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# EVALUATION

## Final Performance Evaluation USAID/Philippines' Biodiversity and Watersheds Improved for Stronger Economy and Ecosystems Resilience Project

**January 2019**

This publication was produced at the request of the United States Agency for International Development. It was prepared independently by Pacific Rim Innovation and Management Exponents, Inc.





**PACIFIC RIM INNOVATION AND MANAGEMENT EXPONENTS, INC.**



CN 2019-0054

23 January 2019

**Ms. Sandra Jansen**

Contracting/Ordering Officer  
Regional Office of Acquisition and Assistance  
USAID Philippines  
Annex 2 Building, US Embassy  
1200 Roxas Boulevard, Ermita, Manila 1000

**Attention:** Dr. Albert Aquino, Contracting Officer Representative (COR)  
Office of Program Resources Management

**Subject:** Final Performance Evaluation (FPE) of the Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience (B+WISER) Activity (REQ-492-18-000028) – DELIVERABLE No. 4: FINAL EVALUATION REPORT

**Dear Ms. Jansen:**

We are pleased to submit herewith the electronic copy of our **Deliverable No. 4: Final Evaluation Report** for the abovementioned USAID project.

The report contains the executive summary, program background, evaluation purpose and evaluation questions, as well as the evaluation findings, conclusions, and recommendations.

We trust that you will find the report in order, and we look forward to its acceptance by your office for uploading onto the Development Experience Clearinghouse (DEC).

In closing, we wish thank USAID/Philippines for the opportunity for PRIMEX to conduct the Final Performance Evaluation of the B+WISER Program. We hope we could work with you again in the near future.

Sincerely,

  
**ELVIRA C. ABLAZA**  
President and CEO



cc: Ms. Bernadette Cariaga, Alternate COR for B+WISER FPE, USAID Philippines

Encl. a/s

# FINAL PERFORMANCE EVALUATION OF USAID/PHILIPPINES' BIODIVERSITY AND WATERSHEDS IMPROVED FOR STRONGER ECONOMY AND ECOSYSTEMS RESILIENCE PROJECT

## Final Report

Prepared under Task Order: REQM-492-19-000036

### Submitted to:

USAID/Philippines January 23, 2019

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### DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

**Cover Photo:** DENR conducted patrolling in Kaliwa Watershed Forest Reserve using the CyberTracker app installed in tablets to monitor threats to natural forest and indicator species of good forest health.

**Photo Credit:** DENR

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# ACRONYMS

AWP	Annual Work Plan
B+WISER	Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience
BO	build-operate
BRFWR	Bago River Watershed Forest Reserve
BMB	Biodiversity Management Bureau
BNP	Bataan National Park
CAR	Cordillera Autonomous Region
CDCS	Country Development Cooperation Strategy
CDD	Conservation and Development Division
CDDC	Conservation and Development Division Chief
CENRO	Community Environment and Natural Resources Officer
CF	conservation financing
COP	Chief of Party
COR	Contracting Officer's Representative
CS	case study
CSR	corporate social responsibility
DAO	DENR Administrative Order
DENR	Department of Environment and Natural Resources
DSWD	Department of Social Works and Development
DO	direct observation
EDC	Energy Development Corporation
EQ	evaluation question
FCA	forest conservation area
FGD	focus group discussion
FMU	forest management unit
FPE	Final Performance Evaluation
GAA	General Appropriations Act
GHG	greenhouse gas
GOP	Government of the Philippines
ha	hectare
IEC	information, education, and communication
IP	Implementing Partner
KBA	key biodiversity area
KII	key informant interview
KIN	Kitanglad Integrated NGO
KWFR	Kaliwa Watershed Forest Reserve
LAWIN	Lawin Forest and Biodiversity Protection System
LGU	local government unit
LOP	life-of-program
LQ	learning question
M&E	monitoring and evaluation
MANP	Mt. Apo Natural Park
MENRO	Municipal Environment and Natural Resources Officer
MKNRP	Mt. Kitanglad Range Natural Park
MOA	Memorandum of Agreement
MTE	midterm evaluation

NGO	nongovernment organization
NGP	National Greening Program
NLNP	Naujan Lake National Park
NRM	natural resource management
NSMO	Northern Sierra Madre Natural Park
P/CENRO	Provincial and Community Environment and Natural Resources Office
PAMB	Protected Area Management Board
PAME	Protected Area Management Enhancement
PASU	Protected Area Superintendent
PENRO	Provincial Environment and Natural Resources Officer
PES	payment for ecosystem services
PFG	Partnership for Growth
PGENRO	Provincial Government Environment and Natural Resources Office
PNP	Philippine National Police
PO	people's organization
PRIMEX	Pacific Rim Innovation and Management Exponents, Inc.
QRW	Quinali River Watershed
SMART	Spatial Monitoring and Reporting Tool
SOW	statement of work
SUC	state university and college
TOC	Theory of Change
UMRBPL	Upper Marikina River Basin Protected Landscape
USAID/P	USAID Philippines
WMC	Watershed Management Committee



# ABSTRACT

To improve the efficiency of natural resource management (NRM) and reduce related disaster risks in the Philippines, the Department of Environment and Natural Resources (DENR) and the United States Agency for International Development (USAID) partnered in 2012 and implemented the *Biodiversity and Watersheds Improved for Stronger Economy and Ecosystems Resilience (B+WISER)* Program from 2013 to 2018, with Chemonics International as the Implementing Partner (IP).

B+WISER was expected to achieve the following results: (a) 5,000,000 hectares (ha) of biologically significant areas under improved NRM; (b) 584,000 ha of such areas showing improved biological-physical conditions; (c) 8,778,278 metric tons (mt) of greenhouse gas emissions reduced, sequestered, and avoided; (d) US\$41 million worth of investments mobilized for NRM; (e) 166,000 people trained in sustainable NRM and biodiversity conservation; and (f) 4,400 days of technical assistance provided to DENR and other local NRM stakeholders.

USAID Philippines commissioned Pacific Rim Innovation and Management Exponents, Inc. (PRIMEX) to perform the Final Performance Evaluation (FPE) to **assess B+WISER results** and **verify the lessons reported**. PRIMEX undertook the FPE in three regions and two project sites from July 23 to December 22, 2018 using as guide the following four key evaluation questions: (a) extent of program performance, (b) efficiency in achieving results, (c) validity of lessons reported, and (d) extent of contributions of B+WISER strategies in achieving the results.

PRIMEX gathered data via: (a) **desk review** of B+WISER documents; (b) **focus group discussions** (FGDs) with *Bantay Gubat* (Forest Patrol) groups, women, indigenous peoples, farmer groups, and Protected Area Management Board (PAMB) members; (c) **key informant interviews (KIIs)** with those familiar with and involved in B+WISER; and (d) **direct observations**, including photo documentation of B+WISER activities.

Overall, B+WISER had achieved all its six performance targets as well as assisted in the institutionalization of the Lawin Forest and Biodiversity Protection System (LAWIN) within DENR. The Program also created a pool of trained DENR and local government units (LGUs) personnel, as well as community people, capable of applying LAWIN. All six B+WISER strategies functioned effectively, thus enabling the Program to achieve its expected results.

Based on the FPE, the following two sets of recommendations are put forward:

For **DENR** to strengthen LAWIN, it has to:

- regularize the LAWIN Command Center within DENR with personnel and funding complement;
- expand the its indicators in assessing and monitoring forest protection and biodiversity conservation;
- design and implement field validation sites for more accurate and reliable estimates of improvements in patrol activities, forest regeneration, greenhouse gas (GHG) emission, and biodiversity conservation;
- improve data integrity with real-time data transmission from patrol teams to the Command Center;
- roll out Payment for Ecosystem Services (PES) scheme to support LAWIN implementation;
- increase participation of LGUs in LAWIN; and
- mobilize state universities and colleges (SUCs) for information, education, and communication (IEC) and monitoring and evaluation (M&E) of LAWIN implementation.

For **USAID** in implementing similar programs in the future, it has to:

- require implementors to establish actual field validation sites for more reliable monitoring of improvements in forest conservation and biodiversity conservation;
- revise the definition of results indicators to capture data that reflect actual accomplishments; and
- ensure the consistent and active engagement of the Program proponent throughout the project implementation period.

# EXECUTIVE SUMMARY

The success of the **Biodiversity and Watersheds Improved for Stronger Economy and Ecosystems Resilience (B+WISER)** Program indicates, among others, that modern user-friendly digital technology, such as that adopted in the Lawin Forest and Biodiversity Protection System, is of tremendous and indispensable help in forest conservation as one of the components of natural resource management. B+WISER should be replicated elsewhere.

## BACKGROUND

The Department of Environment and Natural Resources (DENR) and the United States Agency for International Development (USAID) partnered in 2012 and implemented the Program *Biodiversity and Watersheds Improved for Stronger Economy and Ecosystems Resilience (B+WISER)* to support the Government of the Philippines (GOP) in implementing environmental policies and conducting programs to prevent forest and watershed disturbances and biodiversity loss.

B+WISER was also designed to contribute to the *GOP-US Partnership for Growth (PFG)/Country Development Cooperation Strategy (CDCS)* by focusing on inclusive and broad-based economic growth and environmental services.

Over a six-year implementation period (2013-2018), B+WISER focused on managing the natural resources as well as reducing environmental disaster risks in the country. It employed six strategies: technology development, capacity building, policy making, improving planning, conservation financing, and information, education, and communication (IEC).

By the end of 2018, the B+WISER program should have achieved the following six results:

- 5,000,000 hectares (ha) of biologically significant areas with improved natural resources management;
- 584,000 ha of similar areas with improved biophysical condition;
- 8,778,278 metric tons (mt) of greenhouse gas emissions reduced, sequestered, and avoided;
- US\$41 million worth of investments mobilized for the program;
- 166,000 people trained in forest protection and biodiversity conservation; and
- 4,400 days of technical assistance provided.

Chemonics International, Inc. carried out the actual implementation of B+WISER as the Implementing Partner (IP) of DENR.

## EVALUATION PURPOSE AND QUESTIONS

USAID commissioned Pacific Rim Innovation and Management Exponents, Inc. (PRIMEX) to **conduct the Final Performance Evaluation (FPE)** of B+WISER through a Purchase Order signed on July 26, 2018. As called for in the Scope of Work (SOW), the FPE covered B+WISER's implementation period from December 2012 to March 2018 and had two main objectives, namely: (i) **to assess program performance** in terms of: (a) expected results, as defined in the Program Monitoring and Evaluation (M&E) Plan; and (b) factors that either enhanced or diminished the achievement of the expected results; and (ii) **to verify the lessons reported by B+WISER** by providing a third party, independent assessment from a learning review conducted by the B+WISER IP. The FPE directly linked these two

objectives to USAID's evaluation policy to demonstrate program results and generate evidences from data collected in a systematic way to promote learning, inform decisions, and ensure accountability.

To meet these evaluation objectives, the Scope of Work (SOW) defined four key evaluation questions. The two questions under the **Performance Assessment objective** were the following:

- (i) To what extent has B+WISER achieved its expected results? In conjunction with this: Were there unintended consequences resulting from B+WISER implementation?
- (ii) How effective and efficient were B+WISER strategies in achieving these outputs and outcomes? What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?

The two questions under the **Lessons Verification objective** were the following:

- (i) How valid are the lessons reported during the IP's learning review for each of their learning questions?
- (ii) How valid are the lessons reported during the IP's learning review on the extent to which, and under what conditions, B+WISER strategies have singly and collectively contributed to achieving the results?

The results of the B+WISER IP should have produced evidence to answer the **six learning questions (LQs)** embedded in the latest version of B+WISER's Theory of Change (TOC):

- LQ2: Within a forest conservation area (FCA), does a change in observed threats lead to a change in observed encounter rate of dense forest regeneration?
- LQ3: Within an FCA, does a change in patrol efforts lead to a change in observed threats?
- LQ5: Does a change in the type of partnership (corporate social responsibility [CSR] or business opportunities [BOs]) lead to greater funding generated for conservation?
- LQ8: Does a change in funds generated for conservation lead to a change in patrol efforts?
- LQ9: Does a change in institutional arrangements for conservation financing (CF) lead to greater increases in funding for conservation?
- LQ13: Does a change in local government unit (LGU) governance score lead to a change in patrol efforts?

PRIMEX conducted the FPE from July 23, 2018 to December 22, 2018 at the national, regional, and project site levels to verify the performance, results, and lessons of the B+WISER Program in three regions (Cordillera Administrative Region [CAR], Western Visayas [Region VI], and Davao Region [Region XI]) and two project sites (Upper Marikina River Basin Protected Landscape/Kaliwa Watershed Forest Reserve and Mount Kitanglad Range Natural Park).

## **EVALUATION METHODS AND LIMITATIONS**

### **EVALUATION METHODS**

The FPE Team employed a mix of qualitative and quantitative research methods, including desk review of relevant B+WISER documents (e.g., Annual Work Plans and Progress Reports, including special and technical reports and forest patrol data), focus group discussions (FGDs), key informant interviews (KIIs), and direct observations (DOs). PRIMEX completed 10 **FGD sessions** attended by a total of 69 representatives from *Bantay Gubat* (Forest Patrol) groups, women, indigenous peoples, farmer groups, and Protected Area Management Board (PAMB) members at the evaluation sites. The **KIIs** involved 46 key informants who were familiar with, or were party to, B+WISER implementation. **DOs**, including

photo documentation of relevant B+WISER activities in the selected regions/sites, supplemented the FGDs and KIs to gather evidence from the field. **Case studies (CSs)** captured the good practices and lessons learned, as shared by the community stakeholder groups during FGDs, and reflected the data and information gathered from KIs and B+WISER documents/reports.

## **LIMITATIONS**

The use of external validity in data analysis provided evidence on the applicability of B+WISER strategies and lessons learned in different places or sites. However, the generalization of the findings to all the 17 regions, in the case of LAWIN institutionalization, or to the original seven sites, in the case of all strategies, were largely dependent on the existence of enabling conditions like issuance of necessary policy, provision of user manuals, training on LAWIN, and establishment of data management centers.

## **FINDINGS AND CONCLUSIONS**

Overall, B+WISER either achieved or exceeded its performance targets and successfully assisted in the setting up of LAWIN within DENR, as of October 2018. B+WISER also assisted some LGUs and private sector groups in the original seven priority forest/watershed reserves. The assistance provided comprised the localization of LAWIN and other B+WISER innovations, such as payment for ecosystem services (PES) and partnership building for conservation financing (CF) and restoration initiatives. The issuance of *DENR Department Administrative Order 2018-21*, production of user manuals, training of key DENR personnel on LAWIN, and establishment of data management centers at all levels of DENR, enabled effective and sustainable LAWIN implementation in the country.

With LAWIN, B+WISER created a large pool of trained DENR personnel and people belonging to LGUs and community groups. These groups can now apply *CyberTracker*, a mobile application to record and transmit geographically-accurate, real-time observation data and Spatial Monitoring and Reporting Tool (SMART). SMART generates maps to show spatial distribution of observed threats for effective forest protection actions.

B+WISER also raised the level of community awareness of, and participation in, the importance of patrol efforts not only in restoring forest regeneration and sustaining natural sources of living (e.g., clean water supply and air quality, food supply, etc.), but also in generating livelihood opportunities (e.g., ecotourism activities).

Applying all six strategies, B+WISER achieved the expected results, with the full commitment and support of the DENR leadership.

The FPE confirmed the lessons learned as reported by the B+WISER IP during its learning review. These are: (i) **LQ2:** Within an FCA, a decrease in observed threats ran parallel to an increase in observed rate of forest regeneration; and (ii) **LQ3:** Within an FCA, an increase in patrol efforts paralleled a decrease in observed threats.

## **RECOMMENDATIONS**

Based on the FPE, two sets of recommendations are pushed forward:

For **DENR** to strengthen LAWIN, it has to:

- regularize the LAWIN Command Center within DENR with personnel and funding complement;
- expand the indicators in assessing and monitoring forest protection and biodiversity conservation;



- design and implement field validation sites for more accurate and reliable estimates of improvements in patrol activities, forest regeneration, GHG emission, and biodiversity conservation;
- improve data integrity with real-time data transmission from patrol teams to the Command Center;
- roll out the PES scheme to support LAWIN implementation;
- increase participation of LGUs in LAWIN; and
- mobilize state universities and colleges for IEC and M&E of LAWIN implementation.

For **USAID** to implement similar programs in the future, it has to:

- require implementors to establish actual field validation sites for more reliable monitoring of improvements in forest conservation and biodiversity conservation;
- revise the definition of results indicators to capture data that reflect actual accomplishments; and
- ensure the consistent and active engagement of the Program proponent throughout the project implementation period.

# INTRODUCTION

## PROGRAM BACKGROUND

The Department of Environment and Natural Resources (DENR) and the United States Agency for International Development (USAID) partnered in 2012 to implement the *Biodiversity and Watersheds Improved for Stronger Economy and Ecosystems Resilience (B+WISER) Program* from 2013 to 2018 to support the Government of the Philippines (GOP) in implementing environmental policies and programs to prevent forest and watershed disturbances and biodiversity loss.

It also contributed to the *GOP-US Partnership for Growth (PFG)/Country Development Cooperation Strategy (CDCS)* by focusing on inclusive and broad-based economic growth and ecosystem services. Over the six-year implementation period (2013-2018), the primary goals of B+WISER focused on contributing to the improvement of natural and environmental resource management and the reduction of disaster risks in the country. To achieve these goals, B+WISER aimed at: (i) conserving biodiversity in forest areas; (ii) reducing forest degradation in targeted priority watersheds; (iii) building capacity of DENR and other local stakeholders to conserve biodiversity, manage forests, and support low emissions development; and (iv) contributing to disaster risk reduction (DRR) at the subnational level.

By the end of 2018, B+WISER was expected to achieve the following outputs (deliverables) and outcomes (key results) inclusive of the base and extension periods:

- 5,000,000 hectares (ha) of biologically significant areas placed under improved natural resource management (NRM);
- 584,000 ha of biologically significant areas showing improved biophysical conditions;
- 8,778,278 metric tons (mt) of greenhouse gas (GHG) emissions, in CO<sub>2</sub> equivalent (tCO<sub>2e</sub>), reduced, sequestered, or avoided through sustainable landscape activities;
- US\$41 million worth of investments mobilized for sustainable landscapes;
- 166,000 people trained in sustainable NRM and biodiversity conservation; and
- 4,400 days of technical assistance (TA) in NRM and climate change provided to DENR and other local stakeholders.

Over time, the B+WISER area expanded from seven priority forest/watershed reserves to 17 DENR regions covering 6.8 million ha throughout the country (**Figure I**). The original seven were:

- Northern Sierra Madre Natural Park (NSMNP) in Region 2;
- Upper Marikina River Basin Protected Landscape (UMRBPL) and Kaliwa Watershed Forest Reserve (KWFR) in Region 4A;
- Naujan Lake National Park (NLNP) in Region 4B; (iv) Quinali River Watershed (QRW) in Region 5;
- Bago River Watershed Forest Reserve (BRWFR) in Region 6;
- Mt. Kitanglad Range Natural Park (MKRNP) in Region 10; and
- Mt. Apo Natural Park (MANP) in Regions 11/12],<sup>ii</sup> with an aggregate area of 780,000 ha.

Based on the successful piloting of the Lawin Forest and Biodiversity Protection System (LAWIN) in the original seven sites, the area coverage expanded to 17 DENR-covered regions by the end of 2016. The nationwide application of LAWIN in 17 out of the 18 DENR regions marked a significant accomplishment for the B+WISER Program. It required that its strategic approaches (i.e., technology development, capacity development, NRM plan enhancement, policy and governance, conservation financing (CF), and information, education, and communication [IEC]) converge to provide focused support for the institutionalization of LAWIN within DENR at all levels.

In essence, the different earlier approaches converged in B+WISER, focusing on the strengthening of LAWIN institutionalization in the Philippine Government’s main agency (DENR) with the mandate, organization, and resources for the sustainability of implementation beyond Program life.

The first three years of B+WISER operations focused on preparatory tasks (i.e., mobilization, assessments, and building partnerships) in the seven sites to set the foundation for (i) timely completion of planned activities; (ii) scaling up of B+WISER innovations, such as LAWIN, payment for ecosystem services (PES); and forest management unit (FMU) planning and implementation, among others, at the national level.



Figure 1. The 7 regions of DENR included in B+WISER

By the end of 2015, B+WISER either achieved or exceeded four of its 12 performance indicators.<sup>iii</sup> Two years later, B+WISER either achieved or surpassed all 12 indicators. Hence, B+WISER's last Annual Work Plan (AWP) for FY 2018 shifted “from a program-led to a local ownership-led implementation strategy,” emphasizing the strengthening of partnership with DENR at the national, regional, and local levels for an effective transfer of LAWIN technology, expertise, and database management.

Meanwhile, B+WISER maintained collaboration with local government units (LGUs), Protected Area Management Boards (PAMBs), forest communities including indigenous peoples and women groups, and selected private sector partners on B+WISER activities, including localization of LAWIN. B+WISER worked to establish institutional linkages between DENR and other local stakeholders to sustain collaboration in forest and biodiversity protection through the implementation of LAWIN to support different forest and watershed restoration initiatives in the original seven sites.

Chemonics International, Inc. carried out B+WISER as the Implementing Partner (IP); the USAID awarded Chemonics the service contract in December 2012.

## EVALUATION PURPOSE AND QUESTIONS

### EVALUATION PURPOSE

The Statement of Work (SOW) for the FPE of B+WISER (Annex A) addressed two key objectives:

- (i) Assess program performance in terms of: (a) expected outputs (deliverables) and outcomes (key results), as defined in the activity Monitoring and Evaluation (M&E) Plan (and outline above); and (b) factors that enhanced or diminished the achievement of the outputs and outcomes; and
- (ii) Verify the lessons reported by B+WISER from a learning review conducted by the B+WISER IP.

For the **first objective**, the FPE measured and evaluated the extent by which B+WISER achieved desired outputs and outcomes according to its Theory of Change (TOC) shown in **Figure 2** (next page). The FPE obtained evidences from key stakeholders at all levels to confirm performance reported by the Program. In relation to this, the FPE identified and described factors, both internal and external to the Program, which enhanced or diminished the achievement of desired results during the Life-of-Program (LOP).

For the **second objective**, the FPE carried out an extensive desk review of relevant Program documents and reports and primary data collection to verify the (i) lessons reported by B+WISER as a result of a learning review conducted by the B+WISER IP, and (ii) extent to which and under what conditions B+WISER strategies contributed to the improvement in the status of biodiversity and other focal interests in the forest conservation area (FCA). As shown in **Figure 2**, the strategies included technology development, capacity development, NRM plan enhancement, policy and governance enhancement, conservation financing (CF), and IEC. Collectively, these strategies aimed to reduce threats to forest regeneration, biodiversity conservation, reduce carbon emission, provision of ecosystem services, ultimately improve human well-being.

**Finally**, the scope of work (SOW) required the FPE to apply the triangulation method for a more accurate and reliable assessment of B+WISER performance, results, and lessons.

In July 2018, USAID/Philippines (USAID/P) commissioned **Pacific Rim Innovation and Management Exponents, Inc. (PRIMEX)**<sup>iv</sup> to conduct the FPE of the B+WISER Program.

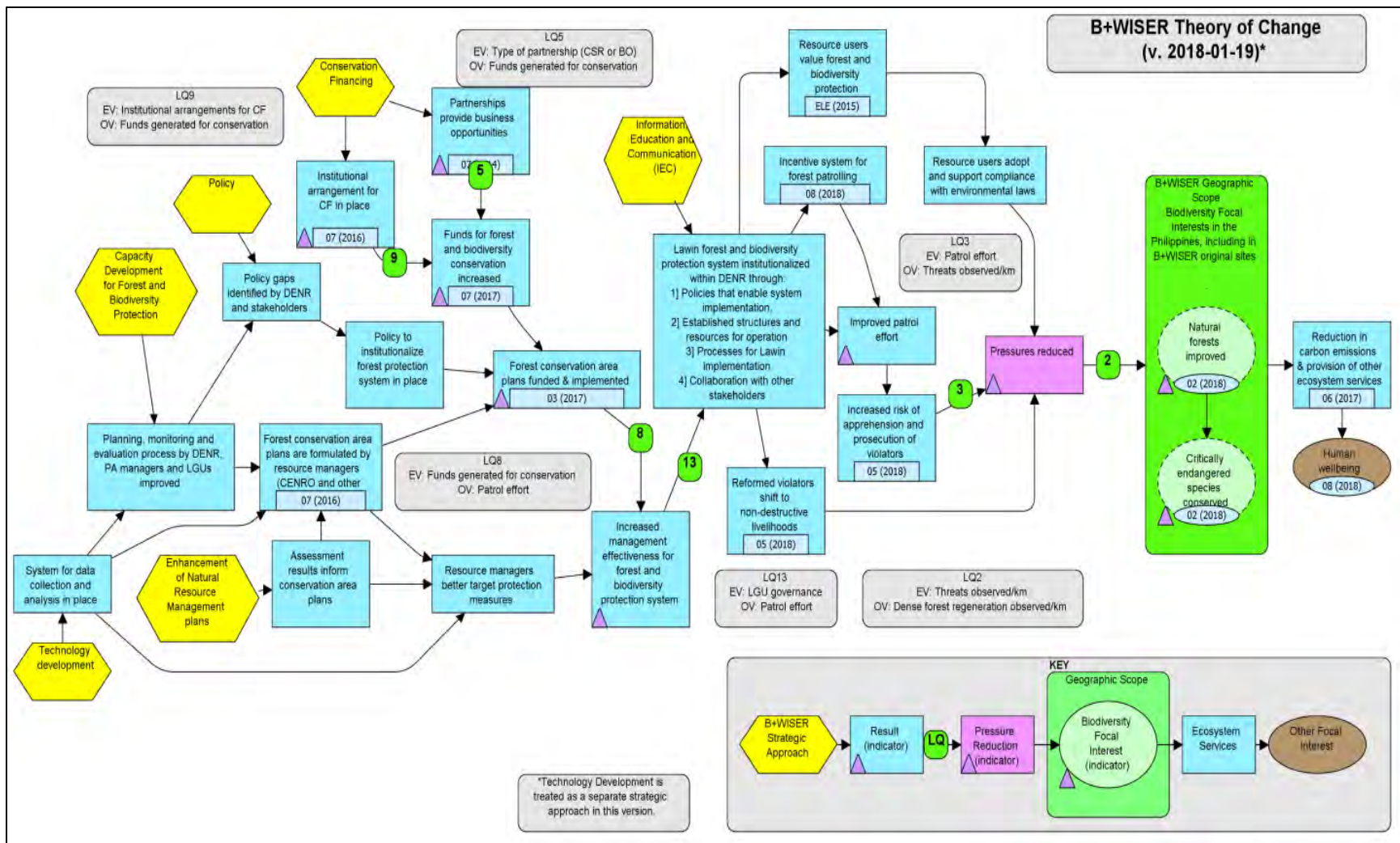


Figure 2. Theory of Change (TOC) for B+WISER (Version 2018-01-19)



## EVALUATION QUESTIONS

The **SOW** defined four key evaluation questions, as listed in **Table I**, for this FPE to meet the evaluation objectives.

**Table I. Evaluation Questions**

Evaluation Objectives	Evaluation Questions
Performance assessment	<ol style="list-style-type: none"><li data-bbox="537 489 1404 594">1. To what extent has B+WISER achieved its expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?</li><li data-bbox="537 604 1404 741">2. How effective and efficient were B+WISER strategies in achieving these outputs and outcomes? What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?</li></ol>
Lesson verification	<ol style="list-style-type: none"><li data-bbox="537 772 1404 846">1. How valid are the lessons reported during the IP's learning review for each of their learning questions?</li><li data-bbox="537 856 1404 993">2. How valid are the lessons reported during the IP's learning review on the extent to which, and under what conditions, B+WISER strategies have singly and collectively contributed to achieving the outcomes (key results)?</li></ol>

The evaluation of the validity of lessons reported by the B+WISER IP was expected to produce evidence to answer the **six learning questions (LQs)** embedded in the latest version of B+WISER's TOC (**Fig. 2**), including the following:

- LQ2: Within an FCA, does a change in observed threats lead to a change in observed encounter rate of dense forest regeneration?
- LQ3: Within an FCA, does a change in patrol efforts lead to a change in observed threats?
- LQ5: Does a change in the type of partnership (corporate social responsibility [CSR] or business opportunities [BOs]) lead to greater funding generated for conservation?
- LQ8: Does a change in funds generated for conservation lead to a change in patrol efforts?
- LQ9: Does a change in institutional arrangements for CF lead to greater increases in funding for conservation?
- LQ13: Does a change in LGU governance score lead to a change in patrol efforts?

The Consultant Team assessed these questions to respond to the two key evaluation objectives of the FPE. The SOW identified three biodiversity hotspot regions and two project sites<sup>v</sup> for field visits to enable the FPE to be conducted at three levels (national, regional, and project sites) and verify the performance, results, and lessons of B+WISER for a period of five months, from July 23, 2018 to December 22, 2018:

### Regions:

- (i) Cordillera Administrative Region (CAR);
- (ii) Western Visayas (Region VI); and
- (iii) Davao Region (Region XI).

## **Project Sites:**

- (iv) Upper Marikina River Basin Protected Landscape/Kaliwa Watershed Forest Reserve; and
- (v) Mount Kitanglad Range Natural Park.

# **METHODS AND LIMITATIONS**

## **EVALUATION APPROACH**

The FPE assessed B+WISER performance and validated the lessons reported by the IP according to four evaluation questions. The FPE Team formulated more detailed guide questions structured around these four evaluation questions in the form of an evaluation design matrix that was agreed upon with the USAID/P Contracting Officer's Representative (COR), as included in Deliverable I that was submitted to USAID/P in August 2018 and attached to this report as **Annex B**.

The results chain reflecting the B+WISER's TOC provided the framework for the FPE. It established the hypothesized relationships between the strategies and desired results and between the results to reduce threats to achieve forest regeneration, biodiversity conservation in natural forest areas, reduction in carbon emission, provision of ecosystem services, and improvement of human well-being. Building on this framework, the FPE Team developed an evaluation design matrix for the FPE (Annex B) under the technical direction of the USAID/P COR. The evaluation design matrix identified the data/information required for each of the four evaluation questions, the methods for data gathering and analysis, and the sources of data/information. The guide questions formulated to gather the required data/information, as contained in the KII, FGD, and DO data gathering instruments, are in **Annex C**.

## **EVALUATION METHODS**

The FPE Team employed a mix of qualitative and quantitative research methods in gathering and analysis of data and information collected.

## **DATA COLLECTION**

**Desk Review.** The FPE Team reviewed B+WISER documents, especially Annual Work Plans and Progress Reports, including special and technical reports and forest patrol data from the DENR. The list of documents reviewed is attached as **Annex D**.

**Focus Group Discussions.** FGDs were conducted to document and assess the collective opinions and views of the key stakeholders who were involved in the implementation of B+WISER. A total of 69 representatives from *Bantay Gubat* (Forest Patrol) groups, women, indigenous peoples, farmer groups, and PAMB members at the evaluation sites attended 10 FGD sessions that the FPE team conducted.

**Key Informant Interviews.** KIIs comprised key officials and authorities familiar with, or involved in, B+WISER implementation. Key informants included the following: B+WISER Chief of Party (COP), M&E Specialist, LAWIN Focal Person, and five Site Managers; DENR central office, bureau and field officials (regional, provincial, and community environment and natural resources officers [Enforcement Division Chiefs/Conservation and Development Divisions [CDDCs]/Provincial Environment and Natural Resources Officers [PENROs]/Community Environment and Natural Resources Officers [CENROs] and protected area superintendents [PASUs]); and participating LGU officials (provincial and municipal government environment and natural resources officers [PGENROs]/Municipal Environment and Natural Resources Officers [MENROs]), and nongovernment organization (NGO) and people's

organization (PO) leaders representing the indigenous peoples. The FPE Team conducted KIs with a total of 46 key informants.

**Direct Observation.** DO, including photo documentation of activities in the selected regions/sites, supplemented the FGDs and KIs to gather evidence from the field.

**Case Studies.** These captured the good practices and lessons learned, as shared by the community stakeholder groups during FGDs, and reflected the data/information gathered from KIs and B+WISER documents/reports.

## **DATA ANALYSIS**

The FPE team used SPSS/STATA software to establish patterns, trends, and themes from FGD and KI documentation reports. Frequency tables showed similarities and differences in stakeholders' responses across groups and sites. The summary tables of FGD and KI responses are in **Annex E**.

To assess B+WISER performance and verify the reported lessons, the FPE gathered and reviewed data on B+WISER results indicators (i.e., outputs and outcomes) from its Annual Reports and Work Plans to compare actual achievements against life of program (LOP) targets to track changes over time and cross-referenced data reported by B+WISER with data from other key stakeholders at different levels (viz., DENR central, regional, PENRO, CENRO and PASU; PAMB; LGUs; and *Bantay Gubat*). Two large CENROs (in terms of ha/region), which adopted LAWIN, were selected to validate reported achievements in five results indicators (number of ha of biologically significant areas under improved NRM; number of ha of biologically significant areas showing improved biophysical conditions; GHG emissions (estimated in tCO<sub>2</sub> equivalent) reduced, sequestered, or avoided through sustainable landscapes activities; number of people trained in sustainable NRM and biodiversity conservation; and number of days of TA provided in NRM and climate change). For the other results indicator (amount of investment mobilized [in US\$] for sustainable landscapes), the FPE carried out a "paper trail" of actual investments mobilized by the B+WISER by obtaining copies of investment instruments (e.g., memoranda of agreement (MOAs), General Appropriations Act (GAA), project/activity proposals/documents, etc.), and evidences of fund allocation/releases (e.g., advice of allotment, approved vouchers, etc.) and utilization (e.g., liquidation reports/vouchers), and work and financial plans of specific projects supported by such investment. To confirm the reliability and validity of B+WISER performance, the FPE team used the information gathered from KIs, FGDs, and DOs to supplement and triangulate the data. The FPE Team used field-level secondary data to recompute some of B+WISER's result indicators. They also hypothesized the relationships of explanatory and outcome variables embedded in the LQs to validate the accuracy of achievements and lessons reported.

## **LIMITATIONS**

The scope of this FPE focused on the selected three hotspot regions and two project sites, from a total of 17 regions, where LAWIN has been rolled out since 2016, and the original seven sites where B+WISER strategies have been implemented since 2013. Thus, the FPE findings may be largely applied to the selected evaluation sites. Use of external validity in data analysis provided evidence on the applicability of B+WISER strategies and lessons in different places or sites. However, the generalization of the findings to all the 17 regions, in the case of LAWIN institutionalization, or to the original seven sites, in the case of all strategies, must be based on the existence of enabling conditions like issuance of necessary policies, provision of user manuals, training on LAWIN, and establishment of data management centers.

The major problems encountered during data gathering are briefly described below.

**FGDs.** The main factors that constrained the timely conduct and completion of FGD sessions were: (i) distant, remote, and rough terrain of forest patrol sites, aggravated by poor road conditions; (ii) unfavorable peace and order situation; and (iii) occurrence of a tropical depression in Northern Luzon. These required a rescheduling of some sessions.

**KIIs.** The non-availability of some key informants due to hectic work schedules, despite prior advice on the interview schedule, resulted in rescheduling or cancellation of some planned interviews.

**Desk review.** The quality of secondary data collected by the FPE Team varied from one region/site to the other. Some offices provided complete data; others gave incomplete secondary data because of the closure of B+WISER operations at the time of the FPE. The data had apparently been sent to the B+WISER National Program Office (NPO) prior to the FPE. Consequently, some data were requested from the central offices of the concerned key informants, which partly limited the gathering of secondary data on time.

**LQ13:** Does a change in LGU governance score lead to a change in patrol efforts? No validity assessment was undertaken for this learning question as efforts to establish the GSA scores ceased with the shift in focus on LAWIN institutionalization within DENR in 2016, particularly on the capacity, policy, and partnership strengthening of DENR and those LGUs that initiated the localization of LAWIN (e.g., LGUs in Bukidnon Province, Malaybalay City, and seven municipalities covered by MKRNP [Region 10] and Tanay, Rizal in UMRBPL/KWFR [Region 4A]).

## **FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

Overall, the B+WISER Program achieved or even exceeded all its performance targets at the end of its implementation period and successfully assisted the institutionalization of LAWIN within DENR as of October 2018.<sup>vi</sup> Along with the establishment of LAWIN, B+WISER created a large pool of trained DENR personnel as well as LGU personnel and community groups. These groups are now capable of applying CyberTracker to record and transmit geo-referenced, real-time observation data and Spatial Monitoring and Reporting Tool (SMART) to analyze observation data and generate maps to show the spatial distribution of observed threats for effective forest and biodiversity protection responses. B+WISER raised the level of community awareness on the importance of, and participation in patrol efforts. Patrol efforts do not just help restore forests, improve biophysical conditions, and sustain natural sources of human subsistence (i.e., clean water supply and air quality, food supply, etc.); it also generates livelihood sources (i.e., ecotourism activities in KWFR, BRWFR, MKRNP, and MANP).

