Internal Report

Proceedings for 'Theory of Change Development Workshop' for Enhanced National Greening Program (ENGP)

3-4 May 2018, Sequoia Hotel, Quezon City, Philippines











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Acronyms and Abbreviations

AoF	Area of Focus
DENR	Department of Environment and Natural Resources
eNGP	Enhanced National Greening Program
ICRAF	World Agroforestry Center
MEF	Monitoring and Evaluation Framework
M&E	Monitoring and Evaluation
PMPCRFD	Philippine Master Plan for Climate Resilient Forestry Development
NGP	National Greening Program
PDP	Philippine Development Plan
ТоС	Theory of Change
UNDP	United Nations Development Programme

Background

The Government of the Philippines is implementing a national-scale reforestation program since 2011. With the recognition of the country's high vulnerability to climate change and increasing threats on forest resources, the government launched the National Greening Program (NGP) through Presidential Executive Order 26. It is an ambitious program which targeted the reforestation of 1.5 million hectares of degraded lands to address food security, biodiversity conservation, climate change mitigation and adaptation, among others. By 2016, DENR reported that the NGP had exceeded its targets since it already planted 1.653 million hectares with 1.358 billion seedlings and provided jobs to 3.293 million Filipinos. Encouraged by the success of the program, the former President Benigno Simeon Aquino, III expanded its coverage and extended its implementation in 2015 through EO 193.

As a huge investment program, it is essential to develop a comprehensive Monitoring and Evaluation (M&E) System for the eNGP. A sound M&E system will help monitor results and track progress towards achieving program objectives and impact. To provide basis in indicator selection, a Theory of Change (ToC) shall be constructed for the eNGP. It aims to gather information on program impacts, organizational landscape, and data sharing mechanisms, among others. Aside from its direct importance to the development of M&E system, ToC could guide the implementation of the eNGP towards achieving its desired change.

In this context, the World Agroforestry Centre (ICRAF) Philippines, a third-party organization that has been providing technical assistance for the development of eNGP M&E System, will conduct a Theory of Change Development Workshop with DENR personnel in 3-4 May 2018. This ToC is one of the crucial steps for the formulation of the monitoring and evaluation framework (MEF) of the eNGP. The output will serve as the basis for the selection of monitoring indicators and conceptualization of potential special studies to measure the success of the program in the long run. The results of this activity will also be presented during a one-day National Workshop on the ToC with other eNGP stakeholders. Hence, these two workshops will be preliminary steps in strengthening the collaboration between different stakeholders of the eNGP.

Workshop Objectives and Expected Outputs

The objective of the workshop was to improve the results framework of the Enhanced National Greening Program through the formulation of Theory of Change (TOC). Specifically, this event seeked to:

- 1. Introduce the concept of Theory of Change and its importance in developing a Monitoring and Evaluation System for eNGP;
- 2. Provide basis for the selection of precise monitoring indicators and appropriate methodologies;
- 3. Identify existing datasets to supplement proposed methodologies; and
- 4. Provide a venue for the different eNGP stakeholders to have a common vision for the program.

The workshop was expected to generate the following outputs:

- 1. Improved Results Framework of the eNGP;
- 2. Initial list of indicators for monitoring and evaluation of the eNGP; and
- 3. Initial list of methodologies and data requirements for the implementation of MEF.

The workshop program and list of participants are annexed as Annexes I and II, respectively.

Day 1: Thursday, 3 May 2018

Opening Remarks

After registration, the day began with a motivating opening remarks from the Assistant Secretary for Staff Bureau Ricardo I. Calderon. He shared his confidence about the Enhanced National Greening Program (eNGP) as it is still being funded by the Department of Budget and Management (DBM) despite the criticisms from other parties. He also expressed his high hopes on the Monitoring and Evaluation Framework (MEF) that will be developed, especially on filling the gaps that were noted on the program.

Key Note Message

On behalf of DENR Secretary Roy Cimatu, Undersecretary for Policy, Planning and International Affairs Jonas R. Leones extended his sincerest gratitude to the United Nations Development Programme (UNDP) and World Agroforestry Center (ICRAF) for financial assistance and technical expertise, respectively.

Usec. Leones shared the success of NGP after about 7 years of implementation. The NGP exceeded their set of targets for the end of Dec 2016 through workshops, consultation and discussion meetings, and program sessions to ensure the effective implementation of the program. However, he also stressed the need to strengthen and enhance the monitoring and evaluation of the program as periodic assessment of the program (either internal of external) suggests.

He added that the M&E of the NGP covers only the 3 major indicators of success for 7 years ,namely 1)) Area planted 2) Number of Seedlings and 3) Jobs Generated. He then acknowledged that these indicators are not enough to reflect the success of goals and milestones of the program.

They have initially reported an average survival rate of 85% for the CY 2011 – 2015 plantations as of Dec 2016, but there are still some sectors that are doubtful of these figures. To determine the real and actual survival rates of these plantations, DENR Central Office together with other bureaus is currently conducting a 5% random validation. This is expected to be completed by the end of 3rd Quarter of 2018. On ther other hand, the 2016 and 2017 plantations are yet to be validated by DENR offices.

Further, Usec. Leones recognized that the first implementation of the program incurred some weaknesses and difficulties but were addressed as they progress with the implementation. He

said that the program was too focused on achieving the physical targets as indicated in their annual work and financial plan and giving limited attention in giving the desired outcomes of the program, specifally on food security, biodiversity conservation and climate chang mitigation and adaptation. He concluded that it is apparent that there is alot of thing to do to be able to ensure that the desired outcomes of the program are realized that these are felt by the common people.

Lastly, Usec. Leones noted that the conduct of this workshop is very timely and imperative in order for DENR to develop a more comprehensive monitoring and evaluation framework. Through the workshop they would be able to have a common M&E framework for the Enhanced National Greening Program, Tools and Methods for eEvaluation, Comprehensive Program Applying the Theory of Change with sets of SMART or Core Indicators, Terms of Reference for Special Studies to explore the critical questions throughout the program's theory of change, current capacities and capacity needs of targeted groups, institutions and offices with key responsibilities of managing and administering the MEF and budget and workplan for executing the MEF.

Overview of the Workshop

Assistant Secretary for Policy and Planning Corazon C. Davis, discussed the Development of Monitoring and Evaluation Framework (MEF) for the eNGP. The six month project is financially supported by UNDP and UNDP engaged ICRAF for technical expertise.

Asec. Davis enumerated the key outputs of the project as follows:

- M&E Framework for the enhanced NGP;
- Tools and methods for evaluation;
- Comprehensive program ToC with sets of SMART or Core Indicators;
- ToRs for Special studies to explore the critical questions around the program's ToCl; and
- Current capacities and capacity needs of targeted groups, institutions, and offices with key responsibilities for managing and administering the MEF; and Budget and Work Plan for executing the MEF.

She also highlighted the following considerations in the ToC Development:

- Importance of Sustainability of Investments DENR consider encouraging the private sectors to invest on forest rehabilation in the ToC development.
- Baseline Development
 In the first phase of eNGP, the baseline was late and the program started with the assessment of the area which resulted in overlooking the other indicators.

There will be 2 baselining that could be done: 5 years after NGP and 5 years after eNGP. The methodology developed in the eNGP could be used in determining the baseline of NGP.

Existing Monitoring and Evaluation Framework and Way Forward

Chief for Program Monitoring and Evaluation Division, Monina Cunanan, discussed the existing MEF used for the eNGP. She noted that there is still no MEF for the eNGP and DENR is still using the previous framework for the NGP which is 2011 – 2016.

The MEF as shown in Figure 1 and Figure 2, and Figure 3 serves as the sustainability mechanism that will facilitate the efficient and effective implementation of NGP by providing decision makers and partners. This will provide timely and accurate data information in accomplishment status of implementation as well as issues and hindrances towards the achievement of the program.



