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Supporting Forests and Biodiversity

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Contents

Acronyms.....	2
Overview	3
Cambodia SFB Results Framework Table.....	4
Figure1. Cambodia SFB Results Framework: Goal, Objectives and Sub-Objectives	4
Cambodia SFB Results Framework: Goal, Objective, Sub-Objective and Indicator Matrix.....	5
Performance Indicators and Annual and LOP Targets.....	8
Table 1. Summary of Cambodia SFB Performance Indicators and Annual and LOP Targets... ..	8
Data Collection	12
Field Surveys.....	13
Data Management	14
Reporting Structure	15
Expertise in Geographic Information Systems	15
Adaptive Management	15
Evaluations	16
Illustrative PMEP	18
Cambodia SFB Performance Indicator Reference Sheets	18
Annex 1	60
Indicator 1.1.1 Milestone Tracking Table.....	60
Indicator 1.4.1/2.4.1 Milestone Tracking Table	60
Indicator 0.2.1 Tracking Table	61

Acronyms

AFOLU	Agriculture, Forestry and Other Land Use
AIG	Alternative Income Generation
ARBCP	Asia Regional Biodiversity Conservation Program
CBPF	Community-Based Production Forest
CF	Community Forest
CIFOR	Center for International Forestry
CMO	Complementary Metal Oxide
CO ₂	Carbon Dioxide
CPA	Community Protected Area
FA	Forest Administration
GCC	Global Climate Change
GCCI	Global Climate Change Initiative
GHG	Greenhouse Gases
GIS	Geographical Information System
ICT/ILT	Indigenous Communal Title/Indigenous Land Title
IR	Intermediate Result
LEDS	Lowering Emissions
LOP	Life of Project
M&E	Monitoring and Evaluation
MRV	Monitoring, Reporting and Verification
NGO	Non-Governmental Organization
NRM	Natural Resources Management
PES	Payments for Environmental Services
PMEP	Performance Monitoring and Evaluation Program
REDD+	Reduced Emissions from Deforestation and Forest Degradation
RGC	Royal Government of Cambodia
RL	Reference Level
SFB	Supporting Forests and Biodiversity
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USG	United States Government

Overview

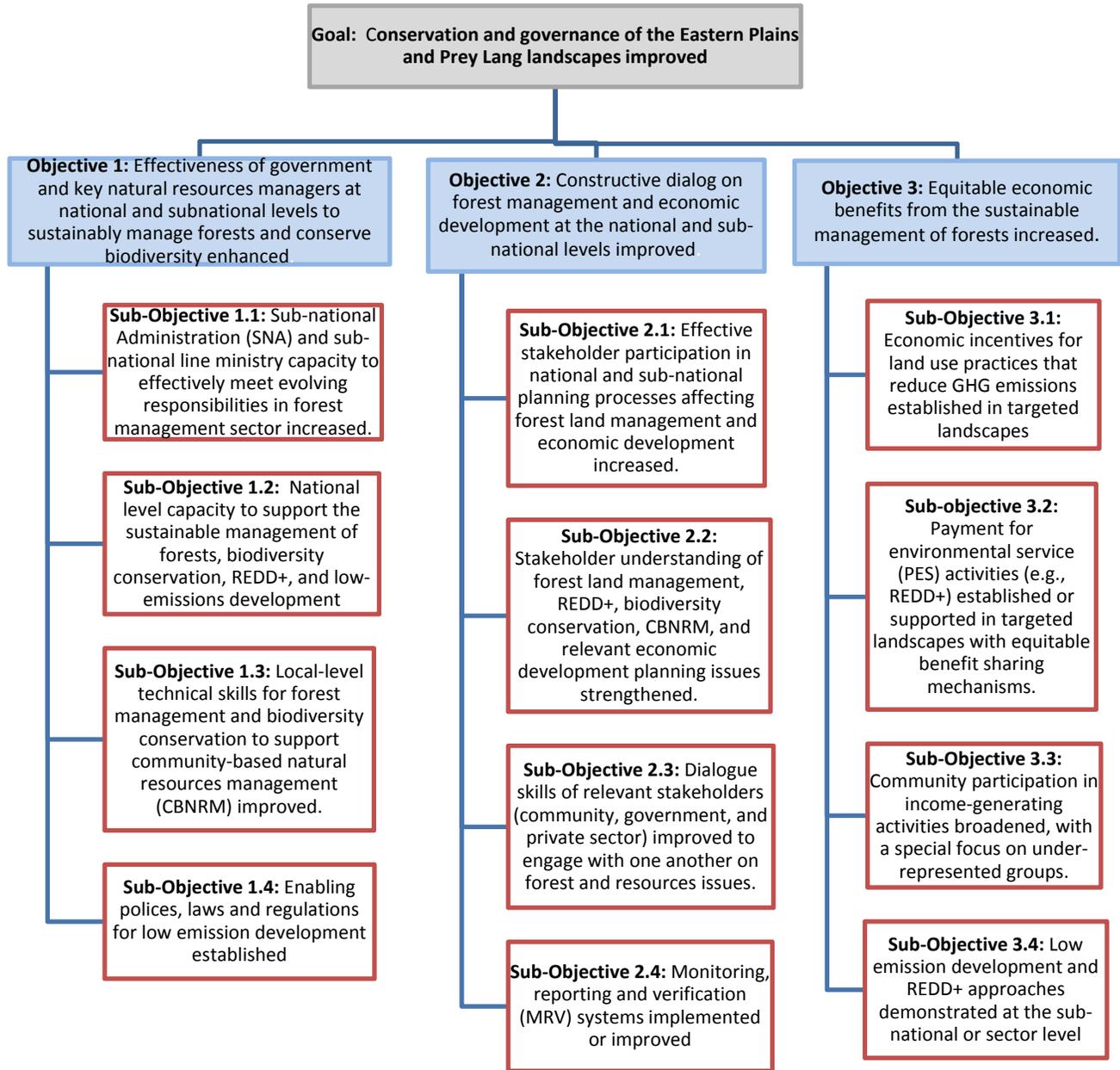
The Winrock Team's monitoring and evaluation plan (PMEP) for SFB will provide USAID with an effective framework for evaluating and reporting on SFB's diverse outputs and impacts, including standard Foreign Assistance Framework output and outcome indicators where appropriate. The system is configured to provide SFB and USAID with reliable, cost-effective information quickly, enabling responsive and adaptive management, and draws heavily on Winrock's wealth of experience in global information systems (GIS) and technologies.

The PMEP will allow USAID to easily and effectively verify SFB's progress towards the goals and expected results. The illustrative results framework (Figure 1) demonstrates SFB's theory of change, with the discrete components leading to reduction in deforestation in Cambodia's priority landscapes explicitly identified and their conceptual relationships made clear. This system of indicators will provide USAID with a means to measure immediate outputs as well as intermediate and ultimate outcomes. Table 1 provides a summary of the performance indicators along with the annual targets and Life of Project (LOP) targets. Figure D 4 provided a more detailed description of each indicator, including the definition, method of acquisition, data sources, frequency of reporting and targets.

Note: The original PMEP for the SFB project was approved by USAID/Cambodia on March 24, 2014. The first revision of the PMEP was approved on June 11, 2015. The revised PMEP was reviewed and amended in response to recommendations from a performance audit by the USAID Office of Inspector General and submitted to USAID/Cambodia for final approval on March 21, 2016.

Cambodia SFB Results Framework Table

Figure 1. Cambodia SFB Results Framework: Goal, Objectives and Sub-Objectives



Cambodia SFB Results Framework: Goal, Objective, Sub-Objective and Indicator Matrix

Conservation and Governance of the Eastern Plains and Prey Lang Landscapes Improved¹
Goal Level Indicators:

G.1: Deforestation rate in priority landscapes decreased (custom indicator)

G.2: Number of hectares of biological significance and/or natural resources under improved natural resource management as a result of USG assistance (standard indicator 4.8.1-26)

G.3: Greenhouse gas (GHG) emissions, estimated in metric tons of CO₂e, reduced, sequestered, and/or avoided as a result of USG assistance (standard indicator 4.8-7)

Objective 1: Effectiveness of government and key natural resources managers at national and subnational levels to sustainably manage forests and conserve biodiversity enhanced.

Objective Indicator 0.1.1: Number of stakeholders actively engaged in improved forestry management practices (custom indicator)

Objective Indicator 0.1.2: Population numbers of Endangered Flagship species stable: Endangered Birds in the Prey Lang Landscape and Banteng in Eastern Plains Landscape (custom indicator)

Objective Indicator 0.1.3: Number of scientific assessments of key species completed (custom indicator)

Objective 2: Constructive dialog on forest management and economic development at the national and sub-national levels improved.

Objective Indicator 0.2.1: Number of conservation and NRM conflicts mitigated or acted upon as a result of USG assistance (custom indicator)

Objective Indicator 0.2.2: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes (custom indicator)

Objective 3: Equitable economic benefits from the sustainable management of forests increased.

Objective Indicator 0.3.1: Number of people with increased economic benefits derived from sustainable natural resources management and conservation as a result of USG assistance (standard indicator 4.8.1-6)

¹ Italics indicate custom indicators.

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Sub-objective 1.1: Sub-national Administration (SNA) and sub-national line ministry capacity to effectively meet evolving responsibilities in forest management sector increased.

Sub-objective indicator 1.1.1: Number of land titles and agreements with approved advancement as a result of USG assistance, including Community Forests, Community Protected Areas, Community-based Production Forests, and Indigenous Land Titles (custom indicator)

Sub-Objective 2.1: Effective stakeholder participation in national and sub-national planning processes affecting forest land management and economic development increased.

Sub-objective indicator 2.1.1: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes (custom indicator)

Sub-Objective 3.1: Economic incentives for land use practices that reduce GHG emissions established in targeted landscapes.

Sub-objective indicator 3.1.1: Increase in income levels of target communities due to economically viable livelihood activities as a result of USG assistance (custom indicator)

Sub-Objective 1.2: National level capacity to support the sustainable management of forests, biodiversity conservation, REDD+, and low-emissions development strengthened.

Sub-objective indicator 1.2.1: Number of people receiving USG supported training in natural resources management and/or biodiversity conservation (standard indicator 4.8.1-27)

Sub-Objective 2.2: Stakeholder understanding of forest land management, REDD+, biodiversity conservation, CBNRM, and relevant economic development planning issues strengthened.

Sub-objective indicator 2.2.1: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes (custom indicator)

Sub-objective 3.2: Payment for environmental service (PES) activities (e.g., REDD+) established or supported in targeted landscapes with equitable benefit sharing mechanisms.

Sub-objective indicator 3.2.1: Number of PES agreements approved and implemented (custom indicator)

Sub-Objective 1.3: Local-level technical skills for forest management and biodiversity conservation to support community-based natural resources management improved.

Sub-objective indicator 1.3.1: Number of people receiving USG supported training in natural resources management and/or biodiversity conservation (standard indicator 4.8.1-27)

Sub-Objective 2.3: Dialogue skills of relevant stakeholders (community, government, and private sector) improved to engage with one another on forest and resources issues.

Sub-objective indicator 2.3.1: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes (custom indicator)

Sub-objective indicator 2.3.2: Number of human rights defenders trained and supported (standard indicator 2.1.4-7)

Sub-Objective 3.3: Community participation in income-generating activities broadened, with a special focus on under-represented groups.

Sub-objective indicator 3.3.1: Number of people participating in income generating activities (custom indicator)

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Sub-Objective 1.4: Enabling policies, laws and regulations for low emission development established.

Sub-objective indicator 1.4.1: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance (standard indicator 4.8.2-28)

Sub-Objective 2.4: Monitoring, reporting and verification (MRV) systems implemented or improved.

Sub-objective indicator 2.4.1: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance (standard indicator 4.8.2-28)

Sub-Objective 3.4: Low emission development and REDD+ approaches demonstrated at the sub-national or sector level.

Sub-objective indicator 3.4.1: Number of PES agreements approved and implemented (custom indicator)

Performance Indicators and Annual and LOP Targets

Table 1. Summary of Cambodia SFB Performance Indicators and Annual and LOP Targets

Indicator	Baseline	Y1	Y2	Y3	Y4	LOP Planned
G.1: Deforestation rate in EPL decreased ²	5,967 ³ ha/year	-	-	596 ha/year (10%)	895 ha/year (15%)	895 ha/year (15% below baseline)
Eastern Plains Landscape	(3.07%)	-	-	(10%)	(15%)	(15%)
G.2: Number of hectares of biological significance and/or natural resources under improved natural resource management as a result of USG assistance	0	40,000	160,000	700,000	0	900,000⁴
Eastern Plains Landscape	0	40,000	125,000	620,000	0	785,000
Prey Lang Landscape	0	0	35,000	80,000	0	115,000

² It is recommended that indicators G1 and G3 not be disaggregated. There is no REDD+ project currently in Prey Lang, which means it is not possible to calculate the deforestation rate in PLL (for indicator G1) with any accuracy. The Seima REDD+ project activities will likely contribute a large portion of targets for both indicators. The actions under the Seima REDD+ project are more advanced with a high level of effectiveness, will be calculated based on stringent REDD+ methodology, and therefore will result in large emission changes during the LOP. In Prey Lang emission changes will be based on much smaller CF areas with less effectiveness at reducing emissions, and the reductions will be greater further in the future. The targets for this indicator have not changed, but they are more intuitively expressed as number/ha/year than as a percentage, so both are provided.

³ Baseline figures in June 2015 Revised PMP of 6,478 ha/year (2.54% deforestation rate) from GHG emissions report estimates have been updated in Amended PMP to 5,967 ha/year (3.07% deforestation rate) based on Seima REDD+ Project site specific measurements. See Table 1 in 'Emissions Reduction Calculation for Seima REDD+ Project Area' (Annex B, SFB Quarter 12 Report).

⁴ Target revised: Original LoP target 700,000 hectares. Over 900,000 hectares achieved by Q9 through improved management of existing protected areas in EPL (Mondulkiri Protection Forest, Phnom Prich Wildlife Sanctuary, Seima Protection Forest) and PLL (Preah Vihear Protection Forest) and CF/CPAs outside these areas. In Years 3-4 SFB will continue to work in these same areas. See PMP Revision Notes on Performance Indicator Reference Sheet.

