Attachment-A: Project Document

AFoCO Project Document

Project code	*AFoCO/040/2023)*

Project Profile	
Project title	Forest Restoration using Philippine Threatened and Endemic Tree Species (PTES) in Bacon-Manito (BAC-MAN) Geothermal Reservation in Support to the Philippine Forestry Sector's National Greening Program
Project duration	Estimated start date: June 2023 Estimated end date: June 2026
Implementing Agency	Energy Development Corporation (EDC)
Participating countries	Philippines
Project site	Bacon-Manito, Sorsogon and Albay
Main objective	1. Restore 100 hectares of disturbed forest with 20 species of highly threatened and endemic trees in Support to the Philippine Forestry Sector' s National Greening Program ("Forest Reforestation Area" or "Project Area") 2. Establish 2 hectares of arboretum within Forest Restoration Area 3. Produce and develop propagation protocols of highly threatened tree species 4. Demonstrate Private-Public Partnership in forest restorations and translate into working national policies and/or technical bulletins 5. Facilitate knowledge sharing on Forest Restoration using PTES

Target Area[2]	**Priority Target Area:** Priority 1. "Accelerating forest restoration with tailor made approaches to the local contexts." **Secondary Target Area:** Priority 2. "Promoting forest-based actions for climate change mitigation and adaptation"		
Budget and source of finance	**Total: US$ 551,354** - AFoCO: **US$ 292, 640** - National (EDC): US$ 193,416 (In-kind) - National (EDC): US$ 15,000 (Cash) - National (DENR-FMB): US$ 50,298 (In-kind)		
Proponent Profile			
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[2] Refer to the list of target areas in accordance with the objectives and prevailing strategic plan of AFoCO (provided by the Secretariat)

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SUMMARY

The continuous degradation of the Philippine natural forests can be attributed to localized timber poaching and expansion of agricultural areas that leads to unabated deforestation. Despite the massive effort of the government to restore degraded forest lands, the restoration and protection of the country's natural forests remains to be challenged.

The private sector can be a potential partner in forest rehabilitation. At present, most companies are limited to supporting tree planting activities and other environmental initiatives hosted by government and other non-government organizations. Although some companies have capabilities of acquiring land and converting it into forest parks and forest purposes. Most companies have allocated some funds for environmental purposes. Thus, it would be more effective if the government can provide a venue for potential companies to be engaged in forest rehabilitation highlighting, among others, sustainability, transparency, and technical development. This project will propose to institutionalize the learnings and success stories of this private-public partnership through a policy proposal for government appreciation and consideration.

The project aims to demonstrate a private-public partnership in restoring 100 hectares of disturbed forest including the development of an arboretum. The partnership intends to document good practices and proposed policy directions in facilitating private engagement in forest rehabilitation. Likewise, the project also intends to develop and recommend propagation protocols to facilitate production of indigenous and endangered tree species in forest restoration programs.

Section A. Project Context

1. Background

Forest restoration of degraded forest lands through reforestation and afforestation are initiated mainly by the government through the DENR. Most of the forest restoration efforts were conducted with the use of introduced/exotic tree species due to limited and non-availability of planting materials of native and indigenous tree species. This situation was clearly elaborated during the implementation of the National Greening Program of the government wherein the use of native and indigenous trees was encouraged however there was no sufficient supply of planting materials.

Private sector participation in forest restoration is very limited as private companies' involvements are mostly confined only to a day activity of tree plantings. Forest restoration activities of private companies are also conducted in their private lots.

In view of the limited resources of the government and the limited opportunities available for private companies in forest restorations, this project aims to provide learning experience and would suggest policy proposals on processes and procedures engaging the private sector in forest restorations. On the ground, the project intends to restore 100 hectares of degraded forestlands within the Bacon-Manito geothermal reservation using native and indigenous tree species that are thriving in the area. The selection of tree species was based on the 12-year experience of the BINHI program of documenting, search and rescue activities of the EDC. Likewise, the project would also propose the formulation of propagation protocols of the subject indigenous and native tree species to facilitate local knowledge development and to increase production of planting materials.

2. Conformity with AFoCO's Objectives and Strategic Priorities

This project fully support AFoCO's objective of strengthening forest cooperation by transforming proven technology and policies into concrete actions in the context of sustainable forest management. The collaboration of AFoCO, FMB and EDC in this project will provide venue of sharing information and jointly appreciate the potentials of private-public partnership in forest restoration.

The project also supports AFoCO's Strategic Priority Areas of adhering to the core values of partnership, member-driven, competency, transparency, equity, and sustainability. Specifically, the project will directly contribute to the global goal of increasing forest cover, propose policies for adaptation in the forestry sector, and provide livelihood and incomes to upland communities by forest restoration. Moreover, the project will greatly contribute in promoting forest-based actions in climate mitigation and adaptation. Considering, Bicol Region is one of the most vulnerable areas in strong typhoons and other direct impacts of climate change, the forest restoration activities using Philippine native trees will ensure sustainability of resiliency of the area and communities.

3. Regionality

This project will address regional concerns on forest restoration and will directly affect national policies, programs, and initiatives. Basically, the project will promote private engagements in forest restorations and facilitate propagation and use of native and endangered tree species in forest restoration efforts.

This project supports the national thrust of the government of enhancing wider participation of stakeholders in sustainable forest management. Private sector participation and partnership will definitely boost resource generation in forest restoration and will contribute in facilitating exchange of technologies and forest management strategies. Likewise, the project may contribute to the development of Species and Ecosystem Map in relation to the ongoing preparation of NGP commodity roadmap particularly in the rehabilitation of protected areas using endemic/indigenous tree species.

On the regional level, proliferation of exotic species coming from different countries will be more prohibited through production of native tree species and proper educational awareness including additional policies will be installed. Species that are on the brink of extinction and prohibited from cutting as indicated in IUCN list of threatened species and CITES will be conserved and protected.