FIGURE 1 MONITORING AND EVALUATION FRAMEWORK OF NGP



FIGURE 2 NGP MONITORING AND EVALUATION SCHEME





FIGURE 3 RELATIONSHIP OF M&E GATES TO STAGES

Chief Cunanan also discussed the hierarchy of results from the existing MEF for NGP. She highlighted the contribution of regional NGP Coordinators and offices in collecting the data for these results.

Results	Increase in Forest Cover Survival Rate of Seedlings Income & Employment Generation
Planation	Seedlings/ Area Planted
Monitoring	Seedlings Produced
	Nurseries Established
	Volunteers' Participation
	IEC Conducted
Initial Gains	Seedlings
Evaluation	Volunteers
	Sites, Site Maps
	Funds

FIGURE 4 HIERARCHY OF RESULTS IMPACT AT 6 YEARS OF IMPLEMENTATION

She then described how the mullti-level of monitoring, evaluation and validation of NGP operates within and outside DENR as shown in Table 1. The monthly, quarterly and annual accomplishment and validation reports are then submitted to the following for review:

- Convergence Initiative (with DA and DAR)
- National Economic and Development Authority
- Department of Budget and Management

- Senate and House of Representatives
- Office of the President (Office of the Cabinet Secretary, Presidential Management Staff, Cabinet Cluster, Human Development and Poverty Reduction Cluster and Climate Change
- Inter-Agency Task Force AO 25 (Results-Based Performance Management System)

OFFICE	M&E ACTIVITY	FREQUENCY OF REPORTING	VALIDATION AND AUDIT
Regional Offices PENROs and CENROs	Progress M&E Progress M&E	Weekly, every Thursday of the week (Regions submit reports to the FMB-NGP Coordinating Office) Monthly, Quarterly, Semi-annual, Annual (Regions submit reports to the Policy and Planning Service)	100% Validation - Geotagged photos - Certified Report on Comprehensive Site Development
FMB	Progress M&E	Monthly, Quarterly, Semi-annual, Annual (FMB submits reports to the Policy and Planning)	Random Sampling Technical Monitoring and Evaluation
Planning and Policy	Progress M&E	Monthly, Quarterly, Semi-annual, Annual (Policy and Planning Service submits reports to the Office of the Secretary, Oversight agencies)	Random Sampling Annual Validation, joint validation activity with the FMB, FMS, ERDB, BMB
IAS			Audit

TABLE 1 NGP MULTI-LEVEL MONITORING, EVALUATION AND VALIDATION

In addition, Chief Cunanan enumerated the third parties that have been involved, are involved, and soon to be involved in the evaluation of NGP as shown in Table 2.

TABLE 2 THIRD PARTY MONITORING AND EVALUATION

Office/ Organization	Engagement
University of the Philippines-National College of Public Administration and Governance (UP-NCPAG)	MOA on Client Satisfaction Survey
Philippine Institute of Development Studies (PIDS)	Impact Assessment Study on NGP (Environmental, Economic, Social, Institutional)
Ateneo de Manila University, Inc (ADMUI)	To project greenhouse gas (GHG) emissions and assess the carbon sequestration of forests under the NGP
SkyEye UAV Services (Ateneo de Manila)	To monitor the tree plantations
UPLB	

In compliance with the NBC No. 565 s. December 2, 2016, "Adoption of a Results-Based Monitoring, Evaluation and Reporting Policy (RBMER)", the DENR is using the RBMER Policy Framework as a guide in evaluating all the DENR Projects. As show in Figure 5, the DENR is also considering Philippine Development Plan (PDP) and Master Plan for Climate Resilient Forestry Development (MPCRFD) in monitoring and evaluation of their projects.



FIGURE 5 RESULTS-BASED MONITORING, EVALUATION AND REPORTING (RBMER) POLICY FRAMEWORK

In conclusion, Chief Cunanan discussed the ways forward for the ENGP with the help from development partners and other relevant agencies as follows:

- Ensure the efficiency and effectiveness of indicators that have yet to collected by the DENR;
- Identify Indicators that capture the climate change initiatives and biodiversity
- Make some adjustments on logical framework to ensure that these indicators are included
- Implement targets on PDP, Philippine Master Plan for Climate Resilient Forestry Development and achievement of commitment on SDGs

Theory of Change: A crucial step in M&E System Development

Dr. Faisal Noor, ICRAF Consultant, briefed the participants about the importance of Theory of Change (ToC) in program monitoring and evaluation. He defined ToC as a diagram that explains how a program has an impact on its beneficiaries as shown in Figure 6. It should not refer to the diagram, growth plan or operational details of the organization itself – it should effectively describe and explain the impact of the program from a beneficiary's point of view.



FIGURE 6 THEORY OF CHANGE DIAGRAM

Dr. Noor enlightened the participants on the difference of the ToC from Logical Framework. The theory of change (ToC) sees development as characterized by long-term and open problems. It recognizes that social-change is complex and requires change in many actors over a long period of time. Therefore, ToC accepts that there are limits to a programs influence. On the other hand, logical framework takes a "mechanistic" view and focuses on the "ballistic" term 'impact' which implies a discrete, measurable, predictable and straightforward relationship between a program and the change it wishes to make. Therefore, logical framework assumes that the results development programs aim for are fully within the organization's control.

He also discussed the backward mapping approach of developing a TOC as shown in Figure 7. From the desired change, the participants will work backwards on the conditions that should exist and activities that should be performed to achieve that goal.



FIGURE 7 TOC DEVELOPMENT PROCESS

Leveling of Expectations and Open Forum

Before the break out sessions, the participants were requested to write their expectations on the the program, facilitators, participants and logistics as shown in Figure 8.

Expectations on the Program

The participants expect clear and concise instructions on the ToC development to be able to come up with sound MEF and tools and methods within the given time period.

Expectations on the Facilitators

The participants expect the facilitators to be approachable, clear and experienced.

Expectations on Fellow Participants

The participants expect their fellow participants to be actively cooperate and share their experiences on eNGP implementation.

Expectations on Logistics

The participants expect the logistics of the program to be systematic and fixed. They also expect the presentations and outputs to be shared after the program.



FIGURE 8 EXPECTATIONS OF PARTICIPANTS

Activity 1: Defining the Desired Change

Joan Ureta, ICRAF Senior Researcher, defined desired change for the eNGP as the Philippine situation relative to the Areas of Focus (AoF) that the participants hope to achieve after 2028. Two approaches are commonly used to explore the desired change of a certain initiative — (1) by defining and analyzing the problem, or (2) by visualizing and articulating the desired change (van Es et al., 2015).

The participants did the positive approach where the desired change is visualized through an activity called "The Conference". Four groups were formed and they were tasked to role play a conference to be held in 2030, 2 years after the completion of eNGP, where stakeholders of the eNGP are presenting the successes of the Program. As the main organizer, they should be able to answer the following questions:

- What would be the main theme of the conference?
- Who would be standing up and sharing?
- What specific successes would they share?

After a detailed synthesis and discussion, the participants decided to have "Sustainably managed environment and natural resources for safe, resilient, healthy and empowered communities thereby improving theri socio-economic well-being" as the desired change for eNGP. (Please see Annex III)

The group presentations also underlined the importance of collaboration to the success of eNGP. The participants recognized that eNGP success is not a work of DENR alone but harmonization of efforts with other stakeholders up to the grassroots level. The following are the critical stakeholders that were mentioned by the groups in their "Conference" on the eNGP success in

2030:

- Office of the President
- Office of the Vice president
- Senate of the Philippines
- House of Representatives
- Chief Justice
- House Speaker
- United Nations Secretary General
- Department of Environment and Natural Resources (DENR)
- Department of Agriculture (DA)
- Department of Agrarian Reform (DAR)
- Department of Labor and Employment (DOLE)
- National Economic Development Authority (NEDA)

- People's Organization (PO)
- Department of National Defense (DND)
- Department of Trade and Industry (DTI)
- Department of Social Welfare and Development (DSWD)
- Department of Education (DepEd)
- Greenpeace
- Local Government Units (LGUs)
- Academe
- Private Sector
- Donors
- Indigenous Peoples
- Local Communities (Beneficiaries)

Activity 2: Mapping the outcomes

Joan Ureta, ICRAF Senior Researcher, presented the process on how to map the outcomes from the desired change. She defined 'outcome' as the preconditions that need to be met in order to achieve the desired change.