The key FPE findings are presented according to the four EQs shown in **Table I**. This section ends with conclusions and recommendations drawn from the key findings to provide guidance to (i) DENR in the implementation and institutionalization of the LAWIN system, and (ii) USAID/P in the design of future similar initiatives in the Philippines and elsewhere.

## **FINDINGS**

### **Achievement of B+WISER Outcomes and Outputs**

EQ 1: To what extent has B+WISER achieved its expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?

**Biologically significant areas under improved NRM.** As noted above, the B+WISER exceeded its LOP targets by the end of its implementation, as shown in **Table 2**.

**Table 2. Achievement of Program Outcomes and Outputs**

Results Indicators	Unit	Target	Actual	% Achieved
Number of ha of biologically significant areas under improved natural resource management	ha	*5,000,000	6,273,196	125
Number of ha of biologically significant areas showing improved biophysical conditions	ha	584,000	616,470	106
GHG emissions (estimated in t CO <sub>2</sub> e), reduced, sequestered, or avoided through sustainable landscape activities	t	*8,778,278	10,239,917	117
Amount of investment mobilized (in US\$) for sustainable landscapes	US\$	*41,000,000	48,261,139	118
Number of people trained in sustainable NRM and biodiversity conservation	person-hour	*166,000	212,574	128
Number of days of TA in NRM and climate change	day	*4,400	4,366	99

Source: B-WISER Project briefing materials for the FPE Team. Data on actual achievements as of March 31, 2018.

\*Targets for five results indicators were increased after completion of the Midterm Evaluation (MTE) in January 2016.

In terms of this outcome indicator, B+WISER exceeded its LOP target of 5.0 million ha by about 1.3 million ha. This result could be directly attributed to the increase in patrol coverage carried out by different *Bantay Gubat* (Forest Patrol) teams that included not only natural forest areas of biological significance<sup>vii</sup> (i.e., the Program’s target forest conservation areas [FCAs]), but also forest plantations established by DENR’s National Greening Program (NGP) and existing buffer zones<sup>viii</sup>.

This largely explains why most patrol effort maps generated by the SMART tool showed the presence of *Bantay Gubat* teams outside target FCAs. Consequently, the achievement of this outcome indicator surpassed LOP targets in the five evaluation sites visited and resulted in the reduction of observed threats.

In B+WISER’s Performance Monitoring Plan (PMP), an area was considered under “improved NRM” when, depending on the typology of the site, any of the following criteria relevant to the site have been satisfied: (i) resource management plan enhancement and implementation was informed by science-based assessments (e.g., biodiversity assessment, forest cover assessment, watershed characterization, climate change vulnerability, socio-economic, institutional, etc.); (ii) enhanced resource management plans (e.g., CLUP, Forest Land Use Plan [FLUP], Protected Area Management Plan [PAMP], Watershed Management Plan [WMP], Ancestral Domain Sustainable Development Protection Plan [ADSDPP], etc.) and incorporated results of such assessments, with clear biodiversity conservation targets, threat reduction targets and climate change elements, harmonized with each other and formally approved with budget allocation for the area; (iii) capacity of the management body enhanced to conserve biodiversity, manage forests, monitor low emission development (LED) and disaster management in the area; and (iv) at least 50% of the key activities (biodiversity conservation, REDD+ readiness related activities, watershed improvement related activities, forest restoration, climate change adaptation, payment for



ecosystem services (PES) (water, ecotourism), law enforcement, monitoring and evaluation (monitoring of threats to biodiversity), research, resource generation in the enhanced management plan for the area implemented. The fulfillment of a criterion was measured through percentage points, equivalent to 25 percentage points each, for a total of 100 percentage points for the four criteria.

These performance measurement criteria were used in the original seven sites with clearly established target protected/watershed areas. However, when B+WISER expanded the implementation of LAWIN to the 17 DENR regions nationwide in 2017, the performance assessment of this particular indicator used USAID AFOLU Carbon Calculator formula<sup>x</sup> to measure the area under “improved NRM”. This tool allowed B+WISER to calculate the area under improved NRM by counting the number of grids<sup>x</sup>, of the area patrolled by *Bantay Gubat* teams for each patrol effort. This tool was also used to measure the next two Program results indicators (number of ha of biologically significant areas showing improved biophysical conditions, and GHG emissions [estimated in t CO<sub>2</sub>e] reduced, sequestered, or avoided through sustainable landscape activities). The general weakness of this tool for measuring area (in ha) under improved NRM (and improved biophysical conditions) could be traced to its inability to calculate the accurate size of the area actually covered by the patrol efforts. This could have been enhanced if systematic ground verification was also carried out by B+WISER on a periodic basis. Recomputation, however, was not done owing to the fact that no secondary data on GHG were available in the field nor at the national headquarters to enable an accurate validation of reported data. Likewise, pertinent primary data could not be gathered due to lack of time and resources. Doing so would require establishment of sample plots following the sampling design and CO<sub>2</sub> assessment protocol prescribed by the UN Framework Convention on Climate Change (UNFCCC).

The most common threats to deforestation and forest degradation in the evaluation sites, as observed by *Bantay Gubat* members, include shifting cultivation (*kaingin*), illegal cutting of trees, charcoal-making, improper siting of infrastructure (i.e., houses, markets, roads, etc.), and indiscriminate garbage disposal. Regular patrol efforts, supplemented by IEC activities for communities through installation of signboards in strategic places and face-to-face conversations, among others, resulted in reduction of observed threats. KII respondents and FGD participants believed that patrol efforts, especially if planned properly and executed regularly, served as an effective deterrent to the occurrence of observed threats. Increased interaction and communication between *Bantay Gubat* teams and communities during patrols also influenced local people’s behavior to contain *kaingin* (shifting cultivation) activities in existing areas, prevent destructive activities, and participate in forest patrol efforts. In all five evaluation sites, FGD participants observed that forest cover has become dense or medium as compared to the open forest cover condition prior to the regular patrol efforts. This improved forest cover was also attributed to the planting of forest and fruit-bearing trees by local people under DENR’s NGP and other local initiatives. In KWFR, for instance, the watershed area has become a tourist spot as a result of the forest tree planting done by the local people with LGU support.

Each patrol team, consisting of 4-8 members, covered a minimum target distance of 10 km/ month. However, some *Bantay Gubat* members in UMRBPL/KWFR (Region 4A) and Region 6 claimed to have patrolled 15-16 km/month to avoid returning to the field for additional patrols if the actual distance traversed fell short of target. DENR’s annual recognition awards to best field office/*Bantay Gubat* team performers in patrol efforts may have also contributed to this higher than expected achievement. Patrol intensity ranged from 1-2 times a week, depending on weather condition (heavy rains); multiple tasks, health and physical condition, and security of patrollers; and timely release of forest protection funds.

In the past 3-4 four years of LAWIN implementation in the evaluation sites, *Bantay Gubat* members in CAR, Region 4A, and Region 10 said, during FGD sessions, that the forest patrols in their areas covered increasing distances as a result of the user-friendly LAWIN gadget used by the teams, and the increase in number of patrollers deployed by DENR per team. In contrast, however, a decline in patrol efforts was

recently observed in Region 6 due to the untimely release of funds. In Region 11, the trend has generally remained the same over time. The practice of assigning multiple tasks to patrollers (particularly Forest Rangers with regular positions in DENR) appeared to be a major constraint to patrol efforts, as noted by *Bantay Gubat* members in most evaluation sites.

### **Biologically significant areas showing improved biophysical conditions**

In all evaluation sites, there was a general observation of increased regeneration of wildlings, closing of secondary forest canopies, reappearance of birds (e.g., Philippine Eagle, Rufous-headed Hornbill, Luzon Bleeding-heart, etc.) and other indicator species (e.g., *Rafflesia arnoldii*), and sightings of footprints and feces of wild boar and wild cat, which are classified as endangered species. In Region 6, *Bantay Gubat* members also observed that water supply (in terms of volume) from rivers and springs has improved, particularly during the dry season. As in the first outcome indicator, the increased area covered by the patrol efforts contributed to the higher than LOP target in terms of the number of hectares of biologically significant areas showing improved biophysical conditions (Table 2).

In the PMP, B+WISER defined “improved biophysical conditions” as when: (i) natural forest cover, as determined through National Mapping and Resource Information Authority (NAMRIA) data and remote sensing, is maintained or improving in the area, especially in identified high value conservation areas (HVCAs); (ii) observed indicator species for healthy forest habitats are increasing; and (iii) observed threats to natural forests are decreasing. B+WISER used Spatial Monitoring and Reporting Tool (SMART)/Landscape and Wildlife Indicators (LAWIN) system as the main tool to monitor the last two parameters above.

### **GHG emissions reduced, sequestered, or avoided through sustainable landscape activities**

In all evaluation sites, DENR field offices have no data on GHG emissions for lack of technical capacity, since the Program performed the actual calculation of GHG. DENR field offices did not receive any training sessions on GHG calculation. In the PMP, carbon benefits from carbon emission reduced were measured in terms of CO<sub>2</sub>e (equivalent). On the other hand, emission reduction was viewed in terms of ‘avoided deforestation’. Hence, B+WISER defined the amount of carbon emission reduced as “the expected amount of carbon that was not emitted due to improved management, including avoiding deforestation or forest degradation.” Under the AFOLU system, carbon emission reduction was estimated using “Forest Protection” as the Management Activity. Consequently, carbon benefits from avoided deforestation was based on the total area under improved management (i.e. forest areas protected under the B+WISER activities).

In the evaluation sites, KII respondents and FGD participants used the observed improvement in air quality as a proxy variable to claim a reduction in GHG emissions, which they attributed to the (i) improved forest biophysical conditions resulting from patrol efforts, and (ii) increased vegetative cover from new tree plantations established under DENR’s NGP. In MKRNP (Region 10), net forest gain was reported by KII respondents, estimated at over 3,700 ha, which they claimed to have contributed to air quality improvement. Some respondents noted, however, that it is too early to measure the impact of forest patrols and other restoration efforts because LAWIN implementation has just started in their areas, and it will take years to see concrete changes.

### **Amount of investment mobilized for sustainable landscapes**

Majority of the KII informants and FGD participants expressed little knowledge of the amount of investment mobilized for CF. However, some noted the existence of funding support from DENR and LGUs for forest patrol work. The private sector (e.g., Energy Development Corporation [EDC] and

Hedcor, a private company engaged in generating renewable energy from run-of-river hydropower systems) for reforestation and protection of plantation areas.

Based on information gathered from the B+WISER IP, over 95% of the total investment mobilized by B+WISER for CF (**Table 2**) originated from DENR, which has been used to pay for salaries, allowances, protective gear, and LAWIN gadgets of *Bantay Gubat* teams deployed by DENR field offices (i.e., P/CENROs). As called for in **Section 7 of DENR DAO 21 (October 2018)**, which adopted LAWIN as a national strategy for forest and biodiversity protection, **regular annual funds were allocated by DENR for LAWIN implementation**. B+WISER supported the drafting and presentation of the DAO to DENR authorities to facilitate its issuance.

Participating LGUs (e.g., Municipal Government of Tanay in KWFR [Region 4A] and Provincial/City/Municipal Governments of Bukidnon in MKRNP [Region 10]), where the two original Program sites are located, provided funds for allowances of local people who volunteered as *Bantay Gubat* members. The Bukidnon Provincial Government increased its annual financial support for patrol efforts from PhP3.0 million to PhP4.0 million; Malaybalay City allocated an annual budget of PhP1.5 million; and the seven municipalities covered by MKRNP also allotted an annual budget ranging from PhP200,000 (six municipalities) to PhP500,000 (Municipality of Lantapan). The Malaybalay City Government provided a monthly honorarium of PhP2,000 per *Bantay Gubat* member in four of its barangays. Other barangays outside Malaybalay City also provided PhP8,000 as a group honorarium. Thus, in one of the barangays, where the *Bantay Gubat* team has 10 members, each member received PhP800. B+WISER facilitated and supported the establishment of formal institutional arrangements between these LGUs and communities within MKRNP.

The combined amount of CF mobilized from LGUs and selected private sector groups comprised less than 5%, which mainly focused on the original Program sites. When LAWIN was institutionalized within DENR and implemented nationwide, B+WISER concentrated all its efforts on building the technical and management capacity of DENR at all levels for effective and sustainable implementation of LAWIN. Consequently, CF mobilization from other stakeholders received less attention in the later years of the Program, since DENR has ensured annual budgetary support for LAWIN implementation through DENR-DAO 2018-21.

### **People trained in sustainable NRM and biodiversity conservation and TA provided on NRM and climate change**

KII/FGD outputs and desk review of Program documents showed that all *Bantay Gubat* members, data managers, and some personnel at DENR central, regional, provincial, and community levels attended formal and informal training on LAWIN system/technology, and related law enforcement subjects. Those who attended the formal training conducted informal training through re-echo and demonstration activities. *Bantay Gubat* members, especially those recruited by DENR from local communities with relatively low educational attainment, found the actual demonstration on the use of SMART tool in the field to be very effective and useful because they were able to see how the specific data/information on observed threats, improved biophysical conditions, etc. were inputted to their SMART phones. This learning process also hastened the development of self-confidence on the use of SMART tool in patrol efforts as they actually record observed data in their SMART phones. The conduct of informal training was part of the design of the Program's capacity building activities.

Some of them also attended training or orientation on forest patrol plan preparation and IEC activities. Prior to the nationwide rollout of LAWIN, several trainings were provided by B+WISER, e.g., on livelihood, preparation of project proposals, leadership, for communities in the original Program sites. However, the shift in strategic focus on LAWIN implementation, as discussed above, influenced the

nature and type of recent training and technical assistance provided by B+WISER to DENR, LGUs, and communities. In the three DENR regions (CAR, Region 6, and Region 11), which adopted LAWIN, FGD participants informed that training on LAWIN were provided to all *Bantay Gubat* members and DENR employees in the regions. B+WISER provided several training courses, including operationalization of LAWIN, data management for Data Managers and P/CENRO Enforcement Section Chiefs, SMART 5.0.1 deployment in support of LAWIN, LAWIN response protocol, and conduct of LAWIN SMART 6.0 upgrade.

When asked about the benefits gained from training courses, FGD participants responded that they increased their level of awareness and knowledge on the use of LAWIN SMART CyberTracker to identify and record observed threats and forest conditions; found the identification of threats and the corresponding locations easier with the use of CyberTracker; improved database planning and decision making skills (i.e., appropriate responses to threats), and motivated them to work in forest patrol efforts. Some of them also noted that the gadget helped direct their patrol route, avoiding getting lost during patrol efforts as in the past.

### **Unintended consequences**

KII and FGD outputs identified positive changes in human behavior of both *Bantay Gubat* members and community residents as important unintended consequences of the B+WISER Program, particularly in LAWIN implementation. In the two original Program sites in UMRBPL/KWFR (Region 4A) and MKRNP (Region 10), majority of the *Bantay Gubat* members from DENR and their community counterparts/partners claimed to have learned how to interact and talk diplomatically with local residents, including violators of environmental and natural resources management laws and regulations, and to better communicate applicable laws and the values of forest and biodiversity protection. In the past, DENR's personnel in the *Bantay Gubat* teams recalled that they focused more on law enforcement, involving identification, apprehension, and reporting of violators, and subsequently, the imposition of penalties. Most of the time, they were positioned in designated checkpoints at entry or exit points of forestlands. As a result of the regular patrol efforts, they needed to interact more often with local people to seek guides for *Bantay Gubat* members, build community champions on forest and biodiversity protection, and mobilize volunteers to participate in patrol efforts. Some members also claimed that they gained a sense of purpose and self-worth in doing patrol work. For community members, particularly the indigenous peoples' communities in MKRNP, their acquired skills on LAWIN application helped them to generate evidence to convince other local residents and outsiders about the importance of protecting the forestlands that formed part of their claimed ancestral domain. In addition, the regular visibility of patrol teams in FCAs was perceived to have influenced local people to realize the need to protect their forestlands.

In CAR and Region 6, the engagement of hundreds of rebel returnees as *Bantay Gubat* members, leading to their gainful employment with DENR as Forest Protection Officers (FPOs), was considered as a major positive unintended consequence of B+WISER implementation, based on FGD outputs. DENR established an institutional arrangement with the Office of the Presidential Adviser on Peace Process (OPAPP) for the involvement of rebel returnees in B+WISER activities, particularly in patrol efforts, to engage them in productive activities and provide alternative livelihood opportunities.

Perhaps the displacement of some community subsistence activities (e.g., *kaingin* [slash and burn farming] and charcoal making) in FCAs covered by patrol efforts could be considered a short-term negative unintended consequence of LAWIN implementation. Alternative livelihood sources for affected communities (similar to ecotourism in KWFR; use of PES in BRWFR, MKRNP, and MANP; and more LGUs' financial support for *Bantay Gubat* members) need to be pursued vigorously by DENR and participating LGUs to sustain patrol efforts even after the completion of the B+WISER Program.

## Effectiveness and efficiency of B+WISER strategies

EQ 2: How effective and efficient were B+WISER strategies in achieving these outputs and outcomes? What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?

The FPE assessed the effectiveness and efficiency of the B+WISER Program's six strategies according to the expected outputs and outcomes embodied in B+WISER design, as reflected in the evaluation design matrix (**Annex B**). The FPE Team's key findings, by strategy, are presented below.

**Technology development.** The SMART technology of LAWIN proved effective for several outputs and outcomes identified by KII respondents and FGD participants. Specifically, LAWIN technology tracked the location and route of patrol teams, mapped the concentration of threats, facilitated responses to threats and monitored status of responses, improved decision-making process in forest protection, reduced observed threats, and improved biophysical conditions. All these outputs and outcomes are consistent with the LAWIN design, as contained in the four-volume LAWIN modules published by the B+WISER Program. Some CENRO chiefs and *Bantay Gubat* members stressed that LAWIN helped them organize patrol plan/effort with clear outputs and outcomes within a specified period of time (i.e., weekly/monthly), thereby ensuring value for public money. B+WISER trained all Data Managers and facilitated the establishment of the LAWIN data management system at the DENR field offices and at the LAWIN Command Center at the Forest Management Bureau (FMB) in the DENR central office. The designation of FMB personnel at the LAWIN Command Center enabled effective data sharing and use of the LAWIN system for forest and biodiversity protection planning, monitoring, and decision-making.

Overall, the transmission of real-time patrol data from patrollers in the field to DENR offices at all levels made it possible to launch appropriate responses to observed threats. KII respondents and FGD participants found this particular attribute of LAWIN technology very efficient as it accelerated patrol data generation, transmission, storage, retrieval, and sharing among key stakeholders. The continued upgrading of SMART CyberTracker (version 6.1) also expanded the functionality of this technology to monitor status of responses to threats on a dashboard while responses are implemented in the field. Across the five evaluation sites, *Bantay Gubat* members and other KII respondents agreed that the SMART CyberTracker made their patrol work easier and faster, generating accurate and timely reports more readily, and enabling them to patrol areas that were not covered before LAWIN implementation. In Region 6, FGD participants noted that LAWIN resulted in paperless patrol efforts, indicating that patrol reports were transmitted, stored, processed, and reported digitally, as all data, information, diagrams and maps could be viewed on computer screens or dashboards.

During the Learning Event to share the FPE results conducted with key stakeholders (DENR and LGUs' field personnel from CAR, Region 4A, and Region 10) last January 10, 2019, DENR Assistant Regional Director for Operations in CAR informed the body that they have started a study to expand the application of LAWIN to include natural hazards (e.g., landslides) in data to be recorded and reported during patrolling in light of the recent natural disasters in the region. This will enable the agency to plan and enforce appropriate responses. Hence, there is a great potential for LAWIN to expand its operation to encompass the broader mandate of DENR in managing and protecting the country's environmental and natural resources. LAWIN could also be expanded to other law enforcement agencies and offices, such as the Philippine National Police (PNP) and the Armed Forces of the Philippines (AFP), as suggested



during the DENR debriefing and learning event. It was also confirmed during the event that the private sector (e.g., Energy Development Corporation [EDC] and Aboitiz) have already adopted LAWIN.

**Capacity development.** As noted earlier, capacity development in the initial years of B+WISER implementation focused on NRM policy and governance, NRM plan enhancement, environmental law enforcement and restoration effort, IEC, CF, and livelihood and organizational development in the original seven sites. As a result of the institutionalization of LAWIN within DENR, capacity development shifted to DENR with legal mandate, organization, and resources for the sustainability of LAWIN implementation. B+WISER provided extensive training and coaching to DENR personnel directly involved in LAWIN implementation at all levels. *Bantay Gubat* teams, in turn, shared knowledge and skills on LAWIN and other DENR policies to LGUs and community groups through IEC activities. In MKRNP (Region 10), the training of indigenous peoples involved in patrolling (composed of members with low literacy rate) made greater use of actual demonstrations (on the use of LAWIN gadgets), complemented by coaching/mentoring in the workplace. The indigenous peoples appreciated this effort, which enabled them to internalize the use of LAWIN technology and generate pictures of observation data, rather than numerical values, for a better understanding of the data and greater usefulness in forest protection. Rebel returnees in *Bantay Gubat* teams in CAR and Region 6 also learned the use of technology through hands-on training, given their limited education.

Most KII respondents and FGD participants in all evaluation sites claimed that the training and coaching on LAWIN increased the capacity of *Bantay Gubat* teams in doing patrol work, equipped them for preparing patrol plans, and made them more proficient in using the technology. Consequently, LAWIN has become a paperless, environment-friendly system, and *Bantay Gubat* teams have learned to do patrol efforts based on plans, resulting in efficient allocation of public resources.

**Policy.** The LOP target for policy development was achieved by B+WISER at midterm. Nevertheless, B+WISER continued to assist DENR and participating LGUs in developing and issuing policies on the institutionalization of LAWIN as a national forest protection and biodiversity conservation system (i.e., DENR DAO 2018-21) and its localization in various forms (e.g., “One Tourist, One Tree Policy” in Tanay, Rizal; KWFR-PAMB Resolution No. 03 of 2016 adopting LAWIN [Region 4]; “Unified Trekking Policy” in MANP, Davao [Region 11]; user fee/PES policies in Region 6; and PAMB strengthening and the organization of Mindanao PAMB network in Region 10). Most of these policies include provisions for generating funds for sustainability of patrol efforts and restoration initiatives, as well as creating employment and income for *Bantay Gubat* members and community members involved in ecotourism and ancillary business activities.

In addition to DENR DAO 2018-21, specific instructions in the form of memoranda were also issued to guide DENR field offices in: (i) distribution of LAWIN patrollers and clarification of granting allowances to patrollers (i.e., PhP8,000 monthly allowance per patroller based on completed accomplishment of the target of 10 km patrolled route a month for each patroller); (ii) monthly reporting on status of responses to threats by each CENRO; and (iii) quality assessment and data management of uploaded patrol data in SMART Connect, among others. The “One Tourist One Tree Policy” requires every tourist visiting KWFR (Region 4A), particularly Mt. Irid, which is now considered a tourist spot, to buy and plant seedlings in the area as a contribution to nature conservation. The “Unified Trekking Policy” sets user fees for tourists visiting MANP, such as entrance and exit fees and tour guide fee, intended for the operation and maintenance (O&M) of the national park. User fees were also established in Region 6 for tourists visiting Bulabog-Putian National Park, which are intended to support patrol efforts in the area.

**Enhancement of NRM plans.** This particular strategy focused on introducing innovative elements in existing NRM plans to achieve LOP targets on biologically significant areas under improved NRM and

showing improved biophysical condition, and reduction of GHG emissions through sustainable landscapes. In the first three years of implementation, B+WISER provided training and TA to: (i) DENR in formulating FCA plans including patrol plans; (ii) PAMBs/Watershed Management Committees (WMCs) in developing or updating Protected Area Management Plans/Watershed Management Plans; and (iii) LGUs in integrating LAWIN in local development plans. In the remaining half of B+WISER implementation period, focus shifted to enhancing patrol plan effectiveness to support the nationwide rollout of LAWIN in 17 DENR regions. In all evaluation sites, *Bantay Gubat* members, during FGD sessions, agreed that their patrol plans have been effective in directing patrol efforts to areas with more serious threats, establishing time-bounded activities and targets, and making the effort more responsive to actual ground conditions. They also considered their patrol plans more efficient in linking budget allocations for patrol efforts, including granting of allowances to patrollers, with deliverable or measurable outputs. All these new plan elements appeared as significant improvements on the old patrol plans.

The *Bantay Gubat* members found the improvement in patrol plans effective in most evaluation sites because it helped them to plan in advance what to prepare and do during patrol efforts, determine the best route to the target area, and coordinate with LGUs and communities regarding the safety and security of patrollers. Detailed information on the schedules of patrol efforts, as presented in patrol plans, also facilitated the processing and release of operating funds for *Bantay Gubat* teams. Training and coaching on LAWIN appeared as the key factor that enhanced the knowledge and skills of patrollers in preparing quality patrol plans as described in LAWIN manuals.

**Conservation financing (CF).** Most KII respondents and FGD participants were unaware of the funding for B+WISER. However, they confirmed B+WISER reports that DENR provided the largest part of such financing, particularly for LAWIN implementation.

In addition, key informants from UMRBPL/KWFR (Region 4A) recalled a tripartite agreement signed by B+WISER with the Department of Social Work and Development (DSWD) and DENR for the mobilization of over 1,000 beneficiaries of DSWD's *Pantawid Pamilyang Pilipino* Program (4Ps) in B+WISER's activities. These 4Ps beneficiaries, who lived in 11 barangays in Antipolo City, in Tanay and San Mateo in Rizal Province, and in General Nakar, Quezon, were mobilized to carry out maintenance work (i.e., nursery establishment, seedling production, ring weeding, and mulching) in about 1,600 ha of reforestation area established under DENR's NGP in 2011 and 2012. This agreement ended in 2016. However, the Municipal Government of Tanay continued to support the patrol efforts in areas within its administrative jurisdiction and even planned to form its own *Bantay Gubat* team in the near future. KII respondents and FGD participants from MKRNP (Region 10) and MANP (Region 11) also reported funding from LGUs for patrol efforts and the private sector for reforestation and protection work, respectively.

Other specific sources of funds generated through B+WISER, according to KII and FGD respondents, are the following:

- the Provincial Government of Rizal provided food allowance to the Patrol Team implementing LAWIN;
- the LGU of Sta Cruz, Davao del Sur provided transport allowance, food, and use of vehicle to forest patrollers;
- CENRO-Davao reported that SM Foundation partnered with Upper Kibalang Farmers Association (UKAPA), a PO in Marilog District, for a 24-ha cacao and durian plantation;
- the municipal government of Makilala in Cotabato established a parallel investment in rubber production for farmers, to provide income to farmers without destroying the forests in Mt. Apo; and

- in Mt. Apo Natural Park, the collection of Trekking Fee augmented the implementation of LAWIN in the protected area.

Moreover, the review of B+WISER documents, particularly its annual reports, revealed that a substantial amount of funding was leveraged through B+WISER interventions. Partnerships with the private and public sectors (including LGUs) and civil society, mobilized more than PhP32 million, which complemented DENR-allocated funds for forest protection. B+WISER also worked closely with the PAMBs of Northern Negros Natural Park, Mt. Kanlaon Natural Park, Mt. Apo Natural Park, and Fuyot Springs National Park (adjacent to Northern Sierra Madre Natural Park), particularly in developing user fee systems. This enabled these protected areas to generate more than PhP1 million in CF. The PES scheme initiated in Bago City generated around PhP3 million in contributions from water users in the area. This scheme is now being replicated in Bataan National Park. Likewise, partnership with the EDC and the National Power Corporation (NPC) leveraged a total investment of PhP66 million for LAWIN.

The issue on CF effectiveness and efficiency was not tackled during KII and FGD sessions in the evaluation sites because most DENR field offices and participating LGUs visited expressed little or no knowledge of the implementation and outcome of this particular strategy in their respective areas. With the improved data-driven, output-based patrol efforts planning, execution, and incentive-granting processes presently being followed by *Bantay Gubat* teams, as discussed above, B+WISER succeeded in developing a strategy for effective utilization of CF, particularly those funds provided by DENR and LGUs in MKRNP (Region 10). Linking the provision of patrollers' allowances to target outputs, in terms of distance covered per patrol efforts per month, is an innovative strategy for more efficient use of CF. However, the sustainability of present patrol efforts will greatly depend on the political commitment and development priority of DENR leadership to maintain LAWIN as a national strategy for forest and biodiversity protection with adequate annual funding support. In Region 6, for instance, FGD outputs reported a decline in patrol efforts in recent months due to the untimely release of funds, as noted earlier.

**IEC.** The Program's Annual Reports revealed that several technical papers and IEC materials were produced and distributed to DENR, LGUs, and community groups. Recently, the four-manual guide on LAWIN, which was produced by the Program, is the most important IEC material recognized by majority of KII respondents and FGD participants in line with the institutionalization of this system within DENR. Some *Bantay Gubat* members, during FGD sessions, identified IEC materials in the form of signboards, leaflets/pamphlets and manuals, which contained information on destructive forest activities, forest and wildlife laws, indicator species, the importance of forest and its resources, and guidelines for planning and law enforcement. In addition to these materials, face-to-face conversations with community members, accompanied by visual presentations on the subject matter of interest, also served as important IEC activities carried out by some *Bantay Gubat* members.

In three evaluation sites (UMRBPL/KWFR [Region 4A], MKRNP [Region 10], and Region 11), *Bantay Gubat* members indicated that IEC initiatives are more effective when: (i) IEC materials are written in the local dialect; (ii) messages are easy to understand; and (iii) messages are complemented by pictures. In UMRBPL/KWFR, some local people have low literacy rate, and thus could not read the messages written in signboards or tarpaulins. Pictures helped to enhance their appreciation and understanding of the IEC messages. In CAR, *Bantay Gubat* members found face-to-face conversations with community members with visual presentation as the most effective IEC strategy in communicating the purpose and process of LAWIN activities in forest and biodiversity protection, destructive and prohibitive activities within FCAs according to existing environmental and natural resources management laws and regulations, and types of activities, which could help protect the forest and biodiversity in FCAs.

In most evaluation sites, IEC activities have become an integral part of the patrol efforts, which helped to build and strengthen community cooperation and participation in forest protection. Hence, many *Bantay Gubat* members also attributed the reduction in observed threats to effective IEC activities and materials. Nonetheless, some of the members suggested that manuals and other IEC materials written in English have local translations, for better understanding. Some LGUs also raised an issue on the limited copies of LAWIN manuals and related IEC materials distributed to them, as they found those materials useful for their own local NRM initiatives.

## Enhancing Factors

**Internal and external factors that enhanced or diminished the achievement of outputs and outcomes.** Based on the above evaluation findings, the integration of strategic approaches to deliver more focused assistance to LAWIN implementation at the national scale evolved as the most critical internal factor that enhanced the achievement of Program outputs and outcomes. These approaches include the following:

- simplicity and functionality of SMART CyberTracker technology;
- use of coaching and mentoring on LAWIN and related topics provided to DENR and LGU staff, particularly for patrollers in the field;
- issuance of policy instruments and provision of funding support for patrol efforts and related protection and restoration initiatives;
- shift from compliance to output orientation in patrol efforts planning and execution, particularly the linking of patrollers' allowances to target output (i.e., minimum distance in km covered per patrol efforts) and deliverables;
- integration of IEC activities with patrol efforts; and
- regular presence of B+WISER personnel at DENR Regional Offices for easy access of P/CENRO Data Managers to technical guidance and support.

Externally, the key enhancing factors included the following: (i) presence of champions at DENR, through the Office of the Assistant Secretary for Staff Bureaus and FMB; (ii) DENR Secretary's decision to allocate funds for institutionalization of LAWIN within the agency; (iii) LGUs' commitment to support forest and biodiversity conservation in their respective areas; and (iv) readiness of the private sector (e.g., EDC and Hedcor) to integrate LAWIN in their ongoing reforestation and protection activities for better business opportunity and as part of their corporate social responsibility (CSR). In MKRNP (Region 10), the presence of organized indigenous peoples communities (*Talaandig*, *Higaonon*, and *Bukidnon* tribes) with functional patrol teams, even prior to the Program's entry into the area, was a major external factor, which led to an effective and sustainable collaborative patrol efforts and to the establishment of institutional arrangements with LGUs in Bukidnon Province for financial and related support.

## Diminishing Factors

Untimely release of funds for forest protection and the assignment of multiple tasks to DENR patrollers in time for the scheduled forest patrol activities (based on patrol plans) emerged as the key internal factors that caused negative effects on the frequency and regularity of patrol efforts in the evaluation sites. These factors are also critical to patrol efforts sustainability beyond B+WISER implementation period. Unless these factors are addressed effectively, the compliance culture, which characterized the previous patrol efforts, could re-emerge in the near future. **The other diminishing factors identified by B+WISER and other key stakeholders include the following:** (i) weak, if not absent, internet connection in some areas, which caused delays in synchronizing patrol data; (ii) lack of equipment hindering effective reporting and sharing of patrol data; and (iii) presence of armed groups

and conflict in some areas, which prevented forest patrollers from doing their jobs and hindered the effective deployment of patrol teams in the evaluation sites. While B+WISER had adequately managed these diminishing factors in the course of implementation, the sustainability of LAWIN implementation nationwide will require more strategic actions from DENR and LGUs.

### Validity of Lessons Reported

EQ 3: How valid are the lessons reported during the IP's learning review for each of their learning questions?

The FPE Team met with the B+WISER IP to get a complete understanding of the assumptions and conditions underlying the hypothesized relationships between explanatory and outcome variables embedded in the six learning questions developed by the Program, as reflected in the TOC (**Fig. 2**). The results of the IP's learning review provided documentation on the empirical patrol data showing the relationships between observed threats and rate of forest regeneration (LQ 2) and between patrol efforts and observed threats (LQ3) with some exploratory explanations to support the lessons reported by the Program. The learning review did not cover the other learning questions (i.e., LQs 5, 8, 9 and 13) because of the shift in the Program's strategic focus from the original seven priority forest/watershed reserves in selected sites to 17 DENR regions in the country to facilitate the institutionalization of LAWIN within DENR. As a consequence, B+WISER also focused on high-impact partnerships that would generate large amounts of money for CF by primarily working with DENR to cover its 17 regional offices, some LGUs and selected business companies in the original seven sites.

The FPE used the principle of external validity (i.e., whether the same findings or results can be applied to, or observed in, other subjects, places, or populations) to confirm whether or not the hypothesized relationships between explanatory (X) and outcome (Y) variables embedded in LQ2 and LQ3 are valid. The FPE Team obtained time-series patrol data for the five evaluation sites from the LAWIN Command Center based at FMB, reconstructed the X and Y relationships in diagrams using the gathered data, and selected data points on the curves to validate the accuracy of data reported on the ground based on the selected two big CENROs per region and triangulated the observed relationships with KII and FGD outputs. The FPE encountered difficulties in obtaining patrol data from majority of the CENROs visited as the Data Managers were either too busy to attend to the Team's request or not available because they were in the field during the Team's visit. In a few cases, where field-level data were obtained, the values were generally the same as the data sets from the LAWIN Command Center. In both cases, the FPE validated the data sets as depicted in diagrams with KII respondents and FGD participants with guide questions on this subject to assess the external validity of the hypothesized relationships for LQ2 and LQ3.

### Observed Threats & Forest Regeneration

**LQ2: Within an FCA, does a change in observed threats lead to a change in observed encounter rate of dense forest regeneration?** The information gathered from KII and FGD outputs generally validated the negative relationship between observed threats and observed encounter of rate of dense forest regeneration. As the diagrams in **Annex F** show, the rates of forest generation have gradually increased as the levels of observed threats declined over time (i.e., patrol efforts period) in the evaluation sites. The major observed threats identified to have declined during the period of patrol efforts include: *kaingin*-making, illegal cutting of trees, charcoal making, and even infrastructure. Most KII respondents and FGD participants rated forest regeneration at the medium level in natural forest areas, with a few claiming that rate at a dense level in newly planted forest areas under DENR's NPG. New wildlings were observed in both *kaingin* and natural forest areas, indicating that the natural

regeneration process has gradually started. Majority of the *Bantay Gubat* members attributed the reduced observed threats and increased forest regeneration to the regular presence (visibility) of patrol teams to FCAs, which prevented the occurrence of destructive and illegal activities. Hence, sustaining patrol efforts in these areas is critical to the full regeneration of forest vegetative cover.

### **Patrol Efforts & Observed Threats**

#### **LQ3: Within an FCA, does a change in patrol efforts lead to a change in observed threats?**

Building on LQ2 experience, the hypothesized negative relationship between patrol efforts and observed threats was also validated by the data sets generated from the LAWIN Command Center. **Annex G** shows the different relationship diagrams formed after the matching of these two variables depicting the situation in the nine CENROs surveyed. This inverse relationship was further triangulated by the information gathered from KII and FGD outputs. Again, regularity of patrol efforts, combined with proper coordination with LGUs and Philippine National Police (PNP), as well as continued conversations with communities (IEC), functioned effectively to reduce the observed threats in the evaluation sites. Increased community awareness, as a result of combined patrol efforts and IEC initiatives, was identified as another factor that contributed to the reduction in observed threats. **Most FGD participants viewed the changes in observed threats (i.e., *kaingin*, illegal cutting of trees, charcoal-making, and hunting of wild animals) in the evaluation sites at a moderate level.** In the two original Program sites (UMRBPL/KWFR [Region 4A] and MKRNP [Region 10]), *Bantay Gubat* members and community groups raised a major concern about the objective of patrol efforts against the subsistence livelihoods of indigenous peoples, which depended on forest resources, pointing to the possibility of not achieving a complete prevention of *kaingin* and tree cutting for food and shelter needs, respectively, of these peoples. Unless alternative sustainable livelihoods are developed for and with these peoples, encouraging them to abandon forest-based subsistence activities would be difficult. Even ecotourism-related activities, as introduced in other Program sites, were not readily acceptable to them because of their fear that ecotourism will lead to the destruction of their sacred places.