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Indicator	Baseline	Y1	Y2	Y3	Y4	LOP Planned
G.3: Greenhouse gas (GHG) emissions, estimated in metric tons of CO ₂ e, reduced, sequestered, and/or avoided as a result of USG assistance	10,681,244 million metric tons ⁵	0	250,000	250,000	1,000,000	1.5million ₆
0.1.1: Number of stakeholders actively engaged in improved forestry management practices	0	5,000	10,000	10,000	10,000	35,000
Eastern Plains Landscape	0	5000	7,000	7,000	7,000	26,000
Prey Lang Landscape	0		3,000	3,000	3,000	9,000
0.1.2: Population numbers of Endangered Flagship species stable ⁷	Banteng: 2074 Birds: 42 adults (15 nests)	-	-	Stable	Stable	Stable ⁸
Eastern Plains Landscape: Population of Banteng	2074 Banteng	-	-	Stable	Stable	Stable
Prey Lang Landscape: Population of critically endangered birds	42 adults (15 nests)	-	-	Stable	Stable	Stable

⁵ For emissions reductions calculations, baselines are specific to each year and each area. The baseline figure of 626,884 in June 2015 Revised PMEP was only for non-Seima areas for the year 2014. This baseline figure of 10,681,244 has been updated in the Amended PMEP to include baseline emissions from all areas for 2014 and 2015. The original LoP target of 1.5 million metric tons in the original PMEP (approved March 2014) was based on a conservative estimate of what SFB might be able to achieve based only on emissions reductions from the CFs in PLL, in case the Seima REDD+ project were to fail. With the Validation of the Seima REDD+ project in December 2014, SFB is expected to exceed the LoP target for this indicator. However, until Verification is completed (expected by end of 2015) and achievements based on REDD Project results can be reported, the target will remain the same.

⁷ New indicator: Added during PMEP revision (March 2015) to measure how project activities affect conservation of key species and the ecosystems on which they depend. See new Performance Indicator Reference Sheet.

⁸ Stable population the bird surveys, is defined as population within the min-max range in number of mature animals, and no decrease in the number of nests. Stable population is defined for Banteng as <5% decline outside the lower 95% confidence intervals.

Cambodia Supporting Forests and Biodiversity

Indicator	Baseline	Y1	Y2	Y3	Y4	LOP Planned
0.1.3: Number of scientific assessments of key species and ecosystems completed ⁹	0	-	-	3	1	4
1.1.1: Number of land titles and agreements with approved advancement as a result of USG assistance, including Community Forests, Community Protected Areas, Community-based Production Forest, and Indigenous Land Titles ¹⁰	0	6	5	24	0	35¹¹
Eastern Plains Landscape	0	6	5	15	0	26
Prey Lang Landscape	0	0	0	9	0	9
1.2.1 and 1.3.1: Number of people receiving USG-supported training in natural resources management and/or biodiversity conservation	0	1,000	3,000	4,000	2,000	10,000
Eastern Plains Landscape	0	420	1,250	1,670	1,000	4,340
Prey Lang Landscape	0	580	1,750	2,330	1,000	5,660
1.4.1 and 2.4.1: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance	0	12	13	30	5	60¹²

⁹ New indicator: added during PMEP revision (March 2015) to capture SFB's work to conduct scientific assessments of key species to support effective government management over areas of biological significance. See new Performance Indicator Reference Sheet.

¹⁰ Original indicator title "Number of land titles and agreements approved" changed to "Number of land titles and agreements with approved advancement" so the indicator title matches the definition.

¹¹ Target revised: Original LoP target 30 titles and agreements approved; as of Q9, 35 achieved. See PMEP Revision Notes on Performance Indicator Reference Sheet.

¹² Target revised: Original LoP target 50; as of Q9, 53 achieved. Additional management plans are in process for CFs in Prey Lang. See PMEP Revision Notes on Performance Indicator Reference Sheet.

Cambodia Supporting Forests and Biodiversity

Indicator	Baseline	Y1	Y2	Y3	Y4	LOP Planned
0.2.1: Number of conservation and NRM conflicts mitigated or acted upon as a result of USG assistance	0	5	10	20	20	55
Eastern Plains Landscape	0	2	5	10	10	27
Prey Lang Landscape	0	3	5	10	10	28
0.2.2, 2.1.1, 2.2.1 and 2.3.1: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes	0	0	6	7	7	20
Eastern Plains Landscape	0	0	3	3	4	10
Prey Lang Landscape	0	0	3	4	3	10
2.3.2: Number of human rights defenders trained and supported ¹³	0	0	0	50	50	100
0.3.1: Number of people with increased economic benefits derived from sustainable natural resources management and conservation as a result of USG assistance	0	0	30,000	35,000	30,000	95,000
Eastern Plains Landscape		0	18,000	19,600	17,000	54,600
Prey Lang Landscape		0	12,000	15,400	13,000	40,400
3.1.1: Increase in income levels of target communities due to economically viable alternative livelihood activities	\$1,180 ¹⁴	0	0	25%	25%	50%

¹³ New indicator: added during PMEP revision (March 2015) to cover the work on Coming Together for Forests, being implemented by Pact under SFB with special funding from the Human Rights Grants Program. Indicator and targets not disaggregated by landscape because the focus is building a nationwide forest network. See new Performance Indicator Reference Sheet.

¹⁴ Average annual income baseline figure of \$1,573 from SFB Socio-Economic Baseline Study (p8) used in June 2015 revised PMEP has been adjusted to subtract \$393 from off-farm income sources per recommendation in SFB

Indicator	Baseline	Y1	Y2	Y3	Y4	LOP Planned
3.2.1 and 3.4.1: Number of Payment for Environmental Services (PES) agreements approved and implemented	0	0	0	2	2	4
Eastern Plains Landscape	0	0	0	1	1	2
Prey Lang Landscape	0	0	0	1	1	2
3.3.1: Number of people participating in income generating activities	0	0	4,000	5,000	6,000	15,000
Eastern Plains Landscape	0	0	1,000	2,000	3,000	6,000
Prey Lang Landscape	0	0	3,000	3,000	3,000	9,000

Data Collection

The SFB PMEP describes linkages between the project inputs, activities, and intermediate results (IRs), methods for data collection, and specific indicators and targets for measuring program success. The PMEP includes custom and standard indicators that will provide a reliable measure of the achievement of outcomes, sub-IRs, IRs, and overall goal, and annual and end-of-program targets. The proposed indicators will:

- Capture project outputs and outcomes;
- Supply information concerning progress on project activities;
- Provide information for adaptive management; and
- Contribute to USAID’s own informational needs.

Data to be collected include project activity reports, training reports and participant information worksheets, assessments, field research, and stakeholder surveys. Collection will employ proven methodologies and instruments that effectively address SFB and USAID reporting requirements.

Winrock will engage an M&E Specialist who will provide expertise in program monitoring and quarterly and annual performance assessment and reporting over the life of SFB. The M&E Specialist will also provide training to local partners on monitoring methods, and will lead the establishment of baselines, verify project staff monitoring reports, compile data on outcome indicators, identify lessons learned, and conduct a final performance assessment to determine and report on achievement of targets, overall program outcomes and results, and significant achievements and lessons learned. SFB will continue to build capacity for M&E for country teams and local partners, including regular reviews and field site verification to ensure that performance indicator data is collected, recorded, analyzed and stored correctly. Based on these

Annual Income Survey (p6-7). Weighted average is based on proportion of activities in each landscape (~1/3 EPL and 2/3 PLL based on weighted survey sampling to reflect proportion of CF/CPA/ICTs in each landscape engaged in livelihood activities).

reviews, the SFB team will provide follow-on training and mentoring to address any weaknesses in the program's M&E systems and methods, and to institutionalize capacity for M&E within partner organizations.

The M&E Specialist with the guidance and assistance of Winrock home office technical expertise will design and lead an assessment to establish program baselines for each of the indicators included in the PMEP that will allow for future performance assessments. The M&E Specialist will also work with Winrock's technical experts to harmonize monitoring, reporting, and verification (MRV) methodologies, including calculation of carbon emissions baselines, with overall program monitoring methods to track indicators and targets. The M&E Specialist will work with the core management team and technical experts to develop methodologies and a toolkit for program tracking and monitoring to be carried out on an ongoing basis by field staff. The monitoring toolkit will include baseline data, interview and field inspection checklists, survey questionnaires, and reporting formats. Field staff will use the toolkits to carry out systematic data collection, compilation, and reporting.

The M&E Specialist will also lead the process of data analysis, which will also involve the SFB management team, key advisors and the M&E Specialist of USAID. The M&E Specialist will also supervise data collection by field teams, manage data storage systems, and will carry out periodic reviews to verify the findings from ongoing field monitoring, and assess the program's progress in achieving the SFB results and overall goal. The M&E Specialist will consult closely with USAID's M&E specialists, and will develop a strong working relationship with them. The M&E Specialist will also work closely with other USAID-funded natural resource management projects to ensure that data collection methods are harmonized and coordinated.

Finally, this individual will also ascertain and advise whether the program activities are on track to meet sub-IRs and IRs and annual and LOP targets, whether any corrective actions in the program design are needed to achieve the anticipated outcomes, and priorities for management decision-making. He/she will lead a quarterly process to identify lessons learned from the findings of the monitoring and performance assessment process, and to work with the Program management team to develop adaptive management solutions throughout the life of the program. The lessons learned and best practices gleaned through this project will be shared with the SFB's regional, national and sub-national partners through cooperating platforms, networks, training institutions, and project-sponsored conferences, workshops and other events.

Field Surveys

A centerpiece of SFB's PMEP is a field survey – the SFB Livelihoods Survey assessing the impact of SFB on stakeholder livelihoods. This survey will be implemented to inform a number of indicators contained within Winrock's PMEP that seek to capture broader social and behavioral changes in the landscape as a result of SFB's efforts.

The survey will be developed by Winrock in consultation with USAID and local partners. Any additional surveys will be developed based on pre-existing and appropriate methodologies such as the toolkit developed by the Center for International Forestry (CIFOR), which includes the

*Guide to Learning about Livelihood Impacts of REDD+ Projects*¹⁵ and *Technical Guidelines for Research on REDD+ Project Sites*¹⁶. In 2010 Winrock carried out an assessment of needs and options for REDD+ Support within the Lower Mekong Sub-region including Cambodia, funded by USAID through the Asia Regional Biodiversity Conservation Program (ARBCP)¹⁷, the WCS livelihood survey along with other ongoing work which will also contribute.

Surveys will be conducted with an eye towards providing high resolution and validity while minimizing costs. Sample sizes will be selected to ensure reasonable confidence intervals without adding excessive costs; for this reason a stratified methodology will be employed including both random sampling in the population and samples drawn from populations already associated with project activities. Data collection will be handled by enumerators drawn from Cambodian universities and provided training and documented experience in exchange for services rendered. Precise methodology, including confidence intervals and sample sizes, will be determined following award with USAID input.

Data Management

SFB's performance MRV has been designed to provide for the rapid, reliable, and accurate transmission of results from disparate field sites to the central office in Phnom Penh and on to USAID and other partners. Our objective is a dependable system that provides timely results in a cost-effective manner.

Project reports and data will be submitted directly to the M&E Specialist in Phnom Penh or to his or her designee. The M&E Specialist and subordinate staff will have sole responsibility for recording project data in narrative, tabular, and graphical formats, as well as vetting data for accuracy and reliability and conducting field audits as necessary. SFB will be managed in a manner that will keep M&E staff in closer contact with field staff than in decentralized projects, facilitating a very high degree of quality control and oversight.

As each individual project component comes online, the SFB's M&E specialist will coordinate with project management, field staff, and implementing partners to plan for a field reporting system that is most suitable for the type of activity being undertaken and the area of Cambodia where it is occurring. These measures are expected to include written reports in both conventional and digital formats as well as innovative new technical approaches, such as the use of mobile phones and other handheld devices for reporting.

Winrock prides itself on its considerable experience deploying handheld and cellular technologies to innovatively support project M&E in locations as diverse as Cambodia and Kenya, and will provide a high level of field expertise and headquarters support to innovatively address field reporting requirements using new approaches and technologies while making

¹⁵ Jagger P., Sills E.O., Lawlor, K. and Sunderlin, W.D. 2010 A guide to learning about livelihood impacts of REDD+ projects. Occasional paper 56. CIFOR, Bogor, Indonesia.

¹⁶ Sunderlin, W.D., Larson, A.M., Duchelle, A., Sills, E.O., Luttrell, C., Jagger, P., Pattanayak, S. Cronkleton, P. and Ekaputri, A.D. 2010 Technical guidelines for research on REDD+ project sites. CIFOR, Bogor, Indonesia.

¹⁷ Strengthening National REDD+ Readiness through Regional Collaboration: Lower Mekong Subregions REDD+ Workshop Proceedings, funded by USAID-RDMA, organized by Winrock in Hanoi May 6-7, 2010.

effective use of proven and traditional systems where appropriate. An approach tailored to each individual project component will allow SFB to maximize the timely and accurate delivery of results from all sectors of the Project while minimizing transmission errors, training requirements, and cost overruns.

Project data will be stored on a computer server in SFB's Phnom Penh office, where they will be protected by access controls including but not limited to the use of unique password-protected user accounts for SFB computer systems and limiting access to network drives containing M&E records to M&E staff and project managers. To further guarantee the security of SFB results data, multiple backups will be maintained, including backups stored abroad on servers such as those in Winrock's home office. These backups will be updated at regular intervals using both automatic and manual processes.

Reporting Structure

Data will be reported at regular intervals to USAID through the use of regular SFB project reports. These reports will include activity reports, quantitative data including process towards SFB indicator targets, and qualitative data as appropriate to promote additional understanding. Wherever possible, project data will be reported quarterly. Due to the methodological challenges posed by some indicators – such as validity concerns stemming from reporting on activities affected by seasonal cycles and other annual rotations and the cost implications of undertaking an extensive field survey quarterly – those indicators will be reported annually. When dealing with such indicators, SFB will continue to facilitate USAID reporting by providing all applicable data that are practical on a quarterly basis. As appropriate, project training data will also be submitted to USAID's TRAINET data management system.