4. Information on Project Target Area

The Project is inside the 25,000 hectare Bacon-Manito (Bac-Man) Geothermal Reservation, where the Energy Development Corporation operates its geothermal energy project. Aside from being one of the country's geothermal powerhouses, Bac-Man Geothermal Reservation is one of the Key Biodiversity Areas in the country. Its forest is serving as a sanctuary of the world's largest remaining fruit bats, the *Acerodon jubatus,* found only in the Philippines and other threatened wildlife both flora and fauna.. The Reservation also boasts of natural geological wonders such as the Inang Maharang Mud Pool, Naghaso Boiling Lake, Parong Hot Springs and Botong Twin Falls —all of which are potential ecotourism destinations. The Bac-Man forest which straddles Albay and Sorsogon provinces is characterized by young secondary forest with lowland evergreen forest formation. Bac-Man is home to 203 known species of fauna and more than 800 species of flora (trees, herbs, shrubs and vines). For the fauna species, 11 are amphibians, 152 are birds, 16 are bats, 7 are small and medium mammals and 17 are reptiles. Forty eight percent of the total fauna species are endemic while 5% are in threatened conservation status based on the IUCN Red list with 2 species are endangered and 9 species are vulnerable.

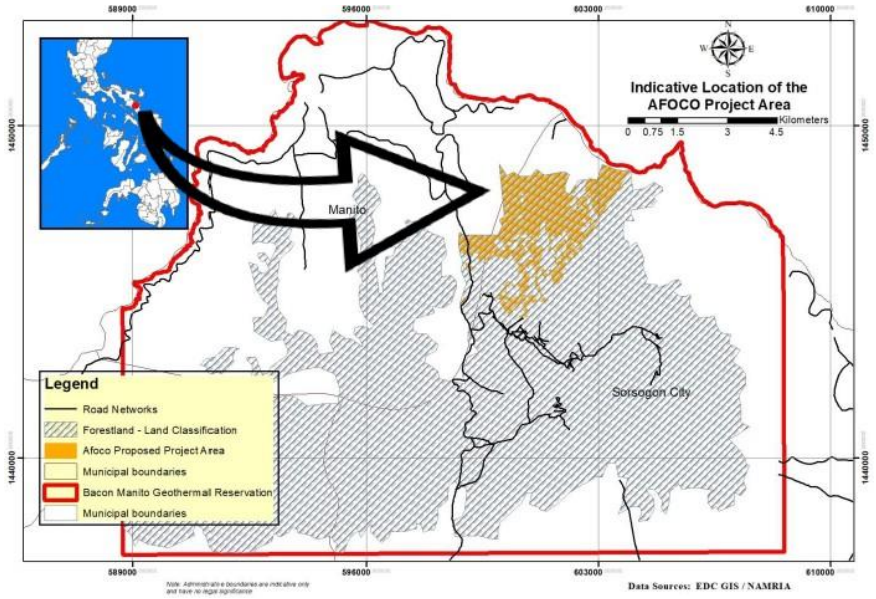

Figure 1. Location of Proposed EDC Restoration Site under AFOCO Project

Of the total species of flora, 658 are trees with 29% endemicity and 4% are in threatened conservation status based on the IUCN Red list and Philippine Red List with 2 species are critically endangered, 3 species are endangered and 21 species are vulnerable. The list of threatened species is attached in Annex 4.

Based on land classification, the Bac-Man Geothermal Reservation is composed of Alienable and Disposable lands (12,336 hectares) and Public/Forestland (12,664 hectares). Based on the 2020 land cover mapping through Remote Sensing and GIS, the majority of the public/forestland areas of the Reservation is classified as open forest at 47%, followed by perennial crops at 29%. Only 15% of the forestlands are covered by closed forests. Abandoned kaingin areas that are covered by brush and shrubs are at 15%. The remaining 2% are either grasslands, open/ barren areas, inland water, built up areas and annual crops.

Manito is a 4th class municipality in the province of Albay while Sorsogon City is a 3rd class component city and capital of Sorsogon province. Manito is a rural municipality that depends on agriculture, fishery and cottage industries while Sorsogon City's most land areas are considered rural which are either forested or devoted to agriculture.

Based on the 2020 Census, the population of Manito and Sorsogon City are 26,162 and 182,237 with annual growth rate of 1.13% and 1.60%, respectively. Manito has a poverty incidence of 37.21% while Sorsogon City has 18.07%. Based on the 2021 survey of the Department of Trade and Industry (DTI) on employment for cities and municipalities, Manito ranked 197th out of 649 municipalities and Sorsogon at 79th out of 119 component cities.

Stakeholder Analysis

Table 1. Stakeholder Analysis for EDC Forest Restoration using PTES in BAC-MAN

Stakeholder analysis table

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Primary stakeholders				
Energy Development Corporation (EDC)	- Company engaged in the exploration, development and utilization of geothermal and other renewable energy resources for power generation - Implement watershed management programs in the Reservation	- Continues degradation of watersheds will affect the geothermal operation - Continues conversion of forests to non-forests negates the forest restoration effort of the company in the Reservation	- Resource complementation and support for its watershed programs - Sustainable geothermal business operation	Implementing Agency