*Bantay Gubat* members employed both “diplomatic” and “militaristic” ways to encourage local people to follow forest protection laws and policies and practice sustainable livelihoods. First, patrollers talked with local people to explain the long-term harmful effects of destructive and illegal activities on the forests and their communities, as well as the appropriate ways to contribute to forest and biodiversity protection. Regular conversations with local people were considered effective in securing community participation and support. Patrol team guides (i.e., local residents who are familiar with forest conditions and trails) were normally recruited through consultations with LGUs and community groups to immediately build social contact for long-term community participation. All these activities aimed at mobilizing community support for forest protection in a diplomatic way. Second, patrollers warned violators caught doing illegal activities for the first time and informed them of existing forest and biodiversity protection laws and policies. However, if violators were caught or spotted doing the same activities for the second time, they were either apprehended or brought by patrollers to the nearest local authorities (PNP or LGUs) or reported to PNP for appropriate follow-up actions. These latter activities corresponded to a militaristic approach to give a signal to violators that the government is determined to deter threats.

### **Type of Partnership & Funding Generated**

**LQ5: Does a change in the type of partnership (CSR or business opportunities) lead to greater funding generated for conservation? LQ8: Does a change in funds generated for conservation lead to a change in patrol efforts? LQ9: Does a change in institutional arrangements for CF lead to greater increases in funding for conservation?**

As noted above, B+WISER shifted its focus to working with DENR, the government agency with the legal mandate, resources, and organization at the ground level, which could produce high impact, and with the private sector for business opportunities (i.e., EDC and Hedcor). With this shift in strategic focus towards the institutionalization of LAWIN within DENR, all key intervening strategies (capacity building, policy formulation, NRM plan enhancement, CF generation, and IEC) were integrated to develop the capacity of (i) DENR for LAWIN implementation at all levels, and (ii) some LGUs and selected business groups which initiated the localization of LAWIN and the replication of PES for forest and biodiversity protection in the original Program sites. Some LGUs in UMRBPL/KWFR (Region 4A) and MKRNP (Region 10) legislated policies to develop their watershed areas as tourist spots to generate CF and to allocate funds for direct support to forest protection. B+WISER assisted DENR and LGUs in these sites to train patrollers on the use of LAWIN technology to prevent the occurrence of observed threats. This training support was extended to selected private sector groups for the use of LAWIN in their respective reforestation activities.

The FPE was unable to generate enough information from the evaluation sites to assess the validity of these three learning questions. However, using the experience of DENR and some LGUs as a case for LQ8 and LQ9, the KII and FGD outputs suggest that (i) the increase in CF (which allowed the recruitment of additional patrollers and provision of allowances to them) resulted in the increase in level of patrol efforts (both in terms of coverage and intensity), and (ii) the establishment of institutional arrangements among key stakeholders, through MOAs, created a more stable source of CF, as was the case in MKRNP (Region 10).

### **LGU Governance & Patrol Efforts**

**LQ13: Does a change in LGU governance score lead to a change in patrol efforts?** With the shift in focus on LAWIN institutionalization within DENR in March 2016, B+WISER worked on the capacity, policy, and partnership strengthening of the agency with legal mandate and resources for forest protection, as well as with those LGUs that initiated the localization of LAWIN (e.g., LGUs in Bukidnon province, Malaybalay City and seven municipalities covered by MKRNP [Region 10] and Tanay, Rizal in UMRBPL/KWFR [Region 4A]). Consequently, efforts to establish the GSA scores ceased, as the focus of LAWIN implementation shifted to DENR and less on the LGUs. Hence, no validity assessment of this learning question was undertaken.

### **Validity of Lessons**

EQ 4: How valid are the lessons reported during the IP's learning review on the extent to which, and under what conditions, B+WISER strategies have singly and/or collectively contributed to achieving the outcomes (key results)?

All B+WISER strategies converged on LAWIN implementation to ensure effective and successful institutionalization of this system within DENR, particularly at the local level, in support of the agency's allocation of PhP130.00 million to finance nationwide system implementation over the period, 2016-2017. Essentially, all six strategies of B+WISER worked in tandem to support the implementation of LAWIN since March 2016 and contributed collectively to the achievement of key results. While the focus shifted to LAWIN implementation, the success of its institutionalization within DENR depended, to a great extent, on other strategies (capacity development, NRM plan enhancement, policy development, CF, and IEC,) as noted above. These strategies functioned effectively for LAWIN implementation in view of the strong DENR leadership support from no less than the Secretary,



accompanied by fund allocation and the issuance of *DENR DAO 2018-21*, which formalized the adoption of LAWIN as a national strategy with regular funding support. In addition, the provision of training on LAWIN for all DENR Data Managers and patrollers at the PENRO and CENRO levels, including the user manuals and necessary IEC materials, has fully equipped DENR to sustain its implementation beyond B+WISER.

## CONCLUSIONS

B+WISER exceeded all its target outputs and outcomes at the end of implementation and successfully assisted DENR in the institutionalization of LAWIN and its nationwide implementation in 17 DENR regions. B+WISER also assisted some LGUs and selected private sector groups in the original seven priority forest/watershed reserves, which initiated the localization or replication of LAWIN and other Program innovations, such as PES and partnership building for CF and restoration initiatives. The issuance of *DENR DAO 2018-21*, production of user manuals, training of key DENR personnel on LAWIN, and establishment of data management centers at all levels of DENR provided the enabling conditions for effective and sustainable LAWIN implementation in the country. All six strategies functioned effectively and enabled B+WISER to achieve its expected outputs and outcomes, with the full commitment and support of the DENR leadership for LAWIN implementation and institutionalization.

The reconstruction of the hypothesized relationships between explanatory and outcome variables embedded in two learning questions (i.e., LQ2 and LQ3) using data obtained from the LAWIN Command Center, and validated with KII respondents and FGD participants in the five evaluation sites, confirmed the lessons reported by the B+WISER IP during its learning review, viz.:

LQ2: Within an FCA, a decrease in observed threats led to an increase in observed rate of forest regeneration (i.e., an inverse relationship); and

LQ3: Within an FCA, an increase in patrol efforts led to a decrease in observed threats (i.e., an inverse relationship).

## RECOMMENDATIONS

Considering that B+WISER has exceeded its target outputs and outcomes and produced significant achievements in steering the institutionalization of LAWIN within DENR to serve as a national strategy for forest and biodiversity protection, the FPE Team recommendations are directed to DENR (for the strengthening and sustainability of LAWIN implementation) and to USAID (for future reference in the design of similar programs in the Philippines and elsewhere).

### *Recommendations for DENR*

- **Mainstream the LAWIN Command Center within the regular structure of DENR with designated regular personnel.** Right now, this Center is operated and managed by one regular staff from DENR's FMB and supported by a number of contractual staff, who received training and coaching from the B+WISER Program. The Center is also an ad hoc unit within FMB, initially created to support the data management needs of the Program. Now that LAWIN has been fully institutionalized within DENR, the role of this Center is critical to the timely transmission of patrol data from patrollers in the field and data management centers at various levels of DENR – from CENROs to PENROs and Regional Offices – to the Center and vice versa, for the data to be useful in forest and biodiversity protection planning, policymaking, and deployment of people and resources in response to threats. Hence, **there is a need to make the Center a regular unit**

of DENR with permanent office space, adequate equipment and supplies, regular annual budget allocation, and full-time/regular personnel.

During the Learning Event held on January 10, 2019, it was learned that DENR Regional Offices, particularly in CAR, have already started a study to increase the application of LAWIN system to include natural hazards (e.g., landslides) in data to be recorded and reported during patrol work. This is a positive development in expanding the coverage of LAWIN to encompass the broader mandate of DENR, not only in managing and protecting the country's environmental and natural resources, but also in relation to disaster risk reduction and preparedness so it can help communities to be more prepared during times of calamity. Similar directions are leading to an expansion of the indicators used for LAWIN, as detailed below. Hence, it is important that the LAWIN Command Center is located at the DENR Central Office to perform a much broader function, rather than at the Bureau level where it is presently situated.

- **Expand the indicator system of LAWIN for biodiversity assessment and monitoring of BMB for a more unified approach to forest protection and biodiversity conservation.** Presently, the indicator system of LAWIN focuses on forest protection with some key species indicators, which limits its use for biodiversity monitoring and conservation. As a national strategy for forest and biodiversity protection, it is necessary to expand the LAWIN indicator system with BMB and FMB agreeing on a manageable set of indicators for each ecosystem, taking into consideration the distinct biophysical characteristics of the different ecosystems in the country, for a more unified approach to forest and biodiversity protection. Furthermore, as noted above, the indicator system can also include other concerns of DENR to perform its mandates more effectively and efficiently.
- **Design and implement the Actual Field Validation Sites established at baseline to estimate more accurate and reliable information on actual improvements resulting from LAWIN implementation** (i.e., patrol area coverage, observed threats, indicator species, regeneration, GHG/CO<sub>2</sub>, etc.). B+WISER used the AFOLU formula to compute the biologically significant areas under improved NRM and showing improved biophysical conditions. This was done by counting the number of grids (with predefined area in ha), which were traversed by patrol teams per week/month/year and multiplied by the frequency/intensity of patrol efforts to get the estimated total area covered by patrols to come up with time-series data on areas under improved NRM and areas showing improved biophysical conditions, observed rate of forest regeneration, etc. The computed areas were estimates, at best, and not actual areas covered by patrollers during patrol efforts. To get more accurate data on these variables, there is a need to design and establish actual field validation sites per CENRO/PENRO to serve as baseline for monitoring the actual improvement in FCAs resulting from LAWIN implementation.
- **Improve data integrity through ensuring real-time data transmission from patrol teams to the LAWIN Command Center.** The absence or poor Internet connection in some parts of the country has hampered the Program's achievement of real-time data transmission from patrol teams to the LAWIN Center. Patrol teams had to wait until they returned to their respective CENROs to upload patrol data with CENRO/PENRO Data Managers who, in turn, transmitted such data to PENROs/Regional Offices and the Command Center. Aside from the patrol data not reaching the Command Center in real-time, the integrity of such data could be compromised if some CENRO Data Managers (or higher authorities) manipulate the date to show greater achievement for awards, recognition, or incentives purposes.

- To address this problem, DENR could perhaps enter into a partnership with Internet service providers (telephone companies) to devise a scheme that will result in improved Internet access. LGU-Tanay has initiated action along this line. With regard to the integrity of data reporting, the expanded composition of the Patrol Team could be looked into. For instance, the addition of LGU/private sector or NGO representatives in the team could be explored in order to provide a check and balance that will ensure the integrity of the reporting system. Another approach that could be tried is the standardization of allowances and honoraria granted to volunteer Patrol Team members, as recommended during the learning event. This could encourage the patrollers to perform their duties better. DENR could consider issuing a policy to this effect.
- **Roll out PES implementation nationwide (e.g., tourism development in KWFR, Region 4A) for sustainable LAWIN implementation.** B+WISER successfully assisted the LGU of Bago City, Negros Occidental Province in establishing PES for BRWFR (Region 6) and replicated PES in Bataan province in the Bataan National Park (BNP) (Region 3) in cooperation with, and in support of, BMB's Protected Area Management Enhancement (PAME) Project. PES implementation in these two areas showed promising results in terms of generating funds, which could be used for sustainable LAWIN implementation. **Such experiences should be replicated in key biodiversity areas (KBAs) and other protected areas (PAs) in the country to generate more funds for the sustainability of LAWIN implementation.** The LGU of Tanay, Rizal has already initiated ecotourism development in some areas under its political jurisdiction in KWFR. DENR-Region 4A should capitalize on this initiative to formally establish PES in the area. Generally, PES could also be used as a market-based solution to entice local communities and stakeholders to engage in economic activities that may augment their income.
- **Increase the participation of LGUs (e.g., Bukidnon Provincial and City/Municipal Governments, Enforcement Division Chief), the private sector (e.g., EDC), other law enforcement agencies (PNP & AFP), and civil society (e.g., Kitanglad Integrated NGO [KIN]) in LAWIN implementation.** Good practices have been developed and demonstrated by B+WISER in building partnerships with LGUs (in UMRBPL/KWFR, Region 4A and MKRNP, Region 10), private sector groups in Region 11, and NGO/PO in MKRNP (Region 10) towards their increased participation in the implementation of LAWIN and related restoration initiatives. DENR should mobilize more institutional partners, networks, expertise and resources for the success and sustainability of LAWIN.
- **Mobilize the expertise and resources of state universities and colleges (SUCs) for IEC and M&E of LAWIN implementation.** DENR should also mobilize the expertise and resources of the country's SUCs for LAWIN implementation, particularly in developing and implementing IEC programs and M&E systems for the continued upgrading of the LAWIN system/technology and increasing public awareness and support for this initiative. The M&E system may also be enhanced by tapping the online platform of the Global Forest Watch to track the status of the forests.

### **Recommendations for USAID**

- **Design and implement Actual Field Validation Sites established at baseline to estimate more accurate and reliable information on actual improvement resulting from LAWIN implementation** (i.e., patrol area coverage, observed threats, indicator species, regeneration, GHG/CO<sub>2</sub>, etc.). USAID should make it mandatory for implementors of future programs similar to B+WISER to establish Actual Field Validation Sites to get more accurate data on these variables. For instance in the measurement of carbon emission, other formula may be utilized using the raw data generated from these sites; thus enhancing and substantiating the findings derived from AFOLU

calculation. This is very important in establishing benchmark information for more effective and accurate M&E of expected results from LAWIN implementation.

- **Review the definition of results indicators to capture data that directly reflect actual (not proxy) accomplishments.** The definition of some result indicators is too encompassing, thus, making it difficult to identify where specific accomplishments could be actually attributed. For instance, in mobilizing or leveraging funds or investments, rather than focusing on the actual amount of money directly provided by DENR, LGUs, and other partners to B+WISER activities, the indicator definition also included and counted the activities (costed in money terms) undertaken by other programs and organizations, which were supported by the Program. In effect, this kind of support could be reported as part of the “technical assistance” performance indicator, rather than “amount of money mobilized for conservation financing.” It is necessary that definitions of result indicators are more focused on desired outputs or outcomes to avoid multiple attributions.
- **Ensure the consistent and active engagement of B+WISER proponent (e.g., DENR) throughout the project implementation period.** Nothing can replace a strong partnership between USAID and B+WISER proponent (e.g., DENR). This has been pointed out on many occasions, especially during program reviews and monitoring. Some interviews indicated that B+WISER had a “shaky” start because of the lack of proper coordination between USAID and higher Philippine Government authorities. Instead of first establishing the relationship at the top level, B+WISER implementors went directly to the field, which offended some authorities. It is necessary for project implementors, especially if they are from the government, to have a sense of ownership of the project for them to throw their full support behind the project. While the initial difficulties were eventually resolved by B+WISER along the way, future initiatives should avoid committing the same mistake.

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- <sup>i</sup> In September 2016, USAID approved a costed expansion of the Program activities to support the scale-up and national rollout of LAWIN, expanding its geographic scope to 17 of the 18 DENR regions in the Philippines, in response to positive action taken by DENR to issue a Technical Bulletin supporting the nationwide rollout of LAWIN in March 2016. In November 2017, USAID approved a one-year extension of the Program to further support the institutionalization of LAWIN within the DENR to ensure sustainability of its implementation.
  - <sup>ii</sup> The Program also operated in mangrove forest areas in Quezon Province (Region 4A), Verde Island Passage in Batangas-Mindoro provinces (Regions 4A/4B), and Siargao Island in Surigao del Norte Province (Region 13).
  - <sup>iii</sup> The 12 performance indicators include: (i) number of ha under improved natural resources management; (ii) number of ha showing improved biophysical conditions; (iii) number of laws, policies, strategies, plans, agreements, or regulations addressing biodiversity conservation officially proposed, adopted, or implemented; (iv) number of biodiversity conservation/ watershed-related research publications and technical papers produced; (v) number of ha of forests under forest restoration initiatives; (vi) amount of GHG reduced or sequestered in metric tons; (vii) amount of investments leveraged from private and public sectors; (viii) number of people with increased economic benefits derived from sustainable NRM and conservation; (ix) number of PAMBs with increases in METT scores (for protected areas) and number of LGUs with increases in GSA scores; (x) number of person-hours of training in NRM and/or biodiversity conservation; (xi) number of days of TA in NRM and/or biodiversity and climate change provided to counterparts or stakeholders; and (xii) number of institutions with improved disaster risk reduction and management capacity (DRRM) in highly vulnerable areas.

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- <sup>iv</sup> The PRIMEX Evaluation Team was composed of the following specialists: Dr. Lope A. Calanog, *Team Leader*; Mr. Luis P. Eleazar, *Senior Evaluation Specialist*; Dr. Diomedes A. Racelis, *Biodiversity and Watershed Management Specialist*; Dr. Imelda G. Pagtolun-an, *Statistician*; and Ms. Lourdes Margarita A. Caballero, *Junior Evaluation Specialist*. Oversight supervision of the Team's activities was provided by Ms. Elvira C. Ablaza, *PRIMEX President and CEO, in her capacity as Project Director*. She was assisted by Mr. Leo R. Pura, *PRIMEX Vice President for Technical Services, as Project Manager*; Ms. Jo Ann V. Ativo as *Technical Assistant*, and Ms. Ma. Kathrina C. Cada as *Administrative Assistant*.
- <sup>v</sup> These hotspot regions and project sites were selected using the following criteria: (i) history of development interventions (old vs. new); (ii) combination of drivers, threats, and strategies employed to address those threats; and (iii) geographic size and status of biodiversity and natural resource conditions.
- <sup>vi</sup> DENR Department Administrative Order (DAO) No. 21 of 2018 adopted LAWIN as a national strategy for forest and biodiversity conservation in the Philippines. Section 7 of this Order provides for the regular allocation of funds for implementation of LAWIN nationwide.
- <sup>vii</sup> Biologically significant areas are usually set aside as protected or conservation areas and being managed to enhance biological diversity and protection against destructive human activities (NIPAS Law, 1992, Page 2, item (b), under Definition of Terms).
- <sup>viii</sup> Buffer zones are declared areas that serve as extra layer of protection to the core forest or protected area. These are the areas where upland communities reside, for instance, the IPs and tenured migrant communities in MKRNP in Region 10.
- <sup>ix</sup> Please refer to the following USAID and Winrock International website for the discussion on AFOLU Carbon Calculator: <http://afolucarbon.org>.
- <sup>x</sup> The number of hectares in a grid is dependent on the size of the grid and distance used. In CENRO level maps, for the grid to appear, the distances used are usually 500 to 1,000 meters, which give an estimate of 25 to 100 hectares per grid (Rodolfo B. Santos, B+WISER Program M & E specialist, personal communication).

ANNEX A

**Summary of Work of the Final  
Performance Evaluation (FPE) of  
B+WISER**

# ANNEX A: STATEMENT OF WORK OF THE FINAL PERFORMANCE EVALUATION (FPE) OF B+WISER

Purchase Order #72049218P00069  
Bwiser Project  
Performance Evaluation

## SECTION C – DESCRIPTION//DESCRIPTION OF WORK

### 1. INTRODUCTION

The United States Agency for International Development in the Philippines (USAID/P) seeks to conduct evaluation that will assess the performance of the "Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience" (B+WISER) program, as detailed below:

Award Number:	AID-492-C-13-00002
Award Date:	December 28, 2012 to December 27, 2018
Funding:	US\$ 27,888,889.00
Contractor:	Chemonics International, Inc.
COR:	Joanne Dulce
Previous Evaluation:	BWISER Midterm Evaluation

The main purpose of the evaluation is to assess the performance of the B+WISER project in terms of a) expected outputs (deliverables) and outcomes (key results) as defined in the activity Monitoring and Evaluation Plan; and b) factors that enhanced or diminished the achievement of the outputs and outcomes results. The evaluation will also verify the lessons reported by B+WISER by providing a third-party, independent assessment of the findings from a learning review conducted by the B+WISER Implementing Partner.

### 2. BACKGROUND

B+WISER is a six-year contract awarded to Chemonics International on December 28, 2012 in order to support the Government of Philippines (GPH) implement environmental policies and programs. It aims to: (1) conserve biodiversity in forest areas, (2) reduce forest degradation in targeted priority watersheds, (3) build capacity to conserve biodiversity, manage forests, and support low emissions development, and (4) contribute to disaster risk reduction at the subnational level.

B+WISER addresses the drivers of biodiversity loss and deforestation such as habitat destruction and undervaluation of natural resources as well as the failure of existing governance mechanisms to curb these problems. It strengthens targeted national/local policies and plans related to biodiversity conservation and forest management, and spurs natural resources-based economic activities.

B+WISER implements capacity-development and enhancement programs, including environmental law enforcement at the national and subnational levels, provides focused technical assistance to selected government agencies and local government units (LGUs), supports scientific and policy research by local higher education institutions, and fosters learning by doing. It also reduces risks from disasters primarily through mitigation actions such as direct reforestation and forest ecosystem services restoration, improved forest land use planning, and integration of disaster risk reduction principles into local development plans. Additionally, it seeks to develop public-private partnerships as well as conducts communication campaigns at the national and subnational levels. In coordination with the Department of Environment and Natural Resources (DENR), it developed the Lawin Forest and Biodiversity Protection System that generates, aggregates and analyzes forest patrol data on the country's remaining seven million hectares of natural forest. The data inform better management, address threats through law enforcement, and provide transparency in forest monitoring and patrolling.

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Its overall theory of change (ToC) depicts the expected pathways between the implementation of B+WISER's strategies and intended results towards the conservation of species and ecosystems, and improvement of human wellbeing (Annex A). The TOC depicts the six (6) strategies of the Activity, namely: (a) capacity development; (b) policy enhancement; (c) improvement of resource management plan; (c) conservation financing; (d) information, education and communication; and, (e) strengthening forest and biodiversity protection system.

B+WISER is implemented primarily in partnership with DENR, together with key LGUs and other members of the protected area management boards (PAMB) or watershed management councils at the project sites. It complements and supports GPH in implementing its environmental policies and programs, such as the Philippine Development Plan (2011-2016), National Greening Program, National Biodiversity Strategy and Action Plan, National Climate Change Action Plan, Philippine National REDD-Plus Strategy, as well as the Mindanao Development Authority's Mindanao Nurturing Our Waters Program.

B+WISER supports the end goal of USAID/Philippines Country Development Cooperation Strategy (CDCS) 1 of a more stable, prosperous, and well-governed nation through Development Objective 3, which is improved environmental resilience. It helps achieve this objective by contributing to Intermediate Result 3.2 Natural and Environmental Resource Management Improved and Sub-Intermediate Result 3.2.1 Biodiversity Conservation and Natural Resource Management Strengthened. It is also designed to support the 2011 Memorandum of Understanding between the Governments of the Philippines and the United States on Enhancing Capacity for Low Emission Development Strategies<sup>2</sup> Annex B shows the original B+WISER logic model (formerly called the B+WISER Results Framework).

B+WISER is implemented in several scales. It was originally implemented in seven (7) project sites, namely: Upper Marikina River Basin Protected Landscape-Kaliwa Watershed Forest Reserve, Northern Sierra Madre Natural Park, Quinali River Watershed, Naujan Lake National Park, Bago River Watershed Forest Reserve, Mount Apo Natural Park, and Mount Kitanglad Range Natural Park. Its implementation was subsequently expanded to cover hotspots in several regions (Table 1). In addition, it also worked in several mangrove forest areas across the country, including Quezon, the Verde Island Passage, and Siargao Island. Overall, the implementation sites cover 2,600,000 hectares of key biodiversity areas

**Table 1: Hotspots/Regions for B+WISER Implementation**

Hotspots/Regions	Target area (in hectares)
Region I	55,00
Region II	239,00
Region III	250,00
Region IV-A	126,00
Region IV-B	350,00
Region VI	60,00
Region VIII	220,00
Region IX	85,00
Region X	190,00C
Region XI	200,00
Region XII	125,00
Region XIII	275,00
CAR - Cordillera Administrative Region	350,00
NIR -Negros Island Region	75,00
Total Area	2,600,00C

At the conclusion of B+WISER, the following overall key results are expected:

- Improved management and governance of 5,000,000 hectares (ha) of key biodiversity areas and their associated watersheds;
- 678,000 ha of terrestrial and mangrove forests under restoration initiatives;
- 8,778,278 tons of greenhouse gases (in CO<sub>2</sub> equivalent) sequestered or reduced after the life of the Activity; and
- \$41 million leveraged from public, private and other sources for biodiversity conservation and climate change mitigation.

B+WISER's life-of-project performance targets are listed in Table 2.

B+WISER is funded by Biodiversity and Global Climate Change-Sustainable Landscapes funds. It was designed partly to see the relationship between climate change impacts on forest resources and the biodiversity that is dependent on such resources.

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<sup>1</sup> <http://www.usaid.gov/philippines/cdcs>

<sup>2</sup> <https://www.ec-leds.org/countries/philippines>

<sup>3</sup> A separate Negros Island Region composed of Negros Oriental and Negros Occidental was created by Executive Order (EO) 138 in 2015. In 2017, President Duterte revoked this EO and this reverted Negros Occidental to Western Visayas (Region VI) and Negros Oriental to Central Visayas (Region VII).

Exhibit 1: B+WISER Project Sites



**Table 2: B+WISER Performance Targets**

Indicator	Years 1-5 Targets (12/27/12 – 12/27/17)	Year 6 Target (12/27/17- 12/27/18)	Total Life-of- Project Targets
Number of hectares of biologically significant areas under improved natural resource management	2,420,000	1,324,798	5,000,000
Number of hectares of biologically significant areas showing improved biophysical conditions	478,000	200,000	678,000
Greenhouse gas (GHG) emissions, estimated in metric tons of CO2 equivalent, reduced, sequestered, or avoided through sustainable landscapes activities	6,278,278	2,468,407	8,778,278
Amount of investment mobilized (in USO) for sustainable landscapes	5,000,000	899,055	\$41,000,000
Number of people trained in sustainable natural resources management and/or biodiversity conservation	100,000	12,000	166,000
Number of days of technical assistance in NRM and climate change	2,700	1000	4,400

**3. Past Evaluation Studies**

A mid-term performance evaluation of the activity was conducted in the last quarter of 2015 to:

- a) Assess the evaluability of 13 evaluation questions with respect to the practicality and empirical feasibility of analysis during the life of activity;
- b) Assess the progress of implementation in terms of achieving the activity's key results, and analyze the factors and conditions that enhance or diminish the achievement of such results based on the stated TOC for the activity; and
- c) Analyze the main challenges of implementing the relevant interventions and the extent to which the activity is able to address such challenges.

The midterm performance evaluation report, annual reports, annual implementation plans and the monitoring and evaluation plan can be downloaded in the USAID DECS website.

**4. EVALUATION OBJECTIVES AND QUESTIONS**

The evaluation will have the following objectives:

- A) Assess the performance of the B+WISER project in terms of a) expected outputs (deliverables) and outcomes (key results) as defined in the activity Monitoring and Evaluation Plan, and

B) Verify the lessons reported by B+WISER by providing a third-party, independent assessment of the findings from a learning review conducted by the B+WISER Implementing Partner.

Specifically, the following questions are to be answered:

- 1) To what extent has B+WISER achieved each of the expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?
- 2) How effective and efficient were the B+WISER strategies in achieving these outputs and outcomes? What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?
- 3) How valid are the lessons reported during the Implementing Partner's learning review for each of their learning questions (Annex D)?
- 4) How valid are the lessons reported during the implementing Partner's learning review on the extent to which, and under what conditions, the B+WISER strategies have singly and/or collectively contributed to achieving the outcomes (key results)?

#### **5. AUDIENCE, INTENDED USES AND DISSEMINATION OF EVALUATION FINDINGS**

The audiences for the B+WISER final performance evaluation findings include USAID/Philippines, Philippine government partners, with DENR as primary counterpart, Chemonics International as main contractor, USAID/E3/Forestry and Biodiversity Office, and the broader biodiversity conservation/forestry community including donors, civil society organizations, academe, and the private sector.

In accordance with the USAID Evaluation Policy, the "[f]indings from evaluations will be shared as widely as possible, with a commitment to full and active disclosure. Furthermore, a summary including a description of methods, key findings and recommendations will be available to the public on-line in a fully searchable form".

#### **6. EVALUATION METHODOLOGY**

This section discusses indicative evaluation design and set of research methods to address the data and analytical requirements in order to answer the evaluation questions.

##### **(a) Evaluation Design**

This will be a final performance evaluation of the B+WISER Activity. The evaluation shall encompass a broad range of evaluation methods; incorporating before-after comparison and address descriptive, normative, and/or cause-and-effect questions. It will be implemented for five calendar months beginning on or about July 23, 2018. Its scope will cover B+WISER implementation period from December 2012 to December 2018.

It shall be guided by a Theory of Change (ToC)<sup>1</sup> designed to review and verify findings generated under a learning review being conducted by the Implementing Partner.

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<sup>1</sup> "A theory of change is the articulation of the underlying beliefs and assumptions that guide a service delivery strategy and are believed to be critical for producing change and improvement. Theories of change represent beliefs about what is needed by the target population and what strategies will enable them to meet those needs. They establish a context for considering the connection between a system's mission, strategies and actual outcomes, while creating links between who is being served, the

**(b) Data Analysis Methods**

Evaluation Questions 1 and 2

Triangulation shall be used to gather data through a combination of techniques, namely: key informant interviews, focus group discussions, direct observations, and textual analysis of B+WISER reports and other documents (the DEC links to these documents are given in Annex C).

Descriptive analysis, both qualitative and quantitative, shall be used to evaluate if expected outputs (deliverables) and outcomes (key results) were achieved as defined in the Activity's Monitoring, Evaluation and Learning (MEL) Plan.

Specifically, the desk review shall focus on the following:

1. Any qualitative or quantitative data indicating progress towards achieving the expected outputs (deliverables) and outcomes (key results) as defined in the Activity's MEL;
2. Any limiting factors that constrain the achievement of a particular key result;
3. Any gaps in data for assessing progress towards expected outputs (deliverables) and outcomes (key results) that will need to be collected through this proposed evaluation.

This review shall be cross-referenced with results or data from primary data sources.

The evaluation will be carried out at three (3) levels: national, regional and project sites. The national level will primarily include DENR and other national GPH offices, universities and private sector partners. The regions and project sites were selected on the basis of the following criteria: (a) history of development interventions (old vs new); (b) combination of drivers and threats, and strategies employed to address those threats; and, (c) geographic size and status of biodiversity and natural resource conditions. The following regions and project sites for the evaluation are:

Regions:

- (a) CAR-Cordillera Administrative Region
- (b) Region VI-Western Visayas
- (c) Region XI-Davao Region

Project Sites:

- (d) Upper Marikina River Basin Protected Landscape/Kaliwa Watershed Forest Reserve
- (e) Mount Kitanglad Range Natural Park

The evaluator will gather data from purposively selected B+WISER's key implementation partners, e.g., contractor and its sub-contractors, national government agencies and local government units, among others. Individual-beneficiaries, on the other hand, will be selected through stratified random sampling. USAID/Philippines shall approve the final list of organizational- /individual-respondents.

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strategies or activities that are being implemented, and the desired outcomes." (Source: INSP. 2005. Theory of Change Tool/Manual. P.6)

#### Evaluation Questions 3 and 4

For Evaluation Question 3, the evaluators will assess the information on each of the learning questions (Annex D) presented in the Implementing Partner's learning review. The assessment need to consider the following:

- The methods to collect the data for each learning questions were sound;
- The dataset to address each learning question was appropriately compiled;
- The analyses was completed and was appropriate and sufficient to address the evaluation question given the available data;
- There was appropriate and adequate interpretation of the results;
- The methods used for conducting learning sessions with Activity participants to collect qualitative information on factors that may have enhanced or diminished the achievement of the expected results were appropriate;
- The qualitative data collected from learning sessions with Activity participants was appropriately analyzed and incorporated in descriptions of factors that may have enhanced or diminished the achievement of expected results; and,
- There were appropriate and sufficient description of any limitations or alternative explanations for the results.

Based on the above, the evaluators will recommend if any additional analyses of the existing data should be conducted to address each learning question or determine if there are alternative explanations for the results.

For Evaluation Question 4, the evaluators will use the results of Evaluation Question 3 and assess the information presented in the Implementing Partner's learning review to verify the validity of the Implementing Partner's findings regarding the extent to which, and under what conditions, the strategic approaches of B+WISER have singly and/or collectively contributed to the improvement in the status of biodiversity and other focal interests.

This will involve extensive desk review of relevant project documents and reports. It will also be supplemented by verification of findings through appropriate primary data gathering methods in selected project sites. The ensuing analysis will largely be textual and descriptive, in nature.

#### **5. DELIVERABLES AND REPORTING REQUIREMENTS**

The evaluators will carry out the following tasks and produce the following deliverables. The schedule of tasks and deliverables is presented at Section F of this Purchase Order:

1. Conduct desk review; and prepare a summary report of desk review.

To initiate the desk review, the evaluators will participate in a planning conference call with USAID/Philippines, MI and E3/FAB to review the evaluation SOW, and the learning review conducted by the Implementing Partner. The evaluators will then carry out a desk review of different sources of information pre-compiled and received by USAID/Philippines from the



Chemonics International, and other sources. A summary report shall be submitted to the evaluation COR after completion of the desk review

2. Develop draft evaluation approach and evaluation implementation plan.

The evaluators shall submit a report detailing the overall evaluation approach that will be used to answer the evaluations questions enumerated in the evaluation SOW; the specific methods (and any attendant methodological limitations/challenges, if any) to gather and analyze data should be discussed in detail in the report. It shall be accompanied by an evaluation implementation plan that outlines the schedule, human resource needed, and other logistical requirements, among others, in order to carry out the evaluation.

3. Organize and convene an in-brief and workshop to fine-tune the evaluation approach and evaluation implementation plan.

The evaluators shall present the evaluation approach and evaluation implementation plan for review by USAID/Philippines (specifically, PRM and EO).

4. Develop data collection instruments, e.g., KII and FGD guide questions, and questionnaire

5. Gather data.

This shall entail collection of primary data through various data gathering methods, e.g., survey, FGD and KII.

6. Analyze data.

This shall include collation, synthesis and analysis of primary and secondary data gathered by the evaluators. Qualitative and quantitative methods to analyze the data set shall be used.

7. Prepare first draft of evaluation report.

The evaluators shall prepare a first draft of the evaluation report for review by USAID/Philippines.

8. Conduct preliminary debriefing based on first draft of evaluation report.

A debriefing of USAID/Philippines shall be organized by the evaluators in order to discuss the comments and recommendations of USAID/Philippines and other key stakeholders.

9. Revise draft report for review by PRM and EO.

The evaluators shall revise the first draft of the evaluation report. The revised draft shall be evaluated further by USAID/Philippines in terms of its compliance with the comments and recommendations discussed during the above-mentioned debriefing.

10. Organize a briefing of USAID/Philippines Front Office and other USAID officers.

The evaluators shall organize a briefing in order to present the salient findings, conclusions and recommendations contained in the revised draft evaluation report

11. Disseminate evaluation findings to B+BWISER implementing partner and other stakeholders.



The evaluators shall disseminate, through a seminar or briefing, the evaluation findings to the implementing partner and other key stakeholders, e.g., DENR and relevant LGU units.

12. Submit final draft evaluation report.

The final version of the evaluation report shall be submitted for review and approval by the evaluation COR.

13. Submit publishable final version of evaluation report, presentation materials and collated data from various data collections.

The approved evaluation report shall be uploaded to the DEC by the evaluators. Per ADS 579, all collated data shall be stored in electronically readable form, and submitted to the Development Data Library by the evaluators.

**EVALUATION SCHEDULE**

The table below shows the indicative tasks, level of effort and timelines for the evaluation. This shall be refined by the contractor when s/he submits the evaluation design and work plan cited in Section VI above. The indicative five month duration of this evaluation is on or about July 23, 2018 to December 22, 2018.

Task(s)	Duration (in days)	First Month	Second Month	Third Month	Fourth Month	Fifth Month
Mobilization	1	█				
Desk Review	5	█				
Preparation of Summary Report	5	█				
Preparation up to Submission of Evaluation Approach and Implementation Plan	5	█				
Briefing and Workshop on Evaluation Approach and Implementation Plan	1		█			
Preparation up to Submission of Data Gathering Instruments	5	█				
Primary Data Gathering	40		█	█	█	
Data Analysis	30			█	█	█
Preparation of Draft Evaluation Report	20				█	█
Briefing on 1st Draft Evaluation Report	0.5					█
Revision and Finalization of Evaluation Report	15					█
Briefing of USAID	0.5					█
Dissemination of Evaluation Report	1					█

## 7. FINAL REPORT FORMAT

The evaluation final report should include an executive summary; introduction; background of the local context and the projects being evaluated; the main evaluation questions; the methodology or methodologies; the limitations to the evaluation; findings, conclusions, and recommendations; and lessons learned (if applicable) The executive summary should be three to five pages in length and summarize the purpose, background of the project being evaluated, main evaluation questions, methods, findings, conclusions, and recommendations and lessons learned (if applicable).