Expertise in Geographic Information Systems

Winrock's Ecosystem Services team is an industry leader in climate change mitigation activities comprising scientists with backgrounds in geo-spatial analysis, ecology, environmental sciences, and forestry. With more than a decade of applicable experience, Winrock has proven capabilities to provide cutting edge, scientifically robust geospatial solutions for deforestation and biodiversity projects, from ground-up construction of reference levels (RLs) to design and implementation of monitoring systems.

Winrock's geospatial team utilizes land cover data, spatial modeling such as GEOMOD, and spatial distribution of forest carbon stocks to identify forests under threat of deforestation with high carbon stocks. This analysis helps policymakers understand why, where, when and how much forest would be lost if current management practices continue in the future. Winrock has conducted such a threat analysis in Cambodia and elsewhere using MODIS and Landsat land cover data. Winrock has also developed a spatial modeling approach incorporating forest type, information on the historic drivers, and patterns of deforestation and degradation.

Adaptive Management

SFB will be managed using an adaptive, results-based model that makes extensive consideration

and analysis of all project results, outputs, and outcomes. As a component of the M&E Specialist's scope of work, he or she will be charged with constant evaluation of project data coming in from the field. The M&E Specialist will evaluate the project using rubrics including but not limited to trends in the number of partners, activities, and beneficiaries; the amount of progress being made towards SFB's quarterly and annual targets; qualitative data indicative of project successes and impacts, financial information, and other details. Analysis of these data will permit incisive, informed, and timely conclusions about SFB's effectiveness.

The M&E Specialist will be a presence in weekly, monthly, and other regularly scheduled meetings of project leadership. It will be his or her responsibility at these meetings to present the information described above to the COP, the DCOP, and managers. Where problem areas, delays, and inefficiency are identified, project leadership will have the responsibility to craft responsive, evidence-based solutions, in consultation with USAID and partners where appropriate. He/she will lead a quarterly process to identify lessons learned from the findings of the monitoring and performance assessment process, and to work with the Program Management team to develop adaptive management solutions throughout SFB's lifetime.

Adaptive management will be facilitated through a number of strategic decisions exemplified in SFB's PMEP. All applicable indicators are disaggregated by sex, membership in under-represented groups, and zone of intervention (e.g., Prey Lang versus the Eastern Plains). This will permit a high level of resolution not only on whether SFB is meeting agreed-upon targets overall, but also on whether or not service to specific regions and sub-groups is experiencing a specific challenge that requires rectification.

The PMEP also calls for the collection of qualitative data on many performance indicators. These data will be used in some cases to inform or disaggregate quantitative results on appropriate indicator, but will also be available to the M&E specialist, and by extension to project leadership, for the purpose of providing a more nuanced and specific evaluation of project effectiveness and the perceptions of the project by stakeholders in the field. SFB's management plan will preserve and maintain qualitative data with specific respect for and awareness of this benefit.

Evaluations

The SFB M&E process will be designed and implemented in a manner that supports USAID's ability to carry out strong performance evaluations of REDD+ and NRM pilot projects and activities after nine months, at the project midpoint, the project endpoint, and at other points requested or desired by USAID. The M&E process will anticipate a number of lines of inquiry and will be designed to respond and facilitate response to questions such as:

How do different types of protected area titles and concessions (i.e., Community Forest, Community Protected Area, and Indigenous Forest) differently affect NRM outcomes? SFB will maintain information on project sites designated as community forests, community protected areas, and indigenous forests, and where possible will also attempt to collect information on economic land concessions. SFB staff will attempt to support multiple forms of conservation areas and establish relationships with their governance bodies, permitting evaluation of how different forms of legal designation for conservation areas affect outcomes.

To what degree are conservation-based enterprise development and livelihoods measures self-sustaining?

Through project technical assistance results occurring especially under Objective 3 – as well as continuing connections and relationships with organizations assisted and SFB’s implementing partners – it will be possible to undertake an analysis of alternative livelihoods measures and how well they sustain themselves on the free market once undertaken. What forms of environmentally sustainable alternative income sources continue to provide real revenue for those that practice them? Are alternative livelihoods measures competitive in terms of their opportunity costs, especially compared with non-sustainable and traditional livelihoods?

It may also be possible to ascertain if stakeholders are undertaking sustainable alternative livelihoods in *combinations* that are especially effective in terms of resource use, labor, and financial costs. To facilitate this form of assessment, SFB will keep detailed records of evaluations at the community level that will include types of livelihoods and their economic benefits. These data will be available from SFB livelihoods assessments undertaken as a component of SFB’s PMEPP.

To what degree did SFB effectively deliver services and real change?

SFB’s records will also be carefully maintained and available to facilitate assessments into SFB’s direct effectiveness and efficiency. Project staff and sub-grantees will be carefully trained and instructed to maintain thorough and complete activity records and financial data. In conjunction with the indicators listed under SFB’s M&E plan, these records will allow effective evaluation of SFB as a development project and will permit USAID to make credible and persuasive reports to US-based stakeholders.

Illustrative PMEP

The following table summarizes and discusses each indicator being proposed by the Winrock Team to monitor and evaluate SFB.

Cambodia SFB Performance Indicator Reference Sheets

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Indicator	G.1: Deforestation rate in EPL decreased
Target	895 ha/year (15% below baseline)
Definition	<p>This indicator measures the change in the rate of deforestation in the Eastern Plains. This indicator will measure the overall on-the-ground impact of the project’s multiple activities and outputs in terms of SFB’s overall goal. The rate of deforestation measures the amount of annual reduction in forest coverage as a percentage of the reference level forest coverage. All forest cover, including both old growth and new growth forests and regardless of the classification of the forest ecosystem (i.e. evergreen, deciduous, bamboo) is intended for inclusion under this indicator. In an optimal scenario, a negative deforestation rate would serve to indicate that replanting exceeds deforestation.</p> <p>This indicator will measure the impact of the Seima REDD+ project on the Eastern Plains. It does not cover Prey Lang because there is no REDD+ project in that landscape.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Linkage to Long-Term Outcome or Impact	Deforestation and land degradation, along with Global Climate Change are among the primary causes for loss of biodiversity in Cambodia. The SFB project will address the drivers of deforestation through policy reform, increased capacity for forest management and conservation, and interventions to improve livelihoods through land uses that provide an alternative to deforestation. Reducing Emissions from Deforestation and Forest Degradation (REDD+) is an initiative to cut GHG emissions associated with forest clearing or conversion, using carbon market mechanisms to provide compensation or payments for “avoided deforestation”. REDD+ initiatives give additional consideration beyond reducing deforestation, forest degradation, GHG emissions and take into account ecosystem services and benefits for biodiversity conservation, watershed protection, and rural economies. Through REDD+ pilot projects, national and sub-national agencies and local organizations demonstrate mechanisms through which they receive payment for producing verified GHG emissions reductions or enhancement of carbon stocks. In addition to demonstrating these mechanisms, the pilot projects allow participating countries to build capacity, strengthen policy frameworks, institutionalize methods for tracking deforestation rates and forest carbon measurement, and put in place the financial architecture for a forest carbon market system that can generate revenues for long-term sustainable forest management, with corollary benefits of biodiversity conservation and other environmental services.
Indicator Type	Outcome
Unit of Measure	Percentage
Data Collection Method	Using satellite imagery and/or other GIS technology as appropriate to map forest and non-forest areas within the Eastern Plains regions over a historical period. That data will then be used to project annual deforestation rates over the life of the project in the absence of the project (i.e., baseline) as compared to the deforestation rate with the REDD+ project. The Seima REDD+ project documents will provide independently audited data based on methods approved by the Verified Carbon Standard.
Use of Indicator	This indicator will measure whether project interventions are having the intended impact to address the drivers of deforestation through policy reform, improved planning and practices for forest management and conservation, and alternative resource and land use and livelihoods strategies. A reduced rate of deforestation will validate the program design and planned interventions. Reduced rates of deforestation should also correlate with reduced GHG emissions from forestry and land use.
Data Source and Reporting Frequency	Data will be reported based on the Seima REDD+ project documents from the Verified Carbon Standard certification process. Reported Annually

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Known Data Limitations	The quality of remote sensing imagery can be affected by a number of factors, including cloud cover, atmospheric conditions, etc.
Baseline Timeframe	<p>Baseline deforestation rates will be based on a projection of historical analyses of deforestation.</p> <p>Baselines will be established in the third quarter of year two by utilizing the Seima REDD+ Project documents, which are based on Verified Carbon Standard methodologies that use satellite imagery and/or other GIS technology as appropriate to map forest and non-forest areas within the Eastern Plains over a historical period. That data will then be used to project annual deforestation rates over the life of the project in the absence of the project (e.g., baseline).</p> <p>Actual deforestation as a result of the project will be estimated. The change in deforestation rates will be calculated as the difference between baseline and actual deforestation rates using the same technologies.</p>
Baseline Established	5,967 ha/year (3.07 %) ¹⁸
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	None
Indicator	G.2: Number of Hectares of Biological Significance and/or Natural Resources under improved natural resource management as a result of USG assistance
Target	Original: 700,000 hectares – Revised: 900,000 hectares
Definition	<p>Standard Definition: “Improved natural resource management” includes activities that promote enhanced management of natural resources for one or more objectives, such as conserving biodiversity, sustaining soil or water resources, mitigating climate change, and/or promoting sustainable agriculture.</p> <p>Management should be guided by a stakeholder-endorsed process following principles of sustainable NRM and conservation, improved human and institutional capacity for sustainable NRM and conservation, access to better information for decision-making, and/or adoption of sustainable NRM and conservation practices.</p> <p>An area is considered under "improved management" when any one of the following occurs: a change in legal status favors conservation or</p>

¹⁸ Baseline figures in June 2015 Revised PMEP of 6,478 ha/year (3.07% deforestation rate) from GHG emissions report estimates have been updated in Amended PMEP based on Seima REDD+ Project site specific measurements. See Table 1 in ‘Emissions Reduction Calculation for Seima REDD+ Project Area’ (Annex B, SFB Quarter 12 Report).

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
	<p>sustainable NRM (for CFs and CPAs, advancing one full step in the establishment process is a change in legal status); a local site assessment is completed which informs management planning; management actions are designed with appropriate participation; human and institutional capacity is developed; management actions are implemented; ongoing monitoring and evaluation is established; adaptive management is demonstrated; or on-the-ground management impacts are demonstrated (e.g., illegal roads closed, snares removed, no-fishing zones demarcated).</p> <p>Reported as total number of hectares improved during the fiscal year in question, which can include maintained improvement in previously reported hectares and/or new, additional hectares. Improved management should be reported for activities where the USAID supported program was plausibly linked to the improvements observed.</p> <p>Precise Definition(s): Improved management includes activities that promote enhanced management of natural resources for one or more objectives, such as sustaining soil and/or water resources, mitigating climate change, conserving biodiversity, and/or promoting sustainable agriculture. SFB supports improved management of Royal Government of Cambodia (RGC) protected areas, Community Forests (CFs), Community-Based Production Forest (CBPF), and Community Protected Areas (CPAs) through a mix of different activities in each area including: establishment of land agreements and management plans; patrolling to prevent land encroachment, illegal logging and wildlife poaching; forest inventories and biodiversity assessments; and capacity building of the people and institutions managing the areas. These activities contribute to overall improved management of the entire area. CFs, CBPF and CPAs will be considered to be under improved management when the forest and land use agreements or management plans have been revised and approved by local authorities for advancement through the establishment steps and/or when management actions have been implemented with appropriate participation (e.g., boundary pole installation). RGC protected areas will be considered under improved management when protected area managers/rangers are trained and outfitted with equipment for systematic patrolling, assessments of key species are conducted and findings integrated into management plans/patrols, and illegal activities are being routinely prevented/reported to relevant authorities for follow-up.</p> <p>For areas where overall management has been improved, the number of hectares reported will be based on the established boundaries of the area.</p>

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
	<p>Multiple activities to maintain and enhance improvement of the same areas will continue throughout the life of project, however, each hectare will only be counted once regardless of how many different practices are applied or if they are applied over multiple years. Hectares of CFs, CPAs, or ICTs within large protected areas will only be counted once, included as part of the larger area.</p> <p>Any hectares within the boundaries of existing protected areas and inside the proposed Prey Lang protection forest core zone (if defined) will be considered of biological significance. CFs and CPAs outside the boundaries of existing protected areas and in the Prey Lang buffer zone, and the CBPF (which is outside of the Seima core zone), will be considered natural resource hectares.</p>
New or Existing Indicator?	Existing Standard Indicator: 4.8.1-26
Primary Program Area (Program Element for IIP) Linkage	4.8 – Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 – Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	<p>A spatial indicator is an appropriate measure of the scale of impact of biodiversity conservation and/or NRM interventions. Good management of natural resources is a prerequisite for achieving improved biophysical condition of natural resources.</p> <p>SFB will build capacity in national and sub-national government agencies and other organizations, including community-based organizations such as community forestry associations to develop/revise and adapt local level forest and land use policies and management plans to address drivers of deforestation and degradation and to include improved management practices aimed at reducing and avoiding carbon emissions, conserving biodiversity, and sustaining the forest ecosystem and the environmental services it provides. If the area under improved management increases, this will demonstrate that capacities have been increased and that the best practices that the program promotes are being applied. An increase in area under improved management is also evidence that local populations value the environmental services that the ecosystems provide.</p>
Indicator Type	Output

