verified carbon units, and net emissions reductions.