The evaluation methodology shall be explained in the report in detail. Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (e.g., selection bias, recall bias, unobservable differences between comparator groups, etc.)

The annexes to the report shall include:

- The evaluation SOW;
- Any statements of difference regarding significant unresolved differences of opinion by funders, implementers, and/or members of the evaluation team;
- All tools used in conducting the evaluation, such as questionnaires, checklists, and discussion guides;
- Sources of information, properly identified and listed; and
- Disclosure of conflict of interest forms for all evaluation team members, either attesting to a lack of conflicts of interest or describing existing conflicts of interest.

All quantitative data collected by the evaluation team must be provided in an electronic file in easily readable format agreed upon with the COR. The data should be organized and fully documented for use by those not fully familiar with the project or the evaluation. USAID will retain ownership of the survey and all datasets developed.

In accordance with AIDAR 752.7005, the contractor will make the final evaluation report publicly available through the Development Experience Clearinghouse within **30 calendar days of final approval of the formatted report.**

## 8. CRITERIA TO ENSURE THE QUALITY OF THE EVALUATION REPORT

Per USAID Evaluation Policy, draft and final evaluation reports will be evaluated against the following criteria to ensure the quality of the evaluation report:

- The evaluation report should represent a thoughtful, well-researched, and well-organized effort to objectively evaluate what worked in the project, what did not, and why.
- Evaluation reports shall address all evaluation questions included in the SOW.
- The evaluation report should include the SOW as an annex. All modifications to the SOW—whether in technical requirements, evaluation questions, evaluation team composition, methodology, or timeline—need to be agreed upon in writing by USAID.
- The evaluation methodology shall be explained in detail. All tools used in conducting the evaluation—such as questionnaires, checklists, and discussion guides—will be included in an annex in the final report.
- Evaluation findings will assess outcomes and impact on males and females.

- Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparator groups, etc.).
- Evaluation findings should be presented as analyzed facts, evidence, and data and not based on anecdotes, hearsay, or the compilation of people's opinions. Findings should be specific, concise, and supported by strong quantitative or qualitative evidence.
- Sources of information need to be properly identified and listed in an annex.
- Recommendations need to be supported by a specific set of findings.
- Recommendations should be action-oriented, practical, and specific, with defined responsibility for the action.

**END OF SECTION C**

ANNEX B

# Evaluation Design Matrix

## ANNEX B: EVALUATION DESIGN MATRIX

Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
<b>Performance Assessment</b>				
I. To what extent has B+WISER achieved its expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?	<ul style="list-style-type: none"> <li>Number of hectares (ha) of biologically significant areas under improved NRM</li> </ul>	<ul style="list-style-type: none"> <li>Cross-reference data reported by B+WISER with data at different levels (DENR central, regional, PENRO, and CENRO; PAMB/WMC; PASU; and <i>Bantay Gubat</i>)</li> <li>Select two biggest CENROs (in ha) per region, which adopted LAWIN, to validate changes in observed threats (e.g., reduced incidence of slash and burn activities, illegal cutting of trees, forest fires, etc.) as proxy variable of areas under improved NRM</li> <li>KIIs with DENR, LGUs, PASU, PAMB/WMC members, etc.</li> <li>FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women's groups, and other POs/CBOs</li> </ul>	<ul style="list-style-type: none"> <li>Measure changes in areas under improved NRM from baseline to midterm and to end-of-project (EOP) condition</li> <li>Assess qualitative attribution of changes in areas under improved NRM through local experiences (LGUs, communities, CENROs, and NGOs)</li> <li>Case study or community story approach to document good practices and lessons learned or unintended consequences</li> <li>Triangulate data gathered from KII, FGD, DO, case study/community story, and desk review</li> <li>Gender disaggregation of data analysis</li> </ul>	<p><b>DR:</b></p> <ul style="list-style-type: none"> <li>Program documents and reports</li> </ul> <p><b>KIIs:</b></p> <ul style="list-style-type: none"> <li>IP - COP, M&amp;E, Site Managers (5 regions)</li> <li>DENR/CO - FMB, BMB, FASPO</li> <li>DENR/FO - CAR, IVA, VI, X, XI (ARD for Technical Services, Enforcement Division, PASU)</li> <li>PAMB/WMC</li> <li>NGOs (PEF, Haribon Foundation, HEDCOR, etc.)</li> </ul> <p><b>FGD:</b></p> <ul style="list-style-type: none"> <li>Forest patrollers,</li> <li>POs/community volunteers</li> <li>Indigenous peoples</li> <li>Women's groups</li> </ul>
	<ul style="list-style-type: none"> <li>Number of ha of biologically significant areas showing improved biophysical conditions</li> </ul>	<ul style="list-style-type: none"> <li>Cross-reference data reported by B+WISER with data at different levels (DENR central, regional, PENRO, and CENRO; PAMB/WMC; PASU; and <i>Bantay Gubat</i>)</li> <li>Select two biggest CENROs (in ha), which adopted LAWIN, to validate changes in observed improvement in biophysical conditions (e.g., reappearance of indicator plants, birds and animals; forest regeneration, etc.)</li> <li>KIIs with DENR, LGUs, PASU, PAMB/WMC members, etc.</li> <li>FGDs with <i>Bantay Gubat</i>/ forest patrollers, indigenous peoples, women's groups, and other POs/CBOs</li> </ul>	<ul style="list-style-type: none"> <li>Measure changes in areas showing improved biological conditions from baseline to midterm and to EOP</li> <li>Assess qualitative attribution of changes in areas showing improved biological conditions through local experiences (LGUs, communities, CENROs, and NGOs)</li> <li>Case study or community story approach to document good practices and lessons learned or unintended consequences</li> <li>Triangulate data gathered from KIIs, FGDs, DO, case study/community story, and desk review</li> <li>Gender disaggregation of data analysis</li> </ul>	
	<ul style="list-style-type: none"> <li>GHG emissions estimated in tCO<sub>2</sub>e reduced, sequestered, or avoided through sustainable landscape activities</li> </ul>	<ul style="list-style-type: none"> <li>Select two biggest CENROs (in ha) per region, which adopted LAWIN, to validate estimated GHG emissions reduced, sequestered, or avoided</li> <li>Gather community perceptions on sustainable landscape activities and air quality improvement, if any</li> <li>Generate DO checklist to be used by field</li> </ul>	<ul style="list-style-type: none"> <li>Obtain AFOLU formula and data used by B+WISER and recompute GHG emissions reduced, sequestered, or avoided</li> <li>Use AFOLU formula of B+WISER and apply to the two selected project sites (i.e., UMRBPL/KWFR and MKRNP)</li> <li>Triangulate data gathered from KIIs, FGDs, DO, and desk review</li> </ul>	

Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
	<ul style="list-style-type: none"> <li>• Amount of investment mobilized (in US\$) for sustainable landscapes</li> <li>• Number of people trained in sustainable NRM and/or biodiversity conservation</li> <li>• Number of days of technical assistance in NRM and climate change</li> </ul>	<p>staff to record/validate community perception on the ground</p> <ul style="list-style-type: none"> <li>• Conduct a “paper trail” of investment mobilized: get copies of investment instruments (i.e., MOA, Project/Activity proposals/documents, GAA, etc.), proofs of fund allocations/releases (i.e., advice of allotment, approved vouchers, etc.) and utilization (i.e., liquidation reports/ vouchers), and work and financial plans of specific projects supported by such investment</li> <li>• KIIs with DENR at field level, PAMB/WMC, and LGUs to document changes in knowledge, attitudes, and practices (KAP), their performance in sustainable NRM and/or biodiversity conservation, and changes in the quality of relevant plans and level of budget and staff for such purpose</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs for the same purpose and identification of sample projects/activities where knowledge learned and technical assistance received were applied on the ground</li> <li>• Cross-reference data reported by B+WISER with data at different levels (DENR central, regional, PENRO, and CENRO; PAMB/WMC; PASU; LGUs; and <i>Bantay Gubat</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and analyze mobilized investment allocated by B+WISER per region/site with data from the two selected project sites (i.e., UMRBPL/KWFR, and MKRNP) and five hotspot regions (i.e., CAR, Regions 4A, 6, 10, and 11)</li> <li>• Case study or community story approach to document good practices and lessons learned or unintended consequences from these trainings and technical assistance</li> <li>• Triangulate data gathered from KIIs, FGDs, DO, case study/community story, and DR</li> </ul>	
<p>2. How effective and efficient were B+WISER strategies in achieving these outputs and outcomes?</p>	<p>• <b>Technology Development:</b> Enhancement of SMART in support of LAWIN</p>	<ul style="list-style-type: none"> <li>• Document the process of enhancement of SMART from interviews with B+WISER and analysis of relevant documents and reports</li> <li>• KIIs with DENR, LGUs, PASU, PAMB/WMC members, etc.</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> </ul>	<p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of development of LAWIN system according to project design</li> <li>• Outcome level: Assessment of the institutionalization of LAWIN system within DENR and LGUs</li> </ul> <p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviations from approved budget and schedule to achieve targets</li> </ul>	<p><b>DR:</b></p> <ul style="list-style-type: none"> <li>• Program documents and reports</li> </ul> <p><b>KIIs:</b></p> <ul style="list-style-type: none"> <li>• IP - Site Managers (5 regions)</li> <li>• DENR/CO - FMB, BMB, FASPO, Planning and Policy Service</li> </ul>

Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
<p>What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?</p>	<ul style="list-style-type: none"> <li>• <b>Capacity Development:</b> Number of PAMB with improved METT scores and LGUs with improved GSA scores; ability of DENR, PA Managers, and LGUs to formulate FCAPs and improve planning and M&amp;E; ability to complete capacity development within approved budget and schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Gather raw data of scores from reports/database of B+WISER</li> <li>• KIs with DENR, LGUs, PASU, PAMB/WMC members, etc.</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> </ul>	<p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of improvement of FCAP and related plans according to project design</li> <li>• Outcome level: Assessment of performance of CENRO with LAWIN system, PAMB with improved METT scores, and LGUs with improved GSA scores</li> </ul> <p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviation from approved budget and schedule to achieve targets</li> </ul>	<ul style="list-style-type: none"> <li>• DENR/FO - Enforcement Division, PASU</li> <li>• PAMB/WMC</li> <li>• LGUs: Selected PG-ENROs/MG-ENROs)</li> <li>• Other government agencies: EDC, NPC</li> <li>• Academe: CMC</li> </ul> <p><b>FGD:</b></p> <ul style="list-style-type: none"> <li>• Forest patrollers, POs/community volunteers</li> <li>• Indigenous peoples</li> <li>• Women’s groups</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Policy:</b> Number of laws, policies, strategies, plans, agreements, and regulations proposed, adopted or implemented; policy gaps identified and policy that institutionalized LAWIN</li> </ul>	<ul style="list-style-type: none"> <li>• Gather specific data from reports/ database of B+WISER</li> <li>• Gather related policies/legislations (e.g., from CENRO, PAMB/WMC, LGU/ barangay ordinances) to determine complementation and consistency of policies, particularly on LAWIN institutionalization</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> </ul>	<p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of completion of policy instruments according to project design/workplan</li> <li>• Outcome level: Assessment of level and outcomes of policymaking and enforcement</li> </ul> <p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviation from approved budget and schedule to achieve targets</li> </ul>	
	<ul style="list-style-type: none"> <li>• <b>Enhancement of NRM Plans:</b> Innovative elements of NRM plans</li> </ul>	<ul style="list-style-type: none"> <li>• Gather data/information from reports of B+WISER</li> <li>• KIs with concerned officials of DENR, LGUs, PAMB/WMC, LGUs/barangays</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> </ul>	<p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of completion of NRM and related plans according to project design/workplan</li> <li>• Outcome level: Assessment of innovative elements and level and outcome of implementation</li> </ul> <p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviation from approved budget and schedule to achieve targets</li> </ul>	
	<ul style="list-style-type: none"> <li>• <b>Conservation Financing (CF):</b> Number of agreements, amount of money generated, DENR budget allocated</li> </ul>	<ul style="list-style-type: none"> <li>• Gather specific data from reports/ database of B+WISER</li> <li>• Gather other data/information from LGUs, PAMB/WMC, NGOs, private sector providing support, etc.</li> <li>• Identify specific projects/activities funded through CF</li> <li>• KIs with concerned officials of DENR, LGUs, PAMB/WMC, LGUs/barangays</li> </ul>	<p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of types of financing agreements signed, amount of money generated, or DENR/LGU budget allocated according to project design/ workplan</li> <li>• Outcome level: Assessment of level and outcomes of financing for specific interventions/projects</li> </ul>	



Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
	<ul style="list-style-type: none"> <li>• <b>IEC:</b> Number of technical papers produced; <i>LAWIN</i> institutionalization</li> </ul>	<ul style="list-style-type: none"> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> <li>• Gather specific data from reports/ database of B+WISER</li> <li>• KIIs with concerned officials of DENR, LGUs, PAMB/WMC, LGUs/barangays</li> <li>• FGDs with <i>Bantay Gubat</i>/forest patrollers, indigenous peoples, women’s groups, and other POs/CBOs</li> </ul>	<p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviation from approved budget and schedule to achieve targets</li> </ul> <p><b>Measures of effectiveness:</b></p> <ul style="list-style-type: none"> <li>• Output level: Assessment of completion and dissemination of IEC materials according to project design/workplan</li> <li>• Outcome level: Assessment of the level and outcomes of use of these IEC materials</li> </ul> <p><b>Measures of efficiency:</b></p> <ul style="list-style-type: none"> <li>• Output/outcome level: Assessment of deviation from approved budget and schedule to achieve targets</li> </ul>	
<b>Lessons Verification</b>				
		<ul style="list-style-type: none"> <li>• Revisit the assumptions and risks identified in B+WISER’s TOC/results framework and contextual factors identified in Monitoring, Evaluation, and Learning (MEL) Plan/PMP</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of the validity of these assumptions, risks and/or contextual factors using the triangulation method</li> </ul>	
<p>1. How valid are the lessons reported during the IP’s learning review for each of their learning questions?</p>	<p><b>LQ2:</b></p> <ul style="list-style-type: none"> <li>• Patrol effort in km per patrol team per CENRO per week/month/year</li> <li>• Number of observed threats per km per CENRO per week/month/year</li> <li>• Number of observations and encounter rate per km of forest regeneration, disaggregated as none, sparse, medium, and dense regeneration per CENRO per week/month/year</li> <li>• Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>• Get the datasets from B+WISER and recompute to check accuracy of estimates of hypothesized relationships between explanatory (X) and outcome (Y) variables</li> <li>• Plot/reconstruct X and Y relationships in a diagram</li> <li>• Go to the field and select data points on the curve to verify accuracy of data reported on the ground (using the selected two biggest CENROs per region)</li> </ul>	<ul style="list-style-type: none"> <li>• Assess external validity (i.e., whether the same findings or results can be applied to or observed in other subjects, places or populations) of hypothesized relationships between explanatory (X) and outcome (Y) variables</li> <li>• Data limitation: Due to security situation, level and regularity of patrol effort may be compromised.</li> </ul>	<p><b>DR:</b></p> <ul style="list-style-type: none"> <li>• SMART database;</li> <li>• Lessons reported by the IP during the learning review</li> </ul> <p><b>KIIs:</b></p> <ul style="list-style-type: none"> <li>• IP - Site Managers (5 regions)</li> <li>• DENR/CO - FMB, BMB</li> <li>• DENR/FO - CAR, IVA, VI, X, XI (ARD for Technical Services,</li> <li>• LGU: Selected PG-ENROs/MG-ENROs)</li> <li>• PAMB/WMC</li> <li>• Government corporations: EDC, NPC</li> </ul> <p><b>FGDs:</b></p> <ul style="list-style-type: none"> <li>• Forest patrollers</li> <li>• Indigenous peoples</li> <li>• Women’s groups</li> </ul>

Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
	<p><b>LQ3:</b></p> <ul style="list-style-type: none"> <li>Patrol effort in Km per patrol team per CENRO per week/month/year</li> <li>Number of observed threats per km per CENRO per week/month/year</li> <li>Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>Get the datasets from B+WISER and recompute to check accuracy of estimates of hypothesized relationships between explanatory (X) and outcome (Y) variables</li> <li>Plot/reconstruct X and Y relationships in a diagram</li> <li>Go to the field and select data points on the curve to verify accuracy of data reported on the ground (using the selected two biggest CENROs per region)</li> </ul>	<ul style="list-style-type: none"> <li>Assess external validity (i.e., whether the same findings or results can be applied to, or observed in, other subjects, places, or populations) of hypothesized relationships between explanatory (X) and outcome (Y) variables</li> <li>Data limitation: Due to security situation, level and regularity of patrol effort may be compromised.</li> </ul>	
	<p><b>LQ5:</b></p> <ul style="list-style-type: none"> <li>Number and type of partnerships</li> <li>Funds generated per type of partnership</li> <li>Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>Get the datasets from B+WISER, DENR, LGUs, other funding donors, including the amount of funds generated</li> <li>Recompute to check accuracy of estimates of hypothesized relationships between explanatory (X, patrol efforts) and outcome (Y, observed threats) variables and plot relationship in a diagram</li> <li>Countercheck data and relationship at the field level</li> </ul>	<ul style="list-style-type: none"> <li>Validate the amount from supporting documents like MOA, work and financial plan, etc.</li> <li>Compare the amount of funds generated by type of partnership and determine which of the types (CSR or BO) generated the greater funding</li> <li>Assess external validity (i.e., whether the same findings or results would apply)</li> </ul>	
	<p><b>LQ8:</b></p> <ul style="list-style-type: none"> <li>Funds generated per type of partnership</li> <li>Patrol effort in km per patrol team per CENRO per week/month/year</li> <li>Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>Get the datasets from B+WISER and recompute to check accuracy of estimates of hypothesized relationships between funds generated (variable X) and patrol effort (variable Y)</li> <li>Plot/reconstruct X and Y relationships in a diagram</li> <li>Go to the field and select data points on the curve to verify accuracy of data reported on the ground (using the selected two biggest CENROs per region)</li> </ul>	<ul style="list-style-type: none"> <li>Validate the amount from supporting documents like MOA, work and financial plan, etc.</li> <li>Compare the amount of funds generated by type of partnership</li> <li>Assess external validity (i.e., whether the same findings or results would apply)</li> </ul>	
	<p><b>LQ9:</b></p> <ul style="list-style-type: none"> <li>Type of CF arrangements</li> <li>Funds generated per type of CF arrangement</li> <li>Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>Get the datasets from B+WISER, DENR, LGUs, other funding donors, including the amount of funds generated</li> <li>Recompute to check accuracy of estimates of hypothesized relationships between explanatory (X, CF arrangement) and outcome (Y, amount of funding) variables</li> </ul>	<ul style="list-style-type: none"> <li>Validate the amount from supporting documents like MOA, work and financial plan, etc.</li> <li>Compare the amount of funds generated by type of CF arrangements and determine which arrangement generated the greater increase in funding</li> </ul>	

Evaluation Questions	Data/Information to be Gathered	Data Gathering Methods	Data Analysis Methods	Data Sources
	<p><b>LQ13:</b></p> <ul style="list-style-type: none"> <li>• LGU governance score per year</li> <li>• Patrol effort in km per patrol team per LGU per week/month/ year</li> <li>• Lessons reported by the IP</li> </ul>	<ul style="list-style-type: none"> <li>• and plot relationship in a diagram</li> <li>• Countercheck data and relationship at the field level</li> <li>• Get the datasets from B+WISER and recompute to check accuracy of estimates of hypothesized relationships between LGU score (variable X) and patrol effort (variable) Y</li> <li>• Plot/reconstruct X and Y relationships in a diagram</li> <li>• Go to the field and select data points on the curve to verify accuracy of data reported on the ground (using the selected two biggest CENROs per region)</li> </ul>	<ul style="list-style-type: none"> <li>• Assess external validity (i.e., whether the same findings or results would apply)</li> <li>• Assess external validity (i.e., whether the same findings or results can be applied to, or observed in, other subjects, places, or populations) of hypothesized relationships between explanatory (X) and outcome (Y) variables</li> </ul>	
<b>For all strategies: Secure specific lessons for each or combination of strategies from B+WISER</b>				
<p>2. How valid are the lessons reported during the IP's learning review on the extent to which, and under what conditions, B+WISER strategies have singly and/or collectively contributed to achieving the outcomes (key results)?</p>	<ul style="list-style-type: none"> <li>• Lessons reported by the IP that contributed to achieving the outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Get record of lessons reported by B+WISER from the IP and assess the logic of evaluation of lessons which B+WISER drew from the learning review.</li> <li>• Identify and describe enabling conditions for each of B+WISER strategies to achieve the outcomes, singly and/or collectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the extent of contribution of each of B+WISER strategies to achieving the outcomes by looking at the measures of effectiveness obtained from the findings of Evaluation Question 2 at the outcome level.</li> <li>• Assess external validity (i.e., whether the same findings or results can be applied to, or observed in, other subjects, places, or populations) of enabling conditions for each or a combination of strategies.</li> </ul>	<p><b>DR:</b></p> <ul style="list-style-type: none"> <li>• SMART database</li> <li>• Lessons reported by the IP during the learning review</li> </ul> <p><b>KIIs:</b></p> <ul style="list-style-type: none"> <li>• IP - Site Managers (5 regions)</li> <li>• DENR/CO - FMB, BMB</li> <li>• DENR/FO - CAR, IVA, VI, X, XI (ARD for Technical Services, PASU)</li> <li>• PAMB/WMC</li> <li>• LGU: Selected PG-ENROs/MG-ENROs)</li> <li>• Government corporations: EDC, NPC</li> </ul> <p><b>FGDs:</b></p> <ul style="list-style-type: none"> <li>• Forest patrollers</li> <li>• POs/community volunteers</li> <li>• Indigenous peoples</li> <li>• Women's groups</li> </ul>

**Notes:** <sup>1</sup> KII = key informant interview, FGD = focus group discussion, DO = direct observation, DR = desk review of B+WISER reports and related documents.

ANNEX C

**KII and FGD Guide Questions and  
Direct Observation Checklist**

# ANNEX C: KII AND FGD GUIDE QUESTIONS AND DIRECT OBSERVATION CHECKLIST

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Achievement of Results	Guide Questions on Unintended Consequences
<b>Performance Assessment</b>			
<p>I. To what extent has B+VWISER achieved its expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?</p>	<p>Number of ha of biologically significant areas under improved NRM</p>	<p>Were the intended targets (2,420,000 ha for years 1-5, 1,324,798 ha for year 6, and 5,000,000 ha for the total life of the project) achieved? In what way? If not, why?</p> <p>What are the evidences identified/observed to support that these targets were achieved?</p> <p>What other consequences were brought about by the achievement of these targets? (Probe and ask questions like, “What is the status of illegal activities, e.g., <i>kaingin</i>, in your area? Have they been reduced? Increased?)</p> <p>Do you think your area is now “under improved NRM”? If Yes, in what way? If not, why?</p> <p>What is the present status of your forest area?</p> <p>What NRM interventions did you implement in your area? Have they been completed? Or are they still ongoing?</p> <p>Do you have an environmental and forest management program in your area? If yes, please elaborate.</p> <p>Have you put up forest restoration projects in your area? If Yes, what were those projects? What were the achievements of those projects?</p> <p>Have you observed any changes in your forest areas? If Yes, what were those changes? What are the causes of those changes?</p>	<p>Besides the intended targets, were there any unintended consequences brought about by the achievement of these targets?</p> <p>What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>
	<p>Number of ha of biologically significant areas showing improved biophysical conditions</p>	<p>Were the intended targets (478,000 ha for years 1-5, 200,000 ha for year 6, and 678,000 ha for the total life of the project) achieved? In what way? If not, why?</p> <p>What are the evidences identified/observed to support that these targets were achieved? Probe and ask questions like, “Have there been other wildlife seen, observed, or heard of in your community? Or Have you observed the</p>	<p>Beside the intended targets, were there any unintended consequences brought about by the achievement of these targets?</p> <p>What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Achievement of Results	Guide Questions on Unintended Consequences
		<p>reappearance of plants, birds, and other forest animals? Please elaborate.</p> <p>What other consequences were brought about by the achievement of these targets?</p> <p>Do you think your area is now “showing improved biophysical conditions”? If Yes, in what way? If not, why?</p>	
	<p>GHG emissions, estimated in tCO<sub>2</sub>e, reduced, sequestered, or avoided through sustainable landscape activities</p>	<p>Were the intended targets (6,278,278 t for years 1-5, 2,468,407 t for year 6, and 8,778,278 t for the total life of the project) achieved? In what way? If not, why?</p> <p>What are the evidences identified/observed to support that these targets were achieved?</p> <p>What other consequences were brought about by the achievement of these targets?</p> <p>Has the condition of your surrounding environment improved, particularly in terms of air quality? Please elaborate. Are there still cases of forest burning seen or reported in your area? Please elaborate.</p> <p>Have you or your organization developed and implemented sustainable landscape activities? If Yes, can you please describe those activities? If not, why?</p>	<p>Besides the intended targets, were there any unintended consequences brought about by the achievement of these targets?</p> <p>What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>
	<p>Amount of investment mobilized (in US\$) for sustainable landscapes</p>	<p>Were the intended targets (US\$5,000,000 for years 1-5, US\$5,899,055 for year 6, and US\$41,000,000 dollars for the total life of the project) achieved? In what way? If not, why?</p> <p>What are the evidences identified/observed to support that these targets were achieved?</p> <p>What other consequences were brought about by the achievement of these targets?</p> <p>How much funding did you or your organization mobilize for your project? Who provided the support funds? (Get copies of the MOA, project documents, work and financial plans, etc. that will prove the veracity of the reported amount of funds mobilized.)</p> <p>How were the mobilized funds utilized? Please site specific</p>	<p>Besides the intended targets, were there any unintended consequences brought about by the achievement of these targets?</p> <p>What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Achievement of Results	Guide Questions on Unintended Consequences
	<p>Number of people trained in sustainable NRM and/or biodiversity conservation</p>	<p>examples. (Get copies of financial reports, etc.)            Can the mobilization of funds and investments be sustained? If Yes, in what way? If not, why?</p> <p>Were the intended targets (100,000 persons for years 1-5, 12,000 persons for year 6, and 166,000 persons for the total life of the project) achieved? In what way? If not, why?            What are the evidences identified/observed to support that these targets were achieved?            What other consequences were brought about by the achievement of these targets?            Please enumerate the trainings conducted and participated on sustainable NRM and/or biodiversity conservation?            Did you apply the knowledge learned from these trainings? If yes, in what way? If not, why?            How do you assess the effects of those training programs on the participants?            Did you attend or participate in any training on LAWIN? What did you learn from this training? How did you apply the knowledge learned from LAWIN training?            Please cite any specific individuals or group of individuals who have applied the learnings obtained from B+WISER training programs on sustainable NRM and/or biodiversity conservation. How did you apply those learnings?</p>	<p>Besides the intended targets, were there any unintended consequences brought about by the achievement of these targets?            What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>
	<p>Number of days of technical assistance in NRM and climate change</p>	<p>Were the intended targets (2,700 days for years 1-5, 1,000 days for year 6, and 4,400 days for the total life of the project) achieved? In what way? If not, why?            What are the evidences identified/observed to support that these targets were achieved?            What other consequences were brought about by the achievement of these targets?            Please cite specific examples of how the technical assistance on (a) NRM and (b) climate change were put to use.            Did the training result in plans, budgets, and proposals with</p>	<p>Besides the intended targets, were there any unintended consequences brought about by the achievement of these targets?            What are these unintended results? Why do you say they are unintended results? What do you mean by unintended consequences of achieving the target?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Achievement of Results	Guide Questions on Unintended Consequences
		<p>funding?</p> <p>Did the training result in efficient and effective performance relative to NRM and climate change? Is this performance observable and visible to the community? How?</p>	

Evaluation Questions	Data/Information to be Gathered	Guide Questions on Effectiveness	Guide Questions on Efficiency	Guide Questions on Enhancing/Diminishing Factors
<p>2. How effective and efficient were B+WISER strategies in achieving these outputs and outcomes?</p> <p>What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?</p>	<p>Technology Development: Enhancement of SMART in support of <i>LAWIN</i></p>	<p>Was <i>LAWIN</i> developed according to the design of the project? If not, please explain or elaborate the changes or modifications made.</p> <p>Was the <i>LAWIN</i> Forest and Biodiversity Protection System institutionalized in your organization? If Yes, in what way? If No, why?</p> <p>Are the four elements in <i>LAWIN</i> institutionalization already in place? Please explain each one.</p> <p>What are the benefits derived (a) by you/family and (b) the community from the implementation of <i>LAWIN</i>? Please elaborate.</p> <p>How do you plan to sustain the implementation of <i>LAWIN</i>? Please explain.</p>	<p>Is the enhancement of the SMART program and institutionalization of <i>LAWIN</i> accomplished within the duration and budget allocation? Please elaborate.</p>	<p>What internal and external factors may have enhanced or diminished the achievement of development and institutionalization of <i>LAWIN</i>?</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p> <p>Are there factors or reasons that will make <i>LAWIN</i> unsustainable? Please elaborate.</p>



Evaluation Questions	Data/Information to be Gathered	Guide Questions on Effectiveness	Guide Questions on Efficiency	Guide Questions on Enhancing/Diminishing Factors
	<p>CapDev: Number of PAMBs with improved METT scores and LGUs with improved GSA scores; ability of DENR, PA Managers, and LGUs to formulate FCA plans and improve planning and M&amp;E; ability to complete capdev within approved budget and schedule</p>	<p>Were the capacity development targets of B+WISER achieved according to their scope and design? Get specific answers for:</p> <ul style="list-style-type: none"> <li>• PAMB improvement in METT score</li> <li>• LGU GSA score</li> <li>• Ability to formulate FCA plans, other planning activities</li> <li>• Conduct of M&amp;E</li> </ul>	<p>Were the capacity development activities accomplished within the duration and budget allocation? Please elaborate.</p>	<p>What internal and external factors may have enhanced or diminished the achievement of capacity development projects of B+WISER? Please explain specific factors for each capdev activity.</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p>
	<p>Policy: Number of laws, policies, strategies, plans, agreements, and regulations proposed, adopted, or implemented; policy gaps identified and policy that institutionalized <i>Lawin</i></p>	<p>What are the laws, policies, strategies, plans, agreements, and regulations proposed, adopted, or implemented in support of NRM and biodiversity conservation in your area?</p> <p>Were these policies promulgated according to the design and targets of B+WISER? (Get copies of the instruments).</p> <p>How would you assess the effect of these policies on reducing the threats to the forests and environment? Please cite specific examples.</p>	<p>Were the different policies proposed, adopted, and implemented according to the duration and budget allocation of B+WISER program? Please elaborate.</p>	<p>What internal and external factors may have enhanced or diminished the achievement of the policy formulation activity of B+WISER?</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p>
	<p>Enhancement of NRM plans: Innovative elements of the plans</p>	<p>Was the intended enhancement of NRM plans achieved? If Yes, in what way? Were they achieved according to their design and scope? If not, why?</p> <p>What the innovative elements were introduced in the NRM plans? Please elaborate.</p>	<p>Was the intended enhancement of NRM plans, including their innovative elements, achieved according to the duration and budget allocation of B+WISER program? Please elaborate.</p>	<p>What internal and external factors may have enhanced or diminished the achievement of NRM plan enhancement and introduction of innovative elements? Please explain.</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p>
	<p>Conservation financing (CF): Number of agreements, amount</p>	<p>Please enumerate the different agreements forged (or entered</p>	<p>Were the CF schemes implemented by B+WISER</p>	<p>What are the internal and external factors that may have enhanced or</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on Effectiveness	Guide Questions on Efficiency	Guide Questions on Enhancing/Diminishing Factors
	of money generated, DENR budget allocation	<p>into in terms of activities, projects, donations, solicited amount, etc.) for CF. (Get copies of the instruments).</p> <p>Is the establishment of CF within the scope and design of the project? Please explain.</p> <p>Do you think the funds set aside by DENR in implementing <i>LAWIN</i> were sustainable? If Yes, in what way? If not, why? (Get copy of DENR's GAA for FY 2018 and proposed budget for FY 2019)</p> <p>Did you receive any funding allocation from the DENR/LGU and other sources? (Please specify.) If Yes, how much was actually received and for what project/activity?</p>	achieved according to their design, scope, and timeframe? Please elaborate.	<p>diminished the establishment of CF? Please explain.</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p>
	IEC: Number of technical papers produced; <i>LAWIN</i> institutionalization	<p>What were the technical papers or popular literature produced by B+WISER?</p> <p>Were they effective in disseminating the desired information?</p> <p>Were they achieved according to the scope and design? Please elaborate.</p>	Was the production of technical papers and related publications accomplished according to their design and scope, and duration? Please elaborate.	<p>What are the internal and external factors that may have enhanced or diminished the production of technical papers and related publications? Please explain.</p> <p>How valid are the assumptions, risks, and identified contextual factors relative to this strategy?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on External Validity
<p>3. How valid are the lessons reported during the IPs' learning review for each of their learning questions?</p>	<p>LQ2:</p> <ul style="list-style-type: none"> <li>• Patrol effort in km per patrol team per CENRO per week/month/year</li> <li>• Number of observed threats per km per CENRO per week/month/year</li> <li>• Number of observations and encounter rate per km of dense forest regeneration, disaggregated as none, sparse, medium, and dense regeneration per CENRO per week/month/year</li> </ul>	<p>Were the patrol areas (in km per CENRO per week/month/year) fully covered by the patrol team? If Yes, in what way? What evidences could you cite? If not, why?</p> <p>Has the forest in your area gained some form of regeneration? Please explain whether: (a) not at all; (b) sparse regeneration; (c) medium regeneration; and/or (d) dense regeneration? Do you think this condition will continue? If Yes, in what way? If not, why?</p> <p>Do you think the regeneration (or not) of forest area was due to the improved efforts in patrol work? Please elaborate.</p> <p>Have you participated in any patrolling activity in your area? How many km did you cover per week/ month/year?</p> <p>Have you observed any threats during your patrolling activities? What are they and how many did you observe?</p> <p>Were persons apprehended and subsequently penalized during your enforcement operations?</p> <p>Did you keep records/logbook of violators and the penalty imposed on them? (Get a copy or take a photograph of the entries in the logbook.)</p> <p>If the same amount (or effort) of patrolling activities will be implemented, do you think the same rate of forest regeneration could be attained or observed in other areas? If Yes, please explain. If not, why?</p>
	<p>LQ3 :</p> <ul style="list-style-type: none"> <li>• Patrol effort in km per patrol team per CENRO per week/month/year</li> <li>• Number of observed threats per km per CENRO per week/month/year</li> </ul>	<p>Were the observed threats (per km per CENRO per week/month/year) fully reported or documented by the patrol team? If Yes, in what way? What evidences could you cite? If not, why?</p> <p>Do you think the reduction in observation of threats was due to the improved efforts in patrol work? Please elaborate.</p> <p>If the same amount (or effort) of patrolling activities will be implemented, do you think the same rate of reduction of threats could be attained or observed in other areas? If Yes, please explain. If not, why?</p>
	<p>LQ5:</p> <ul style="list-style-type: none"> <li>• Number and type of partnerships</li> <li>• Funds generated per type of partnership</li> </ul>	<p>Have you established CF partnership with funding agencies, LGUs, NGOs, private sector? If Yes, what was/were the type/s of CF partnership? How much funding was/were mobilized? Please enumerate and elaborate each partnership.</p> <p>Where these in the form of business opportunities or simply through corporate social responsibility (CSR)? If Yes, please explain.</p> <p>Was this CF utilized for biodiversity conservation? Or for other purposes or activities? Please elaborate.</p> <p>Were partnerships developed relative to CF in your area? Please enumerate and elaborate on each.</p> <p>Where these in the form of business opportunities or simply through CSR? Please explain.</p> <p>If the same amount (or effort) in fund generation activities is exerted, do you think this will result in the generation of the same or similar amount of funding mobilized in other areas? If Yes, please explain. If not, why?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on External Validity	
	<p>LQ8:</p> <ul style="list-style-type: none"> <li>Funds generated per type of partnership</li> <li>Patrol effort in km per patrol team per CENRO per week/month/year</li> </ul>	<p>As far as you can remember, how much funding was generated per type of partnership? Please enumerate these partnerships.</p> <p>Did this contribute toward enhancing the patrol efforts in your area? If Yes, in what way? If not, why?</p> <p>If the same amount of funds is mobilized for a particular type of partnership, do you think it will result in the same level of improvement in patrol efforts in other areas? If Yes, please explain. If not, why?</p>	
	<p>LQ9:</p> <ul style="list-style-type: none"> <li>Type of CF arrangements</li> <li>Funds generated per type of CF arrangement</li> </ul>	<p>What are the types of CF arrangement entered into in your area?</p> <p>How much funding was generated for each type of CF arrangement?</p> <p>Were the CF arrangements institutionalized? If Yes, please cite examples. If not, why?</p> <p>Have you established CF partnership with funding agencies, NGOs, private sector? What is the type of CF partnership? How much funding was involved?</p> <p>If the same type of CF arrangement is entered into, do you think it will result in the generation of the same or similar amount of funding mobilized in other areas? If Yes, please explain. If not, why?</p>	
	<p>LQ13:</p> <ul style="list-style-type: none"> <li>LGU governance score per year</li> <li>Patrol effort in Km per patrol team per LGU per week/month/year</li> </ul>	<p>Has the LGU governance score improved per year? If Yes, please elaborate. If not, why?</p> <p>Has the LGU helped in improving the patrol efforts in your area in terms of increasing the number of km covered? If Yes, in what way? If not, why?</p> <p>How do you think can the LGU level of governance score be sustained?</p> <p>If the same LGU governance score could be attained, do you think it will result in the same level of improvement in patrol efforts in other areas? If yes, please explain. If not, why?</p>	

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Contribution of B+WISER Strategies	Guide Questions on External Validity
<p>4. How valid are the lessons reported during the IPs' learning review on the extent to which, and under what conditions, B+WISER strategies have singly and/or collectively contributed to achieving the outcomes (key results)?</p>	<p>Technology Development: Enhancement of SMART in support of LAWIN</p>	<p>What do you think are the enabling conditions for LAWIN technology that helped achieve B+WISER's outcomes (key results), e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>technology development</u> to the achievement of B+WISER outcomes? Were these contributions attained by this specific strategy? Or in combination/ collaboration with other strategies? If Yes, what are these strategies? And how have they contributed to the achievement of B+WISER outcomes?</p>	<p>If the same enabling conditions for LAWIN technology are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Contribution of B+WISER Strategies	Guide Questions on External Validity
	<p>CapDev: Number of PAMBs with improved METT scores and LGUs with improved GSA scores; ability of DENR, PA Managers, and LGUs to formulate FCA plans and improve planning and M&amp;E; ability to complete capdev within approved budget and schedule</p>	<p>What do you think are the enabling conditions in <u>capacity development</u> programs of B+WISER that helped achieved B+WISER's outcomes (key results) e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>capacity development</u> to the achievement of B+WISER outcomes? Were these contributions attained by this specific strategy? Or in combination/ collaboration with other strategies? If Yes, what are these strategies? And how did they contribute to the achievement of B+WISER outcomes?</p>	<p>If the same enabling conditions in <u>capacity development</u> are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?</p>
	<p>Policy: Number of laws, policies, strategies, plans, agreements, and regulations proposed, adopted, or implemented; policy gaps identified and policy that institutionalized <i>Lawin</i></p>	<p>What do you think are the enabling conditions in <u>policy formulation</u> programs of B+WISER that helped achieve B+WISER's outcomes (key results) e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>policy formulation</u> to the achievement of B+WISER's outcomes? Were these contributions attained by this specific strategy? Or in combination/ collaboration with other strategies? If Yes, what are these strategies? And how they did they contribute to the achievement of B+WISER's outcomes?</p>	<p>If the same enabling conditions in <u>policy formulation</u> are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?</p>
	<p>Enhancement of NRM Plans: Innovative elements of the plans</p>	<p>What do you think are the enabling conditions for the <u>enhancement of NRM plans</u> and programs of B+WISER that helped achieve B+WISER's outcomes (key results) e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>enhancement of NRM plans</u> to the achievement of B+WISER outcomes? Were these contributions attained by this specific strategy? Or in combination/collaboration with other strategies? If Yes, what are these strategies? And how they contributed?</p>	<p>If the same enabling conditions for the <u>enhancement of NRM plans</u> are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?</p>

Evaluation Questions	Data/Information to be Gathered	Guide Questions on the Extent of Contribution of B+WISER Strategies	Guide Questions on External Validity
	Conservation financing: Number of agreements, amount of money generated, DENR budget allocation	<p>What do you think are the enabling conditions for <u>conservation financing</u> programs of B+WISER that helped achieve B+WISER's outcomes (key results) e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>conservation financing</u> to the achievement of B+WISER outcomes? Were these contributions attained by this specific strategy? Or in combination/ collaboration with other strategies? If Yes, what are these strategies? And how they did they contribute to the achievement of B+WISER outcomes?</p>	If the same enabling conditions in <u>Conservation Financing</u> are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?
	IEC: Number of technical papers produced; LAWIN institutionalization	<p>What do you think are the enabling conditions for <u>technical papers and similar publications</u> of B+WISER that helped achieved B+WISER's outcomes (key results), e.g., reduction in threats? Please describe these enabling conditions.</p> <p>What are the specific contributions of <u>technical papers and similar publications</u> to the achievement of B+WISER outcomes? Were these contributions attained by this specific strategy? Or in combination/collaboration with other strategies? If yes, what are these strategies and how did they contribute to the achievement of B+WISER's outcomes?</p>	If the same enabling conditions for <u>technical papers and similar publications</u> are available, do you think the same level of outcomes could be achieved in other areas? If Yes, please elaborate. If not, why?