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Unit of Measure	Hectares
Data Collection Method	<p>SFB is working to improve overall management of CFs, CBPF, CPAs, and RGC protected areas delineated by established boundaries. Activities implemented in each area will be tracked and hectares reported for areas that meet the conditions to be considered under improved management as outlined in the precise definition. Hectares reported will be the total size of each area according to copies of official documents that state the number of hectares within the area as determined by GPS coordinates of the boundaries and GIS spatial analysis.</p> <p>The SFB team will determine benchmarks to gauge success in improving forest management and conservation of existing RGC large protected areas. Benchmarks could include improved patrolling, improved management plans through incorporation of biodiversity assessment data, prevention of illegal activities or encroachment, or status trends of key species. A key species is a species of plant or animal which is either of elevated conservation concern itself (typically one at risk of extinction nationally or globally) or forms a good indicator species for the status of others that are of elevated concern. Status trends are derived from a monitoring system for collecting reliable, comparable information over time about the status of a species population at a site (abundance, threats and other causes of change). Such information may be quantitative or qualitative and represent absolute abundance or an indirect index of status. Methodologies for monitoring key species' status trends will be developed for each species to be monitored (methodologies will vary depending on whether the species is an avian or terrestrial animal, population parameters, and site characteristics). Status trends for key species in protected areas (banteng in EPL and birds in PLL) will be reported annually against indicator 0.1.2 'population numbers of endangered flagship species stable.'</p> <p>Tools for monitoring and reporting on management of existing large protected areas could include the Management Effectiveness Tracking Tool (METT) and the Spatial Monitoring and Reporting Tool (SMART). METT is used to report progress on protected area management and can serve as a scoring system. SMART is a technology to manage, analyze and interpret ranger-based data, and adaptive patrol management in conservation areas.</p> <p>To demonstrate improved management of existing RGC protected areas, SFB will report quarterly on specific actions taken towards the following components:</p>

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
	<ul style="list-style-type: none"> • Protected area managers/rangers trained (e.g., using Minimum Enforcement Standard, SMART); refresher trainings conducted annually. • Rangers outfitted with needed equipment - equipment inventory and maintenance in place. • Biodiversity assessments of key species (e.g., line transect, camera traps). • Protected area zoning identifies critical areas based on biodiversity and threat assessments, and patrols prioritize these areas. • Biodiversity assessment data incorporated into management plans. • Management plans and zoning endorsed by relevant authorities. • Systematic/regular protected area patrolling within boundaries - SMART or monthly patrol team reports, staff duty list. • Illegal activities prevented, reported, and acted upon - SMART data as reference.
Use of Indicator	Measures of this indicator demonstrate progress towards sustainable natural resource governance and institutions, and can inform adaptive management of programs. This indicator is a reliable annual measure that demonstrates the magnitude of USG investments in biodiversity conservation and other natural resource sectors.
Data Source and Reporting Frequency	SFB program and partner organizations' GIS databases, maps, forest management plans, and field data records; official documents that specify the size of the area (e.g. FA cantonment or Department of Environment requests to establish CFs, CF agreements, protected area sub-decrees, CF or CPA management plans). Reported Quarterly
Known Data Limitations	<p>Area measurement is based on official documents that state the size based on clearly established boundaries. GPS shapefiles and maps are used to avoid any double counting of potentially overlapping hectares (for example, hectares of CPAs or CFs that are inside larger protected areas are claimed only once as part of the larger area). Partner staff verifies improved management actions in each area at the field level through activities like boundary delineation and demarcation of CFs, forest inventories for CF/CPA management plans, or routine patrolling of large protected areas.</p> <p>Baseline data for key species populations in the priority landscapes is available only for a few species for use in monitoring status trends.</p>
Baseline Timeframe	At the start of the project, the baseline values will be set to zero for both landscapes, as was done in the HARVEST project.

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]; Land Use classification [biological significance, natural resources]
PMEP Revision Notes – Target Revised	Original LoP target 700,000 hectares. Target raised to 900,000 because 908,122 hectares achieved by Q9 through improved management of existing large protected areas in EPL (Mondulkiri Protection Forest, Phnom Prich Wildlife Sanctuary, Seima Protection Forest) and PLL (Preah Vihear Protection Forest) and CFs/CPAs outside these areas. In Years 3-4, SFB will continue to strengthen improved management of these same areas.
Indicator	G.3: Greenhouse gas (GHG) emissions, measured in metric tons of CO_{2e}, reduced, sequestered, and/or avoided as a result of USG assistance
Target	1.5 million metric tons
Definition	<p>Standard Definition: The CO_{2e} emissions reduced or sequestered as a result of USG programs in climate change, natural resource management, agriculture, biodiversity, energy, industry, urban, transport and other relevant sectors.</p> <p>Precise Definition(s): The amount of emissions, in metric tons of carbon dioxide equivalent (CO_{2e}), which is reduced or sequestered as a result of USG programs in natural resources management, agriculture, agroforestry, biodiversity and/or the forestry land use sector. Carbon sequestration refers to removing CO₂ from the atmosphere by enhancing natural sequestration through plants. This indicator includes increased carbon sequestration from SFB activities, including enhanced natural resources management, forest governance, and alternative livelihood activities.</p> <p>CO_{2e} emissions reduction refers to decreased GHG emissions from forestry and land use sectors. Carbon dioxide equivalent (CO_{2e}) is calculated to convert quantities of greenhouse gases into a common, comparable measure that has a well-defined global warming potential effect. The SFB team will not monitor specific GHGs but use carbon dioxide equivalent (CO_{2e}) as a universal unit of measurement for the six greenhouse gases. It is used to evaluate the impacts of releasing or avoiding the release of different GHGs. Carbon dioxide equivalent is the standard measurement unit for both the US Government and international accounting under the UNFCCC.</p>
New or Existing Indicator?	Existing Standard Indicator 4.8-7

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
Primary Program Area (Program Element for IIP) Linkage	4.8 – Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 – Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	<p>Reducing GHG emissions has long-term impacts on slowing climate change, and global implications for the extent of impacts. Reducing GHG emissions can also have strong ancillary benefits for pollution, security, health, and women.</p> <p>The SFB project will address the drivers of deforestation through policy reform, increased capacity for forest management and conservation, and interventions to improve livelihoods through land uses that provide an alternative to deforestation. Reducing Emissions from Deforestation and Forest Degradation (REDD+) is an initiative to cut GHG emissions associated with forest clearing or conversion, using carbon market mechanisms to provide compensation or payments for “avoided deforestation.” REDD+ initiatives give additional consideration beyond reducing deforestation, forest degradation, GHG emissions and take into account ecosystem services and benefits for biodiversity conservation, watershed protection, and rural economies.</p> <p>Through REDD+ pilot projects, national and sub-national agencies and local organizations demonstrate mechanisms through which they receive payment for producing verified GHG emissions reductions or enhancement of carbon stocks. In addition to demonstrating these mechanisms, the pilot projects allow participating countries to build capacity, strengthen policy frameworks, institutionalize methods for tracking deforestation rates and forest carbon measurement, and put in place the financial architecture for a forest carbon market system that can generate revenues for long-term sustainable forest management, with corollary benefits of biodiversity conservation and other environmental services.</p>
Indicator Type	Outcome
Unit of Measure	Metric Tons of Carbon Dioxide Equivalent (CO ₂ e)
Data Collection Method	For PLL, CO ₂ e emissions reduction or sequestration will be estimated using USAID AFOLU Carbon Calculator based on forest cover in areas of SFB intervention and the specific set of activities being implemented in each area. The AFOLU Calculator outputs annual CO ₂ equivalent figures for each area of intervention, based on the influence area of each

Cambodia Supporting Forests and Biodiversity

Goal	Conservation and Governance of the Eastern Plains and Prey Lang landscapes improved
Required Information	Response
	complementary metal oxide (CMO) image sensor and other necessary data collected from RGC records, field surveys, and global imaging data, GIS analysis, and ground-truthing measurements. For EPL, reporting will be based on AFOLU for all non-Seima Protection Forest areas and the REDD+ validation documents for Seima.
Use of Indicator	Reporting and accountability by in-country program implementers. Progress will be noted at UNFCCC international climate change negotiations, will be used to capture the impact of USAID's GCC portfolio for domestic and international audiences. CO ₂ equivalent is now the world-wide standard measure of carbon emissions reductions or sequestration and represents the effectiveness and scale of USG program impacts designed to reduce levels of greenhouse gases in the atmosphere.
Data Source and Reporting Frequency	AFOLU calculator results and Seima REDD+ project documents (based on maps, GIS data, field surveys, forest and other natural resource inventories, carbon registries, reports from the RGC and partners, and data generated from application of MRV methodologies). Reported Annually.
Known Data Limitations	Some MRV methodologies may need to be developed or adapted for unique ecosystems. Winrock experts and participating partner organizations will develop or adapt MRV methodologies as needed.
Baseline Timeframe	Baseline data will be established in the third quarter of year two by experts employing satellite imagery, GIS data, and data from field surveys. The data surveys will be conducted in year two. Note on baseline calculation for this indicator: baselines for GHG emission are unique to each reporting year.
Baseline Established	10,681,244 million metric tons CO ₂ e for 2014 and 2015 (Y2 and Y3 of SFB) based on all areas using AFOLU calculations for all areas but Seima and REDD+ project documents for Seima Protection Forest. ¹⁹
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]

Objective	1: Effectiveness of government and key natural resources managers at national and subnational levels to sustainably manage forests and conserve biodiversity enhanced
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¹⁹ The baseline figure of 626,884 in June 2015 Revised PMEP was for only non-Seima areas for the year 2014. This figure has been updated in the Amended PMEP to include baseline emissions from all areas for 2014 and 2015.

Cambodia Supporting Forests and Biodiversity

Required Information	Response
Indicator	0.1.1: Number of stakeholders actively engaged in improved forestry management practices
Target	35,000 people (individuals)
Definition	<p>This indicator will measure those stakeholders actively engaged with efforts to reduce deforestation and improve forest management. This includes both stakeholders in SFB target provinces and others at the national level such as government officials, students and youth groups engaged through awareness campaigns, and forest community groups across the country engaged in the Coming Together for Forests initiative. Stakeholders are defined to include both individuals and organizations participating in SFB project activities. However, only individuals will be reported under this indicator, organizational stakeholders will be tracked separately and information provided on an as-needed basis. Organizational stakeholders will include government agencies, partner organizations, civil society and advocacy organizations, policy and research institutions, professional associations, NGOs, community-based organizations, community-level resource-based enterprises, producer associations, private sector partners, student/alumni groups, women’s unions, and youth clubs. Individual stakeholders will include members, representatives, or associates of these organizations.</p> <p>Stakeholder engagement could include membership/participation in community-based resource governance committees or the Seima REDD+ project, adoption of improved management practices, assessment and/or replication of technology demonstrations or best practices, constructive dialogue related to policy reform and to advance policy implementation, participation in public awareness campaigns or environmental education, and dissemination of public awareness messages and materials. Stakeholders actively engaged through people directly participating in SFB activities will be counted under this indicator also, including: members of CFs, CBPF and CPAs involved in the establishment process and constructive dialogues; people represented by the network leaders engaged in the nationwide Coming Together for Forests initiative; members of youth groups whose leaders are engaged in the awareness campaign.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program	N/A

Cambodia Supporting Forests and Biodiversity

Sub-Element for IIP) Linkage	
Linkage to Long-Term Outcome or Impact	Active engagement by stakeholders will demonstrate the effectiveness of project sponsored training and other capacity building and empowerment activities. Increased stakeholder engagement in management and protection of conservation areas will lead to more effective governance and the normalization of practices and behaviors that protect and conserve natural resources and reduce deforestation. Active engagement by stakeholders will also result in increased awareness of forest management and biodiversity conservation issues. Stakeholders who are familiar with and knowledgeable about these issues are more likely to support and advocate for improved forest management policies, and to hold their government representatives accountable for implementation of existing policies and enforcement of regulations. This will contribute to creating the enabling conditions to counteract corruption and increase awareness of and compliance with international standards and safeguards.
Indicator Type	Outcome
Unit of Measure	Individual (Number)
Data Collection Method	<p>Data will be collected through attendance sheets on number of stakeholders who have participated in an SFB project activity such as CF, CPA, CBPF, and ICT members, provincial committees for forest, biodiversity and development, REDD+ participants, students, and any other group who are actively engaged by putting into practice the training, skills, tools, methods, or capabilities that they have gained as a result of SFB activities. Data on people engaged through network leaders will be collected using representatives' signed name lists, and data on members engaged through youth leaders will be collected from youth group entity records. For an individual to be counted under this indicator, they must exhibit a concrete behavioral change or active participation in activities aimed at improving forest management.</p> <p>Project staff will use direct observation of stakeholder activities aimed at improving forest management, and other project activities, through which there are opportunities for active stakeholder engagement, such as public fora, policy roundtables, public awareness campaigns, field demonstrations, and participation in local natural resource management organizations/committees. Direct observation will be supplemented by surveys which will be conducted by the SFB project to measure stakeholder perceptions of their own engagement and that of other stakeholders. The survey will use a mix of both multiple choice and open-ended questions to allow project participants to self-assess their level of engagement in improved forest management practices. Survey questions will also be designed to collect data on the type of activities in which the participants have been engaged, their understanding and perceptions of how the activity contributes to improved forest management, and their interest in engaging in other related activities. This will provide useful</p>

Cambodia Supporting Forests and Biodiversity

	<p>information, not only in terms of project performance, but also in the adaptive design of follow-on activities. The selection of individuals to be included in the survey will not be completely random, as the survey will target individuals who are involved in project supported interventions related to improved forest management, such as training, demonstrations, and other activities. Furthermore the selection of participants for the survey will be stratified to include women and under-represented groups (ethnic and religious minorities as appropriate). We anticipate that the survey will administer the questionnaire to between 100 – 150 project participants. The SFB team will engage a local consultant to assist in designing the survey, determine the number of interviews needed to obtain reliable results, and to stratify the sample group to accurately reflect the target population.</p>
Use of Indicator	<p>This indicator will be used as a measure of government commitment to more participatory governance of natural resources, recognition of stakeholders’ multiple environmental values, and commitment to increased consultation with stakeholders to mitigate conflict.</p>
Data Source and Reporting Frequency	<p>Stakeholder engagement in community-based forest management committees, enterprises, producer associations, public forums or dialogues, forest network initiative, youth awareness campaign, and other activities that require active participant engagement in improved forest management will be reported by partners and small grant recipients in reports on a quarterly basis.</p>
Known Data Limitations	<p>Key informant interviews will be conducted on an annual basis to assess stakeholders’ level of engagement and verify that the number of stakeholders reported meet the definition for active engagement in improved forest management.</p>
Baseline Timeframe	<p>The baseline will be set to zero at the start of the project.</p>
Responsibility	<p>Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org</p>
Disaggregate(s)	<p>Individual; Sex [Female, Male], Ethnicity [Khmer, non-Khmer (indigenous people and other religious minorities)]; Level (for government officials only) [National, Sub-National]</p>
Indicator	<p>0.1.2. Population numbers of Endangered Flagship species: Banteng (<i>Bos javanicus</i>) in the Eastern Plains and Endangered Birds in Prey Lang.</p>
Target	<p>Stable population (within min-max range)</p>
Definition	<p>This indicator will measure the population numbers of selected flagship species, iconic endangered species which are expected to respond to the project’s efforts to reduce deforestation and improve biodiversity conservation.</p> <p>A flagship species is a species of plant or animal which is either of elevated conservation concern itself (typically one at risk of extinction nationally or globally) or forms a good indicator species for the status of others that are of elevated concern. The flagship species in this case are</p>