The four groups were assigned to each AoF of the eNGP, namely Poverty Reduction and Food Security, Climate Change Adaptation and Mitigation, Biodiversity Conservation and Sustainable Management of Forest Resources. They were given a matrix as shown on Table 3 to fill out with guide questions as follows:

- What are the conditions that need to be met in each of the AoF in order to achieve the desired change?
- What conditions can happen simultaneously, and which are sequential?
- What conditions need to be in place in the short, medium and long term?
- How likely is it that we can bring about these conditions?
- What factors obstruct or facilitate our pathway of change?

TABLE 3 OUTPUTS OF ACTIVITY ON MAPPING THE INTERMEDIATE STATE.

Type of Change				
Short-term < 3 years	Medium-term 5 years	Long-term > 10 years	Barriers	Enabling factors

The results of the activity were presented in plenary and discussed, which are annexed as Annex IV.

Activity 3: Revisiting eNGP Activities

Dir. Nonito Tamayo, Director of Forest Management Bureau and National Greening Program Coordinator, refreshed the participants with the current activities done under eNGP to achieve the project objectives.

First, he enumerated the existing frameworks that should be considered in developing the theory of change of the program.

- Sustainable Development Goals 2030
- Global Forestry Objectives
- Forestry Sector Objectives
- Philippine Development Plan 2017-2022
- DENR Priority Programs under Secretary Cimatu

He then recalled that due to the success of NGP, former President Aquino "expanded" NGP up to year 2028 or eNGP. In addition, a second guideline was developed under Secretary Gina Lopez focusing on "enhancing" the existing plantations with low density. To harmonize the "enhanced NGP" and the "expanded NGP", he noted that DENR is in the process of developing a revised guideline with the following changes:

- Extended the engagement of POs for 3-5 years.
- Increase on M&P provisions especially on years 2 and 3 (most critical)
- Development of Social Enterprises (to be cleared if the mandate of DENR; need partnership with other agencies)
- Include soil analysis in Survey, Mapping and Planning (SMP) for the development of soil maps for watersheds
- "Reforestation by Admin" Prioritize Critical watersheds
- Engage not only community level but household level

Dir. Tamayo also presented the current Logical Framework of Expanded and Enhanced NGP with and impact statement of "Sustainably Managed Natural Resources". (Please see Annex V). The outcome was indicated as "Reversed loss of forest cover through sustained rehabilitation of

degraded forestlands including critical watershed & strengthen protection of remaining natural forest." To meet the said outcome, the activities of the program should result to rehabilitation of denuded and degraded forestland and effective management of forestlands.

Lastly, Dir. Tamayo discussed the following activities currently implemented by the DENR and how they are collected, monitored, and validated including the assumptions and risks.

- Delineation of Production and Protection Forests
- Conduct of Survey, Mapping & Planning
- Forging Partnership with Stakeholders
- Seedling Production
- Plantation Establishment
- Maintenance and Protection
- Hiring of Forest Extension Officers
- Monitoring, Evaluation and Control
- Establishment of market linkages

Day 2: Friday, 4 MAY 2015

The day started with Joan Ureta recapping the outputs and activities of day 1. She also presented the revised desired change "Sustainably managed environment and natural resources for improved socio-economic well-being of secured and empowered communities by 2030" that was later approved by the body.

Activity 4: Defining the Outputs, Indicators and Methodologies

Due to limited time, the facilitators developed a new approach in developing the TOC. Joan Ureta presented the new activity wherein the Activity 4: Identification of eNGP outputs and Activity 5: Indicators and Methodologies Selection were merged in one activity.

She defined the 'outputs' as the measurable product that has direct relation to each project intervention or eNGP activitiy. These are necessary to achieve short term outcomes.

Indicators, on the other hand, are the measure of success of the Program and verifies whether an intended change actually occured. These indicators should be complemented with a methodology to ensure their measurability and feasibility based on the program resource limitations. She also differentiated the types of indicators that will be identified in the ToC:

- Output indicators- they measure the direct success of project implementation;
- Outcome indicators- they measure the change in systems or behaviours; and
- Impact indicators- they measure the highest level of change that could be attributed to the project

After that, the matrices as shown in Tables 4 and 5 were explained to the participants. They were still grouped into four to work on the TOC matrix and Indicator Matrix of each area of focus.

The groups were given their respective TOC matrix based on the outputs from day 1's activities. The existing eNGP logical frameworks presented by Dir. Tamayo was also distributed for better understanding of the eNGP activities.

Dr. Noor reminded the participants to take note of proxy and soft indicators along the development as these would help improve the methodologies to be identified.

It took the groups half a day for the breakout sessions. The results of the activity were presented in afternoon plenary for discussion, which are annexed as Annex VII.

Desired Change	Sustainably managed environment and natural reso socio-economic well-being of secured and empowe 2030	ources for improved ered communities by
Long-term Outcome		
Long-term Outcome Indicators		
Medium-term Outcome		
Medium-term Outcome Indicators		
Short-term Outcome		
Short-term Outcome Indicators		
Output Areas		
Indicators		
eNGP Main Activities		

TABLE 4 THEORY OF CHANGE MATRIX

TABLE 5 INDICATOR MATRIX

Indicator	Current methodology	Proposed Methodology (if any)	Frequency of monitoring	Sampling/Geographic Coverage
A. Long-term	Outcome Indicators	5		
B. Medium-te	B. Medium-term Outcome Indicators			
C. Short-tern	n Outcome Indicator	s		
D. Critical Output Indicators				

The activities 6 to 8 , Determining Impact Drivers and Assumption, Refining the ToC and Ways Forward, could not be covered due to lack of time and unexpected presentation from Assistant Secretary for Anti Corruption Darius Nicer.

NGP Implementation Gaps

Asec. Darius Nicer , Assistant Secretary for Anti-Corruption, discussed the gaps of the initial NGP implementation.

First, he stressed that the initial audit of NGP already suggested the agency to work on the respective objectives of the program. However, it was not addressed. He also recognized the lack of baseline data before the NGP implementation.

To support his claims, he presented the Environmentor Application which shows the forest cover changes from 2011 – 2016 based on NAMRIA Maps.He noted the presence of NGP sites on closed forest and alienable and disposable lands. Error from regions, especially those with negative impacts to the environment were also identified.

In conclusion, he suggested that the monitoring and evaluation framework should be specific per site for better implementation. He also offered the help of his office on sharing population and poverty incendence data from NSO for improved baselining.

Concluding Remarks

Joan Ureta congratulated everyone for a job well done. She assured the participants that the workshop results will be consolidated by ICRAF as a report that will be submitted to DENR and UNDP. There will also be follow-up meetings among the organizers to refine the TOC that will soon be presented in the National TOC Workshop of eNGP Stakeholders.

Dr. Cristino Tiburan, ICRAF GIS Consultant, extended his gratitude to the organizers and DENR officials for collaborating with ICRAF and UNDP on this workshop. He recognized how the lively and entertaining discussions facilitated the productivity of the participants. Lastly, he reiterated that ICRAF will come up with revised workshop outputs that will be presented to DENR, especially for the indicators and methodologies.