## DIRECT OBSERVATION CHECKLIST FOR FIELD OBSERVERS

### BIODIVERSITY AND WATERSHEDS IMPROVED FOR STRONGER ECONOMY AND ECOSYSTEM RESELIENCE (B+WISER): FINAL PERFORMANCE EVALUATION

Field Observer		Time of Observation	
Location		Date of Observation	

INSTRUCTIONS: In this instrument, you document what you observe in your assigned site. If you see these indicators, you are to check “[ ] yes” and proceed to the third column “observation description” and write your observation verbatim. When these indicators are non-existent, check “[ ] none” in the second column and do not proceed to the third column. In cases where there is not enough evidence for you to make a judgment, please note on the side so the team can help you assess later on. Note that you may list additional indicators that you consider important to capture the essence of these observations in your assigned project site and describe these as well.

Observation Checklist		Observation Description (Please describe present condition as you see it.)
<b>Environmental Condition</b>		
Natural resources	[ ] yes [ ] none	
Forest cover	[ ] yes [ ] none	
Forest zones/areas	[ ] yes [ ] none	
Biophysical vondition	[ ] yes [ ] none	
“Kaingin” –slash and burn farming activities	[ ] yes [ ] none	
Creeks	[ ] yes [ ] none	
Rivers	[ ] yes [ ] none	
Cutting of trees	[ ] yes [ ] none	
Forest fires	[ ] yes [ ] none	
Charcoal-making (“mag-uuling”)	[ ] yes [ ] none	
Culverts	[ ] yes [ ] none	
Spillway	[ ] yes [ ] none	
Irrigation system	[ ] yes [ ] none	
<b>Location of Buildings and Facilities</b>		
Housing and housing conditions	[ ] yes [ ] none	
Shelter for households	[ ] yes [ ] none	

Observation Checklist		Observation Description (Please describe present condition as you see it.)
Day care center	[ ] yes [ ] none	
Elementary school	[ ] yes [ ] none	
High school	[ ] yes [ ] none	
Community learning center	[ ] yes [ ] none	
Tribal school	[ ] yes [ ] none	
Other school/training centers	[ ] yes [ ] none	
Health centers	[ ] yes [ ] none	
Market/ <i>talipapa</i>	[ ] yes [ ] none	
Terminal	[ ] yes [ ] none	
Command posts and access	[ ] yes [ ] none	
<i>Bantay Gubat/Kalikasan</i>	[ ] yes [ ] none	
Basketball court	[ ] yes [ ] none	
Plazas/covered courts	[ ] yes [ ] none	
Annexed government offices in the area aside from barangay/ municipal offices	[ ] yes [ ] none	
Shelter for indigenous peoples	[ ] yes [ ] none	
Tribal hall for indigenous peoples	[ ] yes [ ] none	
<b>Community Electric and Water System</b>		
Source of water/water supply	[ ] yes [ ] none	
Water facility/water system	[ ] yes [ ] none	
Electricity and access	[ ] yes [ ] none	
<b>Community Sanitation and Cleanliness</b>		
Generally clean environment	[ ] yes [ ] none	
Proper garbage disposal efforts	[ ] yes [ ] none	
Practice of general cleanliness/sanitation of the area	[ ] yes [ ] none	
Clean surroundings (no foul odor, no garbage, no trash lying around)	[ ] yes [ ] none	
Sanitary toilets	[ ] yes [ ] none	
Waste disposal	[ ] yes [ ] none	
Drainage and drainage system	[ ] yes [ ] none	



Observation Checklist		Observation Description (Please describe present condition as you see it.)
Burning of garbage/waste	[ ] yes [ ] none	
Canals	[ ] yes [ ] none	
<b>Trade and Industry</b>		
Main agricultural products	[ ] yes [ ] none	
Farm areas/ farming sites	[ ] yes [ ] none	
Business establishments	[ ] yes [ ] none	
Agricultural practices	[ ] yes [ ] none	
Livelihood activities/economic activities	[ ] yes [ ] none	
<b>Others - Specify</b>		
	[ ] yes [ ] none	
	[ ] yes [ ] none	
	[ ] yes [ ] none	
	[ ] yes [ ] none	

ANNEX D

**List of Documents Reviewed**

## ANNEX D: LIST OF DOCUMENTS REVIEWED

Type	Years	Details
<b>Development Experience Clearinghouse</b> <a href="https://dec.usaid.gov/dec/home/Default.aspx">https://dec.usaid.gov/dec/home/Default.aspx</a>		
Annual Report	2013-2017	
Assessments	2015	Baseline Assessment: Analysis of Pressures to Natural Forests in DENR/B+WISER Sites
	2015	Baseline Assessment-Historical Forest Cover Change Analysis
	2015	Forest Carbon Assessment and REDD
Measuring Impact	2017	FY17 Annual Performance Report
	2013	FY13 Annual Performance Report
Evaluation	2016	Midterm Evaluation
<b>B+WISER IP</b> Google Drive - <a href="https://drive.google.com/drive/folders/1zEW5LgAq-mgBloJoHJUZBnvg3ZiMIENL">https://drive.google.com/drive/folders/1zEW5LgAq-mgBloJoHJUZBnvg3ZiMIENL</a>		
Presentation (PowerPoint)	2018	Briefing for Final Evaluation Team
		Learning Review Workshop Objectives
		Introduction to USAID Policy
		TOC in B+WISER_Background and History
		Intro to Objective 2.
		LAWIN and SMART
		Preliminary Analysis of LAWIN Data
		MI Preliminary Analysis and Recommendations
		Intro to Objective 3
Learning Questions (Word Document)	2018	Information Sheet LQ2
		Information Sheet LQ5
		Information Sheet LQ5
		Information Sheet LQ8
		Information Sheet LQ9
		Information Sheet LQ13
LAWIN Modules (PDF)	2018	Manual 1
		Manual 2
		Manual 3
		Manual 4
		Procedures for responding to observed threats
Carbon Benefit Computations (PDF)	2018	AFOLU Carbon Calculator Project Report
	2017	B+WISER Reduced Emission Reporting - Expansion Sites
	2017	Reduced carbon emissions - original sites
	2016	Carbon Benefits B+WISER FY 2016
	2015	CO <sup>2</sup> Benefits from Forest Protection Activities B+WISER Program 2013 – 2017
Performance Monitoring Plan	2015	Performance Monitoring Plan 2013-2017
Workplans	2013	Annual Workplan 2013
	2014	Annual Workplan 2014-2015

Type	Years	Details
	2015	Annual Workplan 2015-2017
	2016	Annual Workplan Year 4
	2016	Annual Workplan 2016-2017
	2018	Annual Workplan
Facilitators Guides		Looking at the future: working with SMART and beyond (Learning Review Workshop) – Objective 2
		Enabling conditions led to a change in scope and scale of the B+WISER project - Objective 3
Workshop Design		Learning Review Workshop, Day 2, Session 2: Enabling Conditions
		Preliminary findings and lessons on priority learning questions
GSA	2014	Guided Self-Assessment on Local Environmental Governance (GSA) for all sites
<b>DENR</b>		
LAWIN Forest and Biodiversity Protection System	2018	Forest Protection Effectiveness Report - CAR - Baguio
		Forest Protection Effectiveness Report - Region 04A - Rizal
Presentation (PPT)		LAWIN Patrol Effort Per Region, Threat Occurrences, and Regional Threat Indices
<b>DENR CORDILLERA AUTONOMOUS REGION</b>		
Manual (USAID/DENR)	2018	<b>The LAWIN Forest and Biodiversity Protection System Manual</b>
		<b>MODULE 1 Forest Conservation Area Planning</b>
		<b>MODULE 2 Purpose-driven Patrolling</b>
		<b>MODULE 3 Data Management</b>
		<b>MODULE 4 Response</b>
Excel files	2018	Forest Protection Effectiveness Report – CAR Baguio
		Forest Condition
		Regenerance
	2018	1st Quarter Patrol Plan 2nd Quarter Patrol Plan 3rd Quarter Patrol Plan
	No date	3rd Quarter Patrol Plan - Buguias
	No date	Patrol Plan for the Natural Forest in CENRO BAGUIO
	No date	Patrol Team Members
	No date	Travel Plan CENRO Baguio City (September – December)
	2017	Names of Active Patrollers
	No date	List of DENR LAWIN Patrollers
	2017	Work and Financial Plan Enforcement Division
	2018	DENR CAR FY 2018 Work and Financial Plan
	2018	Annual Targets
	No date	List of Forest Rangers and Forest Technician, Active Patollers In LAWIN Forest and Biodiversity Protection System, DENR CAR
	2016-2018	Count Observations Dense [Density of regenerants] (Forest Condition) per Distance (km)
	2016-2018	Dense_regeneration_per_CA
	2016-2018	Count Observations Forest Condition

Type	Years	Details
	2016-2018	Indicator Species
	No date	List of LAWIN Gadgets
		Threats per CENRO Month
		Threat Count per CA RO only
	2016-2018	Patrol Effort Per Distance Per (km) /Per Month
	No date	LAWIN Forest and Biodiversity Protection System Response Capability-Building Workshop For Regional DENR Staff
		Participants LAWIN- vest
Word	2016-2018	List of LAWIN Trainings
	2016	Program for the Training and Coaching of CAR Forest Rangers on LAWIN Forest and Biodiversity Protection System
	2017	Training Design for LAWIN and ENR
	No date	Steps to Add the CA in Cybertracker
	2017	Procedure for responding to observed threats
	2016	List of Forest Rangers and PASU as of 2016
	No date	LAWIN Forest and Biodiversity Protection System Response Capability-Building Workshop For Regional DENR Staff (Provisional Program for RPs/Facilitators/Documentors)
	2016	DENR-CAR Pamana Program and Law Enforcement Activities Midyear Assessment at Supreme Hotel, Baguio City, August 3-5, 2016
Presentations	2017	Response Protocol Training for DENR-CAR
	2018	Data Analysis and Reporting on LAWIN Forest and Biodiversity Protection System, 27-28 June 2018, Sagada
	2017	Updates on LAWIN
	2017	LAWIN in CAR
	2016-2017	Patrol Coverage and Patrol Effort in CAR
	2017	RMC ED Presentation 2nd Quarter
Memo and Special Orders	2018	Summary Table of Kilometers Patrolled and Threats - CENRO Alfonso Lista, Ifugao Identified/Monitored for the Month of August 2018.
	No date	Maintaining Intensified Forest Protection Activities
	No date	Authorizing the Conduct of LAWIN Data Management Conference
	2016	Authorizing the Attendance of Employees on the Capacity Building on the Operationalization of the Landscape and Wildlife Indicators System (LAWIN) on July 12-15, 2016 at the DENR-CAR, Baguio City
	2017	Authorizing the Attendance of Employees on the Regional Training on LAWIN Forest and Biodiversity Protection System Response Protocol on November 13-17, 2017 at the DENR-CAR, Baguio City
	2018	Authorizing the Attendance of Some Officers and Staff of the Cordillera Administrative Region to a LAWIN Data Managers Training On June 27 & 28, 2018 At The Saint Joseph Resthouse In Sagada, Mountain Province
	2017	Authorizing the attendance of some DENR employees on the conduct of regional workshop on LAWIN data management for data managers and PENRO/CENRO Enforcement Section Chief on February 7-9, 2017 at Baguio city.
	2017	Regional Training on LAWIN Forest And Biodiversity Protection System Response Protocol On November 13-17, 2017 At The Denr-Car, Baguio City.

Type	Years	Details
	2017	Assistance During the Visit of Delegates from the Ministry of Environment and Forestry of Indonesia, USAID Indonesia and Forest Management Bureau on July 19-20, 2017
	2017	Addendum to the S.O. No. 314 on the 1st semester project assessment of DENR-CAR PAMANA program and enforcement activities on July 5 to 6, 2017 in Baguio City
	2017	Monthly Reporting on the Status of Responses to Threats Under the LAWIN Forest and Biodiversity Protection System
	2017	Distribution of LAWIN System Patrollers and Clarification on the Granting of Allowances for the Patrollers
	2018	Judicious Deployment of the Forest Rangers and Forest Guards under the PAMANA Program
Images	2016-2018	Trend of Threats
		Threat Index per CENRO
	2017-2018	Summary of Threats
	2018	Summary Table of km. Patrolled and Threats Identified/Monitored for the month of April, 2018 - Aginaldo
<b>Kaliwa Watershed and Upper Marikina River Basin Protected Area</b>		
Images	No date	Kaliwa Watershed and Upper Marikina River Basin Protected Area Landscape Threats
	2018	Threats observed from Jan-June 2018
		Number of patrol teams and patrollers
		Action Taken
	2016-2018	Region IV CALABARZON – Threats and Patrol Effort
	2018	Indicator species as of June 2018
Word	No date	Summary of Assessment of Violations of Major Environmental Laws in Kaliwa Watershed Forest Reserve
		List of Patrollers
		Patrol routes, location of observed threats, and location, urgency of responses needed, locations of actions taken to address threats
	2017	Patrol Effort Region IV A – Real
	2018-2022	Five year Forest Conservation Area Plan for the Natural Forest in CENRO Real
		Forest Conservation Area Plan for Kaliwa Watershed Forest Reserve - Sta. Ines, Tanay, Rizal
	2017	Patrol Plan For The Natural Forest Of Tanay, Rizal Kaliwa Watershed Forest Reserve (KWFR), Sta. Ines Conservation Area (January – March 2017)
Presentation	2013 & 2016	Top Threats Identified KWFR
	No date	Severity of threats KWFR
	No date	Upper Marikina River Basin Protected Landscape (UMRBPL) and Kaliwa Watershed Forest Reserve (KWFR) Forest Cover, High Priority Areas and Pressures/Threats
	2016	KALIWA WATERSHED FOREST RESERVE 2016 Repeat METT Assessment Results
	2016	<b>Indicator Species - LAWIN Forest and Biodiversity Protection System</b>

Type	Years	Details
		Contents of a Forest Conservation Area Plan
		Purpose Driven Patrolling
Excel	2016-2018	Patrol effort 2016-Aug 2018
PDF		Forest Protection Effectiveness Report Reg IV A-Real
	2016	Isang kapasyahan na pinagkaisahan ng Protected Area Management Board (PAMB) na isakatuparan ang mga Napagkasunduang enforcement protocol bilang katugunan sa resulta ng konsultasyon na isinagawa ng DENR-B+WISER Program.
	2017-2022	Forest Conservation Area Plan PENRO-Rizal (July 2017-2022)
<b>Mt. Kitanglad</b>		
Word	2013 & 2017	Top Threats Based on Total Scores (High and Medium)
		Effects of Patrol Efforts Observed Threats
Excel	2017	Patrol Efforts Per Team Of Cenro Manolo Fortich, Bukidnon (Jan-Dec 2017)
	2018	Patrol Efforts Per Team Of Cenro Manolo Fortich, Bukidnon (Jan-Sep 2018)
	No date	Schedule of Foot Patrol
PPT	No date	PA management – Kitanglad, Philippines
	No date	Development, Management And Financing Scheme: The Case Of Mt Kitanglad Range Natural Park-An ASEAN Heritage Park, Philippines
PDF	2018	Summary Patrol Report – CENRO Reg 10 – Valencia
	2016-2018	DENR-10 SECONDARY DATA/INFORMATION-B+WISER ACTIVITIES
Images		Summary threat report – CENRO Reg 10 – Valencia
	2018	Schedules of patrol, teams, route assignments for the period

ANNEX E

**Summary of Key Findings from Data  
Gathering Methods**



# ANNEX E: SUMMARY OF KEY FINDINGS FROM DATA GATHERING METHODS

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings																												
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11																													
<b>Performance assessment</b>																																			
<b>1. To what extent has B+WISER achieved its expected outputs (deliverables) and outcomes (key results)? Were there unintended consequences as a result of its implementation?</b>																																			
	<p>• <b>Number of ha of biologically significant areas under improved NRM</b></p>	<p>TOTAL Forest Conservation Area: 743,245 hectares CENRO's Forest Conservation Area (ha)/ CENRO:</p> <table border="1"> <thead> <tr> <th>CENRO</th> <th>Hectares</th> </tr> </thead> <tbody> <tr> <td>Alfonso Lista</td> <td>17,187</td> </tr> <tr> <td>Baguio</td> <td>52,724</td> </tr> <tr> <td>Bangued</td> <td>60,237</td> </tr> <tr> <td>Buguias</td> <td>36,282</td> </tr> <tr> <td>Calanasan</td> <td>115,027</td> </tr> <tr> <td>Conner</td> <td>100,440</td> </tr> <tr> <td>Lagangilang</td> <td>88,010</td> </tr> <tr> <td>Lamut</td> <td>75,986</td> </tr> <tr> <td>Paracelis</td> <td>27,758</td> </tr> <tr> <td>Pinukpuk</td> <td>44,907</td> </tr> <tr> <td>Sabangan</td> <td>71,491</td> </tr> <tr> <td>Tabuk</td> <td>53,196</td> </tr> <tr> <td><b>Total</b></td> <td><b>743,245</b></td> </tr> </tbody> </table> <p>The total forest area in hectares covered by the implementation of LAWIN or the operation of <i>Bantay Gubat</i>/forest patrol in CAR region.</p> <p>All 6 PENROs and 12 CENROs implemented LAWIN.</p>	CENRO	Hectares	Alfonso Lista	17,187	Baguio	52,724	Bangued	60,237	Buguias	36,282	Calanasan	115,027	Conner	100,440	Lagangilang	88,010	Lamut	75,986	Paracelis	27,758	Pinukpuk	44,907	Sabangan	71,491	Tabuk	53,196	<b>Total</b>	<b>743,245</b>	<p>309,905.3 has total forest conservation area, as reported by the EDC Head; only 18,889 has patrolled per region's record</p> <p>Target conservation area for KALIWA Watershed alone of 26,680 has was reported achieved by the PASU</p> <p>1,274.53 km covered per region's data; although 9,054.28 km patrolled based on FMB LAWIN center</p> <p>In Kaliwa: forest areas in my assigned site are fine now. With the help of IEC, illegal activities like "kaingin system" are minimized.</p> <p>Upper Marikina (UM): it improved</p> <p>CENRO Real (CR): illegal activities like forest burning and cutting of trees were lessened because they are afraid of being caught</p> <p>Our forest in our assigned site is now showing improved biophysical conditions. From open cultivated area because of forest burning before, our</p>	<p>231,000 hectares total forest 656,539 hectares is conservation area --(EDD)</p> <p># of hectares are not mentioned --(CENRO-Guimbal, CENRO-Barotac Nuevo, CDD, B+WISER, PENRO)</p> <p>protect the area not only planting; forest lands have many illegal settlers and do not mind their illegal activities for living -with bio-diversity --(CENRO-Guimbal)</p> <p>Close open forest- the whole conservation area not exceed boundary --(CENRO-Barotac Nuevo, PENRO, B+WISER)</p> <p>CDD is more on Biodiversity Monitoring System (BMS) --(CDD)</p>	<p><b>The total timberland in Region 10 is 897,000 hectares.</b> A portion of this timberland is close canopy. This whole area is the total conservation area of Region 10.</p> <p>Mt Kitanglad Range Natural Park has a total area of 47,270 hectares and around 6,000 hectares have been badly affected by forest fire triggered by el niño phenomenon in 1980. 16,000 hectares were designated as buffer zone, it is an extra layer of protection to the core area or the protected area. This is the place where upland communities reside. The 16,000-hectare buffer zones are based on existing law that registered protected area occupants (PAO). There are 2 recognized inhabitants or occupants of Mt Kitanglad:</p> <ol style="list-style-type: none"> <li>1. IP community which is very dependent on the park for time immemorial; and</li> <li>2. Tenured migrants based on the PAO survey, or forest occupants who have cultivated or settled the area on or before 1987.</li> </ol> <p><b>Mt Kitanglad has recorded 3,768 hectares of forest gain</b> as shown by NAMRIA data between 2003 to 2010.</p>	<p>Size of the natural forest: 22,494.4784 hectares as per forest cover map of NAMRIA 2010 --(CENRO-Davao City)</p> <p>Does not know the exact figure --(CDD, EDD, B+WISER, PENRO, MENRO-Sta Cruz)</p> <p>the conservation area was defined by B+WISER and Central Office --(PENRO)</p> <p>Lawin implemented in 11 CENROs and in 1 working PENRO, and the said offices submit a monthly report to the Central Office. --(EDD)</p> <p>The help of B + WISER is about the capacitation of porters, collection of fees for tricking, garbage collection, then forest protection, basically trying to retain whatever is the remaining forest cover in Mt. Apo because there is not so dense in terms forest cover relative to Mt. Kitanglad, small forest cover in Mt. Apo. --(B+WISER)</p> <p>For the B+WISER project in our area, patrolling is the</p>	<p>Patrol effort covered not only natural forest area but also NGP sites and buffer areas, which explains the presence of <i>Bantay Gubat</i> outside the target forest conservation areas (FCAs) in the Patrol Effort Map. This resulted in actual accomplishments exceeding target FCAs in the evaluation sites, and reduction in observed threats.</p> <p>See Appendix 1: Table 1 for the comparison between target FCA and actual area (distance) covered by patrol effort; and Figure 1 for the trend for national protection effectiveness.</p> <p>Our forest in our assigned site is now showing improved conditions; from open cultivated area because of forest burning before, our forest now is in secondary forest category because new trees are planted courtesy projects like the NGP, and others.</p>
CENRO	Hectares																																		
Alfonso Lista	17,187																																		
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Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11	
			<p>forest now is in secondary area category because new trees are planted courtesy of NGP projects.</p> <p>PGENRO (P): No idea of hectares covered, but so far the forest vegetation is doing/looking good because of the tree planting activities.</p> <p>MENRO (M): It improved I think but I have no data in terms of % of forest area improved.</p> <p>number of ha.no exact data</p> <p>On the improvement of natural resources, they saw that the site need more new trees, so the B+WISER collaborated with DSWD for the cash for work program for the 4P's. They trained the IP's how to prepare nursery and plant the seedlings but I have no idea how many hectares but all the barangays like Sta. Ines, Sto Niño, Cayabu become recipients of that tree planting activities. On the part of the LGU especially here in MENRO office, we just helped in facilitating it.</p>		<p>The patrol effort accomplishment is by kilometers, 10 km per month per team. There are 35 teams with 4 members per team. There are 179 forest rangers, all DENR employees, and 318 volunteers. For the volunteers, the Provincial Government of Bukidnon provided them an honorarium. The volunteers are from Kalatungan as <i>Bantay Lasang</i> and Mt Kitanglad as Kitanglad Guard Volunteers (KGV).</p> <p>Patrol work is conducted 4 times in a month but still depending on weather condition.</p> <p>Despite that the absence of baseline data, all informants believed that the forest cover and biophysical condition are increasing and improving.</p> <p>All 5 PENROs and 10 CENROs implemented LAWIN in the province of Bukidnon.</p>	<p>priority and not physical development --(CENRO-Digos City, MENRO-Makilala)</p>	
	<p>• <b>Number of ha of biologically significant areas showing improved biophysical conditions</b></p>	<p>Rating: It is medium (more than but not dense). There are other factors to be considered like: natural disaster (typhoon and landslide and) and man-made (illegal cutting, small scale mining and forest conversion).</p>	<p>No exact data inly indicators like:</p> <p>Kaliwa: With regards to wildlife, sightings of <i>tariktik</i> increased; In Sta. Ines, we observed re appearance of plants like <i>rafflesia</i></p>	<p>Presence of forest rangers reduced threats and illegal activities like cutting of trees --(CDD, EDD, CENRO-Guimbal, CENRO-Barotac Nuevo)</p> <p>Not visible changes because</p>	<p>There is evidence of significant areas showing improved NRM and biophysical condition because of reduced threats with the presence of KGV and <i>Bantay Lasang</i> and the DENR forest rangers. They have observed that:</p>	<p>Threats, timber poaching and other illegal activities decreased because of the presence of FPOs --(CDD, EDD, B+WISER, CENRO-Davao City, CENRO-Digos City, MENRO-Makilala)</p>	<p>In all evaluation sites, there has been a general observation of increased regeneration of wildlings, closing of canopies, and reappearance of birds and other wildlife.</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
		<p>There are existing threats to FCAs in CAR but have been reduced or controlled. Illegal logging activity is not much in CAR.</p> <p>The Forest Protection Effectiveness Report (Sept 19, 2018) presents trends in observations of forest condition, regeneration, threats and indicator species. The combined presentation allows for an evaluation if protection efforts are effective, conservation targets are met and the forest achieves the desired future forest condition. Protection efforts are effective, when records of forest condition, regeneration and indicator species show an upward trend towards more dense regeneration, particularly in degraded forest areas. Increasing trends in indicator species suggest that the improved forest condition is providing a better habitat for forest dependent species. All trends are presented in relation to patrol effort to provide comparability. Forest cover data were derived from 2003 and 2010 NAMRIA land cover maps.</p> <p>Visibility of patrollers helped lessened the threats because the intent of doing illegal activities is controlled with the presence of <i>Bantay Gubat</i>.</p> <p>If no one will disturb the forest, it will function naturally to reproduce or regenerate. Only those natural causes (typhoon, landslide etc.) of damages will inflate the disturbances. Forest</p>	<p>UM: area showing improvement on biophysical condition because the air quality also improved based on the assessment in vegetative measure within Marikina. There are forest fires every summer but it's a natural occurrence. CR: We also have sightings of footprints of wild boars so I can say personally that the biophysical condition of the forest improved. We heard chirping of birds , we also concluded there are hornbill, wild cat (<i>musang</i>) because we saw their feces and increased number of pitcher plants.</p> <p>P: I think they achieved their targets too because there are cases reported that they had sightings of <i>rafflesia</i>; Also, it was showing improved biophysical conditions because in the past two years, many got caught doing illegal cutting of trees; illegal collection of forest products.</p> <p>M: As per reported by the community , there are reappearance of wildlife but we don't have empirical data on that like the appearance of "kalaw", Philippine eagle, wild boar and other animals in the category of endangered species spotted here in our place</p>	<p>of lack of time- the project just started --(B+WISER, PENRO)</p>	<p>- Forest gain improved, - Kaingin activities reduced, - Logging activities controlled, and - Previously degraded areas restored.</p> <p>Visibility of patrollers helped lessened the threats because the intent of doing illegal activities is controlled with the regular presence of KGV, <i>Bantay Lasang</i> and forest rangers.</p> <p>Because of the increase in population, threats to resources also increased in light of the demand for land and food, causing encroachment in protected area. But in the case of Mt. Kitanglad, forest cover increased based on 2003-2010 NAMRIA data. It is significant because of the increases in forest cover to more than 3,700 hectares. It is attributed to the presence of the volunteers who have protected the area even before the existence of B+WISER. And in the 2015 data of NAMRIA, forest cover of Mt. Kitanglad has also increased.</p> <p>When the B+WISER was implemented, KIN was already 15 years of operation with 340 tribal guards, meaning KGV was already formed to protect the area. B+WISER provided training on the application of LAWVIN technology/system, and "bota" (mountain boots) and other protective gears and supplies.</p> <p>Now, the volunteers are preparing to review on what they have done during the life of B+WISER by looking on the report of KGV</p>	<p>Improved biophysical condition is difficult to establish at this time, it is too early to tell and to see if the biophysical conditions have improved --(PENRO, MENRO-Sta Cruz)</p> <p>chainsaw registration required - allowed to cut trees in private and titled lands, but not allowed to cut trees in forest lands --(CENRO-Davao)</p> <p>Rubber plantation --(MENRO-Makilala)</p>	<p>Number of trees and birds in the area increased. Birds like "kalapating gubat," hornbill (<i>tariktik</i>) which is one bird endangered species ;" kalaw "seen in Brgy. Sta. Ines and Laiban. There were also sightings of footprints of wildboar, wild cat (<i>musang</i>) because we saw their feces and increased number of pitcher plants, as well as sightings of <i>rafflesia</i>.</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11	
		<p>regeneration will depend on the nature of the trees, to produce seeds. Regeneration is natural, this is not that type of regeneration by planting re-forestation</p> <p>Now, to prove that they observed an indicator species, they could click LAWIN gadget to see or hear the species. Another proof is the poop, nest, "pinagkainan" and footprint. In fact, Forest Rangers have become familiar with the sounds of birds that they monitor from the information provided by B+WISER, like the power point materials: "you keep listening to this for you to know and recognize the sounds".</p> <p>Here in CAR there are observed appearance of Philippine Eagle, Kalaw and Bleeding Heart Pigeon. Before these birds were collected for food, but now these are being sold within the Barangay.</p>	<p>Wildlife sightings: according to our monitoring and observation done, there are still <i>Rafflesia</i> in the area. Our team saw/observed that last year while doing the LAWIN patrolling system and we also discovered a water falls which is the highest waterfalls now in Rizal</p> <p>Number of trees and birds in the area increased. Birds like "kalapating gubat," hornbill (tariktik) which is one bird endangered species;" kalaw "seen in brgy. Sta. Ines and Laiban. There were also sightings of footprints of wildboar (baboy damo) in the area.</p>		<p>from 2014 to 2018 to determine the contribution of B+WISER in the observed increase in forest cover.</p> <p>Biodiversity monitoring using SMART cyber tracker was introduced by B+WISER, so there are reports on biodiversity conservation and forest regeneration to provide evidence with the pictures included in the reports.</p>		
	<p>• <b>GHG emissions, estimated in t CO<sub>2</sub>equivalent, reduced, sequestered, or avoided through sustainable landscapes activities</b></p>	<p>No Data available.</p> <p>No Specific Response for GHG emissions but pointed out that in the long run these can be reduced through sustainable landscape activities to quote informant,</p> <p>"If no one will disturb the forest land, the forest will function naturally. It will reproduce or regenerate. Only those natural causes (typhoon, landslide etc.) of damages will inflate the disturbances. The forest regeneration will depend on the nature of the trees to produce seeds. Regeneration is natural, this is not that type</p>	<p>No exact data only indicators like:</p> <p>UM and Kaliwa: Through the NGP, and with the help of the technical assistance of B+WISER, the forest /biodiversity and air quality within the area improved.</p> <p>CR: Aside from patrolling, there were NGP reforestration activities conducted thus resulted to the improvement of air quality. The air is not polluted because of many trees. There are still cases of forest burning but</p>	<p>No capacity to determine/Not yet documented.</p> <p>--(CDD, EDD, PENRO, B+WISER, CENRO-Guimbal, CENRO-Barotac Nuevo)</p> <p>climate here is improving but in pollution we cannot measure it's IMB's work, our is to protect &amp; rehab to ensure continuous flow of water</p> <p>--(CENRO-Guimbal)</p>	<p>No specific response on GHG emissions but pointed out that air quality has improved. To quote one key informant,</p> <p>"In net forest gain as we say this was already improved. Yes, because of course if there is a healthy forest cover you can speak there and there is also clean air, like in net forest gain for previously degraded area now the area is already restoring back to its original situation so I ensure that forest cover will be back, and as I said forest cover means clean air."</p> <p>Referred to NAMRIA map for the increase in forest cover.</p>	<p>Reduction of GHG emissions is beyond our capacity to determine/no means to measure</p> <p>--(CENRO-Davao, CENRO-Digos, MENRO-Makilala, MENRO-Sta Cruz, B+WISER, PENRO)</p> <p>Maybe the EMB can do it. the area still gets foggy and the air fresh --(CENRO-Davao)</p> <p>But I can make a guess which is what I call it a lift of faith because forest is still there as it was in the beginning I can say "okay"</p>	<p>In all evaluation sites, key informants and <i>Bantay Gubat</i> members used the observed improvement in air quality as a proxy measure for reduced GHG emission resulting from improved forest regeneration due to patrol effort and increased vegetation cover from new tree plantation under NGP.</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
		<p>of regeneration by planting re-forestation”</p> <p>CENROs: In terms of improvement in biophysical condition, there are changes because the threats were lessened as a result of the IEC. We include information on the succession of forest regeneration. In the abandoned kaingin area, we are encouraging our stakeholders not to practice kaingin again, instead they should plant fruit bearing trees. We also have planting activities like the NGP. LAWIN helps in forest regeneration in the area because of the visibility of patrollers, and IEC helps a lot.</p> <p>The FMB and JICA had an agreement, the copy of the MOA is in the Region or PENRO.</p>	<p>necessary actions were made to stop it.</p> <p>P: according to the study conducted by the DENR Tanay, the air quality here improved. In fact Rizal is one of the largest” carbon free “province because of the growing forest green program</p> <p>M: air quality everywhere is good but in Lumutan it is much better but I have no basis or ways to measure it. And forest burning is still happening.</p>		<p>Cited the upliftment of KGV volunteers’ living condition.</p> <p>Cited the main cause of threats - perennial farming due to population pressure on the demand for land and food.</p> <p>Observed that improvement in forest condition has definitely occurred with lesser kaingin, and minimized burning and poaching.</p> <p>Also cited the implementation of the NGP in the area.</p> <p>This a scenario presented to provide evidence for forest expansion to measure after a length of time whether there is an increase or reduction of carbon captured. On this concern, the informant responded: “I do not know” - on the actual measurement, but argued:</p> <p>“But I can make a guess which is what I call it left of faith because forest is still there as it was in the beginning. I can say “okay” the forest is still functioning in terms of carbon function whether it is increase or decrease ‘ “I don’t know”. “Yes, but if it triggered by a long drought, fire could occur, ... but rest assured that there are ... group of people who really exert effort to suppress the fire, not just leave the fire burning, without intervention. In 2016 there was a little of exploding forest fire but with our tandem with the local community and the local</p>	<p>the forest still functioning in terms of carbon function whether it is increase or decrease ‘ “I don’t know” --(B+WISER)</p> <p>It is difficult to determine the impact because the project have just started and it will take years to see some changes --(EDD)</p> <p>If an area is again experiencing fogging, then we could say that GHG emission has been reduced in that area. Only the residents in the area can tell of the air quality in their locality --(PENRO)</p> <p>No answer provided --(CDD)</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
					<p>government, the fire was suppressed. B+VWISER, in fact, heard of fire burning in Mt Apo, one of the controversy in 2016 fire together with Mt Kitanglad, but the affected area here was only minimal unlike in Mt. Apo the fire damaged a big area. Many helped to suppress the fire, like bureau of fire protection, mountaineers and other civic oriented groups.”</p> <p>“Maybe with that as what I said about conversion from forest to non-forest which is 1,000 hectares more but the total net forest gain in Mt Kitanglad is 4,000 hectares more but if you deduct the conversion to forest to non-forest into the net forest gain and that is the outcome in net forest gain of 3,760 hectares so we have changes. And still some fewer cutting of trees happen there. In reality Mt Kitanglad is a very much conducive to high value crop production because it is a dormant volcano, the soil deposited ... is fertile. It already has volcanic acids, very conducive to high-value crop production that is the challenge because there still some small cut or plant crops and high value crops but minimal because they are the partners in local communities.”</p> <p>FGD participants claimed that: Yes, forest patrol is important and effective, caused reduction of observed threats (illegal activities minimized) as observed in data gathered by patrollers because of</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings																								
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11																									
					their presence in the area; and the observed increasing biodiversity, with the recorded sounds of indicator species. They also observed forest regeneration in Mt Kitanglad.																										
	<p>• <b>Amount of investment mobilized (in US\$) for sustainable landscapes</b></p>	<p><b>EQUIPMENT:</b></p> <ul style="list-style-type: none"> <li>Gadget/Cellphone (LAWIN).</li> <li>40 Units of LAWIN Computers with the total cost of Php 1,060,384.00</li> </ul> <p><b>FINANCING:</b></p> <p>Forest Protection in Support to the LAWIN Forest and Biodiversity Protection System (10km patrolled per map per patrol plan approved quarterly) (4 members per LAWIN Team). The forest rangers and forest guards are regular employees of DENR.</p> <p>There are no community volunteers, except perhaps the community member who served as guide during patrolling.</p> <p><b>DENR's budget allocation for forest patrol by office:</b></p> <table border="0"> <tr> <td>Regional Office</td> <td>-</td> <td>90,000.00</td> </tr> <tr> <td>Abra</td> <td>-</td> <td>360,000.00</td> </tr> <tr> <td>Apayao</td> <td>-</td> <td>360,000.00</td> </tr> <tr> <td>Benguet</td> <td>-</td> <td>288,000.00</td> </tr> <tr> <td>Ifugao</td> <td>-</td> <td>360,000.00</td> </tr> <tr> <td>Kalinga</td> <td>-</td> <td>360,000.00</td> </tr> <tr> <td>Mt. Province</td> <td>-</td> <td>360,000.00</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>Php</b></td> <td><b>2,178,000.00</b></td> </tr> </table> <p>Other gadgets provided by B+WISER were damaged. But, DENR bought new gadget, the better one than the existing LAWIN, then we uploaded the LAWIN system. The fund for the</p>	Regional Office	-	90,000.00	Abra	-	360,000.00	Apayao	-	360,000.00	Benguet	-	288,000.00	Ifugao	-	360,000.00	Kalinga	-	360,000.00	Mt. Province	-	360,000.00	<b>TOTAL</b>	<b>Php</b>	<b>2,178,000.00</b>	<p>Not aware of amount of investments generated</p> <p>Kaliwa: That's the problem. All funds were provided by the DENR.</p> <p>UM: no funds given by B+WISER; more on participation in the trainings</p> <p>CR: No idea of fund mobilization</p> <p>P: B+WISER gave/donated 40, 000 seedlings to the province</p> <p>P: Minimal Involvement by the province, budget for food only</p> <p>M: I'm not familiar with the amount investment but they allotted funds for the protection; No outsourcing of fund</p> <p>In monetary aspect, No idea</p> <p>M: No funds mobilization.</p>	<p>No total amount mentioned --(ALL)</p> <p>4000 Php Monthly allowances for patrollers/forest rangers, gadgets and personnel are provided by the DENR --(CENRO-Guimbal, CENRO-Barotac Nuevo, B+WISER, PENRO, EDD)</p> <p>Lack of funds --(CDD)</p> <p>Transportation Expense Voucher is provided to Forest patroller. --(PENRO)</p>	<p><b>EQUIPMENT:</b></p> <ul style="list-style-type: none"> <li>Gadget/Cellphone (LAWIN), one gadget per team and there are 35 teams</li> <li>1.3 million of LAWIN budget</li> </ul> <p>Infrastructure: B+WISER office Building in Malaybalay City and in Mt. Kitanglad. This is to be donated to DENR after B+WISER stopped operation in the site.</p> <p><b>FINANCING:</b></p> <p>Forest Protection in Support to the LAWIN Forest and Biodiversity Protection System (10km patrolled per map per patrol plan approved quarterly) (4 members per LAWIN Team). Forest rangers and forest guards are regular employees of DENR</p> <p>LGU of Bukidnon provides Php 2,000 allowance for each volunteer, amounting to Php 358,000.00 for a total of 179 volunteers.</p> <p>Funding coming from DENR is minimal. Fund mobilization was able to access additional funding from LGU both at the provincial and municipal levels. For instance, the Provincial Government of Bukidnon increased the annual financial assistance from Php 3 million to Php 4 million. A MOA with Malaybalay City has provided Php 1.5 million and the 7 municipalities covered by Mt.</p>	<p>Our funds come from the Region. They also provide gadgets as devices for their patrol --(CDD, PENRO, CENRO-Digos</p> <p>They collected tourism fee - -(B+WISER)</p> <p>Forest Protection Fund provided with gadgets and reference material. They also provide incentives; trekking pants, travelling allowance, but it was insufficient --(EDD)</p> <p>LGUs provide transport allowance whenever we attend meetings, food, lets us use vehicles when needed, provides all logistics upon request --(MENRO-Sta Cruz)</p> <p>SM Foundation partnered with Upper Kibalang Farmers Association (UKAPA), a PO in Marilog District, for a 24ha cacao and durian plantation establishment --(CENRO-Davao)</p> <p>The MLGU established a parallel investment of rubber production for farmers. The BLGU</p>	<p>Majority of the key informants and FGD participants expressed little knowledge on the amount of investment mobilized for conservation financing. However, some noted the existence of funding support from DENR and LGUs for forest patrol, and private sector for reforestation and protection of plantation area.</p> <p>DENR – wages, allowances and gadgets,</p> <p>LGUs – remuneration of <i>Bantay Gubat</i> members,</p> <p>Private sector – reforestation and protection work</p>
Regional Office	-	90,000.00																													
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		purchase of new gadget came from savings in capital outlay of the regular fund of DENR.			<p>Kitanglad also allocated Php 500,000 from Lantapan, and Php 200,000 from other municipalities.</p> <p>Most of the funding is being used to assist the operation of KGVs. Every KGV member in Malaybalay City receives an honorarium of Php 2,000 per month, composed of 4 barangays. Other barangays outside Malaybalay City, Php 8,000 are provided for group honorarium. For example, in 1 of the barangays, the KGV members are 10, so each member receives Php 800. The province has work and financial plans for small reforestation project or tree planting activity at the same time here in Mt. Kitanglad, which is a 3-day yearly activity called "ALDAW TA KITANGLAD festival" (the most recent event was held on November 6-8, 2018) where awards of recognition for the contribution of upland communities in forest protection are held.</p> <p>B+WISER supported KGV to prepare a Php 24 million 2-year project proposal for FFP financing for biodiversity conservation, forest protection and livelihood development of IPs in Mt. Kitanglad.</p> <p>The livelihood focuses on bamboo growing in the national park to reduce pressure in the area and create a decent livelihood activity for IPs. Four criteria on None Destructive Livelihood Activities (NDLA) were approved by PAMB, which include: not competing with the biodiversity; not causing in-</p>	identified the farmer beneficiaries. The aim of the project was to provide income for farmers without destroying the forests. --(MENRO-Makilala)	



Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
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					migration; not using machineries; and not creating pollution.		
	<ul style="list-style-type: none"> <li>• <b>Number of people trained in sustainable NRM and/or biodiversity conservation</b></li> <li>• <b>Number of days of technical assistance in NRM and climate change</b></li> </ul>	<p>Trainings and orientation seminars were provided to all 508 <i>Bantay Gubat</i> members in the entire CAR who are employed by DENR. At least, there is 1 team per CENRO, but there are other CENROs with more than 1 team. Each team has more than 4 members (<b>4-6 members based on DENR Memo dated October 25, 2017</b>).</p> <p>No Volunteer member.</p> <p>Forest Ranger and Forest Guards (Rebel Returnees)</p> <p>There are technical trainings on how to use the LAWIN gadgets. With LAWIN technology, relay of information is efficient because there is tracking: To SMART, to Data Manager, to find out the identified threats and if there are threats identified, they can immediately receive instruction from CENROs, ARD or higher authorities. There is faster relay of information and immediate response as the case maybe. The responses to the threats are all in LAWIN. There are protocols on how to approach and the protocol is uniform.</p> <p>Upgrading of LAWIN system. (Data from MEMO dated September 19, 2017).</p> <ul style="list-style-type: none"> <li>• <b>Conduct of SMART 5.0.1 Deployment in Support to LAWIN Forest and Biodiversity Protection System</b> - to facilitate transmission, consolidation and analysis of</li> </ul>	<p>Don't have exact records for the region</p> <p>Kaliwa: our staff, Joseph was part of the training and he focuses in Kaliwa watershed as data manager</p> <p>UM: List of Trainings participated:</p> <ul style="list-style-type: none"> <li>• Guided Self-Assessment on the State of the Local Environmental Governance</li> <li>• Capacity Building on the implementation and Operation of the LAWIN System</li> <li>• Training on the Vulnerability Assessment, Spatial Monitoring And reporting tools (SMART-LAWIN).</li> </ul> <p>CR: LAWIN trainings were conducted monthly, latest was the launching of the 6.0 version from 5.0 and training on the actual use of the cyber tracking</p> <p>Our head data manager is the one who mostly attended different trainings, but all were re-echoed to us. We are part of the implementation because we are using Cyber tracking tool</p> <p>P: Environmental Law</p>	<p>Number of people trained are not provided --(CENRO-Barotac Nuevo, CDD, PENRO, B+WISER, EDD)</p> <p>14 Forest Rangers, half is trained others are old ones --(CENRO-Guimbal)</p> <p>All the forest rangers are trained. --(PENRO)</p> <p>Only Chief, team leaders &amp; data managers are involved in the training- re-echo to patrollers. --(CDD, B+WISER)</p> <p><b>35 teams</b> this is a permanent position: 9 in Negros Occidental, 11 Iloilo City, 2 Guimbal, 2 Capiz, 6 Aklan, 1 Antique. <b>4 members for each team.</b> --Forest Ranger, Forest Technician, Guide --(EDD)</p>	<p>B+WISER conducted training per barangay in all 28 barangays covered by Mt. Kitanglad by going down to the area to teach the application of LAWIN technology/gadget.</p> <p>Since Lawin uses a tablet and software, it is highly technical for the KGV members. At the start, KGV members have a hard time to understand because some of them are already old who could not see clearly, and others do not know how to use the tablet, not to mention the educational background of the members. In KGVs, gender sensitivity is promoted, so there are women in these groups. Hence, young women are taking the responsibility for the operation of LAWIN gadgets.</p> <p>Now, KGVs are already familiar with the use of LAWIN software, and can effectively monitor forest condition with the technology.</p> <p>BMS Biodiversity Monitoring System, the tribes was trained because they are also KGV when B+WISER arrived they introduce smart LAWIN so their technology have branded but the tribe know already how to monitor on biodiversity because they already involved on this. BMS which is now being incorporated to SMART LAWIN,</p> <p>The capacity enhancement of individual patrollers.</p> <p>Trough orientation seminars.</p>	<p>Number of people trained are not provided --(CENRO-Davao, MENRO-Makilala, B+WISER, EDD, PENRO)</p> <p>There are 2 teams with 3 persons per team- The patrollers had training on using the gadgets and conducting patrol effort -- Executives given orientation on the objectives of B+WISER --(CENRO-Digos)</p> <p>We have 110 porters which are also patrollers, and 25 of them have had Lawin training. --(MENRO- Sta Cruz)</p> <p>B+WISER conducted Leadership Training attended by Tribal Leaders and Elders of Mt. Apo. Some of the personnel from the EDD participated in the training --(CDD)</p> <p>We have gave assistance to the Indigenous People to be developed though B+WISER on how to carry out the forest protection so they trained the LUMADS those <i>Bantay Gubat</i> they are given gadgets like cellphone based on the technology. --(B+WISER).</p>	<p>All <i>Bantay Gubat</i> members, Data Managers and even some DENR Central, Regional, Provincial and Community level personnel have attended formal and informal training on LAWIN system and technology, and related law enforcement subject matters.</p> <p>Prior to the nationwide rolling out of LAWIN, several trainings were conducted by the Project on livelihood, preparation of project proposals, leadership trainings, etc.</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
		<p>patrol data at CENRO, PENRO, regional and national levels, an update version of the SMART software (SMART 5.0.1) which contains new features (i.e. inclusion of a dashboard) will be introduced and deployed to the field offices.</p> <p>The LAWIN technology is effective because it identifies threats to FCA and the responses to threats.</p> <p>All <i>Bantay Gubat</i> teams were given training, GPS, phone. The members were provided with a manual to guide them in practicum and actual patrol work.</p> <p><b>TRAININGS/CAPACITY BUILDING ACTIVITIES CONDUCTED (based from secondary data given):</b></p> <ol style="list-style-type: none"> <li>1. Capacity Building given on the Operationalization of the Landscape and Wildlife Indicator System (LAWIN). – July 12-15, 2016 at DENR-CAR, Baguio City.</li> <li>2. LAWIN Data Management for Data Managers and PENRO/CENRO Enforcement Section Chief – February 7-9, 2017 in Baguio City.</li> <li>3. Conduct of SMART 5.0.1 Deployment in Support to LAWIN Forest and Biodiversity Protection System – September 25, 2017</li> <li>4. Training on LAWIN forest Biodiversity Protection Response Protocol – November 13-17, 2017 at the DENR-CAR, Baguio City</li> </ol>	<p>Enforcement training</p> <p>M: I have no exact number but mostly the one mobilized there were barangay captains, <i>tanods</i>, leaders of the community.</p> <p>M: trainings on: -Paralegal training -LAWIN implementation -Nursery establishment</p> <p>Don't have exact records</p> <p>As PASU of KALIWA, all tree planting activities in the area were assisted by my office. We also conducted demonstration on how/what is the proper way of handling seedlings before planting, maintenance and protection with the establishment of the NGP project. It was achieved through the help of technical assistance of the B+WISER and DENR.</p> <p>CR: Before there was a plan to adopt/ tie up the LAWIN in the LGU/barangay level but it did not happen because there were no budget. On the CENRO level, although there are funds but that is not the priority project.</p> <p>M: Their biggest impact technically was the trainings on nursery establishment because it made way to the livelihood of many IPs families who are currently</p>	<p>No answer provided --(CENRO-Guimbal, CENRO-Barotac Nuevo, CDD, B+WISER, PENRO)</p> <p>Orientation of LAWIN for 5 days roll out training for Forest rangers using the apps--(EDD)</p>	<p>They requested participants from PENRO's/CENRO's all over the Region.</p> <p>Aside from trainings and orientation seminars, they provided cellphones, the SMART LAWIN.</p> <p>Institutionalized because it was adapted to our activity formally. It is included in our work plan and financial plan. Even before B+WISER it was the job of the DENR with the KGV to conduct patrolling. With LAWIN system, it was just upgraded because of the gadget and system. We have enforcement even before LAWIN because this is the regular function of DENR.</p>	<p>Number of days are not provided --(CDD, EDD, CENRO-Digos)</p> <p>2015 Initial PILOT used LAWIN, Nationwide role out 2016 training formally the software in Mt. Apo and in all areas. --(B+WISER)</p> <p>The trainings conducted takes 2-4 days --(CENRO-Davao, MENRO-Makilala, MENRO-Sta Cruz, PENRO)</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
		<p>5. Capacity Development Workshop – May 28-29, 2018 in Hotel Elizabeth, Baguio City</p> <p>6. Conduct of LAWIN data Management – July 31, 2018 – August 3, 2018 in Linden Suites Hotel, Mandaluyong City</p> <p>7. Conduct of LAWIN SMART 6.0 Upgrade. – September 12-14, 2018 at One Vittoria Hotel, Bantay, Ilocos Norte</p> <p>CENROs: There were orientation and trainings provided to our staff and even to us. We facilitated trainings in a lecture form. It falls into IEC or recommendation. We do it sometimes one day or an hour. The topic usually is about forest fire and forest protection.</p> <p><b>TRAININGS CONDUCTED by FMB and B-WISER: (Based from secondary data)</b></p> <ol style="list-style-type: none"> <li>1. Training of Data Managers on Data Analysis and Reporting - June 27-28, 2018</li> <li>2. Training/workshop on the LAWIN SMART 6.0 Upgrade - September 12-14, 2018</li> <li>3. Officers and Staff on the Capacity Development GAPS workshop - May 28 to June 1, 2018</li> <li>4. LAWIN Data Management Conference -July 30 to August 4, 2018</li> </ol> <p><b>TRAINING CONDUCTED BY DENR-CAR, FMB and B-WISER (Based from Secondary Data)</b></p> <ol style="list-style-type: none"> <li>1. Training of Data Managers on the Smart 5.0.1 Upgrade in</li> </ol>	selling those seedlings.			

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
		<p>Support of LAWIN Forest and Biodiversity Protection System (LAWIN) - September 24 to 25, 2017</p> <p>2. Training on LAWIN Forest and Biodiversity Protection System Response Protocol - November 11-15, 2017</p> <p>3. Regional Training Workshop on LAWIN Forest and Biodiversity Protection System Data Management and Response - February 7-9, 2017</p> <p>4. Training on the Implementation and Operationalization of Landscape and Wildlife Indicator Forest and Biodiversity Protection System - July 12-15, 2016</p> <p><b>TRAINING CONDUCTED BY B-WISER (Based from secondary data)</b></p> <p>1. Data Manager Refreshers Training - July 5-6, 2017</p> <p>The training is effective. POs and other stakeholders involved in forest conservation participated in the training. They have applied the knowledge gained from the training in respective areas of assignment</p> <p>In IEC, the participants were POs, Barangays and LGUs. IEC was in form of presentation, which included Information about forestry laws.</p> <p>CENROs: Forest patrolling has become more organized with B+WISER technology than before.</p>				

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
<b>2. How effective and efficient were B+WISER strategies in achieving these outputs and outcomes? What factors, internal and external to B+WISER, enhanced or diminished the achievement of these outputs and outcomes?</b>							
<b>Strategies</b>	<ul style="list-style-type: none"> <li><b>Technology Development: Enhancement of SMART in support of LAWIN</b></li> </ul>	<p>The LAWIN system is very effective and efficient in tracking patrol efforts and in relaying information, threats as well as identifying other needed data. The SMART technology is quite effective and underwent several upgrading to become more appropriate and relevant. There is faster relay of information and immediate response as the case maybe. The responses to the threats are all in LAWIN. There are protocols on how to approach and the protocol is uniform.</p> <p>Upgrading of LAWIN system. (Data from MEMO dated Sept. 19, 2017).</p> <ul style="list-style-type: none"> <li><b>Conduct of SMART 5.0.1 Deployment in Support to LAWIN Forest and Biodiversity Protection System</b> - to facilitate data transmission, consolidation and analysis of patrol data in the CENRO, PENRO, regional and national levels, an update version of the SMART software (SMART 5.0.1) which contains new features (i.e. inclusion of a dashboard view) will be introduced and deployed to the field offices.</li> </ul> <p>All <i>Bantay Gubat</i> teams were given training, GPS, phone. The members were provided with a manual to guide them in practicum and actual patrol work.</p> <p>There are Data Managers in every PENRO and CENRO.</p>	<p>Started in 2015, B+WISER (thru FMB) introduced LAWIN; upgrade the system/version from 5.0 to 6.0.</p> <p>LAWIN institutionalized thru the FMB as forest protection where funds are downloaded to the region;</p> <p>covered 5 PENROs and 7 CENROs</p> <p>10km/team, with 4 patrollers per team With 37 teams, composed of 255 DENR permanent patrollers</p> <p>In Kaliwa: We have 10 DENR staff patrollers. No idea about the number of volunteers.</p> <p>CR: patrolling minimized kaingin system, charcoal making, timber poaching</p> <p>P: So far, the illegal activities were minimized because of Task force FLAVS (Forest Land ,Air, Water and Solid Waste) organized by PENRO Mercado. It was a wholistic approach because there were deployment of <i>Bantay Gubat</i> in the area and there are presence of the military, who are also helping in patrolling.</p> <p><b>NOTE: area patrolled</b></p>	<p>Upgrading of SMART LAWIN-improvement of smart is up to tracking of threats, from observation of threat to filing &amp; court decision</p> <p>-is effective- minimize threats thru IEC</p> <p>--(B+WISER, CENRO- Barotac Nuevo)</p> <p>Provide Laptops, smart/cellphones, GPS, powerbank and other incentives (jacket, shoes, etc.) to use and serve as a guide for patrollers</p> <p>--(B+WISER, CENRO- Barotac Nuevo, CDD, EDD, PENRO)</p> <p>the system itself is systematic, what is needed is captured (CENRO-Guimbal)</p>	<p>The technology is effective because it identifies threats in FCA and the responses to threats.</p> <p>They have really their commitment to do the capability building. Technology development = They do the monitoring and I on I coaching to the data managers.</p> <p>Capability technology - yes there is an improvement/revision, because as I remember that is simple operation, we have the indicator now and it is higher version already</p> <p>Forest patrol plan/NRM = commitment and coaching also they will follow up</p> <p>Policies = Their policies are not contradicting, it's consistent</p> <p>Financing = only in training</p> <p>IEC = it's for free</p> <p>All <i>Bantay Gubat</i> teams were given training, GPS, phone. The members were provided with a manual to guide them in practicum and actual patrol work.</p>	<p>Regular upgrading of Lawin application and trained the implementer about the system</p> <p>--(CENRO-Davao, CENRO-Digos, MENRO- Sta Cruz, CDD, B+WISER)</p> <p>-The gadgets installed with cyber tracker.</p> <p>-Our data managers are already GIS experts so they have the technical background needed for Lawin especially mapping out the conservation area.</p> <p>--(EDD)</p> <p>adoption of technological innovation in monitoring and reporting of threats in the area</p> <p>--(PENRO)</p> <p>We have Wildlife Enforcement Officer (WEO) from MANP</p> <p>--most MENROs are focused on Solid Waste Management</p> <p>-we respond to threats reported to us</p> <p>--no gadget was provided to us (MENRO-Makilala)</p>	<p><b>Effectiveness</b> Reduced observed threats, Increased observed regeneration, and Reduced observed GHG emission in terms of improved air quality</p> <p>Tracked location of patrol teams, Mapped out concentration of threats; Facilitated responses and monitored status of responses; and Improved decision making process in forest protection</p> <p><b>Efficiency</b> Shortened data/ knowledge generation, transmission, storage, retrieval and sharing; and Continued improvement of cyber tracking tool (ver 6.1).</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11	
		LAWIN, unlike NGP, doesn't plant trees but it protects standing forest or remaining forest. The technology shows the actual change or increase in forest regeneration. For example, the technology uses remote sensing/satellite images, processes data from patrolling and reclassifies an image of forest condition to see the change. However, the map that is being used is old, which is no longer accurate at all or reflective of actual condition, and this becomes always a bone of contention between B+WISER/DENR and patrollers.	<b>reduces when some of patrollers' contracts are not renewed.</b>				
	<ul style="list-style-type: none"> <li>Capacity Development: Number of PAMB with improved METT scores, and LGUs with improved GSA scores; Ability of DENR, PA Managers and LGUs to formulate FCA plans; and improve planning, and M&amp;E; Ability to complete capacity development within approved budget and as scheduled</li> </ul>	<p>The training is effective - it was participated by the stakeholders (POs) and those involved in forest conservation. They gained knowledge on LAWIN technology from the training, which they applied in their areas of assignment.</p> <p>IEC was also conducted in form of presentation to impart information about forestry laws. Participants to this IEC included POs, Barangays and LGUs.</p> <p>Forest patrol has become more organized than before because of the capacity and skills acquired by members through actual patrolling and practicum of <i>Bantay Gubat</i>.</p> <p><b>TRAININGS CONDUCTED by FMB and B-WISER: (Based from secondary data)</b></p> <ul style="list-style-type: none"> <li>Training of Data Managers on Data Analysis and Reporting - June 27-28, 2018</li> <li>Training/workshop on the LAWIN</li> </ul>	<p>Series of trainings on proper use of LAWIN gadgets in patrolling; fast data input and downloaded immediately unlike before patrollers used only paper and ballpen</p>	<p>DENR provides trainings-teach/coach the patrollers/forest rangers on data encode, LAWIN, etc. --(CENRO-Guimbal, CENRO-Barotac Nuevo, PENRO)</p> <p>improved capacity of staff; our staff does not stay as rangers only, aims for promotions --(CENRO-Guimbal)</p> <p>We on B+WISER it is more on the Protected Area Management Plans, whatever observations done, it was translated into resolutions. --(CDD)</p> <p>prepare of patrol plan, improvement of cyber tracker --(B+WISER)</p> <p>There is an annual plan to check the patrollers of their</p>	<p>The capacity development is very effective in involving and capacitating KGVs as well as the members of IP members of the Kitanglad Indigenous NGO (KIN). The trainings for KGVs include:</p> <ul style="list-style-type: none"> <li>paralegal seminar provided by a hired lawyer</li> <li>kalikasan on Philippine Eagle Foundation</li> <li>Pertaining loss, forestry loss.</li> </ul> <p><b>TRAINING CONDUCTED BY DENR- FMB and B-WISER (Based from Secondary Data)</b></p> <ul style="list-style-type: none"> <li>Training of Data Managers on the Smart 5.0.1 Upgrade in Support of LAWIN Forest and Biodiversity Protection System (LAWIN)</li> <li>Training on LAWIN Forest and Biodiversity Protection System Response Protocol</li> <li>Regional Training Workshop on LAWIN Forest and Biodiversity Protection System Data Management and Response</li> <li>Training on the Implementation</li> </ul>	<p>B+WISER training/ coaching FPOs on how to conduct patrolling</p> <ul style="list-style-type: none"> <li>law enforcement</li> <li>on using the application</li> <li>FCA and patrol plans --(MENRO-Makilala, MENRO-Sta Cruz, EDD, CDD, PENRO)</li> </ul> <p>DENR provides resource person, venue for the training, counterpart - transportation allowance</p> <ul style="list-style-type: none"> <li>train FPOs and data manager on data synchronization --(CENRO-Davao, CENRO-Digos)</li> </ul>	<p><b>Effectiveness</b> Increased capability of <i>Bantay Gubat</i> teams in doing patrol work; Learned to prepare patrol plans; Learned to interact and talk with local people; and More proficient in using technology (tech savvy)</p> <p><b>Efficiency</b> "Paperless", environment-friendly system/technology; More organized/ systematic patrol effort based on plan; <i>Bantay Gubat</i> members gained self-confidence and self-worth; sense of purpose; and Better allocation of resources.</p> <p>(Unintended consequences: environment-friendly system/technology; <i>Bantay Gubat</i> members gained self-confidence and self-worth; sense of purpose); more organized/ systematic patrol effort based on plan; better</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
		<p>SMART 6.0 Upgrade - September 12-14, 2018</p> <ul style="list-style-type: none"> <li>Officers and Staff on the Capacity Development GAPS workshop - May 28 to June 1, 2018</li> <li>LAWIN Data Management Conference -July 30 to August 4, 2018</li> </ul> <p><b>TRAINING CONDUCTED BY DENR-CAR, FMB and B-WISER (Based from Secondary Data)</b></p> <ul style="list-style-type: none"> <li>Training of Data Managers on the Smart 5.0.1 Upgrade in Support of LAWIN Forest and Biodiversity Protection System (LAWIN) - September 24 to 25, 2017</li> <li>Training on LAWIN Forest and Biodiversity Protection System Response Protocol - November 11-15, 2017</li> <li>Regional Training Workshop on LAWIN Forest and Biodiversity Protection System Data Management and Response - February 7-9, 2017</li> <li>Training on the Implementation and Operationalization of Landscape and Wildlife Indicator Forest and Biodiversity Protection System - July 12-15, 2016</li> </ul> <p><b>TRAINING CONDUCTED BY B-WISER (Based from secondary data)</b> Data Manager Refreshers Training - July 5-6, 2017</p>		work --(EDD)	<p>and Operationalization of Landscape and Wildlife Indicator Forest and Biodiversity Protection System</p> <p>The training is effective -- it was participated by the stakeholders (POs) and those involved in forest conservation. They applied the knowledge and skills acquired from the training in their respective area of assignment.</p> <p>Because of these training provided by B+WISER, the patrolling has become more organized than before.</p> <p>The training really equipped them technically. For example, majority in KGVs have low literacy level, but because of the training which focused more on coaching and mentoring and less on lecturing, KGV members have internalized the value and process of the training. That is what B+WISER did to KGVs to acquire technical skills and ensure that despite that absence of technical guidance, KGVs can really operate on their own. KGV members also attended training on LAWIN.</p> <p>One condition of the Foundation for Philippine Environment (FPE) for approving project proposals for funding is to demonstrate that the proponent community/PO is actually involved in forest protection.</p> <p>Yes. They are the once implementing the one and of course,. Example formerly KGV there activity we do not require</p>		allocation of resources

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
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					<p>them to conduct to daily foot patrolling because voluntary nature but most of the KGVs have respective land holding or cultivation near the forest edge. While doing there from their daily farming activity and by the time we can hear chainsaw or any manmade disturbance in the area we encourage them to report confidential report because we also provide them handheld radio and cellphone not individual but in every group there is a cellular phone provided to them being provided with to their chief and it is the chief were the once making relaying report for us to take action whenever possible.</p> <p>We are part of the participant and during the implementation of course, and what happen it is the KGVs nowadays is doing their job in data gathering but here in the office we also have data manager so whatever data collected in the field they sink in to our office and so far as of now we also ensure that in every LAWIN operation it is a must for this desk officer assigned in the municipality to really escort or assist the KGV team operation. Our desk officer will go with them in the field just to ensure that they operate to the right track because as what we experience before that they are knew to the method and they don't know how to operate the gadget and they detect many threats maybe because of their curiosity even single clearing that not kaingin but they put it in the gadgets, and we noticed many kaingin so we verify in the area.</p>	