Alliance of Bac-Man Farmers Association (ALBAFAI)	Network of farmer associations that implement environmental and livelihood programs involving community residents	- More severe impacts of natural calamities such as floods, typhoons, drought, etc. - Alternative livelihood to veer the m away from unsustainable forest practices	- Additional livelihood/ income from the project - Directly benefit s from the outcome of the Project	Partner in the implementation of the Project
Forest Management Bureau of the Department of Environment and Natural Resources (FMB - DENR)	Primary agency mandated for the protection and conservation of natural resources	- Continues degradation of watersheds results to habitat fragmentation and loss of bi odiversity	- Resource implementation and support for natural resources conservation - Stronger partnerships for forest conservation and protection	Partner in the implementation of the Project
Secondary stakeholders				
Local Governmen t Units	Policy making and implementation of local environmental programs in the locality	Law enforcement against illegal forest activities	- Additional benefits to their constituency - Continues provision of ecosystem services to their locality	Support in the sustainability of the Project
Enforcement agencies - Local police, Army/ CAFGU	Support the national and local government agencies in the enforcement of environment and forestry laws and regulations	Law enforcement against illegal forest activities	Support to law e enforcement against illegal forest activities	Support to forest protection and enforcement of forestry laws and regulation
Water Districts	Corporate entities that operate and maintain a water supply system in	Water supply are affected by forest degradation at the upstream watersheds	Sustainable water supply	Support in the sustainability of the Project

	the locality			
Academic Institutions	Conduct of research and extension related to watershed management, forest restoration, biodiversity, etc.	Generation of research topics, publication of researches, venues for practicum for students	Opportunities for the advancement of research, extension and academic programs	Support for research, extension and academic programs
Tertiary and other stakeholders				
Local Irrigators Association	Operates and manages irrigation system for agriculture	Severe natural calamities impacted the operation of irrigation system	Sustain abundant sources of water for irrigation	Support in the sustainability of the Project
Civil Society groups	Provides assistance and support for livelihood, environment and social needs of rural communities	Limited access of resources and areas for project implementation	Opportunity for partnership	Support in the sustainability of the Project

5. Gender Analysis and Mainstreaming

The project will center on multi-stakeholder engagement where there are no preferences for gender and participants should have to be committed to support the goals and objectives of the project. Its key to success is giving equal opportunity and importance to each member of the community. The Philippine landscape for the last decade has changed significantly in terms of gender equality. According to the Global Gender Gap Report on 2020, the country is the number one (1) in Asia and number sixteen (16) out of 153 countries in Gender Equality. It is evidently observed across the country. In particular to this project, gender equality will be observed in the following items;

- There will be a balanced representation of genders in implementing the Project;
- Participants for the conduct of various trainings, mixed with males and females and other gender preferences shall commit to support the project; and
- Information awareness campaigns and other advocacy platforms will be gender sensitive through proper use of language among others.

Section B. Problem Analysis and Proposed Actions

1. Problem Identification

Following the end of logging inside the (Bac-Man Geothermal Reservation, the logged over forest at the borders were converted to agricultural areas and other land uses which extended further going up the forest line, exacerbated by other unsustainable forestry practices such as timber poaching, charcoal making, forest encroachment and occupancy for the conversion into slash and burn farms and other illegal practices in the area.

The barangays in Sorsogon City and Manito, Albay that are covered in the proposed Project area are beset with several socio-economic problems. Among the problems identified are: a) lack of credit for livelihood investments, b) insufficient livelihood and employment opportunities, c) kaingin making, d) unregulated poaching in the forested lands, and e) charcoal making which affect the ecological condition of the watershed. There is very strong pressure on the use of natural resources inside which is primarily driven by poverty due to lack of sustained livelihoods and employment opportunities, if not insufficient income to feed a family. While there are resource-based livelihoods which include copra and abaca production in the said barangays, these are insufficient to sustain the income of the growing and diverse needs of its population. Hence, there are people living within or adjacent to the watershed that resort to illegal activities at an unprecedented rate, and if unchecked will undermine the integrity and resilience of the watersheds, deplete its water and forest resources.

For the last 20 years, EDC has recorded a total of 860 incidents of illegal forestry activities inside the Reservation. These resulted in the cutting of trees equivalent to 615 cubic meter of wood and the conversion of forests to non-forests land uses equivalent to 338 hectares.

The vanishing forest cover of the Bac-Man Geothermal Reservation is a serious threat that needs to be addressed not only to the biodiversity of the area but to the overall integrity of the whole landscape that serves as a critical watershed to the downstream communities.

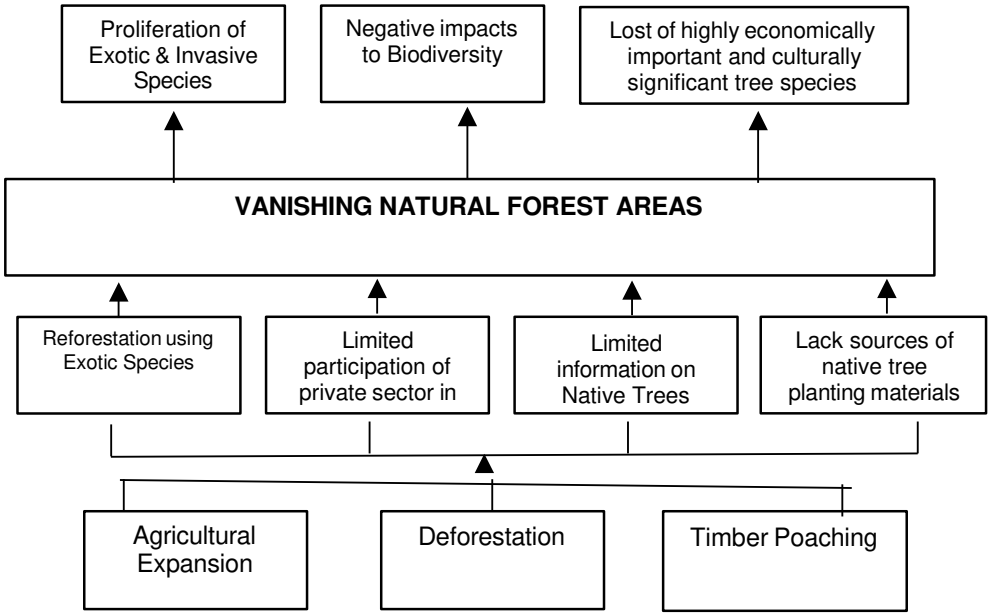

Figure 2. Problem Tree Identification

2. Problem Description

The Bac-Man Geothermal Reservation is a key biodiversity area and critical watershed that provides the downstream communities with a myriad of ecosystem services. However, the natural forests are threatened by agricultural expansion and aggravated by timber poaching and deforestation caused by natural and man-made activities due to limited livelihood opportunities downstream.