Annexes

Annex I : Program Outline

Theory of Change Development Workshop

3-4 May 2018 Sequoia Hotel

Time Activity **Resource Speaker** Registration 08:30-09:00 09:00-09:02 Prayer National Anthem 09:02-09:05 09:05- 09:20 **Opening Remarks** Asec. Ricardo L. Calderon Assistant Secretary for Staff Bureaus Key Note Message Usec. Jonas R. Leones Undersecretary for Policy, Planning and International Affairs Overview of the Workshop Asec. Corazon C. Davis Assistant Secretary for Policy and Planning Understanding the Rationale of the TOC Workshop 09:20-09:35 Existing M&E Framework & way forward Ms. Ma. Lourdes G. Ferrer Director, Policy and Planning Service 09:35-10:00 Development of M&E Framework for eNGP Dr. Faisal Noor ICRAF Philippines and Theory of Change: A crucial step in M&E System Development Leveling of Expectations and Open Forum 10:00-10:15 10:15-10:30 COFFEE BREAK Activity 1: Defining the Desired Change Session background, terminology definition, 10:30-10:40 and mechanics 10:40-11:10 Breakout session for the development of impact statement 11:10-11:40 Synthesis and development of one sentence that would capture the desired change 11:40-12:00 Group Photo LUNCH 12:00-01:00 Activity 2: Mapping the Outcomes

Day 1

01:00- 01:10	Session background, terminology definition, and mechanics	
01:10- 01:40	Breakout session for the identification of short-term, medium-term, and long-term outcomes	
01:40-02:10	Synthesis	

Day 2

Time	Activity	Resource Speaker	
08:30- 09:00	Registration		
09:00-09:10	Recap of the 1 st day		
Activity 5: Indica	tor and Methodology Selection		
09:10-09:20	Session background, terminology definition, and mechanics		
09:30- 10:30	Indicator and methodology selection	Activities will be divided and assigned to groups	
10:30- 11:30	Synthesis		
11:30- 12:30	LUNCH		
Activity 6: Deter	mining Impact Drivers and Assumption	n	
01:00- 01:10	Session background, terminology definition, and mechanics		
01:10- 01:40	Defining the drivers and assumption		
01:40-02:00	COFFEE BREAK		
Activity 7: Refining the ToC			
02:10-03:00	ToC Refinement		
Activity 8: Moving forward			
03:00- 04:00	Discussion on the initial plans for national core indicators workshop (e.g. who will present the ToC, up to what extent can it be revised?)		
04:30-04:45	Closing Remarks	Dr. Cristino Tiburan Jr. <i>ICRAF PH</i>	

Annex II : List of Participants

E

		C	DEVELOPMENT	WORKSHOP ON SEQUOIA HOT	THEORY OF CH MAY 2-4, 2 TEL, MOTHER IGN	ANGE FOR THE 2018 NACIA ST., QUEZO	ENGP M&E FRAM	NEWORK		
		IDER		POSITION/		Email		SIGNA	TURE	
NAME	M	F	OFFICE	DESIGNATION	CONTACT #	ADDRESS	2-May-18	3-May-18	4-May-18	5-May-18
CHESTER O. CASIL	/		DENR-RI	ROGIONAL COORDINATOR	0956-88D 2000	Chest-casil Chaloo.com	pil	fi	m	for
CELERINA D. FLORES		/	DENR-R9	REGIONAL NGP	09954732029	cetive-algoryaliss	ton Gee ir	See	- Coos	0.0
Gemma B. Celinu		1	DENR-RIO	EVIS- I NSP Stop	Coom59412494	rio-ngp@gma	I.um masing	yasing	marriel	marc
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Annex III : Output of Activity 1

As shown in Figure 9, the respective groups were able to come up with themes highlighting collaboration of agencies, community welfare, sustainable management, and resiliency.

I	A SUSTAINABLY MANAGED NATURAL RESOURCES, HEALTHY ENVIRONMENT AND IMPROVED WELL-BEING
2	SAFE and RESILIENT COMMUNITIES UPLIFTED THE QUALITY OF LIFE THROUGH FOREST SUSTAINABLE NRM
3	COMMUNITY."
4	You NITY ENGP 2030: TAGUMPAY ng PROGRAMA TAGUMPAY NATING LAHAT

FIGURE 9 DESIRED CHANGE OF EACH GROUP

Annex IV : Output of Activity 2

Poverty Reduction and Food Security

Group 1 identified their long term outcome as "Local Communities having self sustaining enterprises" as shown in Table 4. The factors that mainly restrict the achievement of outcome are limited community engagement and limited DENR Mandate. These barriers could be managed through harmonization of policies, collaboration with stakeholders, and improvement of tenurial instruments.

	Type of Change			
Short-term	Medium-term	Long-term	Barriers	Enabling factors
< 3 years	5 years	> 10 years		
 Income generated from eNGP related activities to provide the basic needs of the NGP beneficiaries Enterprise development 	 Manage income to engage in other livelihood options Enterprise development/ enhancement 	Local communities have self sustaining enterprises - Ecotourism - Mangrove plantations - Protected areas - Sustainable timber production	 Willingness of communities to engage in eNGP Whether it is within the DENR's mandate to capacitate partners in enterprising 	 Harmonization of policies Tenurial instruments (CBFMA) IEC Collaboration with other government agencies/ stakeholders MOAEngagement of LGUs FLUP Soil and water conservation measures to improve the productivity of the soil Engagement of LGUs

TABLE 6 OUTCOMES IN POVERTY REDUCTION AND FOOD SECURITY

Climate Change Adaptation and Mitigation

Group 2 identified their long term outcome as "Climate stability through attaintment of National Determined Contributions" as shown in Table 5. The factors that mainly restrict the achievement of outcome are weather condition uncertainty and pressure from pest and diseases. These barriers could be managed through convergence and research and development.

	Type of Chang	ge		Frahling
Short-term < 3 years	Medium-term 5 years	Long-term > 10 years	Barriers	factors
Sustained awareness of community on climate change mitigation as a component of eNGP	Forest development initiatives harmonized and mainstreamed nationwide	Contribute to climate stability through attainment of NDC - Increased canopy and forest cover	Uncertainties of weather conditions	Convergence with other agencies
Capacity of the community to implement or manage reforestation	Participation of various stakeholders in ENR management	 Improved micro-climate Increased biodiversity Access to clean water BMPs of agriculture Increased soil organic matter 	Pressure on pests and diseases	Research and development

TABLE 7 OUTCOME S IN CLIMATE CHANGE ADAPTATION AND MITIGATION

Biodiversity Conservation

Group 3 identified their long term outcome as "Increased species diversity" as shown in Table 6. The factors that mainly restrict the achievement of this outcome are human interventions and environmental disasters. These barries could be managed through increased community participation and capacities, convergence, research and development.

TABLE 8 OUTCOMES IN BIODIVERSITY CONSERVATION

	Type of Cha	nge		
Short -term < 3 years	Medium- term 5 years	Long-term > 10 years	Barriers	Enabling factors
Impro veme nt of habit ats	Increased population of flora and fauna species	Increased species diversity	 Destructive human interventions Timber and wildlife poaching Land conversion Natural calamities Pest and diseases Forest fire Weak enforcement Peace and order Upland migration and encroachment Political interventions Insufficient funds for protection and conservation Improper solid waste management 	 Increased community participation and other stakeholders Issuance of local ordinances Convergence Political will Innovations in patrolling the area (e.g. LAWIN) Use of technologies NIPAS and eNIPAS Capacity building and trainings

•	Low acceptability of communities to the	•	Implementation of
	program		BAMS
-	Use of exotic species over indigenous	•	Research and
	species and monocropping		development
-	Lack of species-site suitability mapping	-	Wildlife Act (RA 9147)

Sustainable Management of Forest Resources

Group 4 identified their long term outcome as "Improved ecosystem services and provision of forest-based goods and increased support to forest protection" as shown in Table 7. The factors that mainly restrict the achievement of this outcome are fragmented policies and lack of sense of ownership. These barriers could be managed through issuance of tenure and defining policies on sustainable forest resources management e.g. amendment of PD 107 and FLUP.