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					<p>And to find it there are minimal kaingin found. Because of their curiosity and our problem now those gadgets were given few were functioning.</p> <p>Our problem now is those gadget where given to them is already not functioning and but we are thankful because those livelihood project of KGV they include the procurement of 28 tablets to be given to them; the procurement was included in their activity they have selling production and the corresponding cst, what they will procure with cost and all of them was about 24 million.</p>		
	<p>• <b>Policy: Number of laws, policies, strategies, plans, agreements and regulations proposed, adopted or implemented; policy gaps identified and policy that institutionalized LAWIN</b></p>	<p>Policy formulation is quite effective strategy because the data provided by LAWIN guide what policy should be formulated and implemented. These data provide information what plans, laws, and policies as well as regulations are needed. If there is a need to widen patrol efforts and where should the patrolling be done? Like, those illegal loggers, they knew where to do illegal activities, in distant area, to this, we advised the forest guard to go to those area that was not patrolled yet because the illegal activities might be in that place.</p> <p>Through B+WISER, DENR made policies to support implementation. For example, the memo dated on October 25, 2017 stating the number of patrollers per CENRO Team: "there is 1 team per CENRO, but there are other CENRO's that has more than 1 team. Each team has more than 4 members (4-6</p>	<p>LAWIN forest patrollers and protocol were adopted through KALIWA-PAMB resolution No. 03-2016</p> <p>M: In Tanay, one ordinance was passed on "ONE TOURIST ONE TREE" wherein every tourist who will visit the place will buy seedlings to be planted to the place they visit like Mt. Irid we considered as tourist spot.</p>	<p>PD 705- bible of the Forest Protection. During apprehensions-it helps serves as a guide-- (CENRO-Barotac Nuevo, PENRO)</p> <p>Protected Areas policies - LAWIN program to fit n to the system of DENR with the existing policies like Biodiversity but I can't remember specifically. --(CENRO-Guimbal)</p> <p>Protocol in coordination of FMB. Serve as guidelines. --(B+WISER)</p> <p>They want to enhance their policy with training --(EDD)</p> <p>No answer provided --(CDD)</p>	<p>Through B+WISER DENR made policies to support implementation. For example, the policy that the number of patrollers per Team and the set goal of patrol works of 10 km per month per team</p> <p>Instructions during patrolling follow the patrol plan. See to it that the patrol plan area applicable. The instruction is in form of Memo. There are verbal instructions during meetings. Basically the instruction is to follow the guidelines and to include the other areas that were not patrol. Meaning to widen the patrol effort.</p> <p>The LGU policy of supporting KGV and other volunteers effort in protecting Mt Kitanglad and Mt Kalatungan.</p> <p>That is one of our concern from the PAMB to pass the resolution requesting the respective local government unit to sustain their</p>	<p>Enforced existing laws like PD 705, Wildlife Act, and Chainsaw Act- no new policies or agreements made or proposed --(CENRO-Davao, CENRO-Digos, MENRO-Makilala)</p> <p>B+WISER supported the formulation of the Unified Trekking Policy initiated by the PAMB which concerns the Municipalities of Sta. Cruz, Digos City, Bansalan, Kidapawan, Makilala and Magpet --(MENRO- Sta, Cruz)</p> <p>Lawin has standardized monitoring and reporting of threats -the increase in the number of threats is due to detection and documentation of case-- (CDD)</p>	<p>This indicator was achieved by midterm of the Project. However, more recent DENR and LGU policies focused on the institutionalization of LAWIN as a national forest protection and biodiversity conservation system in the Philippines (DENR DAO 2018-21, LGU "One Tourist One Tree Policy in Tanay, Rizal; Unified Trekking Policy in MANP, Davao; KALIWA-PAMB resolution No. 03-2016 adopting LAWIN )</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
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		<p><b>members based from MEMO dated October 25, 2017).</b></p> <p>Instructions during patrolling follow the patrol plan. See to it that the patrol plan area applicable. The instruction is in form of Memo. There are verbal instructions during meetings. Basically the instruction is to follow the guidelines and to include the other areas that were not patrol. Meaning to widen the patrol effort.</p> <p><b>MEMORANDUM:</b></p> <ol style="list-style-type: none"> <li>1. Distribution of LAWIN System Patrollers and Clarification of the Granting for the Patrollers. The granting of Php 8, 000.00 monthly allowance to the LAWIN patrollers shall be based on the completed accomplishment of quota of 10 km patrolled route a month for each patroller.</li> <li>2. Monthly Reporting on the Status of Responses to Threats under LAWIN Forest and Biodiversity Protection System - CENROs are required to submit a monthly update.</li> <li>3. Quality Assessment and Data MANAGEMENT ON Uploaded LAWIN Patrol Data in SMART Connect.</li> </ol> <p>Maintaining Intensified Forest Protection Activities.</p>			<p>financial assistance to the Mt. Kitanglad for the person of KGV and as part of our responsibilities of our task here in our office I requested the LGUs to enact the ordinance to support or sustain the financial assistance , so out of 8 LGUs we have 5 LGUs they now working their ordinance that financial assistance of KGV despite that there is a change in the administration in as a result of local and national election.</p> <p>It should be in the work and financial plan and make it mandatory activity. And it is now implemented or existed because before it's only in Kitanglad. But now it is being rolled out to other CENRO offices. Further, the LGUs are quite supported even before the B+WISER support. KGV and volunteering work is quite effective and the participation of many stakeholders, Indigenous communities, women, and farmers are quite important in maintaining forest cover and many other NRM and sustainable landscape activities in Mt Kitanglad and in the whole Region.</p>	<p>National policies -SOs and Memos -Forestry policies if applicable to the observed threats. --(EDD)</p> <p><b>Refers to PAMB</b> we had administrative order and circular order and DENR followed only in written instruction --B+WISER)</p>	
	<p>• <b>Enhancement of NRM Plans: Innovative elements of the plans</b></p>	<p>The plans are revisited and enhanced annually based on their patrolling needs and efforts. The coverage of their patrol area increased because patrol plan</p>	<p>Assisted in updating of Kaliwa Watershed Management Plan.</p>	<p>LAWIN helps in forest works --(CENRO-Guimbal, PENRO)  implementing protection</p>	<p>The innovation is the LAWIN system itself. Tracking includes biodiversity monitoring, patrolled area and threats encountered. There's a preparation of</p>	<p>Crafting of FCA and Patrol plan -guide for patrollers -to reduce threats through patrol effort</p>	<p><b>Effectiveness</b> Patrol plans focused activities and resources on hotspot areas; Plans established time-</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
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		<p>were made. Through this they can identify where to do the patrolling.</p> <p>Those that are designated natural growth forest are the conservation area. Before, only public forest land were protected and patrolled by the <i>Bantay Gubat</i>, with LAWIN it is specific within the designated conservation area. Having an understanding that: "This is not just an ordinary forest but a conservation area".</p> <p>The innovation is the LAWIN system itself. Tracking includes biodiversity monitoring, patrolled area and threats encountered. There's a preparation of conservation area plan which includes: quarterly patrol plans to determine whether to what area are they going to be assigned when their present patrol area does not encounter any problem anymore.</p> <p>The submission of functioning of patrol plans was done. The forest conservation plan has been revised. The project make sure that the targeting and objective setting is tied-up in the forest protection. The protocol in terms of patrolling that there should have 4 patrollers and they are properly trained was followed. It is a different case if they followed the protocol or not because not in every single moment we monitored them. We never knew whether these 4 patrollers did patrolling. But of course, the system itself, SMART, I can easily see who went to patrol. But I will know if they are</p>		<p>aspect, integration of management Plans-- (CENTRO-Guimbal, CDD)</p> <p>In enforcement- LAWIN- conduct of service evaluation--(CENRO- Barotac Nuevo)</p> <p>Enhanced in terms of preparation of FCAP.-- (EDD)</p> <p>No plans (B+VISER)</p>	<p>conservation area plan which includes: quarterly patrol plans to determine whether to what area are they going to be assigned when their present patrol area don't encountered any problem anymore.</p> <p>The submission of functioning of patrol plans was done. The forest conservation plan has been revised. The project makes sure that the targeting and objective setting is tied-up in the forest protection. The protocol in terms of patrolling that there should have 4 patrollers and they are properly trained was followed.</p>	<p>--(CENRO-Davao, CENRO-Digos, EDD)</p> <p>No NRM plan --(MENRO-Makilala, MENRO-Sta Cruz, CDD, PENRO)</p> <p>Protected Area Management Plan --High conservation value area = areas that are of high because of eco system protection it means they have services, sustainable water. Climate regulations, landscape stabilization, and carbon capture. --We call Patrol Plan , forest protection plan, conservation area plan.-- (B+VISER)</p>	<p>bounded activities and targets (unlike before without set targets); Identified patrol area/ route; and Patrol effort has become more responsive to actual ground condition.</p> <p><b>Efficiency</b> Patrol plans linked budget allocation to deliverable outputs</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	Region 11	
		physically and actually there if I'm going to the field.					
	<ul style="list-style-type: none"> <li><b>Conservation Financing: Number of agreements, amount of money generated, DENR budget allocation</b></li> </ul>	<p>From DENR Budget none from B+WISER except for Lawin gadgets and technical support/assistance and through their continued presence in CAR region</p> <p><b>EQUIPMENT:</b></p> <ul style="list-style-type: none"> <li>Gadget/Cellphone (LAWIN).</li> </ul> <p>40 Units of LAWIN Computers with the total cost of PHP 1,060,384.00</p>	<p>Tripartite agreement between the DSWD, DENR and B+WISER for the maintenance and protection of the National Greening Program (NGP). Beneficiaries: Five barangays namely: Sto. Nino, Cayabu, Tinukan, Sta Ines and San Isidro, Antipolo City</p> <p>Different agencies collaborated like DSWD who gave funds for the tree planting activity participated by their 4Ps beneficiaries; LGU as implementing partner and the DENR provided technical assistance and B+WISER coordinated everything</p>	<p>None, more on assist-- (CENRO-Barotac Nuevo, EDD, B+WISER, PENRO)</p> <p>-CAC-eco- tourism of Leon, -EPOP (forest land)- required in every municipality, -CLUP- local government is expanding, there is co-management with LGUs in managing Pas -Eco-tourism- LGU is implementing- we can open for 2<sup>nd</sup> party but it's LGU; no financial provisions for LGU, they allot from their IRA --(CENRO-Guimbal)</p> <p>Approved plans have corresponding budgets-- (CDD)</p>	<p>From DENR Budget both for conservation and enforcement with forest rangers and <i>Bantay Gubat</i> being regular employees of DENR. Conservation financing provided by LGU Bukidnon and LGU Malaybaly, Lantapan, Talakag and Valencia providing support for <i>Bantay Gubat</i> volunteers, KGVs and funding support for Indigenous Peoples Organization to help and support enforcement protection in Mt. Kitanglad.</p> <p>B+WISER, LAWIN provided gadgets and technical support/assistance.</p> <p>Forest patrol plan/NRM = commitment and coaching also they will follow up</p>	<p>None --(CENRO-Davao, CENRO-Digos, MENRO-Makilala, MENRO-Sta Cruz, PENRO, EDD)</p> <p>-Unified Trekking Policy - trekking fees vary from different entry points; existing trails will now adopt a standardized system of registration and trekking fees. -Camp Management Policy - install a system that will identify campsites, set uniform fees, determine responsibilities of LGUs and camp managers, and lay camp rules and regulations to monitor illegal trekkers and address issues on solid waste management --(CDD)</p> <p>There is nothing that you have introduce that require conservation financing the project progress there are already innovation that were accepted like for example LAWIN because of that innovation the necessity to gather resources in order to promote and sustained it. --B+WISER</p>	<p>This indicator was achieved by end of 2017?</p> <p><b>Effectiveness</b> Mobilized over 95% of conservation financing from DENR, and less than 5% from LGUs and private sector for patrol effort and related forest regeneration efforts</p> <p>Trekking fees in MANP Php 2,000 entry fee Php 1,000 exit fee Aside from the payment for the guide</p> <p>PES in Bago City and replication in Bataan</p>
	<ul style="list-style-type: none"> <li><b>IEC: Number of technical papers produced; LAWIN institutionalization</b></li> </ul>	<p>Manual which include LAWIN protocol and the training of all data managers in all 6 PENROs and 12 CENROs.</p> <p>The training and technical assistance to all patrollers, in</p>	<p>IEC on LAWIN like leaflets and protocol/manuals were provided</p> <p>Signages, saying cutting of tress is prohibited ... are effective because it helps in</p>	<p>None --(CENRO-Guimbal, CDD, EDD)</p> <p>Tech papers- booklet. LAWIN protocol serves as guide to patrol. A step by step guide whether to go or</p>	<p>Manual which include LAWIN protocol and the training of all data managers in all 6 PENROs and 12 CENROs.</p> <p>The training and technical assistance to all patrollers, in</p>	<p>Manuals are serves as a guide</p> <p>-Response Protocol Manual --(CENRO-Davao, CENRO-Digos, EDD)</p>	<p>Recently produced a 4-manual guide on LAWIN</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites					Key Findings
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		<p>particular, practicum of actual patrol work and identification of indicator species, etc. New technology in response to LAWIN system. Capacity enhancement in identifying threats and its responses. To upgrade their capacity in identifying the threats.</p>	<p>controlling the conduct of illegal activities. B+WISER distributed tarpaulins and signages with pictures of different endangered species</p>	<p>not for the patrol (dangerous or not) --(CENRO-Barotac Nuevo)</p> <p>Brochures on Forest Protection- Effective –not only as guide but for insights --(PENRO)</p> <p>protocol given to team leaders of CENROs, PENRO has limited copy --(B+WISER)</p>	<p>particular, practicum of actual patrol work and identification of indicator species, etc.</p> <p>New technology in response to LAWIN system. Capacity enhancement in identifying threats and its responses. To upgrade their capacity in identifying the threats.</p> <p>All PENRO and CENROs received the trainings. In fact, if there's a particular PENRO or CENRO who wanted to be trained (1 one 1), B+WISER responded to these request.</p>	<p>-Procedures for Responding to Observed Threats in FCA manual. -Lawin manual - 1 copy only-it would have been better to have many copies of the manual to give to BLGUs --(CENRO-Davao)</p> <p>LGU has posters and fliers, and press released statements -effective in disseminating the desired information: 1. English was the language used; so the IEC materials cater to a certain audience only, 2. radio would have been better for it has a wider reach, 3. i do not know the spread of distribution of the IEC materials --(MENRO-Sta Cruz)</p> <p>Cannot recall if there is any/No answer provided --(MENRO-Makilala, CDD)</p> <p>Provided us with LAWIN forest and biodiversity protection system manual which contains many modules --(PENRO)</p> <p><b>manual forest protection</b> --(B+WISER)</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
	<b>Factors that enhanced or diminished the achievement of Project outputs and outcomes</b>		<p>Enhancing factor: networking and collaboration with NGOs/POs increased manpower and enhanced technology</p> <p>Diminished: Availability of funding support influences level/intensity of patrol effort; Quality of gadget (battery, natural economic life) LGUs: No gadgets provided for LGUs Safety and security of patrollers</p>		<p>Diminished: Forest rangers have incomplete PPE (personal protective equipment) like raincoat when it's raining and so on. They were given once only. Weather condition, age and health of patrollers, and threats from the other group (NPAs).</p> <p>No insurance coverage in case of accident or any untoward incident</p> <p>Unsecured employment: It's just that 50% of the total # of employees is contractual. There's no "plantilla" position.</p>	
<b>Learning verification</b>						
<b>3. How valid are the lessons reported during the IP's learning review for each of their learning questions?</b>						
<b>Learning Questions (LQs)</b>	<p><b>LQ2:</b></p> <ul style="list-style-type: none"> <li>• <b>Patrol effort in Km per patrol team per CENRO per week/month/year</b></li> <li>• <b>Number of observed threats per km per CENRO per week/month/year</b></li> <li>• <b>Number of observations and encounter rate per km of dense forest regeneration, disaggregated as none, sparse, medium and</b></li> </ul>	<p>There are 8-15 Forest Rangers (the number of Forest Rangers depends on the area covered) per CENRO. Their functions are for forest protection like: patrolling, apprehend and investigate just like the <i>Bantay Gubat</i>. The only difference is Forest Rangers are regular personnel and <i>Bantay Gubat</i> are hired under agreement between DENR and OPAPP which started in C/Y 2013, before LAWIN was introduced.</p> <p>Before there were no patrol target, only LAWIN gives target of at least 10km. Before, its patrol sector or patrol jurisdiction meaning there is specific area/municipality covered for patrol work.</p>	<p>Constant patrolling and presence of FPOs in patrol areas, the forest threats, such as illegal activities, are lessened.</p> <p><b>Medium</b>, because if the patrolling is effective, definitely the natural regeneration of the forest increased/ improved; not totally forested area, there are still areas inside being assisted in natural regeneration/not totally virgin forest Do not have exact tool to measure data on forest cover increase; but based on assessment, illegal</p>		<p>The patrol effort accomplishment is by kilometers, 10 km per month per team. There are 35 teams with 4 members per team. There are 179 forest rangers DENR employees and 318 volunteers. For the volunteers, the province of Bukidnon provided them an honorarium. The volunteers are from Kalatungan as <i>Bantay Lasang</i> and Mt. Kitanglad as Kitanglad Guard Volunteer (KGV)</p> <p>Patrol work is conducted 4 times in a month but still depending on weather condition.</p> <p>The most common threats identified are: 1. Illegal cutting of trees /timber</p>	<p>Information gathered from KII and FGD validates the direct relationship between patrol effort and rate of forest regeneration</p> <p>Majority of KII and FGD participants rated forest generation at medium level, with a few claiming that rate at a dense level</p> <p>See Appendix 2 showing the graphs of the relationship...</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
	<b>dense regeneration per CENRO per week/month/year</b>	Rating: regeneration is medium	<p>activities are controlled so it is expected that the forest cover has improved</p> <p>UM: <b>DENSE</b>. Before (2012) there were fewer trees but now (2018) the trees planted that time were big already. Total number of hectares planted: 14</p> <p>CR: <b>medium</b>, changes are happening little by little</p> <p>P: we confirmed that there were big improvement in that aspect because illegal activities were reduced</p> <p><b>medium</b>, because of the different programs of NGP, like locally funded tree planting activities; also because it reduced illegal activities</p> <p>M: Improvement in terms of forest covered</p> <p>In terms of regeneration in the whole municipality: between <b>medium to dense</b>.</p>		<p>poaching</p> <ol style="list-style-type: none"> <li>2. Kaingin</li> <li>3. Wildlife hunting</li> <li>4. Agricultural -high value crop gardening</li> </ol> <p><b>Forest regeneration is medium.</b> This is due to minimal threats because of patrol visibility</p> <p><b>Unintended consequences:</b> The awareness of the community which lead to their participation in patrolling the area.</p> <p><b>Factors that diminished:</b> The forest rangers have incomplete PPE (personal protective equipment) like raincoat when it's raining and so on. They were given once only.</p> <p><b>Lessons Learned:</b> I can't claim that we make linkages with academe because it has been done with our previous bosses, only that we just sustained the partnership with our implementing partners (e.g. academe, KIN, LGU, NGOs) since DENR can't do it alone. For them to penetrate the remote area, they request for a guide which is compensated. Additional for their allowance since they do sometimes request for a guide especially for the route that they're not familiar.</p> <p><b>For the factors that diminished the level of patrol effort</b> are as follows: weather, age, health and threats from the other group (NPAs).</p> <p>The main problem is the lack of manpower. It's just that 50% of the</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
					<p>total # of employees is contractual. There's no "plantilla" position. Actually, the government itself is the violator of the order of the president.</p> <p>Actually, the B+WISER helped in crafting the FLUP (Forest Land Use Plans) surrounding Kitanglad. So, we tapped them as resource speakers/person. All LGUs should have their FLUP and it will be integrated to CLUP (Comprehensive Land Use Plan). Their (B+WISER) assistance being given to us (DENR) is by training our field personnel on how to convince the LGU to create their FLUP and what should be the content. Since we have an insufficient staff, our FLUP focal is the one also who handle the watershed and at the same time do the planning. The present set up of DENR is very stressful.</p> <p>It is effective because it undergo into analysis/study. For example, on how to approach armed illegal loggers, in natural way you will not go after them, but now it was written in the manual on how to approach them.</p>	
	<p><b>LQ3:</b></p> <ul style="list-style-type: none"> <li>• Patrol effort in Km per patrol team per CENRO per week/month/year</li> <li>• Number of observed threats per km per CENRO per week/month/year</li> </ul>	<p>The most common threats identified are:</p> <ol style="list-style-type: none"> <li>1. Illegal cutting of trees</li> <li>2. Garbage throwing</li> <li>3. Agricultural within patrol areas</li> <li>4. Pest among trees</li> <li>5. Kaingin (minimal)</li> </ol> <p><b>Unintended Consequence:</b> Contribute to the awareness of the people in the community. Regular visibility of patrollers made the community realized to</p>	<p>The observed threats Lessen because of the direct efforts of FPO. Their constant visibilities /direct effort helped reduced illegal cutting of trees and other illegal activities.</p> <p>6.84 threats observed per km (index); Top threats are infrastructure, road network, perennial farming (kaingin), garbage, cutting of trees</p>		<p>There are many threats in the forest; You can even categorize eco-tourism as a threat; you start the idea with a forest system has a certain values; maybe because this is sacred to the LUMADS, but in eco-tourism they just have footprints there and that is already threats although eco-tourism is not seen as threats it is advantageous through revenue generation schemes or initiatives of local government, but to the Indigenous People that is all sacred needs. So</p>	<p>Information gathered from KII and FGD validated the data reported by B+WISER, and the reverse relationship between patrol effort and observed threats.</p> <p>Appendix 3 showing the graphs on the relationships between patrol effort and observed threats</p>



Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
		<p>protect the forest land.</p> <p><b>Good practices</b> include regularity of patrolling which promote coordination with other agencies like PNP, LGUs. It enhanced the coordination and information dissemination to the community.</p> <p>B+WISER are active and diligent to adopt the LAWIN system. Meaning, internally, B+WISER pushed for the extreme lining of their program. We say push because they are constant/consistent. If there is improvement to be done, they do or give it. The assistance is always there.</p> <p>INTERNAL: Technology – upgrading of the LAWIN system. It became institutionalized</p> <p>EXTERNAL: Support of the LGU's. They assigned people to be part of the patrolling team.</p> <p>No diminishing factors in the achievement of the outputs, only those that of luck of support like: provision of vehicles, increased in salary and having an allowance because in this case the Rangers provide food for the forest guards. Sometimes when Forest Rangers don't have budget for the food, patrol effort is weak. Sometimes they are not motivated to conduct patrol effort.</p>	<p>Deterrent to threats are: (1) coordination with the military or police; and (2) diplomatic way of talking by explaining to them the harmful effects of the activities to the forest and to the environment</p> <p>UM: <b>Medium:</b> before there were hundreds sacks of charcoal sold but now it was lessen to close to 20 sacks because charcoal makers are being apprehended.</p> <p>CR: Decreased cutting of tress and charcoal making, lessened "kaingin system" or open cultivation</p> <p>M: improvement in terms of the numbers of wildlife in the forest.</p> <p>Forest threats were lessened too, between <b>medium to sparse.</b></p>		<p>there is prioritization in threats, now the threats here we are looking in the forest system in the forest in terms of eco-system functions; that is the primary function, that eco system function is climate regulation, carbon captures, the trees should always hold; so that they can get carbon capture, and forest holds water for drinks, for agriculture, for industry, and the purpose is that the threats against the forest system. Thus threats against removal of trees, destruction of the landscape against biological diversity, that is the priority but if you look on that what are the specific activities characterize in those threats; firewood gathering, charcoal making, timber poaching, kaingin, wildlife hunting, those specific activities are all threats; In Kitanglad and in other protected areas. The data indicate that patrol efforts may reduced these threats but not conclusive that these threats declined.</p> <p>B+WISER are active and diligent to adopt the LAWIN system. Meaning, internally, B+WISER pushed for the extreme lining of their program. We say push because they are constant/consistent. If there is improvement to be done, they do or give it. The assistance is always there.</p> <p>INTERNAL: Technology – upgrading of the LAWIN system. It became institutionalized</p> <p>EXTERNAL: Support of the LGU's. The LGU support includes provision of allowances to volunteers (KGV and <i>Bantay Lasang</i>) in their patrol</p>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
					<p>efforts and other activities in the site. This institutional support contributed to the institutionalization of KGV and volunteers in protecting Mt Kitanglad and the neighboring protected sites.</p> <p>if cultural policies and cultural PS will be supported it will generate funding support for councils of elders performing relevance cultural duties that would have positive impact biodiversity for watershed and our resilient to climate change</p>	
	<p><b>LQ5:</b></p> <ul style="list-style-type: none"> <li>Number and type of partnerships</li> <li>Funds generated per type of partnership</li> </ul> <p><b>LQ8:</b></p> <ul style="list-style-type: none"> <li>Funds generated per type of partnership</li> <li>Patrol effort in Km per patrol team per CENRO per week/month/year</li> </ul> <p><b>LQ9:</b></p> <ul style="list-style-type: none"> <li>Type of CF arrangements</li> <li>Funds generated per type of CF arrangement</li> </ul>	<p>Through B+WISER partnership with DENR funds were available for NRM, forest conservation and landscape conservation.</p> <p><i>Bantay Gubat</i> doesn't have salary. Only those shares coming from OPAPP. But, the operational funding is coming from the DENR. In terms of coordination, do it with the Enforcement Officers at the level of PENRO's, CENRO's and at the Regional, The project reported to ARD and RD. The project presented during the Regional Management Conference to update on LAWIN. Sometimes, it's the best place to do the presentation because all the CENRO's are there. When you go to the field for trainings the only present are the FBOs and the Enforcement Chief.</p> <p>In terms of looking for new partners and augmentation, have the PAMANA. There are also existing project of DENR, like INREMP, there are PO's there, they are requesting for trainings</p>	<p>Most patrol funds came from DENR: 2017: P 12,228,000.00</p> <p>2018: P 2,952,000.00 supplemental P14,376,000.00 Regular fund Can't establish relationships between source of funds and protection effectiveness</p> <p>M: no idea</p> <p>The more funds resulted in: increased number of people hired/involved in patrolling; and if there is additional manpower, the kilometers and the patrol effects also increased, which is SIGNIFICANT</p>		<p>Through B+WISER partnership with DENR funds were available for NRM, forest conservation and landscape conservation.</p> <p>KGV and <i>Bantay Lasang</i> do not have salary. Only support in the form of allowances from LGU of Bukidnon.</p> <p>There is an increased in funding. The increased of conservation fund can help in the reduction of threats because the fund transit to their activities.</p> <p>It should be maintained in work and financial plan proposal budget. But I foresee those that are needed for proposal in the financial plan.</p> <p>The region had longer plan for the protection itself including LAWIN because it is institutionalized, LAWIN is included in the mission in protecting the forest and the natural resources.</p> <p>Source of Fund: DENR and LGUs</p>	<p><b>LQ5 to LQ9</b></p> <p>Project shifted focus on working with agency with the mandate and resources (including organization at the ground level) which could produce high impact, and working with private sector for business opportunity (EDC, HEDCOR)</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
		<p>and B+WISER provided that also. In terms of coaching on the vision of patrol plan, everything is completed, There are no uncompleted deliverables in CAR.</p> <p>There is an increased in funding. The increased of conservation fund can help in the reduction of threats because the fund transit to their activities.</p> <p>Rating: Significant. And it is much more significant if there is an additional funding support.</p> <p>It should be maintained in work and financial plan proposal budget. But I foresee those that are needed for proposal in the financial plan.</p> <p>The region had longer plan for the protection itself including LAWIN because it is institutionalized, LAWIN is included in the mission in protecting the forest and the natural resources.</p> <p>Source of Fund: DENR</p>			<p>B+WISER have attained its targets in implementing this project in our province of Bukidnon because its assigned targets to each respective CNR offices now been delivered efficiently 100% targets more particularly they achieved by means of technology transfer, the service strategies to each respective CNR Offices in conducting LAWIN activity in their respective area of jurisdiction.</p> <p>There is what we called illegal cutting, or illegal occupation or any other forms forest destruction has been eliminated actually not 100% there is what we called the total visibility of the field personnel in the area is one facilitating factor in eliminating forest destruction in their area of responsibility.</p> <p>Bukidnon is place always number 1 in the nationwide assessment in the implementation of this particularly in the CENRO Valencia rank number 1 in the implementation meaning it's a manifestation that there is what we called the total improvement now in every activities we have example the NRM, the NRM for now they also adapting LAWIN system. In fact we don't have target in this NRM activity but we are very:</p> <ul style="list-style-type: none"> <li>• Apprehensive this technology activity is the revival in the conduct of this NRM activities considering that there is what we call a system in monitoring</li> <li>• PENRO is the one consolidating the report in every CENRO and we had data manager.</li> </ul>	

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
					<p>Allowing in, because some of the personnel are being augmented with other activities by allowing them in the conduct of LAWIN every week /once a week and they LAWIN activity by leaving other assigned activities the LAWIN is the priority activity</p> <ul style="list-style-type: none"> <li>• Vehicle even though there was assign to other areas but because of LAWIN considering with the far flung areas so he gave them priority of used of vehicles or hired motorcycle “habal-habal” considering they can secure the endorsement receipt for them to refund the expense in the field like on there also giving foods and they let them Cash Advance to ensure that they will bringing foods in the field.</li> <li>• Moral Support; Encouragement in this activity giving it on your legacy because you are protecting the forest the remaining environment we have now; Let them Encourage to do the work</li> <li>• Coordinating the LGU the mayor and Barangay Captain there are teams visited to conduct this activity to inform them for their security reasons</li> </ul>	
	<p><b>LQ13:</b></p> <ul style="list-style-type: none"> <li>• <b>LGU governance score per year</b></li> <li>• <b>Patrol effort in Km per patrol team per LGU per week/ month/year</b></li> </ul>	<p>LGUs, in particular MENROs and PGENROs are not involved so far in LAWIN activities All LGUs are not aware of LAWIN</p>				<p>With the shift in project focus on LAWIN institutionalization in September 2017, the project worked on the capacity strengthening of DENR with the legal mandate and resources for forest protection; as well as those LGUs which are working on the localization of LAWIN (e.g.</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings	
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad		Region 11
						<p>Bukidnon province, Malaybalay City and 7 municipalities covered by Mt Kitanglad; and Tanay, Rizal in Upper Marikina/ Kaliwa.</p> <p>Efforts to establish the GSA Score ceased, as focus of LAWIN implementation shifted to DENR and less with LGU.</p>	
4. How valid are the lessons reported during the IP's learning review on the extent to which, and under what conditions, B+VVISER strategies have singly and/or collectively contributed to achieving the outcomes (key result)?							
	<ul style="list-style-type: none"> <li>Lessons reported by the IP that contributed to achieving the outcomes</li> </ul>	<p>It is effective because it undergo into analysis/study. For example, on how to approach armed illegal loggers, in natural way you will not go after them, but now it was written in the manual on how to approach them.</p>			<p>They contributed much and what we called the mobilization of personnel and help the adaption of technology in the conduct of this LAWIN. We have positive approach in which the field personnel who conducted this even women is eager t perform this activity</p> <p>The providing sufficient enough personnel augmentation of logistics and personnel in the conduct of this activities because one of their major activities we have on forest protection activities and this activity of LAWIN infact the forest protection are being enhanced with LAWIN</p>	<p><a href="https://mail.yahoo.com/neo/launch#">https://mail.yahoo.com/neo/launch#</a></p>	<p>LESSON or LEARNING</p> <p>With the shift in project focus on LAWIN institutionalization since September 2016, all strategies converged on LAWIN implementation, particularly at the local level.</p> <p>Depending on the following EXTENT and CONDITIONS:</p> <p>Continuous upgrading of the LAWIN system is necessary to ensure patrol effectiveness plus provision of gadgets, financial and technical support</p> <p>Continuous financial and logistical support should be provided; Or PES should be institutionalized</p> <p>Collaboration with the LGU and other stakeholders - need to be more active</p> <p>Communication is the biggest problem encountered because if we are in the middle of the forest and there is no signal at all, we cannot report immediately the illegal</p>

Evaluation Questions	Data/Information to be Gathered	Evaluation Sites				Key Findings
		CAR	Region 4A Upper Marikina/Kaliwa	Region 6	Region 10 Mt. Kitanglad	
						<p>activities we observe. We cannot even call for help or back up if needed, especially if there are arrests to be made.</p> <p>Accessibility, poor roads. Illegal occupants pose problem in patrol work.</p> <p>People apprehended who threatened to harm us that's why sometimes we think of having a firearm for protection purposes.</p>

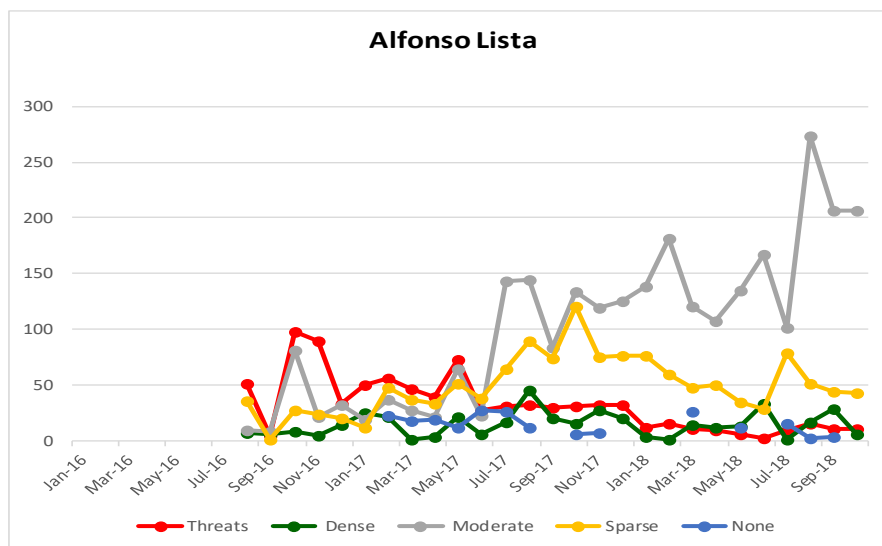
## ANNEX F

# **Diagrams Showing the Relationship between Observed Threats and Rate of Regeneration**

# ANNEX F: DIAGRAMS SHOWING THE RELATIONSHIP BETWEEN OBSERVED THREATS AND RATE OF REGENERATION

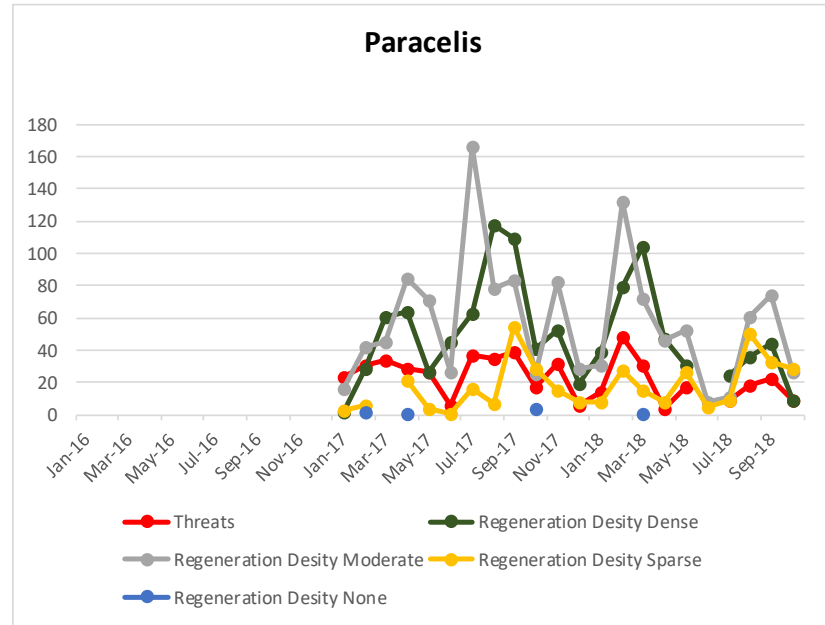
CAR: Alfonso Lista and Parcelis

Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16					
Jun-16					
Jul-16					
Aug-16	51	7	9	36	
Sep-16	5	6	8	1	
Oct-16	98	8	81	27	
Nov-16	90	5	21	24	
Dec-16	34	14	32	20	
Jan-17	50	25	19	12	
Feb-17	56	22	37	48	23
Mar-17	46	1	27	37	18
Apr-17	40	3	22	34	19
May-17	73	21	64	51	12
Jun-17	27	6	23	38	27
Jul-17	31	17	143	65	26
Aug-17	32	45	144	89	12
Sep-17	30	20	84	74	
Oct-17	31	16	134	120	6
Nov-17	32	27	119	75	7
Dec-17	32	20	125	76	
Jan-18	12	4	138	77	
Feb-18	15	1	181	60	
Mar-18	11	14	121	48	26
Apr-18	10	12	108	50	
May-18	6	13	135	35	12
Jun-18	2	34	167	29	
Jul-18	9	1	101	79	16
Aug-18	15	17	273	51	2
Sep-18	11	29	207	44	4
Oct-18	11	6	206	43	



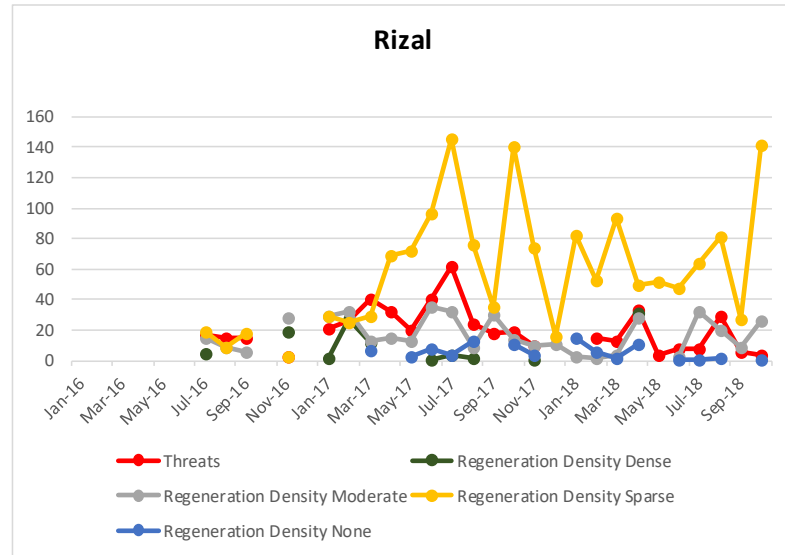


Patrol Date	Threats	Regeneration Desity			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16					
Jun-16					
Jul-16					
Aug-16					
Sep-16					
Oct-16					
Nov-16					
Dec-16					
Jan-17	23	2	16	3	
Feb-17	31	28	42	6	2
Mar-17	34	61	45		
Apr-17	29	64	84	21	1
May-17	26	26	71	4	
Jun-17	6	45	26	1	
Jul-17	37	63	166	16	
Aug-17	35	118	78	7	
Sep-17	39	109	83	54	
Oct-17	17	41	25	29	4
Nov-17	32	52	82	15	
Dec-17	6	19	28	8	
Jan-18	14	39	31	8	
Feb-18	48	79	132	27	
Mar-18	31	104	72	15	1
Apr-18	4	47	46	8	
May-18	17	31	52	26	
Jun-18			8	5	
Jul-18	9	24	11	9	
Aug-18	18	36	61	50	
Sep-18	22	44	74	33	
Oct-18	9	9	26	29	



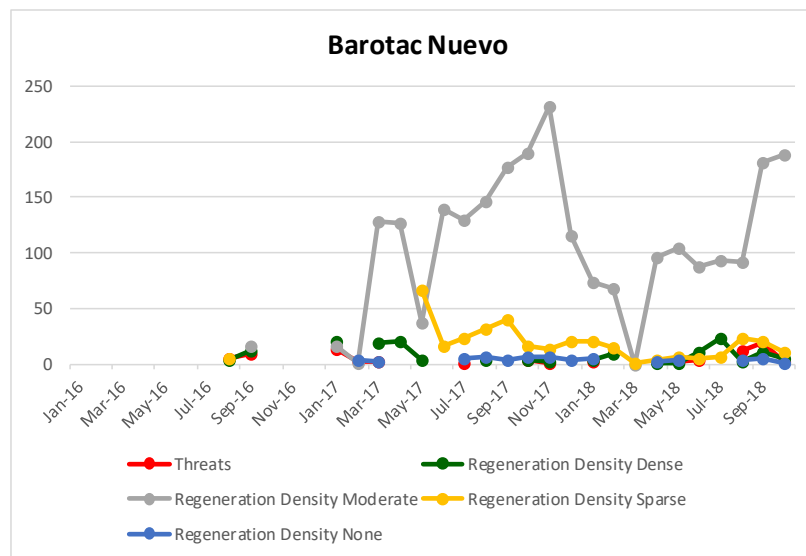
### Region 4A: Rizal

Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16					
Jun-16					
Jul-16	17	5	15	19	
Aug-16	15		9	9	
Sep-16	15		6	18	
Oct-16					
Nov-16	3	19	28	3	
Dec-16					
Jan-17	21	2	29	29	
Feb-17	26	27	32	25	
Mar-17	40	12	13	29	7
Apr-17	32		15	69	
May-17	20		13	72	3
Jun-17	40	1	35	96	8
Jul-17	62	4	32	145	4
Aug-17	24	2	9	76	13
Sep-17	18		30	35	
Oct-17	19		14	140	11
Nov-17	10	1	10	74	4
Dec-17			11	16	
Jan-18			3	82	15
Feb-18	15		2	53	6
Mar-18	13		4	93	2
Apr-18	33	31	28	50	11
May-18	4			52	
Jun-18	8		3	47	1
Jul-18	8		32	64	1
Aug-18	29		20	81	2
Sep-18	6		9	27	
Oct-18	4		26	141	1