Moreover, the unfamiliarity of the local population and limited information about native trees has resulted in the over-utilization and poor conservation of these trees. This is aggravated by limited or un availability of native tree planting materials which previous reforestation efforts resorted to exotic species.

Among others, the limited local employment opportunities in the localities of Manito, Albay and Bacon, Sorsogon contributes to the pressures of upland agricultural expansions and illegal collection of forest resources. The 2021 survey of the Department of Trade and Industry (DTI) for cities and municipalities, Manito ranked 197th out of 649 municipalities and Sorsogon at 79th out of 119 component cities.

If these problems are not addressed, the natural forests of Bac-Man Geothermal Reservation will continue to vanish, resulting in biodiversity loss and fragmentation of habitats. With the continued use of exotic species in reforestation, it will give rise to the proliferation of exotic and invasive species that will compete and take over native trees.

3. Logical Framework Matrix

Table 2. Logical framework matrix

Output/ Activities	Narrative	Objectively Verifiable indicators (OVIs)[3]	Means of Verification	Important Assumptions	Target Completion
Goal: Increase natural forest area and mainstream PETS in Bacon, Sorsogon and Manito, Albay					
Outcome(s): 1) Increased natural forest areas of Bac-Man Geothermal Reservation with PTES 2) Increased local community awareness and engagement in natural resources conservation, make them recognize that more than the value of forest restoration in their locality, the forests are also finite resources that support their short, medium, and long term needs such as food, water, and source of their livelihoods. 3) Developed information materials, policies, technical bulletins and provide venues to demonstrate PTES management and protection 4) Draft new forest policies and/or technical bulletins on private-public partnerships in forest restorations 5) Provided livelihood to the local community of Bacon-Manito, Sorsogon and Albay Shared and developed technical knowledge between partners on forest restorations using native trees species					
Objective 1: **Establish 100 hectares of Forest Restoration with 20 of highly threatened and endemic tree species[4] in close coordination with the local communities who will be the key partner on the ground implementation of the Project.**					
Output 1: Restored 100 ha using PTES. (35%)[5]					

[3] OVIs are reference measure in quantitative specifications that indicate the current or final progress of the project. OVIs show the performance quantification of the Output/Activity Narratives that are expected to be achieved in terms of quantity i.e., area in hectares, no. PTES seedlings produced, etc.

[4] See Annex 4. Priority 20 Philippine threatened and endemic tree species was based on EDC's BINHI Program experience in the conduct of tree inventory and documentation across the Philippines. The 20 species including other native and pioneer tree species can be found inside BAC-MAN and will be prioritized for Forest Restoration and Arboretum Projects.

[5] Forest Restoration will follow existing standards and protocol established by EDC including proper consultation and focus group discussion prior, during and after the conduct of the project implementation. Standards are written in the 2016 publication "*A Field Manual on Forest Restoration Using Indigenous Species Module 1: Site-Species Matching, Module 2: Production of Quality Planting Materials, Module 3: Forest Restoration in Grasslands, Brushlands, and Forest Gaps*

Activity 1.1	*Site validation and mapping of forest restoration areas with the local communities*	Area in Hectares (100 ha)	Survey Report and Maps	No typhoon and travel and fieldwork restrictions	2023 – 2nd Q (Due: June 30, 2023)
Activity 1.2	*Organizing local community, farmers association or peoples organization*	No. of engaged farmers association (>20 active members of FA)	Contract with FA's	Cooperative and organized FA's	2023 – 3rd Q (Due: September 30, 2023)
Activity 1.3	*Tree identification and Seedlings sourcing of PTES and production*[6]	No.of PTES seedlings produced (>62,500 seedlings)	Seedlings	No travel and field restrictions	2024 – 2nd Q (Due: June 30, 2024)
	of quality planting materials				
Activity 1.4	*Site preparation*	Area in Hectares (100ha)	Monitoring report	No typhoon and trave and field restrictions	2024- 2nd Q (Due: June 30, 2024)
Activity 1.5	*Planting and Maintenance*	Area in Hectares (100ha)	Monitoring report	No typhoon and travel and field restrictions	Planting: 2024 – 3rd Q (Due: September 30, 2024) Maintenance : 2026 – Up to June 2026 (3 years)
Activity 1.6	*Annual audit of forest restoration performance*	Area in Hectares (100ha)	Monitoring report	No typhoon and travel and field restrictions	2025 – 4th Q (December 30, 2025)
Output 2: Capacitated local community or farmers association (2%)					

[6] Priority threatened and endemic tree species inside the Bacon-Manito Geothermal Reservation were already geo-tagged and documented under EDC-BINHI Program from 2011-2016.

Activity 2.1	*Training for forest restoration, nursery management and forest protection*	No. of participants trained (>20 active members of FA)	Attendance and Documentation	No typhoon and travel and field restrictions	2023 – 4th Q Due (December 30, 2023)
Activity 2.2.	*Development of forest protection plan with the local communities and other stakeholders*	No. of protection plan (1 plan)	Forest Protection Plan	Availability of data and full cooperation/ participation of partner community	2024 – 2nd Q (Due: June 30, 2024)
Objective 2: Establish 2ha arboretum in accessible area for educational and advocacy purposes *and increase awareness about PTES*[7]					
Output 3: Established 1 Arboretum with 20 of PTES (13%)					
Activity 3.1	*Preparation of Arboretum design*	No. of arboretum design prepared (1 perspective design)	Arboretum design perspective	No typhoon and travel and field restrictions	2024 -1st Q (Due: March 30, 2024)
Activity 3.2:	*Tree identification and Seedlings sourcing*	No.of seedlings produced (>1000 seedlings for arboretum)	Seedlings		2023- 4th (Due: Dec. 30, 2023)
Activity 3.3	*Site preparation*	Area in Hectares (2 ha)	Monitoring report		2024 – 2nd Q (Due: June 30, 2024)
Activity 3.4	*Construction of signages, pathwalk, information boards and other r elated facilities*	No.of pathwalk and signages (to be confirmed depending on the type of land and existing condition of the area)	Pathwalk and IEC Signages		2024 – 2nd Q (Due: June 30, 2024)
Activity 3.5	*Planting and Maintenance*	Area in Hectares (2 ha)	Monitoring Report		2024 – 2nd Q (Due: June 30, 2024)
Activity 3.6	*Regular monitoring*	Area in Hectares (2 ha)	Monitoring Report		2025 -4th Q (Due: December