TABLE 9 OUTCOMES IN SUSTAINABLE MANAGEMENT OF FOREST RESOURCES

	Type of Change				
Short-term < 3 years	Medium-term 5 years	Long-term > 10 years	Barriers	Enabling factors	
Improved social awareness thru trainings and capacity-buildings of all stakeholders	Harmonization of policies and improvement of compliance to regulations for effective and efficient management of forest resources among stakeholders	 Improved ecosystem services and provision of forest-based goods Increase support to forest protection 	 Fragmented policies Sense of ownership/ Lack intensive moral recovery Limited financial allocation and time constraints 	 Well-defined policies on Sustainable Forest Resources Management Issuance of appropriate tenure management Amendment of PD 107 and FLUP 	

Annex V : Enhanced and Expanded NGP Logical Framework

Hierarchy of Objectives	Objectively Verifiable Indicators	Means of Verification	Assumptions and Risks		
Impact Sustainably managed natural resources achieved	 Increase in supply of forest goods (timber, ntfp) Ensure regulating functions Improve socio- economic conditions of the people 	Statistics report Forestry Accounts	Valuation of goods and services		
Outcome Reverse the loss of forest cover through sustained rehabilitation of degraded forestlands including critical watershed & strengthen protection of remaining natural forest	 Net increase (x) in forest cover by end of 2022 14% increase in forest cover by end of 2022 X tonnes of CO2 sequestered 	Latest Satellite Imageries of National Mapping and Resource Information Agency (NAMRIA) (CO2 Sequestration Potential per Hectare) Closed Forest – 4.58 tonnes CO2/ha/yr Open Forest – 7.63 tonnes CO2/ha/yr Mangrove – 6.59 tonnes CO2/ha/yr Plantation – 10.98 tonnes CO2/ha/yr	 Timely provision of the satellite imageries Integration of FLUP into CLUP Passage of Final Forest Limit Bill & National Land Use Bill 		
 Outputs Denuded and degraded forestland rehabilitated Forestland under effective management 	 Developed 1.2 M hectares of degraded and denuded forestland by end of 2022 Jobs/Employment generated 8.8 Million hectares of forestland effectively managed by end of 2022 	 Field Inspection/Validation Reports Certificate of Site Development Geotagged Photos & GIS Generated maps Patrol plan Field Reports 	 Force majeure Forest fire Extreme weather conditions Pests & Diseases 		
Activities/Inputs	al Greening Program (Facili	tate Reforestation Progra	m)		
Delineation of Production and Protection Forests	Area delineated into production and production forest (km)	GIS generated maps Field reports	•		
Conduct of Survey, Mapping & Planning	 Area Surveyed (ha/no of polygons) Maps prepared (no) Farm plan prepared (no) 	GIS generated maps	 Availability of resources (GPS) Market identification included 		

TABLE 10 ENHANCED AND EXPANDED NGP LOGICAL FRAMEWORK

Forging Partnership with Stakeholders	MOA/LOA Signed (no), Household Beneficiaries (no)	MOAs/LOAs	Willingness of the stakeholders
Seedling Production	Planting materials produced Species/ Commodity (no)	 Copy of Farm Plan Report MOA/LOA Disbursement Vouchers Field Inspection Reports Geotagged Photos Source of Planting materials 	 Extreme weather conditions Availability of Planting material Pests & Diseases
Plantation Establishment	 Area planted & developed (ha) Area enhanced (ha) Hedgerows established (lm/ha) 	 Farm Plan MOA/LOA Disbursement Vouchers Field Inspection/Validation Reports Certificate of Site Development Geotagged Photos & GIS Generated maps 	 Force majeure Forest fire Extreme weather conditions Pests & Diseases
Maintenance and Protection	 Firelines/Firebreaks established (ha) Survival rate (%) Vegetative measures established (ha/lm) Structural/Engineering measures constructed (cu. m) 	 MOA/LOA Maintenance & Protection Workplan Disbursement Vouchers Field Inspection Reports Geotagged Photos & GIS Generated maps 	 Force majeure Forest fire Extreme weather conditions Pests & Diseases After 3 years, established NGP plantations will be part of Forest Protection activities
Hiring of Forest Extension Officers	EOs deployed in field (no)	 Contracts/TOR of EOs Reports including POs assisted and type of assistance 	
Monitoring, Evaluation and Control	 Sites Geotagged (no) Shapefiles Rectified (no) 	 Inspection/Validation Reports Geotagged Photos GIS generated map 	
Establishment of market linkages	 NGP Products marketed (volume) Market linkages established (no) Products packaged (no) Volume (unit) 	• Report	 Support from other government agencies (DTI) Private sector investment

Annex VI: Results of Activity 4

Poverty Reduction and Food Security

TABLE 11 POVERTY REDUCTION AND FOOD SECURITY TOC MATRIX

Desired Change	Sustainably managed environment and natural resources for improved socio-economic well-being of secured and empowered communities by 2030						
Desired Change Indicator	Significant increase in contribution t	o National GDP					
Long-term Outcome 2028 onward	Local communities have self-sustain	ed well-being and quality of life of ommunities					
Long-term Outcome Indicators	Number of self-sustaining enterprise Number of individuals continuously by NGP Trend in volume and net income of c timber, fruits) marketed from NGP s	es managed by eNGP beneficiaries engaged in enterprises developed and enhanced ommodities (e.g. cacao, coffee, bamboo, rattan, tes	al change in number of households bove poverty and food thresholds in ommunities				
Medium- term Outcome 2022	Enterprises established by eNGP beneficiaries	eNGP contributed to the food security of benefic	iaries	Local communities are engaged in ecotourism activities in eNGP sites (e.g. mangrove areas or protected areas)			
Medium- term Outcome Indicators	Number of enterprises established by eNGP beneficiaries Number of eNGP beneficiaries engaged to establish the enterprises Volume of commodities (e.g. cacao, coffee, bamboo, rattan, fruits) marketed from NGP sites	Volume of commodities (e.g. cacao, coffee, fruits) harvested for domestic consumption Volume of harvested coastal and marine resource eNGP mangrove plantations) es from	% increase in number of community members involved in ecotourism and related activities *Number of PES schemes developed			

Short-term Outcome 2020	Local communities have access to market of eNGP commodities	Income generated from eNGP related activities to provide the basic needs of the NGP beneficiaries		Local co with LG agencie sites	ommunities are working Us, DENR and other s to develop ecotourism
Short-term Outcome Indicators	Number of eNGP communities assisted by DENR to access market (e.g. supplying private companies with eNGP products, development of enterprise products) Number of communities with technical and financial assistance from other government and private organizations Number of MOA or similar agreements forged between local communities, LGUs, DENR, and other agencies	% increase in household income derive Number of MOA or similar agreements local communities, LGUs, DENR, and oth relation to farm-to-market roads, water post harvest facilities	d from eNGP forged between her agencies in r supply, access to	Number agreem commu other aş	r of MOA or similar ents forged between local nities, LGUs, DENR, and gencies
Output Areas	Enterprises developed, enhanced, and implemented	Jobs and income generated	Enhanced capac eNGP benefician area manageme development	ities of ries in nt and	Feasibility studies on potential ecotourism sites developed and implemented
Core/Proxy Output Indicators	Number of business plans developed	Number of individuals employed at all stages of eNGP implementation	Number of POs tr in in area manage and development	ained ement	Number of potential ecotourism sites identified
	Number of communities trained to implement the enterprise business plans	Number of POs contracted			Number of feasibility studies developed
	Number and volume of products packaged	% increase in income of eNGP beneficiaries			
	NGP products harvested and marketed				
	Number of market linkages established				
eNGP Main Activities	 Establishment of market linkages 	 Forging partnership with POs to implement nursery production, 	1. Capacity-build (e.g. area	ding	 Forging partnership with stakeholders (e.g.