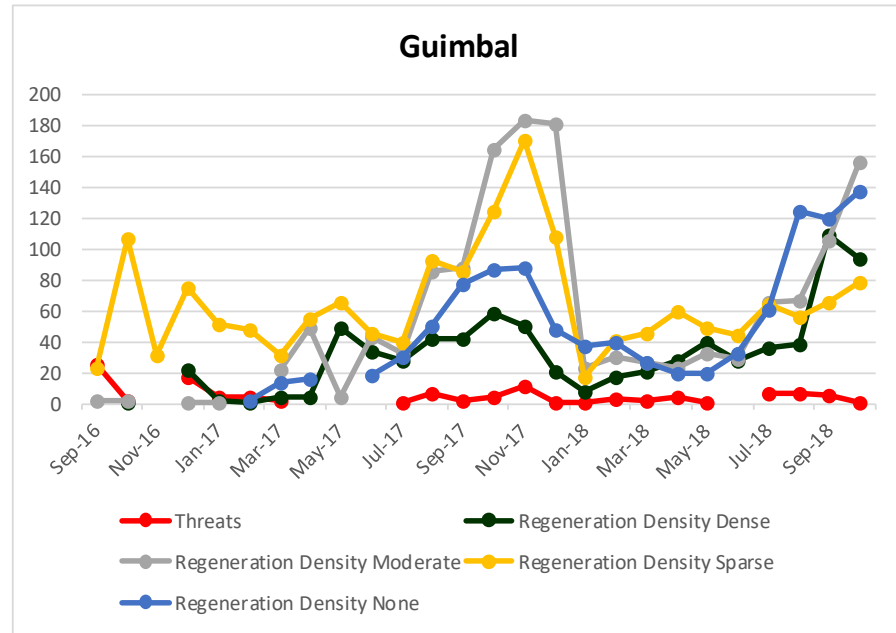


### Region VI: Barotac Nuevo and Guimbal

Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16					
Jun-16					
Jul-16					
Aug-16	5	4		5	
Sep-16	9	12	16		
Oct-16					
Nov-16					
Dec-16					
Jan-17	13	20	16		
Feb-17	2		1		4
Mar-17	2	19	128		2
Apr-17		21	127		
May-17		4	37	66	
Jun-17			140	16	
Jul-17	1		129	23	5
Aug-17		4	147	32	6
Sep-17			177	40	4
Oct-17	4	3	190	16	7
Nov-17	1	2	232	14	6
Dec-17			115	20	3
Jan-18	2	3	73	20	5
Feb-18		9	68	15	
Mar-18			nsity	1	
Apr-18	2	1	96	3	2
May-18	2	1	104	6	4
Jun-18	3	11	88	5	
Jul-18		23	93	7	
Aug-18	12	2	92	23	3
Sep-18	19	10	181	20	5
Oct-18	2	5	188	11	1

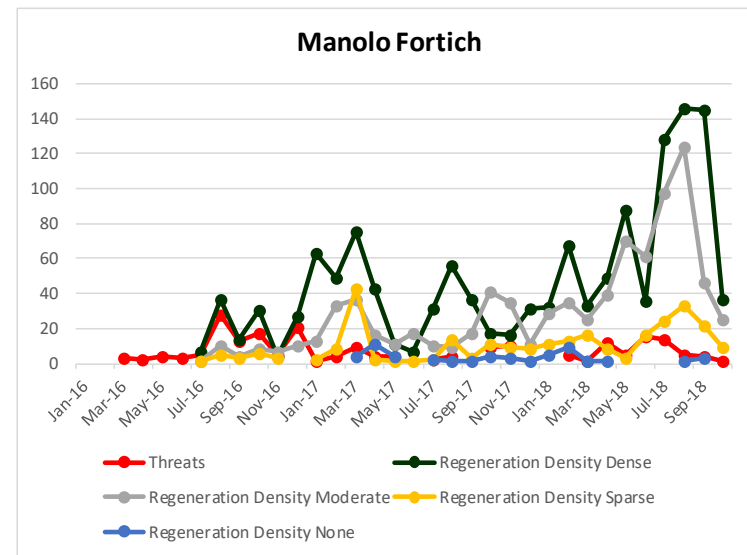


Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Sep-16	25		2	23	
Oct-16	2	1	2	107	
Nov-16				31	
Dec-16	17	22	1	75	
Jan-17	4	2	1	51	
Feb-17	4	1		48	2
Mar-17	2	4	22	31	14
Apr-17		4	49	55	16
May-17		49	4	66	
Jun-17		34	43	45	18
Jul-17	1	28	32	40	30
Aug-17	6	42	85	93	50
Sep-17	2	42	88	85	77
Oct-17	4	58	165	124	87
Nov-17	11	50	183	171	88
Dec-17	1	21	181	108	48
Jan-18	1	8	23	17	37
Feb-18	3	17	30	41	39
Mar-18	2	21	27	46	27
Apr-18	4	28	23	59	19
May-18	1	40	32	49	20
Jun-18		28	29	44	32
Jul-18	6	36	66	64	61
Aug-18	7	38	67	56	125
Sep-18	5	109	105	65	120
Oct-18	1	94	156	78	137

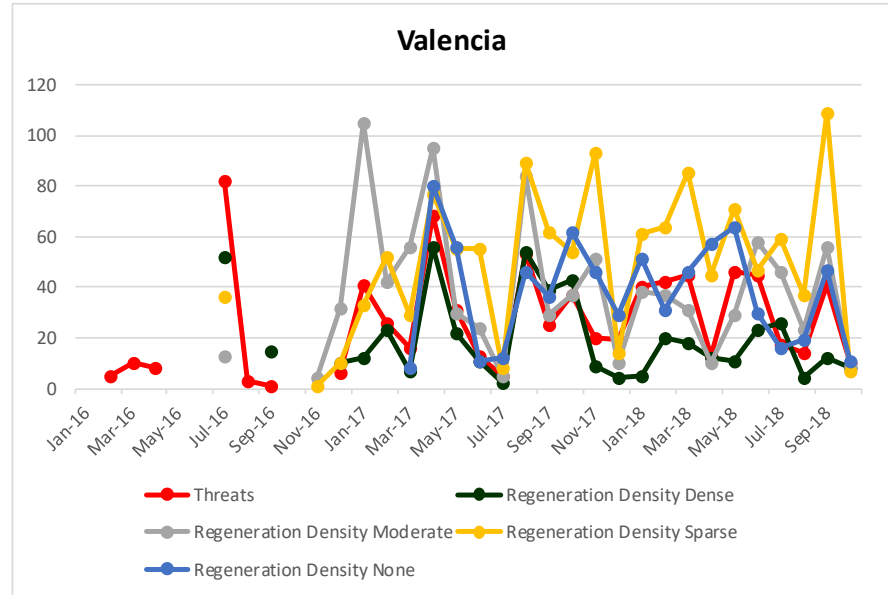


### Region X: Manolo Fortich and Valencia

Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16	3				
Apr-16	2				
May-16	4				
Jun-16	3				
Jul-16	5	7	1	1	
Aug-16	28	37	10	5	
Sep-16	13	14	4	3	
Oct-16	17	30	8	6	
Nov-16	5	4	7	3	
Dec-16	21	27	10		
Jan-17	1	63	13	2	
Feb-17	4	49	33	8	
Mar-17	9	75	37	43	4
Apr-17	4	43	16	2	11
May-17	4	11	11	1	4
Jun-17		7	17	1	
Jul-17	2	31	10	2	2
Aug-17	4	56	9	14	1
Sep-17		37	17	3	1
Oct-17	9	17	41	11	4
Nov-17	10	16	35	9	3
Dec-17		31	11	8	1
Jan-18		32	29	11	5
Feb-18	5	67	35	13	9
Mar-18	1	33	25	16	1
Apr-18	12	49	39	8	1
May-18	5	88	70	3	
Jun-18	15	36	61	16	
Jul-18	14	128	97	24	
Aug-18	5	146	124	33	1
Sep-18	4	145	46	22	3
Oct-18	1	37	25	9	

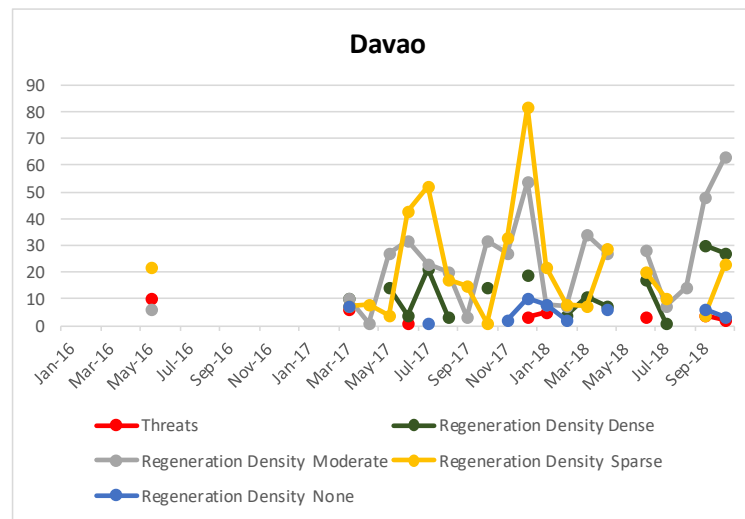


Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16	5				
Mar-16	10				
Apr-16	8				
May-16					
Jun-16					
Jul-16	82	52	13	36	
Aug-16	3				
Sep-16	1	15			
Oct-16					
Nov-16			4	1	
Dec-16	6	10	32	10	
Jan-17	41	12	105	33	
Feb-17	26	23	42	52	
Mar-17	16	7	56	29	8
Apr-17	68	56	95	77	80
May-17	31	22	30	55	56
Jun-17	13	11	24	55	11
Jul-17	5	2	5	8	12
Aug-17	53	54	84	89	46
Sep-17	25	39	29	62	36
Oct-17	37	43	37	54	62
Nov-17	20	9	51	93	46
Dec-17	19	4	10	14	29
Jan-18	40	5	38	61	51
Feb-18	42	20	37	64	31
Mar-18	45	18	31	85	46
Apr-18	13	12	10	45	57
May-18	46	11	29	71	64
Jun-18	45	23	58	47	30
Jul-18	17	26	46	59	16
Aug-18	14	4	23	37	19
Sep-18	41	12	56	109	47
Oct-18	10	8	9	7	11

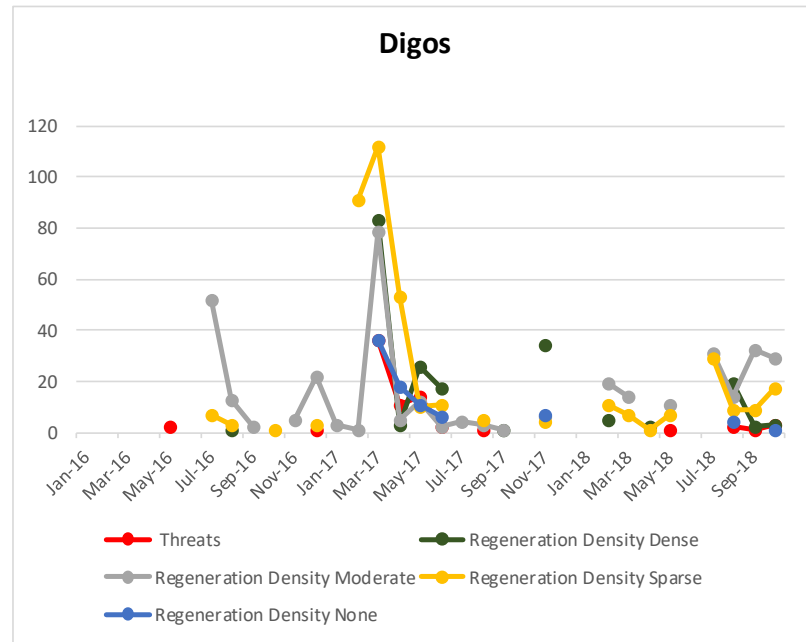


## Region XI: Davao and Digos

Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16	10		6	22	
Jun-16					
Jul-16					
Aug-16					
Sep-16					
Oct-16					
Nov-16					
Dec-16					
Jan-17					
Feb-17					
Mar-17	6	10	10	7	7
Apr-17			1	8	
May-17		14	27	4	
Jun-17	1	4	32	43	
Jul-17		21	23	52	1
Aug-17		3	20	17	
Sep-17			3	15	
Oct-17		14	32	1	
Nov-17			27	33	2
Dec-17	3	19	54	82	10
Jan-18	5		8	22	8
Feb-18		4	7	8	2
Mar-18		11	34	7	
Apr-18		7	27	29	6
May-18					
Jun-18	3	17	28	20	
Jul-18		1	7	10	
Aug-18			14		
Sep-18	4	30	48	4	6
Oct-18	2	27	63	23	3



Patrol Date	Threats	Regeneration Density			
		Dense	Moderate	Sparse	None
Jan-16					
Feb-16					
Mar-16					
Apr-16					
May-16	2				
Jun-16					
Jul-16			52	7	
Aug-16		1	13	3	
Sep-16			2		
Oct-16				1	
Nov-16			5		
Dec-16	1		22	3	
Jan-17			3		
Feb-17			1	91	
Mar-17	36	83	79	112	36
Apr-17	11	3	5	53	18
May-17	14	26	12	10	11
Jun-17	2	17	2	11	6
Jul-17			4		
Aug-17	1		3	5	
Sep-17		1	1		
Oct-17					
Nov-17		34	6	4	7
Dec-17					
Jan-18					
Feb-18		5	19	11	
Mar-18			14	7	
Apr-18		2		1	
May-18	1		11	7	
Jun-18					
Jul-18			31	29	
Aug-18	2	19	14	9	4
Sep-18	1	2	32	9	
Oct-18	3	3	29	17	1





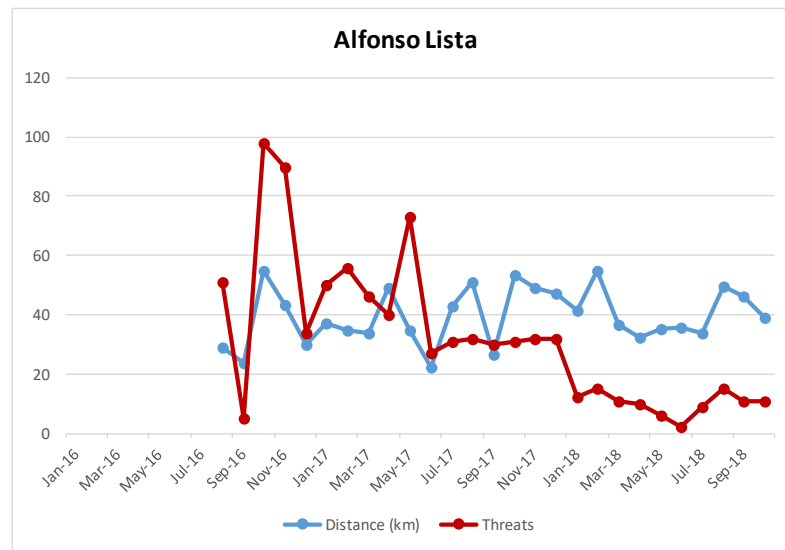
## ANNEX G

# Diagrams Showing the Relationship between Patrol Effort and Observed Threats

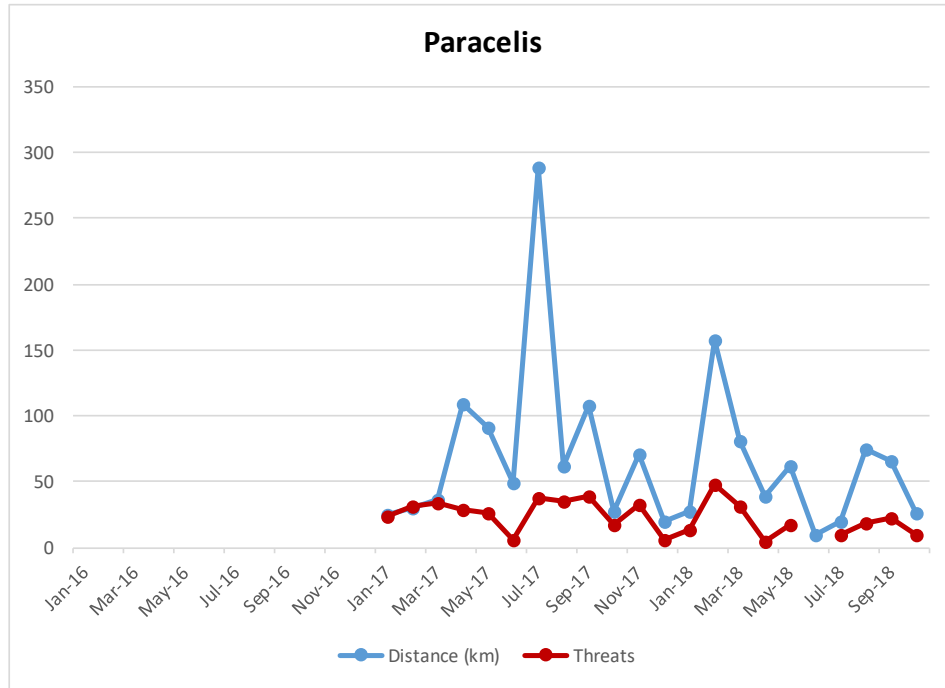
# ANNEX G: DIAGRAMS SHOWING THE RELATIONSHIP BETWEEN PATROL EFFORT AND OBSERVED THREATS

CAR: Alfonso Lista and Parcelis

Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16		
May-16		
Jun-16		
Jul-16		
Aug-16	29.08871	51
Sep-16	23.48502	5
Oct-16	55.02342	98
Nov-16	43.49408	90
Dec-16	29.98018	34
Jan-17	36.9383	50
Feb-17	34.52361	56
Mar-17	33.64075	46
Apr-17	49.16256	40
May-17	34.91016	73
Jun-17	22.18852	27
Jul-17	43.06929	31
Aug-17	50.83357	32
Sep-17	26.58999	30
Oct-17	53.35975	31
Nov-17	49.13757	32
Dec-17	47.27137	32
Jan-18	41.50029	12
Feb-18	54.88797	15
Mar-18	36.54849	11
Apr-18	32.3856	10
May-18	35.19085	6
Jun-18	35.76769	2
Jul-18	33.71968	9
Aug-18	49.65115	15
Sep-18	46.16713	11
Oct-18	39.06441	11

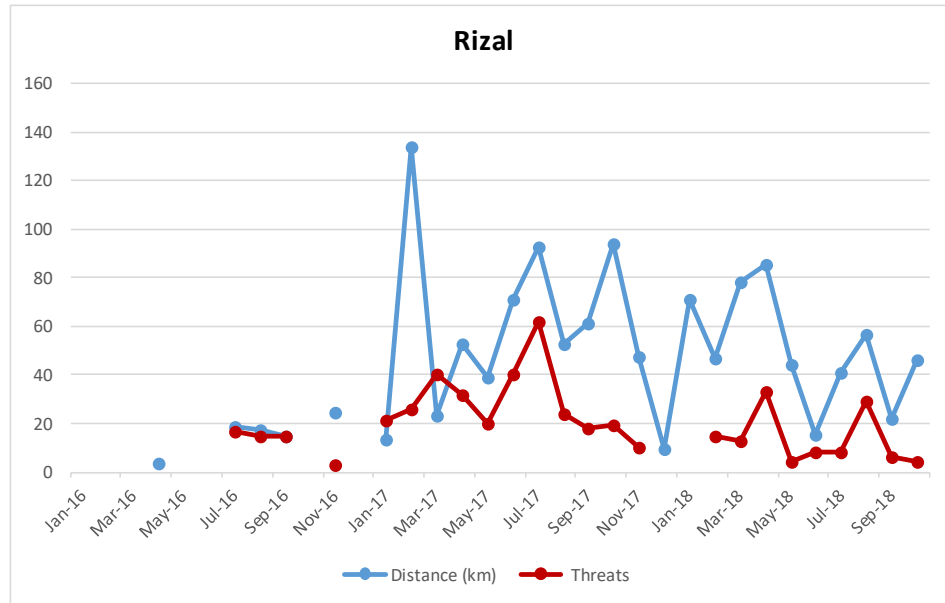


Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16		
May-16		
Jun-16		
Jul-16		
Aug-16		
Sep-16		
Oct-16		
Nov-16		
Dec-16		
Jan-17	24.46594	23
Feb-17	30.36339	31
Mar-17	36.84048	34
Apr-17	109.6292	29
May-17	90.71932	26
Jun-17	49.05735	6
Jul-17	288.3214	37
Aug-17	61.43051	35
Sep-17	107.85	39
Oct-17	27.78677	17
Nov-17	71.11387	32
Dec-17	19.21928	6
Jan-18	27.45255	14
Feb-18	157.9613	48
Mar-18	81.24203	31
Apr-18	38.97139	4
May-18	62.12991	17
Jun-18	9.982137	
Jul-18	19.76732	9
Aug-18	74.59403	18
Sep-18	66.24949	22
Oct-18	26.32861	9



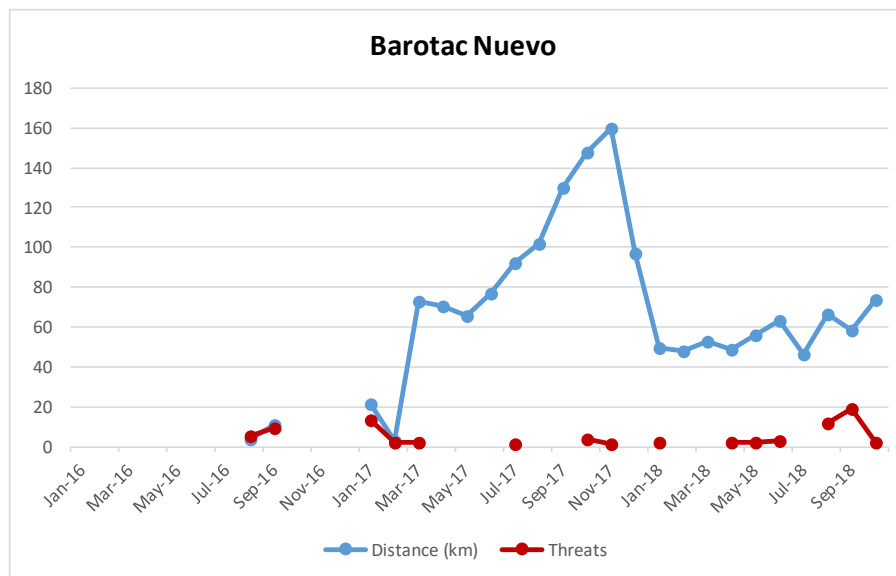
**Region 4A: Rizal**

Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16	3.712267	
May-16		
Jun-16		
Jul-16	18.35117	17
Aug-16	17.09246	15
Sep-16	14.85873	15
Oct-16		
Nov-16	24.4056	3
Dec-16		
Jan-17	13.10702	21
Feb-17	133.6371	26
Mar-17	23.14523	40
Apr-17	52.93472	32
May-17	38.99509	20
Jun-17	70.81435	40
Jul-17	92.29055	62
Aug-17	52.86611	24
Sep-17	61.04343	18
Oct-17	93.96686	19
Nov-17	47.12608	10
Dec-17	9.3451	
Jan-18	71.18843	
Feb-18	46.65838	15
Mar-18	78.50204	13
Apr-18	85.64156	33
May-18	44.18793	4
Jun-18	15.37727	8
Jul-18	41.17431	8
Aug-18	56.35737	29
Sep-18	21.78849	6
Oct-18	45.96091	4

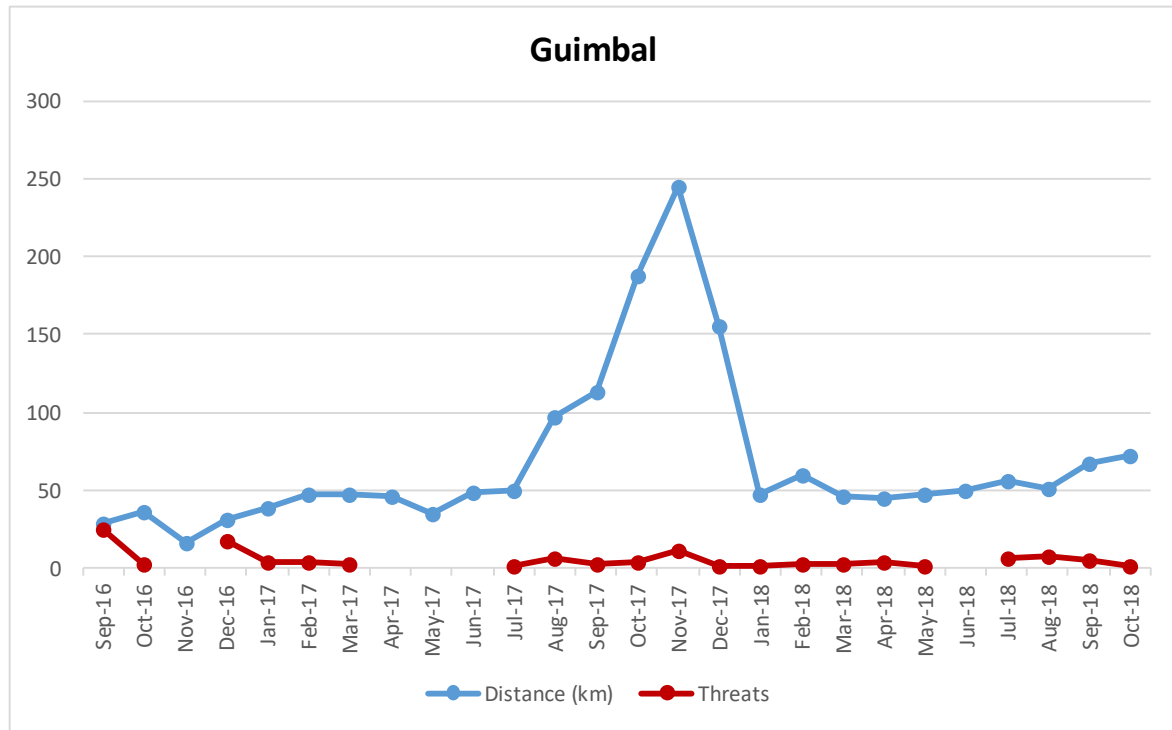


### Region VI: Barotac Nuevo and Guimbal

Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16		
May-16		
Jun-16		
Jul-16		
Aug-16	3.2665441	5
Sep-16	10.5679264	9
Oct-16		
Nov-16		
Dec-16		
Jan-17	21.5433731	13
Feb-17	3.17158008	2
Mar-17	72.4712753	2
Apr-17	70.4878464	
May-17	65.7747955	
Jun-17	76.7242737	
Jul-17	92.036911	1
Aug-17	101.660049	
Sep-17	129.816452	
Oct-17	147.803558	4
Nov-17	159.804367	1
Dec-17	97.2976761	
Jan-18	49.7830734	2
Feb-18	48.0034866	
Mar-18	52.9681435	
Apr-18	48.9127731	2
May-18	56.054184	2
Jun-18	63.2726059	3
Jul-18	46.1974297	
Aug-18	66.2310562	12
Sep-18	58.0695038	19
Oct-18	73.8983383	2

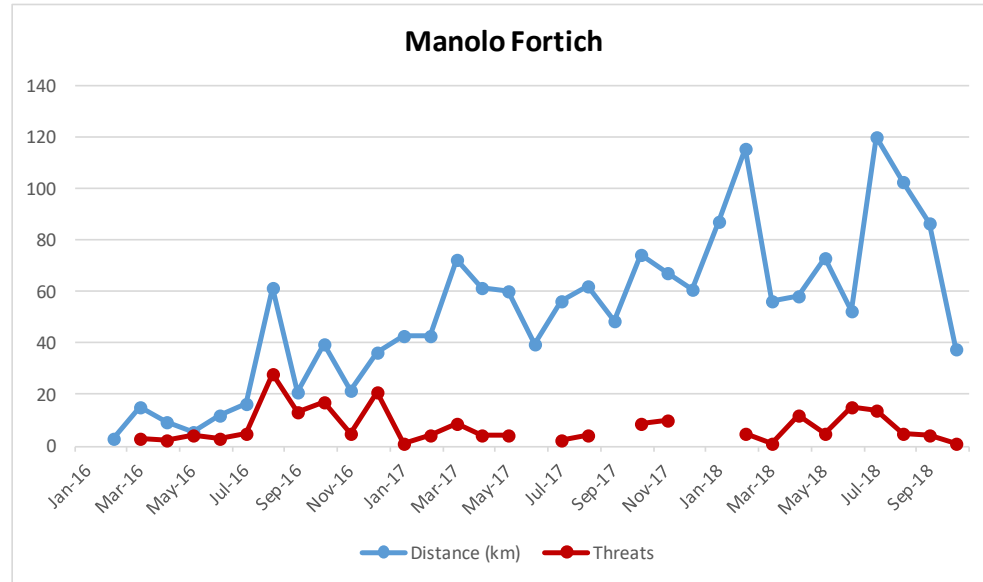


Date	Distance (km)	Threats
Sep-16	28.36885	25
Oct-16	35.63775	2
Nov-16	16.39787	
Dec-16	31.03585	17
Jan-17	39.07108	4
Feb-17	47.39677	4
Mar-17	47.22833	2
Apr-17	45.57438	
May-17	34.9321	
Jun-17	48.84047	
Jul-17	49.36453	1
Aug-17	96.8464	6
Sep-17	112.7122	2
Oct-17	188.2353	4
Nov-17	245.659	11
Dec-17	155.3361	1
Jan-18	47.43336	1
Feb-18	59.35368	3
Mar-18	45.75696	2
Apr-18	44.33343	4
May-18	47.20834	1
Jun-18	49.71777	
Jul-18	55.41694	6
Aug-18	51.22303	7
Sep-18	66.93422	5
Oct-18	72.21149	1

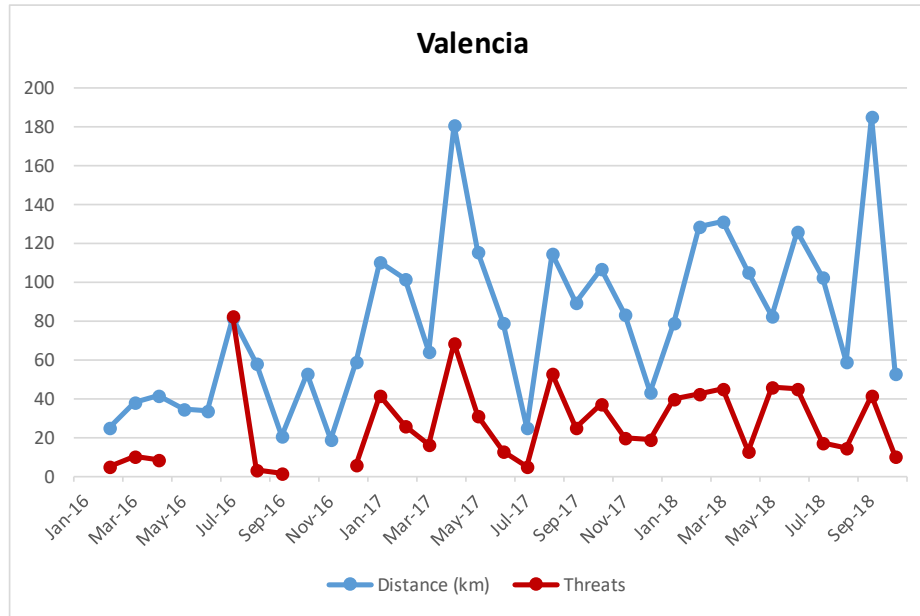


**Region X: Manolo Fortich and Valencia**

Date	Distance (km)	Threats
Jan-16		
Feb-16	2.603802919	
Mar-16	15.44363976	3
Apr-16	9.118847847	2
May-16	5.609363556	4
Jun-16	11.95970535	3
Jul-16	16.6799736	5
Aug-16	61.76208115	28
Sep-16	20.96072197	13
Oct-16	39.40205002	17
Nov-16	21.25685692	5
Dec-16	36.5450058	21
Jan-17	43.00889969	1
Feb-17	42.71334457	4
Mar-17	72.2310791	9
Apr-17	61.66656494	4
May-17	60.31989288	4
Jun-17	39.87077332	
Jul-17	56.02144241	2
Aug-17	61.95902634	4
Sep-17	48.66854095	
Oct-17	74.30492401	9
Nov-17	67.20836639	10
Dec-17	61.05947113	
Jan-18	87.29589844	
Feb-18	115.7824173	5
Mar-18	56.17385483	1
Apr-18	57.98987198	12
May-18	73.0763092	5
Jun-18	52.37943268	15
Jul-18	119.9085541	14
Aug-18	102.5723419	5
Sep-18	86.78487396	4
Oct-18	37.6985054	1



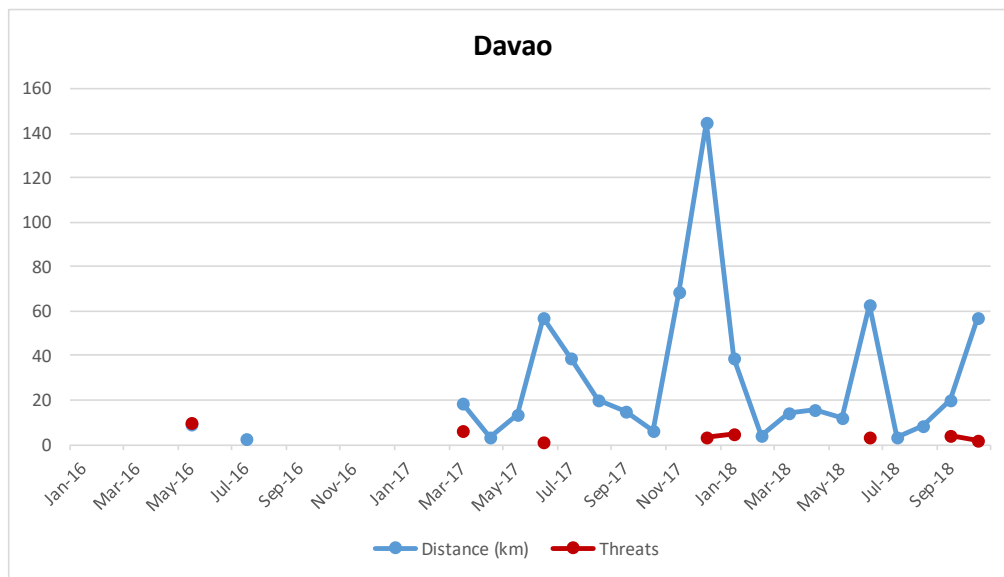
Date	Distance (km)	Threats
Jan-16		
Feb-16	25.21574	5
Mar-16	38.07753	10
Apr-16	41.6577	8
May-16	34.7843	
Jun-16	33.57982	
Jul-16	81.74551	82
Aug-16	57.55026	3
Sep-16	20.70768	1
Oct-16	52.65713	
Nov-16	19.13322	
Dec-16	58.925	6
Jan-17	110.0604	41
Feb-17	101.8436	26
Mar-17	63.80423	16
Apr-17	180.6911	68
May-17	115.1431	31
Jun-17	78.94032	13
Jul-17	24.53083	5
Aug-17	114.4216	53
Sep-17	89.00327	25
Oct-17	106.7318	37
Nov-17	83.02117	20
Dec-17	43.50989	19
Jan-18	79.13495	40
Feb-18	128.8069	42
Mar-18	131.144	45
Apr-18	105.393	13
May-18	82.54337	46
Jun-18	125.5586	45
Jul-18	102.0112	17
Aug-18	59.12754	14
Sep-18	185.529	41
Oct-18	52.87852	10





### Region XI: Davao and Digos

Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16		
May-16	9.181833	10
Jun-16		
Jul-16	2.659289	
Aug-16		
Sep-16		
Oct-16		
Nov-16		
Dec-16		
Jan-17		
Feb-17		
Mar-17	18.40123	6
Apr-17	3.584002	
May-17	13.4742	
Jun-17	57.27464	1
Jul-17	38.84921	
Aug-17	19.64165	
Sep-17	14.7772	
Oct-17	6.466643	
Nov-17	68.37713	
Dec-17	145.0126	3
Jan-18	39.12666	5
Feb-18	4.230711	
Mar-18	14.35052	
Apr-18	15.92538	
May-18	11.79504	
Jun-18	63.0409	3
Jul-18	3.554905	
Aug-18	8.466324	
Sep-18	20.24672	4
Oct-18	57.05703	2



Date	Distance (km)	Threats
Jan-16		
Feb-16		
Mar-16		
Apr-16		
May-16	2.365095	2
Jun-16		
Jul-16	17.29303	
Aug-16	10.66532	
Sep-16	20.29177	
Oct-16	5.925314	
Nov-16	6.795849	
Dec-16	9.132465	1
Jan-17	1.786878	
Feb-17	12.28257	
Mar-17	86.37572	36
Apr-17	75.95019	11
May-17	38.39192	14
Jun-17	16.74707	2
Jul-17	5.340904	
Aug-17	23.45123	1
Sep-17	1.841154	
Oct-17		
Nov-17	14.44305	
Dec-17		
Jan-18		
Feb-18	23.13378	
Mar-18	40.16899	
Apr-18	4.435603	
May-18	4.561407	1
Jun-18		
Jul-18	26.23265	
Aug-18	16.85852	2
Sep-18	7.063605	1
Oct-18	15.68025	3