[7] Arboretum will be established outside the 100ha Forest Restoration target and to be managed by the local partner/s. The 20 PTE's priority of BAC-MAN will be showcased along with other native and threatened tree species for educational purposes.

	and evaluation				30, 2025)
Output 4: Updated/Developed information database for PTES (5%)					
Activity 4.1	*Photo documentation of Philippine threatened and endemic tree species*	No. of information materials (> 1 database)	Information database	No typhoon and travel and field restrictions	2025 – 4th Q (Dec.30, 2025)
Activity 4.2	*Desktop work for completion of database and data gathering*	No.of information materials (> 1 database)		Stable internet connections	2025 – 4th Q (Dec.30, 2025)
Activity 4.3:	*Publication of information database through website, social media and printed books*	No. of information materials (> 1 database)		Completeness of data and information gathered during the project duration	2025 – 4th Q (Dec.30, 2025)
Objective 3. Produce and develop propagation protocols of highly threatened tree species					
Output 5 Produced information materials and developed at least 10 Propagation Protocol of PTES (13%)					
Activity 5.1	*Conduct propagation trial for PTES using vegetative parts and available seeds (if any)*	No. propagation protocols and produce seedlings (>10 protocols)	Nursery Inventory report	Availability of planting materials and germplasm for propagation trials	2024 – 4th Q (Due: Dec.30, 2024)
Activity 5.2	*Training for clonal propagation or vegetative material reproduction*	No.of participants trained for propagation technology (>20 active member of FA)	Documentation report	No high risk pandemic cases	2023 – 4th Q (Due: December 30, 2023)

Objective 4. Demonstrate Private-Public Partnership in forest restorations and translate into working national policies and/or technical bulletin					
Output 6. Drafted and proposed/recommended new forest policies and/or technical bulletins on private-public partnerships in forest restorations (1%)					
Activity 6.1	Round table discussion /workshop	No.of technical bulletin (> 1 Technical bulletin by DENR)	Draft Policy	Availability of participants and cooperation	2025 – 4th Q (Due: Dec.30, 2025)
Activity 6.2	Field data validations	No.of travels (> twice a year)	Travel Report	No travel restrictions	2025 – 4th Q (Due: Dec.30,2025)
Activity 6.3	Annual Conference w/ FMB	No.of participants (depending on the budget provided)	Travel Report		2025 – 4th Q (Due.30, 2025)
Objective 5. Facilitate knowledge sharing on Forest Restoration Using PTES					
Output 7. Trained and capacitated at least 10 Technical Person from DENR, EDC and AFOCO (5%)					
Activity 7.1	*Benchmarking, site visit and hands-on learning opportunities*	No. of participants trained (>10 member)	Travel Report	No travel restrictions	2024 – 4th Q (Due: Dec.30, 2024)
Activity 7.2	*Documentation of knowledge sharing*			No travel restrictions	2024 – 4th Q (Due: Dec.30, 2024)
Activity 7.3	*Annual AFOCO Conference*				*2025: Schedule depends on AFOCO*

4. Perceived Project Impacts

- Impacts at the Outcome level
  - Better appreciation on private-public partnership in forest restoration by the government and policy makers
  - Better appreciation on PTES propagation and use in forest restoration activities through government policies
  - Institutionalization of private-public partnership in sustainable forest management
  - Encourage more partnerships and advocacy in using PTES
  - Proliferation of Philippine native tree species and reduce threat of extinction
  - Improve ecosystem services due to increase of forest cover
- Impacts at the Output level
  - Report and documentation of the forest restoration activity
  - Report and documentation of propagation protocols/procedures of PTES
  - Report and documentation of lessons learned and policy recommendations

- Improved technical knowledge on PTES propagation and use of PTES in forest restoration

- Impacts at the Activity level

  - Facilitate learnings on PTES propagation
  - Provide livelihood to participating upland communities
  - Increase technical knowledge on forest restoration and its component activities
  - Facilitate exchange of technical knowledge between FMB, EDC, and AFoCO

Section C. Description of Project Interventions

1. Work Plan and Schedule

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline*												Remarks
			Year 1				Year 2				Year 3				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Objective 1: Establish 100 hectares of Forest Restoration with 20 of highly threatened and endemic tree species															
Output 1: Restored 100 ha using PTES. (44%)															
Activity 1.1: Site validation and mapping of forest restoration areas	*100 hectares validated*	*EDC and FMB*													
Activity 1.2: Organizing local community, farmers association or peoples organization	*>1 FA organized*	*EDC*													
Activity 1.3: Tree identification and Seedlings sourcing of PTES and production of quality planting materials	*>50,000 seedlings produced*	*EDC and FMB*													
Activity 1.4 Site preparation	*100 hectares forest restored*	*EDC and ALBAFAI*													
Activity 1.5. Planting and Maintenance		*EDC and ALBAFAI*													Forest restoration includes maintenance activities for 3 years. These includes regular wedding, fertilizing, creation of firebreak, replanting and other maintenance activities to ensure high survival rate
Activity 1.6. Regular Monitoring and Evaluation		*EDC, ALBAFAI and FMB*													M&E is imbedded to quarterly progress report
Output 2: Capacitated local community or farmers association…24, 760 (6%):															
Activity 2.1: Training for forest restoration, nursery management and forest protection	*>20 members of FA trained and capacitated*	*EDC and FMB*													