	<p>selected based on their Endangered status, their presence in, and extensive coverage of, the landscapes, their iconic ‘flagship’ status, and the availability of existing baseline data on their populations.</p> <p>A stable population means that there is no statistically significant decline in the density of the species across the sampling area within the landscape. Specifically “Stable” is defined for Banteng as <5% decline outside the lower 95% confidence intervals. For the bird surveys, it is defined as population within the min-max range in number of mature animals, and no decrease in the number of nests detected during standardized surveys.</p> <p>Endangered wild cattle (Banteng) in EPL:</p> <ul style="list-style-type: none"> • Banteng (<i>Bos javanicus</i>) are an endangered species which are a key part of the ecosystem in the Eastern Plains, and a major conservation icon. • The total global population is estimated by the IUCN as 8,000 individuals, but could be as low as 5,000. • The population in the Eastern Plains is fast becoming recognized as the most significant population in the world, with a population estimate of 2,074 in 2011/12, which has been estimated using robust scientific methods. <p>Critically Endangered birds in PLL include:</p> <ul style="list-style-type: none"> • Giant Ibis (<i>Thaumatibis gigantean</i>): <ul style="list-style-type: none"> ○ Critically Endangered. ○ Cambodia’s National Bird. ○ Number 1 on global EDGE list. • 3 vulture species (all Critically Endangered): <ul style="list-style-type: none"> ○ White-rumped Vulture (<i>Gyps bengalensis</i>). ○ Slender-billed Vulture (<i>Gyps tenuirostris</i>) ○ Red-headed Vulture (<i>Sarcogyps calvus</i>). • Recent surveys have found a baseline of 42 of these birds in the sampling area in northern Prey Lang Landscape.
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	4.8 – Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 – Natural Resources and Biodiversity

Cambodia Supporting Forests and Biodiversity

<p>Linkage to Long-Term Outcome or Impact</p>	<p>Conservation targets frequently incorporate positive responses by populations of rare or endangered species to conservation interventions. Monitoring these populations requires information on species distribution, density and abundance, and other relevant biological parameters. In its simplest form, monitoring the density of a population is a direct measure of the impact of biodiversity conservation work. Selecting wide-ranging species with large home ranges such as Banteng, which are considered globally important will assist with maintaining and enforcing governance over large tracts of protected areas. Understanding Banteng distribution will also aid in any future mitigation measures required for future development within the landscape, and will ensure that critical habitats, corridors, and linkages within the landscape remain and achieve improved condition. The critically endangered bird species highlighted, promote conservation on biodiversity including mosaic habitats that support these vulnerable species, coupled with the ecosystem services that they provide.</p> <p>Population data and species presence information collated under the SFB project will assist with providing key information to all relevant stakeholders (national and sub-national, governmental, community based organizations and private sectors). Improved forest and biodiversity management will be demonstrated in stable populations of these important flagship species. The successful monitoring of biodiversity indicators is an essential aspect to natural resource management, and this indicator will reflect the increase in capacity at a national and sub-national level of natural resource managers to implement research that both informs management actions and decisions, and reflects the success of project activities.</p>
<p>Indicator Type</p>	<p>Outcome</p>
<p>Unit of Measure</p>	<p>Population estimate (Number); 95% confidence interval (Range), or minimum count (mature individuals) and minimum count (nests) in the sampling area.</p>
<p>Data Collection Method</p>	<p>Data will be collected on the species in question, using robust scientific monitoring techniques. Line transect-based distance sampling is one of the most widely applied method for estimating the abundance of biological populations, and is used on an annual or twice-annual basis in the EPL. Historical baselines exist for Banteng in the EPL already, and temporal comparison is appropriate as the same method has always been used for this species.</p> <p>For the suite of threatened bird species in PLL, changes in relative population density will be measured by continuing with the survey methodology that has been used to successfully monitor these species for several years. This allows the use of historical data to be used as a baseline from which changes in population as a result of the SFB Project can be measured. The vulture species are effectively measured using vulture “restaurants”, and these surveys will be continued, in coordination with</p>

Cambodia Supporting Forests and Biodiversity

	the national vulture census.
Use of Indicator	This indicator will be used as a measure of the impacts of biodiversity conservation activities. This indicator is a reliable measure that demonstrates the real target-level impacts of USG investments in the biodiversity conservation sectors.
Data Source and Reporting Frequency	All historic data on the flagship species have been collected by either WWF or WCS in collaboration with the Forestry Administration or the Ministry of Environment, and WWF and WCS retain user rights to these data. All new data will be collected by WWF and WCS in collaboration with government partners. The data for birds will be reported in Year 3 and Year 4. Incidental data on Banteng will be reported in Year 3, Year 4, and LOP end.
Known Data Limitations	Data on Banteng from Seima Protection Forest are marginally less precise than from the other two protected areas due to lower underlying density (a result of larger areas of evergreen and semi-evergreen forest). Estimates are improved by “pooling” data from across the landscape – a recommended and accepted method under such circumstances. For birds the two methods employed result in “minimum count” estimates, which can only be used to measure relative changes in population abundance as the probability of detection is not incorporated into the methodology. Therefore, these methods preclude absolute population estimates with degrees of uncertainty. These methods are however, appropriate for the species within this landscape, and have been widely published in the peer-reviewed literature.
Baseline Timeframe	The baseline will developed from combined data held by project partners from intensive biodiversity monitoring work done prior to the start of the project.
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]; Species.
PMEP Revision – Indicator Added	The SFB mid-term evaluation suggested adding one or more biodiversity indicators to the PMEP. This outcome level indicator captures SFB’s work to support key species conservation in areas of biological significance.
Indicator	0.1.3: Number of scientific assessments of key species and ecosystems completed
Target	4 scientific assessments
Definition	This indicator will measure the number of scientific assessments completed that provide information about the status of key species in Prey Lang (which includes a portion of Preah Vihear Protection Forest and the

Cambodia Supporting Forests and Biodiversity

	<p>PVPF extension) and Eastern Plains Landscapes and the ecosystems on which they depend. Data on the presence of key species will be collected using robust scientific monitoring techniques, such as line transect sampling and camera trapping to estimate population densities. Where possible, data from previous scientific studies conducted in the same area will be used as a point of comparison to assess if/how the populations of key species have changed over time. Ecosystem services assessments will be based on existing data, spatial analysis.</p> <p>Assessments will be considered “completed” when all fieldwork has been conducted, data analyzed, and the draft assessment report is issued.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	4.8 – Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 – Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	<p>Scientific assessments of key species provide important information to decision-makers tasked with protecting Cambodia’s forests and biodiversity (e.g., government ministries like MAFF and MoE, protected area managers). Assessments that compare existing key species populations with population counts in previous years are a measure of the success or failure of conservation efforts in those areas. Assessments that highlight the biological significance of Prey Lang will be used to rally support for approval of the proposed Prey Lang Protection Forest, gaining official protected area status for this landscape.</p>
Indicator Type	Output
Unit of Measure	Scientific studies assessing biodiversity and ecosystem services in EPL and PLL (Number of assessment reports completed and submitted)
Data Collection Method	The SFB team will count the number of scientific assessments that have been completed with SFB funding.
Use of Indicator	Key species assessments are an input towards improved management of areas of biological significance (indicator G2).
Data Source and Reporting Frequency	Quarterly
Known Data Limitations	N/A
Baseline Timeframe	The baseline will be set to zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]

Cambodia Supporting Forests and Biodiversity

PMEP Revision – Indicator Added	The SFB mid-term evaluation suggested adding one or more biodiversity indicators to the PMEP. This output level indicator captures SFB’s work to conduct scientific assessments of key species to support effective government management over areas of biological significance.
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Sub-Objective	1.1: Sub-national Administration (SNA) and sub-national line ministry capacity to effectively meet evolving responsibilities in forest management sector increased.
Required Information	Response
Indicator	1.1.1: Number of land titles and agreements with approved advancement as a result of USG assistance, including Community Forests, Community Protected Areas, Community-based Production Forests, and Indigenous Land Titles
Target	Original: 30 – Revised: 35
Definition	<p>SFB will support the increase in conservation areas formalized and under effective local governance through land agreements or titles endorsed by the RGC. Various levels of RGC approval are required for advancement through each step in the CF, CBPF, CPA, and ICT establishment processes, which take many years to complete in full. This indicator will count the number of land agreements or titles (and report the area (hectares) and the number of households under each agreement) that have been approved by the RGC to advance through at least one establishment step towards a designated classification based on agreements negotiated through the assistance and support of SFB. These designated classifications include Community Forest, Community Protected Area, Community-based Production Forest, and Indigenous Land Title area.</p> <p>The project team will provide training and technical assistance to support the necessary policy or legal changes, community organization and capacity building for resource governance, area demarcation and management planning, and preparation of documents required to complete the establishment steps for a land agreement or title. The indicator will count titles and agreements that have advanced a full step in the establishment process under SFB funding. Each land title or agreement is only counted once, regardless of how many steps are advanced under the SFB Project. The reporting format, showing how advancement through the steps will be tracked and reported, is attached to the PMEP in Annex 1.</p> <p>The steps in the formalization process for each designated classification are:</p> <p>CF/CBPF Establishment Steps</p> <ol style="list-style-type: none"> 0. Identification of Potential CF Area 1. CF Establishment

Cambodia Supporting Forests and Biodiversity

	<ol style="list-style-type: none"> 2. Information gathering 3. Establishment of Community Forestry Management Structure 4. Preparation of internal by-laws of CF management committee 5. Demarcation and mapping of community Forestry boundary 6. Preparation of community forestry regulation 7. Preparation and approval of the community forestry agreement 8. Preparation of community forestry management plan 9. Enterprise development 10. Implementation of CF management plan 11. Monitoring and evaluation <p>CPA Establishment Steps</p> <ol style="list-style-type: none"> 1. Participatory assessment and consultation 2. Submission for approval on establishing a CPA 3. Development a management structure for a CPA 4. Delineating the boundaries of a CPA 5. Development of a CPA regulation 6. Development of a CPA Agreement 7. Development of a CPA management plan 8. Monitoring and evaluation of CPA management <p>ICT Establishment Steps</p> <ol style="list-style-type: none"> 1. Capacity building 2. Indigenous community identify 3. Draft of regulation and ICC election 4. IC regulation Congress by-law 5. Register IC in Ministry of Interior 6. Draft IC internal rule 7. Congress on IC internal rule by-law 8. Register land and issue title
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A
Linkage to Long-Term Outcome or Impact	Although it is not the only approach, formalization of land and resource rights through titling increases tenure security. This, in turn, increases the security of durable investments in the land that can have significant positive impact on conservation. This indicator is linked to project support for an improved enabling environment and increased capacity to develop new policy frameworks and management modalities. Based on evidence

Cambodia Supporting Forests and Biodiversity

	<p>from pilot projects already implemented in Cambodia, it is expected that transferring areas of natural resources and biodiversity to community-level governance will enable better protection of ecosystems and better management of shared assets. The preparation and implementation of land titling agreements will demonstrate government buy-in, as well as the communities' active engagement in land use issues.</p>
Indicator Type	Output
Unit of Measure	Land Titles/Agreements (Number, area (hectares), and households)
Data Collection Method	<p>Using national and local government records and community documents, the SFB team will identify community groups in the two landscapes that have a title or agreement, communities that have initiated the titling or agreement process, indigenous groups that have a legitimate title claim and other communities that are candidates for CF, CBPF or CPA agreements. The project team will work with community organizations and local/national government agencies to provide assistance as needed to achieve agreement and complete the titling project. The SFB team will count the titles/agreements for communities that received project assistance, and that have advanced a full step in the title and/or agreement establishment process as recorded by a local or national government agency. Copies of titles and agreement documentation, including the area covered by the title/agreement as determined by GPS coordinates of the boundaries and GIS spatial analysis, maps and other geographic information, will be obtained and kept in the SFB project data storage system. The team will use local government and community organization records to determine the number of households included under each title/agreement.</p> <p>Milestones will be used to measure the progress of each area's advancement through the land agreement or titling establishment steps described in the definition section. . The team will also track and record at which step in the establishment process the area was when USAID funding started (i.e. the baseline step for that area).</p>
Use of Indicator	Achievement of targets for this indicator will demonstrate government recognition of local land and resource tenure rights and capacity for resource governance, as well as commitment to conflict resolution.
Data Source and Reporting Frequency	Third party data sources will include copies of agreement and title documents, copies of management plans and approval documents, and community organization reports. Reported Quarterly
Known Data Limitations	N/A
Baseline Timeframe	At the start of the project, the baseline value will be set at zero . Although some land titling activities and agreements may have been already underway at the start of the SFB project, the land title or agreement will only be counted if it advances at least one full step in the establishment process as a result of USG-assistance through SFB project activities. Therefore the baseline will be set at zero to reflect the assumption that the

Cambodia Supporting Forests and Biodiversity

	land titles and agreements reported are only those that are attributable to SFB efforts to secure their approval.
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Type [Community Forest, Community-Based Production Forest, Community Protected Area, Indigenous Community Land Title]; Landscape/Region [Prey Lang, Eastern Plains]
PMEP Revision Notes – Target Revised	<p>Original LoP target 30 titles and agreements approved. Approval is required for advancement through each step in the CF, CBPF, CPA, and ICT establishment process. Based on counting all CF, CBPF, CPA, and ICTs that advanced at least one step in the establishment process since SFB funding began, 35 achieved as of Q9. SFB will continue to support these same areas in the ongoing establishment process in Years 3 and 4.</p> <p>There are 8 additional CF/CPA/ICTs that could potentially be counted towards this target in SFB Y3 or Y4. However, the target will not be further increased because achievement for these areas is highly uncertain due to: 1) changes in the approval processes for CPAs and CFs within nationally managed protected areas (MPF and PPWS) that are delaying advancement; 2) the backlog of ICTs awaiting verification by RGC to complete the final step and issue the land titles.</p>