2.	Forging partnership with stakeholders (e.g. private sector,		planting, and plantation maintenance and protection		management and development)		private sector, local communities, DOT)
	local communities, DTI)	2.	Information Education Campaign	2.	Information	2.	Capacity- building (e.g.
3.	Community organizing		on employment opportunities and		Education Campaign		tour guiding, homestay
4.	Capacity-building on		success stories of eNGP		on good practices in		program)
	organizational management	3.	Conduct of baseline and progress		area management	3.	Information Education
	(e.g. leadership, financial		monitoring		and development		Campaign on
	management, enterprise	4.	Database management	3.	Conduct of baseline		ecotourism potential
	development)				and progress		and employment
5.	Support activities to enable local				monitoring		opportunities of eNGP
	communities to access financial			4.	Database		sites
	resources/ credit facilities				management	4.	Conduct of baseline
6.	Information Education						and progress
	Campaign on enterprise aspect						monitoring
	of eNGP					5.	Database management
7.	Conduct of baseline and						
	monitoring studies on						
	enterprises of eNGP						
	beneficiaries						
8.	Database management						

*secure- encompasses resilience/ DRR, safe (peace and order), health as adopted from NCCAP collective term 'human security'

 TABLE 12 POVERTY REDUCTION AND FOOD SECURITY INDICATOR MATRIX

Indicator	Current methodology	Proposed Methodology (if any)	Frequency of monitoring	Sampling
A. Desired Change Indicator				
ant increase in contribution to National GDP		*establish a system to compute for the contribution of eNGP to regional/national GDP	Baseline in 2019	
B. Long-term Outcome Indicators				
Marginal change in number of households living above poverty and food thresholds in eNGP communities	None	Baseline socio-economic survey in 2018- 2019 (no. of household members, % income from eNGP, % income from non- eNGP livelihood sources, household assets)		Primary data for eNGP sites with no available data

	- Survey instrument to be developed by Central Office/ ERDB		Secondary data from PSA and LGUs for communities within forestlands; to be validated
	Monitoring of socio-economic condition of eNGP beneficiaries	Every 3 years (2022, 2025)	All eNGP sites
	Terminal evaluation		
		2028	All eNGP sites
Number of self-sustaining enterprises managed by eNGP beneficiaries	Survey, KIIs, and FGDs	2022, 2028	All eNGP sites engaged in enterprise development
Number of individuals continuously engaged in enterprises developed and enhanced by NGP	Based on periodic reporting of DENR, survey, KIIs, and FGDs	Yearly (reporting), 2022, 2028 (participatory tools)	All eNGP sites engaged in enterprise development
Trend in volume and net income of commodities (e.g. cacao, coffee, bamboo, rattan, timber, fruits) marketed from NGP sites	Based on periodic reporting of DENR, KIIs, FGD Financial analysis	Yearly (reporting), 2022, 2028 (participatory tools) Every 3 years (2022, 2025)	All eNGP sites engaged in enterprise development
C. Medium-term Outcome Indicators			
Number of enterprises established by eNGP beneficiaries	Based on periodic reporting of DENR	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of eNGP beneficiaries engaged to establish the enterprises	Based on periodic reporting of DENR	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Volume of commodities (e.g. cacao, coffee, bamboo, rattan, fruits) marketed from NGP sites	Based on periodic reporting of DENR, survey	Quarterly, Yearly	All eNGP sites engaged in enterprise development

Volume of commodities (e.g. cacao, coffee, fruits) harvested for domestic consumption	Based on periodic reporting of DENR, survey	Quarterly, Yearly	All eNGP sites
Volume of harvested coastal and marine resources from eNGP mangrove plantations	Baseline perception survey Perception survey	2019 2022	All eNGP mangrove sites
% increase in number of community members involved in ecotourism and related activities	Based on periodic reporting of DENR, survey	Quarterly, Yearly	All eNGP sites
D. Short-term Outcome Indicators			
Number of eNGP communities assisted by DENR to access market (e.g. supplying private companies with eNGP products, development of enterprise products)	Based on periodic reporting of DENR	Yearly	All eNGP sites engaged in enterprise development
Number of communities with technical and financial assistance from other government and private organizations	Based on periodic reporting of DENR	Yearly	All eNGP sites engaged in enterprise development
% increase in household income derived from eNGP	Baseline socio-economic survey in 2018- 2019 (% income from eNGP) - Survey instrument to be developed by Central Office		Primary data for eNGP sites with no available data Secondary data from PSA and LGUs for communities within forestlands; to be validated
	Monitoring of socio-economic condition of eNGP beneficiaries Terminal evaluation	Every 3 years (2022, 2025)	All eNGP sites
		2028	All eNGP sites

Number of MOA or similar agreements forged between local communities, LGUs, DENR, and other agencies	Based on periodic reporting of DENR	Yearly	All eNGP sites
A. Core Output Indicators			
Number of business plans developed	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of communities trained to implement the enterprise business plans	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number and volume of products packaged	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
NGP products harvested and marketed	Based on periodic reporting of DENR	Yearly	All eNGP sites engaged in enterprise development
Number of market linkages established	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of individuals employed at all stages of eNGP implementation	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of POs trained in in area management and development	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites
% increase in income of eNGP beneficiaries	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of potential ecotourism sites identified	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of feasibility studies developed	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of potential ecotourism sites identified	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development
Number of feasibility studies developed	Based on regional accomplishment reports	Quarterly, Yearly	All eNGP sites engaged in enterprise development

Climate Change Adaptation and Mitigation TABLE 13 CLIMATE CHANGE ADAPTATION AND MITIGATION TOC MATRIX

Desired Change	Sustainably managed environment and natural resources for improved socio-economic well-being of secured and empowered communities by 2030				
Long-term Outcome	Improved resilience of vulnerable forests community in the upland, lowland and coastal areas to uncertainty climate-related events Improved the four major factors that affect microclimates such as vegetation, soil, air, and topography	Contribute to reduce carbon emissions through attainment of NDC (Nationally Determined Contribution)			
Long-term Indicators	Microclimate stability. LTO indicators: e.g. precipitation (mm), windspeed (m/s), leaf wetness (minutes), temperature (°C), solar-radiation (W/m ²), atmospheric pressure, sediment transport and concentration.	Carbon stock (MtCO ₂): Biomass measurement (such as leave litters, and woody biomass stand) *Carbon sequester: Determine the weight of CO ₂ sequestered in the eNGP sites per year, % contribution to the NDC. *Estimated growth rates and sizes of agroforestry trees. Algorithm is available from the World Agroforestry Centre's "Agroforestree Database"			
Medium-term Outcome	Sustained ecosystem services delivery such as, available water and water quality, soil fertility, biomass, insect pollination, dispersal vector, enhancement of carbon stock, and air quality and length of growing season	Forest development (climate smart) initiatives harmonized and mainstreamed nationwide.			
Medium-term Indicators	Number of report on incident of damage/ and costs from extreme climate related events (PhP) Number of households with access to clean water	Number of climate smart forestry development project implemented with stated initial target/ and range value			

	Number of DENR publications with national and in journals on climate smart land use systems	Number of communities (upland community)/ people participated in various sustainable social forestry initiatives			
Short-term Outcome	Improved adaptation measures (technology/ and s within the forestry sector	strategies)	Number of forestry partnerships (MOU/ MOA) and investments on forest protection and restoration		
Short-term Indicators	Number of forestry technology/ strategies implem Number of area (ha) affected by pest and tree dise sites Number of area affected by forest fire occurrence Number of households that adopted promoted tec strategies, such as agroforestry system and best m agricultural practices.	Number of MOA forged between stakeholders (investments/ PhP committed by the private sector) Number of climate financing mechanisms accessed for forest protection and rehabilitation projects.			
Output Areas	Increased in private sector and community participation in climate smart community forestry and conservation Increased community knowledge and awareness on the aspects of climate change adaptation and mitigation of eNGP achieved	R&D on climate smart agroforestry technology and extension services intensified Innovative financing mechanisms developed to support climate resilience community project		Increased forest fuel and carbon stocks Increased carbon sequestration, and reduced CO ₂ emissions	
Core/Proxy** Output Indicators	Number of people engaged in IEC activities	Number of integrated watershed management and climate smart forest land use plans		Volume biomass (MtCO ₂)	
	Number of IEC materials disseminated	Number of incr irrigation syster	ease in n**	Sustainable level of soil carbon	