Activity 2.2: Development of forest protection plan	*>1 Forest protection plan*	*EDC and FMB*													
Objective 2: Establish 2ha arboretum within forest restoration area and increase awareness about PTES															
Output 3: Established 1 Arboretum with 20 of PTES (15%)															
Activity 3.1 Preparation of Arboretum design	*1 Arboretum perspective design*	*EDC*													
Activity 3.2: Tree identification and Seedlings sourcing	*>20 PTES planted in arboretum*	*EDC and FMB*													
Activity 3.3 Site preparation	*2 hectares Arboretum*	*EDC and ALBAFAI*													
Activity 3.4 Construction of signages, pathwalk, information boards and other related facilities		*EDC, ALBAFAI and 3rd party contractor*													
Activity 3.5 Planting and Maintenance		*EDC and ALBAFAI*													
Activity 3.6 Regular monitoring and evaluation		*EDC, ALBAFAI and FMB*													Semi-annual
Output 4: Updated/Developed information database for PTES (9%)															
Activity 4.1 Photo documentation of Philippine threatened and endemic tree species	*1 Information database*	*EDC and FMB*													
Activity 4.2 Desktop work for completion of database and data gathering															
Activity 4.3: Publication of information database through website, social media and printed books															
Objective 3. Produce and develop propagation protocols of highly threatened species															
Output 5:* Produced information materials and developed at least 10 Propagation Protocol of PTES *(26%)															
Activity 5.1 Conduct propagation trial for PTES using vegetative parts and available seeds (if any)	*>50,000 seedlings produced and propagation protocols developed*	*EDC and ALBAFAI*													
Activity 5.2 Training for clonal propagation or vegetative material reproduction	*>1 training implemented*	*EDC and FMB*													

Objective 4. Demonstrate Private-Public Partnership in forest restorations and translate into working national policies and/or technical bulletins															
Output 6: Draft new forest policies and/or technical bulletins on private-public partnerships in forest restorations															
Activity 6.1 Round table discussion	***>1 Technical Bulletin or Policy Concept***	***FMB and EDC***													
Activity 6.2 Field data validation		***FMB and EDC***													
Activity 6.3.Annual conference with DENR		***FMB and EDC***													
Objective 5. Facilitate knowledge sharing on Forest Restoration Using PTES															
Output 7. Trained and capacitated at least 10 Technical Person from DENR, EDC and AFOCO															
Activity 7.1 Benchmarking, site visit and hands-on learning opportunities	*>1 Knowledge sharing/Hands-on learning opportunities*	*EDC and FMB*													
Activity 7.2 Documentation of knowledge sharing															
*Activity 7.3. Annual AFOCO Conference**															Schedule depends on AFOCO

Note: AFOCO funding will be expected by June 2023 therefore there will be some adjustment in the workplan activities up to May 2026 but the budget still be maximized by 2025 due to contract agreement with farmers association

2. Budget (USD)

Activity	Allocation by Unit				Allocation by Year												
	Unit Cost (USD)	Quantity	Unit	Total Unit Cost	Year 1				Year 2				Year 3				Total Annual Cost
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Objective 1: Establish 100 hectares of Forest Restoration with 20 of highly threatened and endemic tree species																	
Output 1: Restored 100 ha using PTES																	
Activity 1.1: Site validation and mapping of forest restoration areas	*28720*	*1*	*lot*	*28720*	3500	3500	3500	3500	7120	5000	2600	0	0	0	0	0	**28,720**
Activity 1.2: Organizing local community, farmers association or peoples organization	*80*	*25*	*pax*	*2000*	0	0	0	2000	0	0	0	0	0	0	0	0	**2,000**
Activity 1.3: Tree identification and Seedlings sourcing of PTES and production of quality planting materials	*0.24*	*62500*	*pcs*	*15000*	0	0	15000	0	0	0	0	0	0	0	0	0	**15,000**
Activity 1.4 Site preparation	*1200*	*100*	*ha*	*120000*	0	0	0	0	90000	0	0	0	30000	0	0	0	**120,000**

Activity 1.5. Planting and Maintenance																		
Activity 1.6. Annual Audit of forest restoration performance	*292*	*100*	*ha*	*29200*	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***14600***	***0***	***0***	***0***	***14600***	***29200***
Output 2: Capacitated local community or farmers association (3,600 Operational Cost + 20571.4 Mgt.Cost + 2901 Program Fee (12%) = 27072 (5%)																		
Activity 2.1: Training for forest restoration, nursery management and forest protection	*10000*	*1*	*lot*	*10000*	0	0		5000	0	0	0	5000	0	0	0	0	0	10000
Activity 2.2: Development of forest protection plan																		
Total for Objective 1					***3500***	***3500***	***18500***	***10500***	***97120***	***5000***	***2600***	***19400***	***30000***	***0***	***0***	***14400***	***204,520***	
Objective 2: Establish 2ha arboretum within forest restoration area and increase awareness about PTES																		
Output 3: Established 1 Arboretum with 20 of PTES																		
Activity 3.1 Preparation of Arboretum design	*1000*	*1*	*lot*	*1000*	0	0	0	0	1000	0	0	0	0	0	0	0	1000	
Activity 3.2: Tree identification and Seedlings sourcing	*50*	*300*	*seedlings*	*15000*	0	0	0	0	15000	0	0	0	0	0	0	0	15000	
Activity 3.3 Site preparation	*25,000*	*2*	*ha*	*50000*	***0***	0	0	0	50000	***0***	***0***	***0***	***0***	***0***	***0***	***0***	50000	
Activity 3.4 Construction of signages, pathwalk, information boards and other related facilities																		
Activity 3.5 Planting and Maintenance																		
Activity 3.6 Regular monitoring and evaluation	*783*	*6*	*times*	*4698*	0	0	0	0	0	1566	0	783	0	783	0	1566	4698	
Output 4: Updated/Developed information database for PTES																		
Activity 4.1 Photo documentation of Philippine threatened and endemic tree species	1500	1	lot	15000	0	0	0	0	10000	5000	0	0	0	0	0	0	15000	