Sub-Objectives	1.2: National level capacity to support the sustainable management of forests, biodiversity conservation, REDD+, and low-emissions development strengthened.
	1.3: Local-level technical skills for forest management and biodiversity conservation to support community-based natural resources management (CBNRM) improved.
Required Information	Response
Indicator	1.2.1 and 1.3.1: Number of people receiving USG supported training in natural resources management and/or biodiversity conservation
Target	10,000 people (individuals)
Definition	This indicator measures the number of individuals trained by SFB in the management of natural resources or biodiversity conservation. Training could include training in natural resources issues, management of conservation areas; application of laws and conventions and their enforcement; training in land tenure and property rights; improved land use, agricultural practices, and resource-based enterprise management; business skills; and community-based governance of natural resources and protected areas. Training to improve forest management, climate change mitigation, and biodiversity conservation could include forest carbon accounting methodologies, development of MRV systems and national reference scenarios, monitoring changes in forest cover, land use and

Cambodia Supporting Forests and Biodiversity

	<p>carbon stocks; and improved land use mapping and planning; demonstration of new technologies and practices; and economic and policy analysis methods, such as cost-benefit studies and valuation of benefits and services.</p> <p>Training can also consist of transfer of knowledge, skills, or attitudes through structured learning and follow-up activities, or through less structured means, to solve problems or fill identified performance gaps. Training programs are expected to include short-term non-degree technical courses, seminars, workshops, mentorships, and practical demonstrations and field day events. Training participants may include RGC personnel, other policymakers, managers of conservation areas, partner organizations, local stakeholders, community organizations, community-based entrepreneurs, and others as appropriate. This includes both stakeholders from SFB target provinces and those from other parts of Cambodia who participate in national level events.</p> <p>Training at the national level will be reported as sub-indicator 1.2.1 and will be disaggregated by sex and ethnicity. Training at the sub-national level will be reported as indicator 1.3.1 and will be disaggregated by administrative level Provincial, District, Commune, Community); Sex (Female, Male), Ethnicity.</p>
New or Existing Indicator?	Existing Standard Indicator: 4.8.1-27
Primary Program Area (Program Element for IIP) Linkage	4.8 Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	<p>The capacity of institutions derives from the individuals who comprise its leadership, workforce or membership; therefore increased individual capacity will contribute to increased effectiveness within national and sub-national institutions and local-level organizations. Training enhances demonstration activities to strengthen in-country capacity. Training and skills transfer will accelerate replication and scale-up of demonstrated models and pilot activities. These training activities help improve the likelihood that development partners will continue to implement relevant projects long after USG support has ended. Training will also include capacity building for policy analysis and reform and valuation of natural resources and environmental services. Increased human and institutional capacity will contribute to sustainability by strengthening organizational leadership and governance; and will empower people to improve their livelihoods in ways that do not exacerbate environmental degradation.</p>

Cambodia Supporting Forests and Biodiversity

Indicator Type	Output
Unit of Measure	Individuals (Number)
Method of Data Collection	<p>The SFB team will use attendance sheets to collect data on all training participants in training activities related to natural resources management and/or biodiversity, such as workshops, field days, cross-visits, study tours and other project-sponsored events. Attendance sheets will include information on the training subject, hours of training provided, and participants' gender, ethnicity and address.</p> <p>Activity records in the SFB online database will include attendance sheets and details on the geographic level of training (national, sub-national), training topics covered and purpose, agenda, training materials used, etc. Client profiles will be created in the database to track each individuals' participation in SFB trainings. This will ensure participants will only be counted once, even if the individual participates in multiple training events. Only people who complete an entire training session will be counted under this indicator. The number of people trained represents the total number of individuals who have received project sponsored training, not the sum total of training participants.</p> <p>All participant training data will be entered into the USAID Trainet data management system.</p>
Use of Indicator	Training indicators account for the expenditure of USG funds to build country capacity. This indicator will enable the SFB team and USAID to monitor progress of training activities and their contribution to increased capacity at national and sub-national levels. Data from participant training report forms will inform annual work plan training targets. Training assessments and participant self-assessments will be used to identify priority topics and subject matter for ongoing training.
Data Source and Reporting Frequency	Activity records in the SFB online database; Pre- and Post-training self-assessments; Training reports by Winrock Consortium Partners. Reported Quarterly
Known Data Limitations	This indicator measures participation in training programs, which may not directly translate to action, unless other capacity building and institutional issues are also addressed. The SFB team will promote increased capacity through other interventions, including stakeholder participation in demonstrations, pilot projects, policy reform, and development of management and conservation plans.
Baseline Timeframe	At the start of the project, the baseline value will be set to zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Individuals; Sex [Female, Male]; Ethnicity [Khmer, non-Khmer]; Level (government officials only) [National government, Sub-National]

Cambodia Supporting Forests and Biodiversity

Sub-Objectives	1.4: Enabling polices, laws and regulations for low emission development established
	2.4: Monitoring, reporting and verification (MRV) systems implemented or improved
Required Information	Response
Indicator	1.4.1 and 2.4.1: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance.
Target	Original: 50 policy actions – Revised: 60 policy actions
Definition	<p>Standard Definition: Policies, laws, strategies, plans, agreements and regulations include those developed and formally endorsed by governmental, non-governmental, civil society, and/or private sector stakeholders to address climate change and/or biodiversity conservation issues. However, if a measure is not yet adopted, it must at least be formally proposed within an official government process to be reported.</p> <p>Legal, regulatory and policy reform has a role to play by incentivizing investment in clean energy or energy efficiency, or encouraging lower risk behavior. Depending on the context, regulatory and policy reform might include: zoning regulations to prevent development in flood-prone areas, standards for improved infrastructure, policies to conserve or allocate energy or water more effectively, regulations to encourage the development of renewable energy sources, or trans-boundary agreements related to the use of shared resources, among many others. For example, an officially proposed or adopted low-emission development strategy (LEDS) is one type of strategy that should be counted, including strategies for REDD+ pilot projects.</p> <p>Policies, laws, strategies, plans, agreements and regulations that address climate change and/or biodiversity conservation may be integrated in scope (e.g., at a certain spatial scale or political boundary such as municipal, state, or national), or may address certain climate-relevant sectors like water, marine resources, forests, land use and agriculture, energy, and urban development.</p> <p>Precise Definition(s): This indicator measures the number of policy actions (policies, laws, agreements, plans, strategies, or regulations) that address natural resource management, resource governance, climate change, REDD+, conservation, biodiversity, regulation of the agricultural sector, and other policy issues, such as land and resource tenure, indigenous land titles, and community-based land and resource management. Policy actions can also include those</p>

Cambodia Supporting Forests and Biodiversity

	<p>that contribute to biodiversity conservation or climate change mitigation by restricting development or deforestation in critical areas, reducing forest degradation, increasing local level engagement in natural resource governance, and/or supporting community-based control over sustainable land use and resource utilization.</p> <p>Policy actions reported under this indicator shall be those for which the SFB team provided specific inputs, such as convening stakeholders; sponsoring policy fora and round-table discussions; economic analysis; providing expert advisory services to ministries and legislative bodies; assessment of the effectiveness of existing policies, laws and regulations; analysis of constraints to policy implementation and enforcement of existing laws; technical assistance to draft or review policy documents; facilitating agreement negotiations and consensus building; and strategy development; and support to build capacity for and improve implementation of existing laws, policies, strategies, plans, agreements, or regulations. SFB project-supported local level pilot activities, model actions, tools and methodologies to demonstrate community-based governance of protected areas and forest resource-based livelihoods activities will also be counted as policy actions, including implementation at the local-level by community-based organizations.</p>
New or Existing Indicator?	Existing Standard Indicator: 4.2.8-28
Primary Program Area (Program Element for IIP) Linkage	Program Area: 4.8 – Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 – Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	<p>An improved enabling environment through legal and policy reform, strategy development and planning is essential for ensuring that efforts and investments in climate change have legal and strategic backing and institutional ownership. Formal and informal institutional structures in the form of laws, policies, agreements, and regulations, strategies or plans are essential to meeting the SFB goal and objectives because they provide the enabling environment on which actions are built and maintained. Without clear laws, policies that can be implemented at national and local levels, and regulations that are respected and enforced, natural resources cannot be effectively conserved or managed. The process of proposing, reviewing, adopting and implementing policy actions can take time and the steps in the process do not always proceed along a straight-forward pathway. Also the process of drafting, reforming and enacting policy actions can involve negotiation and compromise among many actors. Nevertheless, support for</p>

Cambodia Supporting Forests and Biodiversity

	a stronger enabling environment for natural resource management and conservation is key to the sustainability of other project activities.
Indicator Type	Output
Unit of Measure	Policy actions (laws, policies, strategies, plans, agreements, regulations, models, protocols) [Number]
Method of Data Collection	<p>Data on the status of planned policy actions and their implementation will be collected from legislative proceedings, government agency policy memos, minutes of policy committee meetings, and official decrees, published laws and regulations, and signed agreements. Once the policy actions are passed, enacted into law, approved, signed or authorized, the team will obtain copies of the actual documents. Key decision-makers, members of legislative bodies, government agencies responsible for policy implementation, policy analysts, and community and advocacy group members will be interviewed to determine the status of implementation.</p> <p>A milestone tracking method will be used to determine when a law, regulation, policy, agreement, decision, strategy or plan has passed through the various stages of development. A milestones table will be updated every quarter so that at any given time, it will show the progress of each enabling condition for which the SFB team is providing support. This tracking approach will be used to determine whether a policy initiative is making acceptable progress towards adoption and implementation, or whether it has been blocked or delayed. The milestone reporting format is attached to the PMEP in Annex 1.</p> <p>The milestone approach will be used to disaggregate policy measures based on their level of completion. Planned policy actions, laws, policies, strategies, plans, agreements, or regulations will be counted and reported as they progress through the legislative or approval process below:</p> <p>The action milestones will be counted only if the SFB project contributed to movement to the next stage of development: Stage 1: Analyzed; Stage 2: Drafted and presented for public/stakeholder consultation; Stage 3: Presented for legislation/decrees; Stage 4: Passed/approved; and Stage 5: Passed for which implementation has begun.</p> <p>This indicator is meant to capture not only RGC legislative or executive policies (laws, resolutions, decrees, orders), but also the policy decisions of RGC ministries and policy directives of local government and community-based committees that are responsible for implementation of agreements governing community forests and conservation areas (e.g., incorporating communities' NRM priorities into Commune Investment Plans). This includes ICT, CPA, and CF agreements counted under indicator 1.1.1 and management plans counted under indicator 0.2.2. Identical policies being</p>

Cambodia Supporting Forests and Biodiversity

	pursued in multiple jurisdictions (i.e. the same standard forestry law being applied in two provinces simultaneously) should be reported once per jurisdiction; a single high-level policy should only be counted as one law no matter how many sub-jurisdictions it affects, however. The narrative reports shall include information on the nature and objective of each law reported under this indicator.
Use of Indicator	This indicator can be used for project level monitoring and evaluation, to track national progress to address climate change, and for reporting on the progress of the GCCI as a whole. The indicator tracking will be used to determine whether additional resources are needed to overcome constraints to adoption and implementation.
Data Source and Reporting Frequency	Third party sources will include: Annual work plans, RGC legislative and agency proceedings, committee meeting minutes, official decrees, published laws, strategies and agreements, and other official documentation. Reported Quarterly
Known Data Limitations	The process of policy action can and should involve many interested parties, which can include other donors and development programs with similar objectives. Therefore, it may be difficult to isolate the effect of the SFB project interventions on policy outcomes, separate from those of other organizations, for the purpose of attribution.
Baseline Timeframe	In the first year of the project, the existing policy framework will be analyzed by the SFB project team and the baseline will be set to zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Level [National, Sub-National]; Landscape/Region [Prey Lang, Eastern Plains]; Type of policy action [law, policy, strategy, plan, agreement, regulation]
PMEP Revision Notes – Target Revised	Original LoP target 50; as of Q9, 53 achieved. Target increased to 60 because additional management plans are in process for CFs in Prey Lang, and it is expected that final draft plans for several will be submitted to FA by Nov 2016, further increasing SFB achievement against this indicator.