	Number of people changed in agricultural practices into climate smart activities due to climate related events**	Number of recommended species with high CO ₂ sequestration potential	Number of area planted (ha)
	Number of climate-sensitive diseases outbreak in eNGP sites**	Number of vulnerability assessments conducted	Number of mangrove forest (ha) under sustainable coastal zone management
		Length of growing season**	Level of soil organic matter content (%)
eNGP Main Activities	Partnerships for Forests program. Catalyses investments in which the private sector, public sector and communities can achieve shared value from sustainable forests and sustainable land use.	Plantation establishment Maintenanance and protection (silviculture) Agroforestry development	Nursery development and seedling production Plantation establishment Maintenance and Protection (silviculture)
	Hiring of Forestry Extension Officers Community training in forest management and conservations		

*secure- encompasses resilience/ DRR, safe (peace and order), health as adopted from NCCAP collective term 'human security'

Indicator	Current methodology	Proposed Methodology (if any)	Frequency of monitoring	Sampling/ Geographic Distribution
A. Long-term Outcome Indicators				
Carbon stock (MtCO ₂)	on stock (MtCO ₂) ??		Monthly 3 months ?	All eNGP sites Selected sites or all eNGP sites ?
Carbon sequestration (MtCO.)	22	Multispectral Drope application to		
		estimate tree parameters such as,		
		1. the total (green) weight of the tree.		
		2. dry weight of the tree.	_	
			Yearly	All eNGP sites

		 3. weight of carbon in the tree. 4. weight of carbon dioxide sequestered in the tree 5. weight of CO₂ sequestered in the tree per year 		
Number of increased in irrigation system (long term Proxy indicator)		Volume of rice (Mt) in eNGP sites	Monthly	All eNGP sites
B. Medium-term Outcome Indicators				
Number of affected areas/ incidents of damage "costs" (PhP) from extreme climate related events	Survey the extent of damaged area (ha) Estimated cost (PhP) of damage according to estimated investment cost	Cost Benefit Analysis for the price of ecosystem services and value Standard policy on the price of ecosystem services	Monthly Upon request	All eNGP sites Effected eNGP sites
Number of households with access to clean water	Prepared survey questionnaires Outbreak cases of waterborne related diseases (EMB/ DOH)	HORIBA (water quality) Electro chemistry instrument GIS & Remote sensing app., (assesment of sedimentation thru the river flows)	Monthly	All eNGP sites
Short-term Outcome Indicators				

Number of forestry technology/ strategies implemented (e.g., drought resistance species, cash crops, Mycorrhiza or root enhancement, leguminouse N fixing s /indigenous species and clone tree planting, good rotation/ alley cropping system and agroforestry technology). Number of R&D on climate smart Agroforestry system (Number of ICRAF and DENR collaboration) C.	Ground truthing/ and survey Validation of the pilot site (clone species)	Multispectral Drone (measure attributes of the eNGP sites eg., species composition and tree height density or woody biomass) GIS & Remote sensing application to measure attributes of forest canopy eg., species composition R&D on clone species use assessing field performances MOA between DENR and ICRAF eNGP performance report	Quaterly	Per site/ basis Per site/ basis
Number eNGP sites (ha) affected by pest and tree diseases	Ground observation SAP flow meter (chlorophyll meter)	 Drone (multispectral camera) Measurement of species composition/ species diversity Assessing pest and diseases occurrence (validation thru field and laboratory analysis) GIS & Remote sensing app., (Health and vitality assesment of canopy 	Monthly	Selected eNGP sites

		using vegetation index/ Red-edge index)		All eNGP sites
Number of eNGP sites (ha) and other areas (ha) affected by Forest Fire occurrence	Drone Cyber tracker (LAWIN monitoring system	GIS & Remote sensing application (X- ray imagery)	Monthly	Provincial
Number of households adopted promoted technologies and strategies (e.g.,households/ farmers practicing agroforestry system)	Commodity Mapping (survey. Interview) National and Regional coffee board, DA database on cash crop volume produced	Volume estimation of high value crops produced in NGP sites(Cocoa, Coffee & Rubber) Harmonize data sharing platform	Monthly Monthly/ or Quarterly	Regional
	Annual Accomplishment Report			

Biodiversity Conservation TABLE 15 BIODIVERSITY CONSERVATION TOC MATRIX

Desired Change	Sustainably managed environment and natural resources for improved socio-economic well-being of secured and empowered communities by 2030			
Long-term	Enhanced species diversity			
Outcome				
Long-term Outcome Indicators	Increase in flora diversity	Increase in fauna diversity		
Medium-term	Increased population of flora and fauna			
Outcome				
Medium-term Outcome Indicators	Marginal change in flora population	Number of sightings of ecologically important flag species and/or nesting sites		
Short-term	Improved habitats			
Outcome				
Short-term Outcome Indicators	Reduced number of open areas or fragmented forest patches (ha)	Percentage of improved vegetation cover (e.g. vegetation indices) (ha)		
Output Areas	Improved canopy forest cover by enhancing forest connectivity and wildlife corridors	Planting of suitable species promoted (e.g. indigenous, endemic, high-value crops)		
Core/Proxy Output	Area planted (ha) based on existing cluster developed	Number of seedlings planted per commodity/species		
Indicators	Area of established plantations maintained and protected (ha)	Number of high quality planting materials (based on DENR standards) produced/procured		
	Survival rate (target is at least 85%)	Number of IEC conducted on the importance of eNGP (this already includes the use of indigenous/endemic species and promotion on the importance of care and maintenance activities)		
	Vegetation indices (e.g. NDVI) generated	Number of research studies adopted (<i>e.g. use and benefits of appropriate indigenous species, pest and diseases, use of suitable species for mined-out areas, agroforestry, value-chain analysis, valuation studies</i>)		
eNGP Main	1. Plantation establishment	1. Focus on Production/procurement and delivering of high quality planting materials		
Activities	 Maintenance and protection Monitoring and evaluation 	 Conduct of meetings, dialogues and consultations to various stakeholders to enhance awareness on biodiversity (e.g. local communities, LGUs, CSOs, POs, SUCs) 		

4.	Generation of vegetation indices
	using remotely-sensed images

3. Conduct program Partnerships (e.g. ERDB) and academic institutions (e.g. SUCs) to conduct research studies related to eNGP

*secure- encompasses resilience/ DRR, safe (peace and order), health as adopted from NCCAP collective term 'human security'

 TABLE 16 BIODIVERSITY CONSERVATION INDICATOR MATRIX

Indicator	Current methodology	Proposed Methodology (if any)	Frequency of monitoring	Sampling/ Geographic Distribution
Long-term Outcome In	ndicators			
Increase in flora diversity	None	Adopt relevant parts of the Biodiversity Assessment and Monitoring System (BAMS) manual of BMB	Twice a Year	One per Province (prioritize critical watersheds or legislated PAs)
Increase in fauna diversity	None	Adopt relevant parts of the Biodiversity Assessment and Monitoring System (BAMS) manual of BMB	Twice a Year	One per Province (prioritize critical watersheds or legislated PAs)
Medium-term Outcon	ne Indicators			
Marginal change in flora population	None	Adopt relevant parts of the Biodiversity Assessment and Monitoring System (BAMS) manual of BMB	Twice a Year	One per Province (prioritize critical watersheds or legislated PAs)
Increased number of sightings of ecologically important species and/or nesting sites	None	Adopt relevant parts of the Biodiversity Assessment and Monitoring System (BAMS) manual of BMB	Twice a Year	One per Province (prioritize critical watersheds or legislated PAs)
Short-term Outcome I	ndicators			
Reduced number of open areas or forest patches	None	GIS and remote sensing	Annual	Regional coverage
Improved vegetation cover (e.g. vegetation indices)	None	GIS and remote sensing	Annual	Regional coverage
Core/Proxy Output Inc	dicators			
a. Area planted (ha)	Mapping using GPS receivers and geotagged photos	Use of DENR-customized geoCam and CMIS that are	Weekly (usually conducted by Extension Officers)	all eNGP sites