Activity 4.2 Desktop work for completion of database and data gathering	0																
Activity 4.3: Publication of information database through website, social media and printed books	15000	1	lot	15000	0	0	0	0	10000	5000	0	0	0	0	0	0	15000
			Total for Objective 2		***0***	***0***	***0***	***0***	***86000***	***11566***	***0***	***783***	***0***	***783***	***0***	***15666***	***100698***
Objective 3. Produce and develop propagation protocols of highly threatened species																	
Output 5. **Produced information materials and developed at least 10 Propagation Protocol of PTES**																	
Activity 5.1 Conduct propagation trial for PTES using vegetative parts and available seeds (if any)	70000	1	lot	70000	0	60000	0	2000	0	2000	0	2000	0	2000	0	20000	70000
Activity 5.2 Training for clonal propagation or vegetative material reproduction	1000	1	lot	1000	0	0	0	1000	0	0	0	0	0	0	0		1000
			Total for Objective 3		***0***	***60000***	***0***	***3000***	***0***	***2000***	***0***	***2000***	***0***	***2000***	***0***	***20000***	***71000***
Objective 4. Demonstrate Private-Public Partnership in forest restorations and translate into working national policies and/or technical bulletins																	
Output 6: Draft new forest policies and/or technical bulletins on private-public partnerships in forest restorations																	
Activity 6.1 Round table discussion	*200*	*6*	*times*	*1200*	***0***	0	0	0	200	200	200	0	200	0	200	2000	1200
Activity 6.2 Field data validation	*400*	*5*	*pax*	*2000*	***0***	0	0	0	400	400	0	400	0	400	0	4000	2000
Activity 6.3 Annual Workshop/Conference with DENR	*100*	*20*	*pax*	*2000*	***0***	0	0	0	0	0	0	1000	0	0	0	10000	2000
			Total for Objective 4		***0***	***0***	***0***	***0***	***600***	***600***	***200***	***1400***	***200***	***400***	***200***	***16000***	***5200***
Objective 5. Facilitate knowledge sharing on Forest Restoration Using PTES																	
Output 7. Trained and capacitated at least 10 Technical Person from DENR, EDC and AFOCO																	
Activity 7.1 Benchmarking, site visit and hands-on learning opportunities	2256	6	pax	13536	0	0	0	0	0	6768	0	0	6768	0	0	0	13536
Activity 7.2 Documentation of knowledge sharing																	

Activity 7.3 Annual AFOCO Conference	6000	2	pax	12000	0	0	0	0	0	4000	4000	0	0	0	4000	0	12000
Total for Objective 5					***0***	***0***	***0***	***0***	***0***	***10768***	***4000***	***0***	***6768***	***0***	***4000***	***0***	***25536***
																Sub-Total	***406,954***
Management Cost																	
FMB Management Cost (1 Focal Person and 2 Site Counterparts)-14% Per Output	14400	3	pax	43200	3600	36000	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	43200
EDC Management Cost (7 Dedicated Personnel) - Addition 14% per Output	14400	7	pax	100800	8400	84000	8400	8400	8400	8400	8400	8400	8400	8400	8400	8400	100800
Sub-Total					12000	120000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	144000
GRAND TOTAL: Annual Budget (Per Quarter)					*15500*	*75500*	*3050*	*2550*	*#####*	*4193*	*18800*	*3558*	*48968*	*1518*	*16200*	*3156*	*550954*
																Program Support Fee (12%)	*0*
																GRAND TOTAL	*551354*

Procurement Management Plan

Activity No.	Item	Unit	Unit Cost	Number	Total cost (USD)	Owner	Delivery Time	Remarks
1.1	*Site validation and mapping of forest restoration areas*	mo	1270	36	45,720	EDC	1st -4thQ of 2023	Pre-site preparation counterpart of EDC regardless of budget delays, this is on-going
1.2	*Organizing local community, farmers association or peoples organization*							
1.3	*Tree identification and Seedlings sourcing of PTES and production of quality planting materials*							
1.4	*Site preparation*	ha	1200	100	120,000	EDC	1st to 3rd Q of /2024/2025	1200 USD per hectare was based on regular or standards of EDC through the BINHI program given prevailing rates on the actual implementation of forest restoration the
1.5	*Planting and Maintenance*							

								cost includes 3 year maintenance
1.6	*Regular Monitoring and Evaluation*	ha	292	100	29200	EDC/DENR-FMB	Monthly from 2023-2025	Monthly travel cost per month of 2 hired local taff
2.1	*Training for forest restoration, nursery management and forest protection*	lot	10000	1	10,000	EDC/DENR-FMB	4th Q of 2023	Conduct focus group discussion and trainings for atleast 20pax x 3 trainings x 50USD per pax x 3years and other miscellaneous expenses
2.2	*Development of forest protection plan*							
3.1	*Preparation of Arboretum design*	lot	1000	1	1,000	EDC	1st and 2nd Q of 2024	Architectural design perspective of the arboretum based on the current prevailing rates 1000 USD/design
3.2	*Tree identification and Seedlings sourcing*	seedlings	50	300	15,000	EDC	3rd and 4th Q Q of 2023	Current prevailing rate per seedlings of PTE's