Objective	2: Constructive dialog on forest management and economic development at the national and sub-national levels improved.
Required Information	Response
Indicator	0.2.1: Number of conservation and NRM conflicts mitigated or acted upon in priority landscapes as a result of USG assistance.
Target	55 conflicts
Definition	This indicator measures actions taken in response to land- and natural resource-related disagreements. Disagreements may include disputes over land tenure and ownership, improper exploitation of shared resources, over-harvesting of resources, equitable land and resource access rights, and

Cambodia Supporting Forests and Biodiversity

	<p>activities that lead to resource degradation or loss of environmental services.</p> <p>Mitigated conflicts are those that can be resolved through preventive measures, such as community consensus-building; mediation; increased tenure security; and/or forums for constructive dialogue. Acted-upon conflicts are conflicts that require a decision or an action by a recognized authority, such as a Community Forest Conservation Committee, local government officials, or a provincial or national level government agency or Ministry.</p> <p>Conflicts may include disputes over land and resource tenure and use; especially where property rights are unclear or boundaries have not been legally established or delineated. In these cases, conflicts are likely to arise over land and resource use, violation of customary/traditional land or resource use rights, unauthorized encroachment, and inequitable access to scarce resources. Thus, installing boundary poles approved by recognized authorities to demarcate the area of a CF, CBPF or CPA will be counted as a conflict acted upon. Stakeholders include community members in the priority landscapes and representatives of government agencies and other organizations with responsibility for activities in the priority landscapes.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A
Linkage to Long-Term Outcome or Impact	<p>Land and resource conflicts are an important source of social unrest, and have economic consequences as well, in the form of reduced tenure security, limited investment and damage to property and assets. Where land conflicts can be resolved, tenure security and economic outcomes are improved, and the potential for land conflicts to spill over into broader civil conflicts is reduced. Actions to mediate and resolve conflicts demonstrate increased government effectiveness and capacity. The effectiveness of community governance depends in part on the willingness, ability and empowerment of stakeholders to resolve and/or prevent conflict due to land- and resource- related disagreements. Improved local level resource governance, increased local participation in forest management, and adoption of adaptive conflict management and resolution skills will normalize the use of legal and community forums for mediation, increase community buy in, solidify community relationships, and reduce the incidence of maladaptive forms of resolution including violence. By</p>

Cambodia Supporting Forests and Biodiversity

	legitimizing and promoting community governance systems as effective options for resolution of land- and resource-based conflict, training in negotiation and conflict-management will further SFB's mission of improving NRM and biodiversity conservation.
Indicator Type	Outcome
Unit of Measure	Conflicts [Number]
Data Collection Method	The SFB team will carry out interviews with local law enforcement officials, forest guards/officers, community leaders, journalists, local NGOs and civil society organizations, and other key informants. The team will use the data from key informant interviews to identify existing conflicts/disagreements. In addition, it will respond to community requests for assistance in resolving specific cases. If the conflict is resolved through mediation, a formal decision-making or judicial process; or other official action, the project team will use the relevant reports to document the process.
Use of Indicator	This indicator will enable the SFB team, USAID, and government agencies to monitor progress on a range of activities that seek to resolve conflicts, including increased stakeholder engagement and empowerment in forest management and conservation issues, training in conflict resolution, land titling agreements, forest and conservation area management planning, and interventions to improve livelihoods.
Data Source and Reporting Frequency	Key informant interviews; official reports and documentation of conflict mediation or resolution process. SFB will share with USAID a quarterly matrix with the current status of past, current, and planned constructive dialogues. The matrix template, showing how the status of conflict mediation/resolution processes will be tracked and reported, is attached to the PMEP in Annex 1. Reported quarterly.
Known Data Limitations	NRM conflicts occur in a constantly changing context, which includes politically powerful companies and individuals and their resolution can involve several levels of government authorities. Conflicts which have been mitigated or acted upon may arise again if decisions are overturned at a later date (e.g., by a higher government level).
Baseline Timeframe	The baseline will be set at zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]; Conflicts mitigated, Conflicts acted upon

Cambodia Supporting Forests and Biodiversity

Sub-Objective	2.1: Effective stakeholder participation in national and sub-national planning processes affecting forest land management and economic development increased.
	2.2: Stakeholder understanding of forest land management, REDD+, biodiversity conservation, CBNRM, and relevant economic development planning issues strengthened.
	2.3: Dialogue skills of relevant stakeholders (community, government, and private sector) improved to engage with one another on forest and resources issues.
Required Information	Response
Indicator	0.2.2, 2.1.1, 2.2.1, and 2.3.1: Number of sustainable forestry and biodiversity management plans developed using participatory national and sub-national planning processes.
Target	20 plans
Definition	<p>This indicator will track the status of national and sub-national management plans developed with assistance from the SFB. This indicator will also measure the number of management plans prepared to support the management and governance of community forests and conservation areas. The SFB team will support national and sub-national planning processes for sustainable forest management and biodiversity conservation in the priority landscapes using participatory approaches. These approaches will include stakeholder consultation at all levels, with parallel public awareness campaigns, information dissemination, training/workshops, and other communications media, that will empower stakeholders to make an informed contribution to the planning process. Management and conservation priorities will be determined through public fora, roundtable discussions, focus group interviews, and other opportunities for stakeholder input and review of the plans under development.</p> <p>Although plans will be developed using participatory methods, they will also make use of the best available data and scientific assessments. Forestry and biodiversity conservation plans can include maps; assessments of existing resources and ecosystem conditions; estimates of key species populations and habitat status; evaluation of environmental degradation and key drivers of deforestation; management/conservation objectives; detailed action plans; timelines and assignment of responsibility for specific tasks; expected outcomes and targets; and plans for ongoing assessment of key biological and economic factors. Plans counted under this indicator will also be counted under indicator 1.4.1/2.4.1.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program)	N/A

Cambodia Supporting Forests and Biodiversity

Element for IIP) Linkage	
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A
Linkage to Long- Term Outcome or Impact	The development and adoption of forestry and conservation area management plans, participatory management plans, and comparable instruments represents an important technical assistance and capacity building input at national, sub-national and local levels. This indicator also links to increased stakeholder engagement. Planning activities will also support efforts to increase local level tenure security through land titling and strengthen policy and legal frameworks for forest land management and conservation. By emphasizing participatory methods and stakeholder consultation, the team will be able to identify and mitigate possible points of future conflict that could result from the implementation of national and sub-national plans.
Indicator Type	Outcome
Unit of Measure	Plans (Number)
Data Collection Method	The SFB team will count plans that have been developed. Plans will be considered to be developed when all community consultations are completed and the final draft plan has been submitted to the governing organization for approval (for CF, CBPFs and CPAs, when the management plan is submitted to the FA cantonment or Provincial Department of Environment; for RGC protected areas, when the management plan is provided to the highest office of FA or MoE involved in the process). Copies of management plans and related documentation, including maps, geographic information, workplans, and conservation strategies will be obtained and kept in the SFB project data storage system. The SFB team will facilitate the management planning process and will use direct observation to determine whether the plans were developed using participatory national and/or sub-national planning processes.
Use of Indicator	Plans developed using participatory processes are a measure of the government's commitment to constructive dialogue. Participatory planning processes generally take more time and are more complex to manage. However, implementation of the plans is more likely to receive stakeholder support, if the plans reflect participants' input and priorities.
Data Source and Reporting Frequency	Data sources will include forestry and biodiversity conservation planning documents; approval/adoption documents; reports from stakeholder consultation events and focus group interviews; stakeholder input provided through websites and other public media. Reported quarterly
Known Data Limitations	It will be necessary to determine the step at which the plan has been developed to avoid ambiguity in counting plans that are in different stages of development.
Baseline Timeframe	In the first year of the project, the baseline value will be set to zero .

Cambodia Supporting Forests and Biodiversity

Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Level [National, Sub-National]; Landscape/Region [Prey Lang, Eastern Plains]

	2.3: Dialogue skills of relevant stakeholders (community, government, and private sector) improved to engage with one another on forest and resources issues.
Required Information	Response
Indicator	2.3.2: Number of human rights defenders trained and supported
Target	100 people (individuals) who are human rights defenders
Definition	<p>To be a human rights defender, a person can act to address any human right (or rights) on behalf of individuals or groups. Human rights defenders seek the promotion and protection of civil and political rights as well as the promotion, protection and realization of economic, social and cultural rights, including rights related to the protection of the environment. This includes both stakeholders from SFB target provinces and those from forest communities in other parts of Cambodia who are participating in the Coming Together for Forests initiative to build a nationwide network of forest communities.</p> <p>Human rights defenders trained will only be counted under the main SFB training indicator (1.2.1/1.3.1.) if they are an individual who also participates in other SFB natural resource management trainings. However, all human rights defenders and those they represent will also be counted under indicator 0.1.1.</p> <p>USG support includes training, grants or other support designed to improve the human rights services, reporting, and advocacy for the citizens.</p> <p>The types of trainings measured are provided as a result of USG programs, whether short-term or long-term, in-country or abroad. Individual training participants will only be counted once, even if the individual participates in multiple training events. It is required that trainings follow a documented curriculum with stated objectives and/or expected competencies; all data should be sex-disaggregated; and where possible, training should meet national or international standards.</p>
New or Existing Indicator?	Existing Standard Indicator: 2.1.4-7
Primary Program Area (Program Element for IIP Linkage)	2.1 Rule of Law and Human Rights

Cambodia Supporting Forests and Biodiversity

Primary Program Area (Program Sub-Element for IIP Linkage)	2.1.4 Human Rights
Linkage to Long-Term Outcome or Impact	Effective management of forest resources and biodiversity in Cambodia is linked to improving human rights and equity for forest communities. Human rights defenders are on the frontlines of human rights protection and conflicts over managing forest resources. They are a key aspect to government accountability and contribute to transparency in terms of violations of human rights standards. To the extent human rights defenders are trained and supported to improve their abilities to report and advocate on behalf of human rights, rights will be more easily respected and ensured.
Indicator Type	Output
Unit of Measure	Individuals (Number)
Method of Data Collection	The SFB team will use attendance sheets to collect data on all participants in training activities to support the forest network through the Coming Together for Forests initiative, such as network quarterly meetings that include training sessions, workshops, field days, cross-visits, study tours, and other project-sponsored events. Individual training participants will only be counted once, even if the individual participates in multiple training sessions.
Use of Indicator	This data indicates the level of effort used to train human rights defenders, and bureaus, missions, and in-country program managers will use the data for program planning, adjustment and resource allocation. The number of human rights defenders trained and supported indicates that USG assistance is providing human rights defenders with an increased capability to report and advocate about human rights violations and the protection of human rights which leads to increased government accountability and transparency. This awareness can potentially lead to a decrease in human rights violations and improved management of natural resources.
Data Source and Reporting Frequency	Direct observation from post and implementing partners. Attendance sheets will be used to track participants and identify the number of individuals trained. Reported Quarterly
Known Data Limitations	This indicator measures participation in training programs, which may not directly translate to action, unless other capacity building and institutional issues are also addressed. The SFB team will promote increased capacity and actions to promote forest communities' interests throughout all forest network activities.
Baseline Timeframe	The baseline will be set to zero at the start of the project.
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Sex [Female, Male]

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PMEP Revision – Indicator Added	New indicator added during PMEP revision (March 2015) to cover the work on Coming Together for Forests, being implemented by Pact under SFB with special funding from the Human Rights Grants Program. Indicator and targets not disaggregated by landscape because the focus is building a nationwide forest network.
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Objective	3: Equitable economic benefits from the sustainable management of forests increased. ²⁰
Required Information	Response
Indicator	0.3.1: Number of people with increased economic benefits derived from sustainable natural resources management and conservation as a result of USG assistance.
Target	95,000 people (individuals)
Definition	<p>Standard Definition: Number of people may be a direct count, or it may be determined by multiplying the number of households with increased economic benefits by the number of people per household (the estimated average household size in rural Cambodia is 5 people). Increased economic benefits are increases in economic earnings or consumption due to sustainable management or conservation of natural resources, which can include wages, communal revenues, non-cash benefits, and economic benefits from ecosystem services.</p> <p>Precise Definition: Increased economic benefits include: increased income, average increase in income, number of new enterprises developed (including but not limited to forestry/agroforestry, sustainable agriculture, sustainable tourism, microenterprise, etc.), economic benefits from ecosystem services, etc. Economic benefits may be based on actual cash transactions, economic value of ecosystem services, or Payment for Environmental Services (PES).</p>

²⁰ The relationship between the different livelihoods indicators is as follows. **Indicator 0.3.1:** is a count of people with increased economic benefits. These benefits come from much more than just income increase. They include the value of ecosystem services provided by PLL and EPL forests, which helps people both directly and indirectly benefiting from the project. Direct beneficiaries are considered members of households in CF/CPA/ICT communities where SFB works (even if they are not being directly trained) AND those directly participating in livelihoods with SFB. The Mekong Basin Study will include data on both the number of people who are indirect beneficiaries living in the micro-watersheds between EPL and PLL forests and the Mekong River/Tonle Sap and an estimation of the economic value of the ecosystems service these forests provide to the people that will be counted under 0.3.1. **Indicator 3.3.1:** includes only people directly benefiting from the project through training in income generating activities. **Indicator 3.1.1:** measures the increase in income as a result of the direct livelihood activities and will be estimated based on a survey of those people counted under indicator 3.3.1. The people counted in 3.1.1 are a sub-set of those in 0.3.1 – so they are included in this larger count of both direct and indirect beneficiaries but will only be counted one time under all Objective 3 people indicators.

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	The number of people directly and indirectly benefiting from ecosystem services provided by forests in Eastern Plains and Prey Lang will be calculated based on census data for villages within the watersheds of tributaries flowing from these areas into the Mekong. Current sediment and nutrient loads, flood patterns etc. will be calculated and compared with potential future scenarios based on various rates of deforestation. The value of the ecosystem services provided by these landscapes will be estimated based on data from SFB’s Baseline Socio-Economic Survey, other existing data sets of publishable scientific quality, and a literature review of ES valuation in comparable situations.
New or Existing Indicator?	Existing Standard Indicator: 4.8.1-6
Primary Program Area (Program Element for IIP) Linkage	4.8 Environment
Primary Program Element (Program Sub-Element for IIP) Linkage	4.8.1 Natural Resources and Biodiversity
Linkage to Long-Term Outcome or Impact	This indicator links sustainable natural resources management to economic growth and social development objectives. When people receive tangible economic benefits from natural resource management or conservation, they are more likely to value and support these activities into the future, well after the project ends, creating a sustainable impact.
Indicator Type	Outcome
Unit of Measure	Individuals (Number)
Data Collection Method	Data on the number of people with direct economic benefits through SFB activities will be collected from records of CF, CPA, and ICT membership, enterprise group membership, etc. The estimated number of people receiving indirect economic benefits and value of ecosystem services provided by the landscapes will be calculated based on population statistics and ecosystem services modeling of the watersheds where SFB works and detailed in an ecosystem services report.
Use of Indicator	This measure demonstrates project reach and may be reported in aggregate to Congress or other stakeholders.
Data Source and Reporting Frequency	Data will be collected from group/community interviews, key informant interviews, survey responses, CF/CPA/ICT membership records, census data, and the ecosystem services modeling report. Reported Annually
Known Data Limitations	Number of people with economic benefits does not indicate the actual or relative size of the benefit, which may be a cash or non-cash benefit. Validity is good, integrity is high, reliability and timeliness is reasonable.