		Use of drones (e.g. Phantom 4 Pro) for mapping selected NGP areas (PENROs have drones already)	currently being piloted by FASPS through FMP and INREMP Explore the use of drones for mapping selected eNGP areas (trainings for drone image analysis are currently being proposed)	By request	selected eNGP sites
b.	Area of established plantations maintained and	Geotagged photos/ use of inspection monitoring reports	Development of a customized LAWIN system for eNGP	Quarterly	all eNGP sites
	protected (ha)	Ose of drones (e.g. Phantom 4 Pro) for mapping selected NGP areas (PENROs have drones already)	explore the use of drones for mapping selected eNGP areas (trainings for drone image analysis are currently being proposed)	By request	selected engp sites
c.	Survival rate (target is at least 85%)	Geotagged photos 100% Validation (Region) Random sampling using Grid Index (Central)		Annual	all eNGP sites
d.	Vegetation indices (e.g. NDVI) generated	None	Use of remote sensing technology to derive vegetation indices (e.g. NDVI, EVI)	Annual	all eNGP sites
e.	Number of seedlings planted per commodity/species	Inventory		Weekly	all eNGP sites
f.	Number of high quality planting materials (based on DENR standards) produced/procured	Inventory of planting materials and inspection of seedlings before planting		Weekly	all eNGP sites
g.	Number of IEC conducted on the importance of eNGP (this already includes the use of	Meetings, dialogues and consultations		Quarterly	all eNGP sites

indigenous/e species and promotion o importance o and mainten activities)	endemic n the of care ance				
h. Number of restudies adop (e.g. use and benefits of appropriate indigenous s pest and dise use of suitab species for m out areas, vo chain analys valuation stu	esearch Ited I pecies, eases, Ie ained- alue- is, udies)	None	Monitoring can be done through the issuance of instructions, memos, and technical bulletins, among others	Annual	selected eNGP sites

Sustainable Management of Forest Resources

 TABLE 17 SUSTAINABLE MANAGEMENT OF FOREST RESOURCES TOC MATRIX

Desired Change	Sustainably managed environment and natural resources for improved socio-economic well-being of secured and empowered communities by 2030			
Long-term Outcome	Improved delivery of ecosystem goods and services	Sustained support to forest protection and maintenanceSustained Management Arrangement with stakeholders		
Long-term Outcome	Improved water quality and quantity	Reduced threats observed to forests (e.g. forest fires, illegal cutting, slash and burn)		
Indicators	Improved Soil Quality- NPK, pH, OM	Reduced volume of confiscated log	js	
	Improved quality of timber products	Increase in number of individuals equipped to be forest managers		
Medium-term Outcome	Improved Forest Cover	Harmonized policies for effective and efficient management of forest resources among stakeholders		
Medium-term Outcome Indicators	Increase in forest cover (Area)	No. of guidelines/policies/issuances formulated and implemented		
	Number of denuded and degraded forestland rehabilitated			
	Improved volume of agroforestry and fuelwood production from eNGP sites			
Short-term Outcome	Rehabilitation of degraded forestlands including critical watersheds	Sustained awareness and acceptance of eNGP	Improved compliance to forest regulations	
Short-term Outcome Indicators	Increased crop production (annual crops)	No. of capable communities engaged No. of Tenurial Instruments /agreements assessed (cancelled)		
Output Areas	Improved Reforestation/Rehabilitation Plans	Enhanced forest cover Enhanced Capacities of eNGP Implementers and communities		
Critical Output Indicators	No. of Complete Survey, Mapping and Planning Reports	Survival Rate (%)	# of trainings conducted	
		Vegetative Measures established (ha/lm)	# of Household Beneficiaries	

		Structural/ Engineering measures constructed (cu. m)	# of EOs deployed in the Field
			# of Individuals trained
		Area planted & developed (ha)	
eNGP Main Activities	 Delineation of Production and Protection Forests Conduct of Survey, Mapping & Planning Production quality planting materials 	 Maintenance and protection Monitoring and Evaluation Plantation Establishment Production of quality planting materials Forging partnership with 	 Hiring of Forest Extension Officers Forging Partnership with Stakeholders Capacity Building and Training Assessment of tenure

stakeholders

instruments

Baseline assessment

*secure- encompasses resilience/ DRR, safe (peace and order), health as adopted from NCCAP collective term 'human security'

 TABLE 18 SUSTAINABLE MANAGEMENT OF FOREST RESOURCES INDICATOR MATRIX

Indicator	Current methodology	Proposed Methodology (if any)	Frequency of monitoring	Sampling/Geographic Coverage
A. Long-term Outcome Indicators				
improved water quality and quantity Increase in number of water aquifer	ERDB (Water Quality Assessment in Mangrove Areas) Baseline and after 5 years	Water Quality Assessment (what are the needed parameters)	Every 5 Years (every 2 years)*	Watershed
Improved Soil Quality-NPK, pH, OM	ERDB for eNGP	Soil Analysis	During SMP and After 5 Years	All eNGP Project Sites
Improved quality and volume of timber stand	None	Timber Stand Improvement (Silvicultural treatments) *Timber tracking	Every 5 years	ENGP sites (Timber Commodity)

Reduced threats observed to forests (e.g. forest fires, illegal cutting, slash and burn)	Lawin Recording of observation every 100 m in Graduated and On going eNGP sites	_	Weekly	Forest conservation areas
Reduced volume of confiscated logs	Lawin Recording of observation every 100 m in Graduated and On going eNGP sites	-	Weekly	Forest conservation areas
Increase in number of forest managers	None	Sufficient number of field managers identified (ratio to area managed)		
B. Medium-term Outcome Indicators				
Increase in forest cover (Area)	Updating of Forest Cover Maps		Every 5 years (depends on NAMRIA map on forest cover)	Nationwide
Number of denuded and degraded forestland rehabilitated	Updating of Rehabilitation Activities and Mapping Conducted by the Region	Land Cover Analysis using Satellite Imageries	Every year	Nationwide
Improved agroforestry and fuelwood production	None	Supply Demand Analysis Cost Benefit Analysis NPV	Annual	All eNGP sites (Agroforestry and fuelwood)
No. of guidelines/policies/issuances formulated and implemented	PTWG		As the need arises	Nationwide
C. Short-term Outcome Indicators				
Increased crop production (annual crops)	None	Yield Analysis	Annual	eNGP sites (annual an agroforestry crops)
No. of capable communities engaged	Assessment and selection of Financially and technically capable eNGP communities/POs	Socio-economic survey and assessment of eNGP Communities	Annual	All eNGP sites
No. of Tenure Instruments /agreements assessed (cancelled)	Socioeconomic survey of CSC holders	Use appropriate assessment tool for tenure instrument	Annual	Areas with Tenure instruments

D. Critical Output Indicators				
Area Delineation into Production and Protection Forest (km)	Survey		During SMP	All eNGP sites
Area Surveyed (ha/no of polygons)	Survey		During SMP	All eNGP sites
Maps prepared (no)	Mapping/GIS		During SMP	All eNGP sites
Planting plan prepared (no)	Mapping/GIS		During SMP	All eNGP sites
Sites, Geotagged and Evaluation Control	Survey		During SMP	All eNGP sites
Survival Rate (%)	Inventory of eNGP sites 100% in-house validation	Standard Monitoring Scheme of Assessment for survival rate	Annual	All eNGP sites
Vegetative Measures established (ha/lm)	None			
Structural/ Engineering measures constructed (cu. m)	None			
Hedgerows established (Im/ha)	Inspection Report	Specific guidelines on Hedgerow establishment for Engp sites	Depends on Work Schedule	All eNGP sites
Area planted & developed (ha)	Inspection Report		Depends on Work Schedule	All eNGP sites
# of trainings conducted	Annual Report		Annually	All FIUs
# of Household Beneficiaries	Survey		Annually	All FIUs
# of EOs deployed in the Field	Monthly Report		Monthly	All FIUs
# of Individuals trained	Annual Report		Annually	All FIUs

Annex VII: Post Workshop evaluation