Cambodia Supporting Forests and Biodiversity

	Precision is variable across projects but should be consistent within projects.
Baseline Timeframe	The baseline value will be set to zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Sex; Landscape/Region [Prey Lang, Eastern Plains]; Direct/Indirect beneficiaries

Sub-Objective	3.1: Economic incentives for land use practices that reduce GHG emissions established in targeted landscapes
Required Information	Response
Indicator	3.1.1: Increase in income levels of target communities due to economically viable alternative livelihood activities as a result of USG assistance.
Target	50% above baseline
Definition	<p>This indicator will measure the average increase in income in communities in the priority landscapes, as reported by community members through surveys. Increased income is expected to be gained as a result of economic benefits from ecosystem services, ecotourism, and other alternative livelihood activities and development of forest-based enterprises and value chains, such as honey, sustainable resin harvesting, and bamboo products. Economic benefits may be based on actual cash transactions or the economic value of other benefits derived from Payment for Environmental Services (PES) or from REDD+ carbon finance mechanisms.</p> <p>REDD+ carbon finance mechanisms compensate community-based organizations, resource based enterprises, and individuals for reducing emissions from deforestation and forest land degradation. REDD+ carbon finance mechanisms recognize that forest resource dependent communities give up income and livelihoods options to reduce deforestation and degradation, and that they should be compensated or provided with alternative income generating (AIG) options or other benefits. Local communities include communities located within priority landscapes.</p> <p>For the purposes of SFB reporting, average annual household income will be calculated based on “formal” sources only (agriculture, livestock, NTFPs, etc.), and will NOT include income from “informal” sources such as logging, wildlife hunting etc. This will be reflected in the methodologies developed for the socio-economic baseline and annual income surveys. Since SFB activities are not designed to influence off-farm income, income from off-farm sources will be withheld from calculations of formal household income to calculate only the income increase plausibly attributable to alternative livelihood activities promoted by the project.</p>

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New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A
Linkage to Long-Term Outcome or Impact	This indicator links sustainable NRM financed by PES and REDD+ to economic growth and social development objectives. To ensure long-term improved natural resource management and to reduce deforestation, it will be necessary for communities that have traditionally employed land use practices involving unsustainable harvesting and other environmentally destructive activities to adopt alternative income generation (AIG) strategies. Successful adoption of improved resource management practices depends on whether individual resource users perceive the practices as an opportunity for financial gain or some other clear benefit, such as increased tenure security or resolution of resource-related conflicts. For project interventions aimed at promoting AIG to be widely adopted, individual resource users should experience minimal financial loss under new management plans, prospects for income replacement from alternative activities, new employment opportunities, or better access to land and/or resources.
Indicator Type	Outcome
Unit of Measure	Percent increase in income of communities
Data Collection Method	To measure the percent increase income of target communities, the socio-economic baseline study on incomes and livelihood of community will be used combining Sustainable Livelihoods Approach (SLA) Framework and the CIFOR toolkit. The M&E team will develop livelihoods surveys using existing instruments and questionnaires, adapt tools that have already been tested in similar programs, and develop additional survey questions as needed to establish baselines in the communities where economic benefits are expected to be accrued, and to collect follow-up data on income and revenues generated from project supported activities on an annual basis. Survey questionnaires will be designed to collect data on household income from specific enterprise or value development activities supported by the project, as well as community benefits from REDD+ or PES benefit sharing mechanisms. For annual income surveys, a representative sample of participants engaged in income generating activities (under indicator 3.3.1) will be surveyed to determine household income level. Percentage increase will be calculated based on average household formal income, excluding off-farm sources of income as compared to baseline levels.

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Use of Indicator	This indicator is a measure of the viability of sustainable finance mechanisms to offset loss of livelihoods in communities in the priority landscapes. Communities that participate in PES and REDD+ agreements, and forest management and conservation plans aimed at reducing deforestation and protecting biodiversity, will agree to give up practices that are environmentally destructive, even though these practices may provide short-term economic benefits. Pilot projects will demonstrate that sustainable finance transactions can be transparent and feasible to implement with full community involvement.
Data Source and Reporting Frequency	Livelihoods Surveys (SFB will submit a complete package of survey procedures, related instruments, and reports to USAID), PES and REDD+ agreements and financial reporting. Reported Annually
Known Data Limitations	Livelihoods surveys depend on respondents' memory of income levels and thus precision may be lessened. Survey data will be compared with records of PES and REDD+ agreements and financial transactions to cross check accuracy of reported benefits.
Baseline Timeframe	The baseline values will be established in the third quarter of year two from socio-economic surveys and livelihood assessments conducted. The survey methodology and procedures will be made available for review by USAID prior to survey implementation.
Baseline Established	<p>SFB Socio-Economic Baseline Study EPL: formal income of \$1,404/year/household. PLL: formal income of \$1,658/year/household. SFB project aggregate: \$1,573 based on sample weighted average of the two landscapes (~1/3 EPL, 2/3 PLL). These baseline figures included income from agriculture, NTFP, and off-farm sources.</p> <p>SFB Annual Income Survey The Annual Income Survey Report recommended removing off-farm income sources from the baselines and calculation of annual achievement because SFB activities are not designed to influence off-farm income (p6-7). The adjusted baseline figures are: EPL: \$1,058 formal income excluding off-farm (\$1,404 - \$346 off-farm) PLL: \$1,241 formal income excluding off-farm (\$1,658 - \$417 off-farm) SFB project aggregate: \$1,180 (\$1573 - \$393 off-farm sources) based on sample weighted average of the two landscapes (~1/3 EPL, 2/3 PLL).</p>
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]; Type of financial mechanism

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Sub-Objective	3.2: Payment for environmental service (PES) activities (e.g., REDD+) established or supported in targeted landscapes with equitable benefit sharing mechanisms.
	3.4: Low emission development and REDD+ approaches demonstrated at the sub-national or sector level
Required Information	Response
Indicator	3.2.1 and 3.4.1: Number of PES agreements approved and implemented
Target	4 PES agreements
Definition	<p>Payment for Environmental Service (PES) agreements <i>are quid pro quo</i> agreements between a natural resource or environmental service provider and a buyer. These are based on market or non-market rewards to compensate the seller and can take many forms including cash, in-kind assistance, and exemption from taxes, tenure, skills training, or new jobs. PES agreements reward the rural poor for environmental stewardship and contribute to poverty reduction efforts.</p> <p>Environmental services are defined as the provision of natural resources and functioning ecological systems that produce environmentally and economically valuable goods and services, for example watershed protection, forest products, flood control, soil quality, erosion control, biodiversity conservation, etc.</p> <p>PES agreements outline the conditions for sustainable financing - the funding needed to sustain conservation and resource management activities over the long term and into perpetuity. The SFB team will promote the use of PES agreements as a sustainable finance mechanism through pilot projects. PES agreements will include Village Market Network agreements for Ibis Rice farmers, and conservation agreements between communities receiving livelihood benefits in exchange for conducting forest patrols that will be monitored using the SMART reporting system.</p> <p>PES Agreements will be developed and implemented through participatory, multi-stakeholder processes, and will focus on community co-management of natural resources and conservation of protected areas, in partnership with government agencies, municipalities and/or private sector partners. The agreements will be implemented with the active involvement of communities and other stakeholders. PES agreements will be counted when they are signed by the environmental services provider and purchasing agent (company, NGO, government, etc.)</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program	N/A

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Element for IIP) Linkage	
Primary Program Element (Program Sub-Element for IIP) Linkage	N/A
Linkage to Long- Term Outcome or Impact	By providing a direct financial incentive, PES is envisioned to be the main source of sustainable financing for conservation and improved resource management in the project area. PES has been applied effectively in Vietnam, Nepal and other countries.
Indicator Type	Output
Unit of Measure	Agreements (Number)
Data Collection Method	The project team will facilitate the development of the PES agreements between community organizations and other stakeholders, such as downstream resource users and/or entities that are willing to compensate communities for the environmental services they provide. The SFB team will count the PES agreements that are facilitated through this process, which will also include development of transparent and equitable benefit sharing mechanisms. Copies of written agreements and related documentation will be obtained and kept in the SFB project data storage system. The agreements will include requirements to report to the project team on financial transactions, such as payments to the community, establishment of a community fund to receive payments, and/or distribution of benefits within the community. These transaction reports will be used by the project team to monitor the ongoing functionality of the PES agreements.
Use of Indicator	The number of PES agreements is a direct indicator of the feasibility and utility of the PES-based conservation and development strategy in Cambodia.
Data Source and Reporting Frequency	Agreement documents, records of PES financial transactions; records of community organizations that are the recipients of sustainable finance payments. Reported quarterly
Known Data Limitations	N/A
Baseline Timeframe	The baseline value will be set to zero .
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]

Sub-Objective	3.3: Community participation in income-generating activities broadened, with a special focus on under-represented groups.
Required Information	Response

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Indicator	3.3.1: Number of people participating in income generating activities.
Target	15,000 people (individuals)
Definition	<p>The indicator will track all members of targeted communities who are participating in SFB project income generating activities. Targeted communities/participants will be defined as residents of communities within the five targeted provinces of EPL and PLL (Mondulkiri, Preah Vihear, Steung Treng, Kampong Thom and Kratie). Reporting on the indicator will be disaggregated by landscape, gender, and ethnicity.</p> <p>Participants from under-represented groups are defined as SFB project participants in the targeted landscapes, who may have inequitable access to productive economic resources because of their ethnicity (non-Khmer) or gender (female).</p> <p>SFB participants are members of communities in the targeted landscapes who are involved in project-supported livelihoods activities, which can include training, demonstrations, technical assistance, skills transfer, employment opportunities, support for enterprise development, and access to information for decision-making. Participants do not include those merely contacted or touched by an activity through brief attendance at a meeting or gathering.</p> <p>Income generating activities include activities to increase participants' access to improved productive technologies, marketing techniques, improved inputs, engagement with lenders or microfinance institutions to expand their lending to weaker clients, opening access to credit and lowering the cost of credit, and community women saving schemes. Land titling activities will increase participants' access to productive assets, such as land and resource tenure security, and sustainable resource management strategies will enable protection of these assets over the long-term.</p> <p>Income generating activities also include participation in PES and REDD+ pilot projects that generate revenues in the form of direct payment, compensation, or other benefits provided to communities for their participation in forest conservation, protection and prevention of deforestation and forest degradation.</p>
New or Existing Indicator?	New Custom Indicator
Primary Program Area (Program Element for IIP) Linkage	N/A
Primary Program Element (Program	N/A

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Sub-Element for IIP) Linkage	
Linkage to Long-Term Outcome or Impact	<p>This indicator is linked to the outcome indicator for Objective 3, indicator 0.3.1: Number of people with increased economic benefits derived from sustainable natural resources management and conservation as a result of USG assistance. Data collected to report on this indicator will track the number of people participating in income generating activities, while indicator 0.3.1 will track the number of people who have experienced increased economic benefits as an outcome of their participation in SFB activities related to livelihoods, improved forest management, and secured land tenure.</p> <p>Because they play a prominent role in natural resource use and management in the targeted landscapes, and due to the persistent economic constraints they face, income generating activities will focus on increasing representation of under-represented groups, including women and ethnic minorities.</p>
Indicator Type	Output
Unit of Measure	Number of people
Use of Indicator	Tracks participation in income generating activities
Data Collection Method	The team will collect information on those directly involved in the income generating activities through direct observation and collecting relevant activity implementation reports and participant attendance lists for relevant activities through the SFB online database. Field survey and key informant interview through the annual income surveys will also be conducted to verify the data. The SFB team will collect data from community enterprises on the number of members belonging to NTFP harvesting groups, agriculture livelihood practices, producer associations, marketing cooperatives, or ecotourism activities.
Data Source and Reporting Frequency	Agreements with partners, employment records; activity reports and attendance sheets in the SFB online database; PES and REDD+ agreements, livelihoods surveys. Reported Quarterly
Known Data Limitations	N/A
Baseline Timeframe	The baseline value will be set to zero . Partner organizations have conducted preliminary surveys to estimate of the number of potential participants in communities in the targeted landscapes where the project will initiate activities.
Responsibility	Curtis Hundley, Chief of Party, Supporting Forests and Biodiversity Project; Phone: (855) 23 220-714 x16; Email: chundley@winrock.org
Disaggregate(s)	Landscape/Region [Prey Lang, Eastern Plains]; Ethnicity; Gender

Annex 1

Indicator 1.1.1 Milestone Tracking Table

Name of CF/CPA/ICT	Area (ha)	No. HH	Baseline Step ²¹	Steps Completed To Date	Reported Against Target (Y/N) ²²	Mgt. Plan status	SFB supported activities
1.							
2.							
3.							

Indicator 1.4.1/2.4.1 Milestone Tracking Table

Identification No.	Type of Policy Action	Description	Highest Gov't Body Officially Approved	Baseline Stage ²³	Current Stage ²⁴
National					
Eastern Plains					
Prey Lang					

²¹ Step CF/CCF/CPA/ICT was at when SFB support began.

CF Establishment Steps		CPA Establishment Steps	ICT Establishment Steps
0.	Identification of Potential CF Area	1.	Participatory assessment and consultation
1.	CF Establishment	2.	Submission for approval on establishing a CPA
2.	Information gathering	3.	Development a management structure for a CPA
3.	Establishment of Community Forestry Management Structure	4.	Delineating the boundaries of a CPA
4.	Preparation of internal by-laws of CF management committee	5.	Development of a CPA regulation
5.	Demarcation and mapping of community Forestry boundary	6.	Development of a CPA Agreement
6.	Preparation of community forestry regulation	7.	Development of a CPA management plan
7.	Preparation and approval of the community forestry agreement	8.	Monitoring and evaluation of CPA management
8.	Preparation of community forestry management plan		
9.	Enterprise development		
10.	Implementation of CF management plan		
11.	Monitoring and evaluation		

²² Reported as achievement against targets on Summary of Results Table (Yes or No).

²³ Baseline stage when SFB funding began (based on PMEP definition, page 33).

²⁴ Current stage for disaggregation based on PMEP - Stage 1: Analyzed; Stage 2: Drafted and presented for public/stakeholder consultation; Stage 3: Presented for legislation/decreed; Stage 4: Passed/approved; Stage 5: Passed for which implementation has begun.

Indicator 0.2.1 Tracking Table

Type	Reported Against Target? ²⁵	Location					Description		
Mitigated or Acted Upon	Yes or No	Area (CF/CPA/ICT/PA Name)	Commune	District	Province	Government Level ²⁶	Conflict Description	Intervention Measures	Current Status/Update
Eastern Plains									
Prey Lang									

²⁵ Reported as achievement against targets on Summary of Results Table. If no, resolution is still ongoing.

²⁶ Highest level of government engaged by SFB team to mitigate or act upon the conflict.