3.3	*Site preparation*	ha	25,000	2	5,0000	EDC	3rd to 4th Q of 2024	25,000 USD contract cost per hectare in the development of arboretum including scientific information, admin and logistical expenses
3.4	*Construction of signages, pathwalk, information boards and other related facilities*							
3.5	*Planting and Maintenance*							
3.6	*Regular monitoring and evaluation*	times	783	6	4,698	EDC/DENR-FMB	Quartlery from 2024-2026	Semi-annual monitoring for 3 years and evaluation of project staff including transportation cost and admin expenses
4.1	*Photo documentation of Philippine threatened and endemic tree species*	lot	15000	1	15,000	EDC	4th Q of 2024/2025	Regular project cost in the development of publication and website including admin and ohte rlogistical expe
4.2	*Desktop work for completion of database and data gathering*							
4.3	*Publication of information database through website,*	lot	15000	1	15,000		4th Q of 2023-2025	Regular project cost in the

	social media and printed books					EDC/DENR-FMB		publication and printing of books and development of website
5.1	*Conduct propagation trial for PTES using vegetative parts and available seeds (if any)*	lot	70000	1	70,000	EDC	3rd-4th Q of 2023 to 1st – 4Q of 2024	Including nursery facility counterpart of EDC worth 60000 and supplies for 3 years
5.2	*Training for clonal propagation or vegetative material reproduction*	lot	1000	1	1,000	EDC	4th of 2023	Regular training cost for members of farmers atleast 20 pax
6.1	*Round table discussion*	times	200	6	1,200	EDC/DENR-FMB	Nov-Dec Annually	Meeting meals for round table discussion
6.2	*Field data validation*	pax	400	5	2,000	EDC/DENR-FMB	4th Q of 2024-2025	Travel logistical expenses for DENR/EDC and Project Hired Staff
6.3	*Annual Workshop/Conference with DENR*	pax	100	20	2,000	EDC/DENR-FMB	4th Q of 2024-2025	Admin and logistical expenses for 20pax

7.1	*Benchmarking, site visit and hands-on learning opportunities*	pax	2256	6	13,536	EDC/DENR-FMB	3rd Q 2023-2025	3 year Knowledge Sharing for DENR and EDC including airfare and other logistical expenses
7.2	*Documentation of knowledge sharing*							
7.3	*Annual AFOCO Conference*	pax	6000	2	12,000	EDC/DENR-FMB	3rd Q of 2023-2025	Depending on AFOCO schedule

Section D. Project Implementation

1. Implementation Arrangement

The project will be implemented by EDC in close collaboration with DENR-FMB. A management agreement will be executed between EDC and DENR-FMB providing their specific duties and responsibilities.

The TWG will be composed of representatives from different partner entities such as EDC, DENR-FMB and AFOCO and will closely coordinate with the Project Management Office (PMO) composed of the Project Manager, the technical staff of EDC who will be directly involved in the project such as Watershed Specialist, Forester, Monitoring and Evaluation Specialist, Knowledge Management and Communication Specialist. The TWG will also hire specific coordinators who will lead coordination with partner communities and farmers associations for the conduct of forest restoration, nursery and arboretum establishments.

The DENR-FMB, shall assist EDC in the implementation of the project and provide technical assistance and coordination works. DENR-FMB shall lead the preparation of relevant policies and guidelines for the nationwide adoption of good practices as a result of this project to include mainstreaming of PTES in restoration efforts of related forest reservations and protected areas, among others.

DENR-FMB and EDC are expected to also provide in-kind contributions to the project like personnel, local travel expenses, and per diem, as applicable.

ALBAFAI will be the partner upland community who will implement the project activities on the ground. Specifically, ALBAFAI will conduct the specific activities on forest restoration to include the establishment of arboretum, site preparation, planting, maintenance and protection. ALBA FAI will be directly supervised by the PMO.

2. Reporting and Monitoring Arrangements

The required financial, mid-year, and annual reports shall be prepared by EDC in close coordination with DENR-FMB through the NFP, for submission to the AFoCO based on the template and dates of submission.

Monitoring and evaluation shall be conducted based on the activities provided by Logical Frame work Matrix and Work and Schedules provided by this project proposal. The monitoring and evaluation shall be composed of representatives from EDC and FMB, and if time/schedule permits, with AFoCO representatives. The creation of an external monitoring and evaluation team may also be considered. EDC and FMB technical staff that are not involved in the project team may ~~y~~ be tapped to be part of the evaluation team. Concerned offices from DENR and other EDC sites may also be invited to be part of the evaluation team.

3. Environmental and Social Risk and Management

Potential Risk	Mitigation Measures
1. Impacts of natural calamities such as typhoons, landslides, etc.	• Inclusion of local weather forecast in planning activities • Selection of project area to exclude landslide prone sites • Selection of resilient tree species from typhoon • Restored area and arboretum to be insure d
2. Forest fire from anthropogenic activities	Effective forest protection activities that inclu de surveillance, fire prevention measures and continuous forest patrol
3. Project delays and possible infection to C OVID-19 and other related pandemic	• Implementation of strict COVID-19 safety, health and security protocols • Establish strong coordination with local partners either through physical or virtual interactions using existing technologies
4. Uncooperation and failure of partner farmer association to deliver their commitment s	Regular community organizing and monitoring through combination of physical and virtual interactions

4. Sustainability Mechanism

- As deputized manager of the BAC-MAN geothermal reservation, EDC will sustain the maintenance and protection of the restored forest and arboretum and it will serve as a model for replication in other geothermal reservations where EDC operates..
- Capacity training provided to local communities will equip them with the skill sets and technology needed in the continuous protection of forest restored and watershed areas.
- Established arboreta will be replicated and propagation protocols developed will be disseminated to ensure the mainstreaming and proliferation of highly threatened tree species
- Established arboreta will serve as a venue for educational development and better appreciation on the importance of threatened tree species for forest restoration
- Information databases and advocacy campaigns for Philippine threatened tree species will drive social behavioral change
- Forest restoration as a nature based solutions initiative against the impacts of climate change can be developed into a revenue stream in the voluntary carbon offset market to generate funds in sustaining the expansion or replication of the Project
- Forest policy proposals for national implementation highlighting the learnings and good practices of engaging private-public partnerships in forest restorations

Annex 1. Cost Assumption

Output/ Activity	Unit	Quantity	Unit Cost (USD)	Assumptions*
Output 1: Restored 100 ha using PTES				
Activity 1. Site validation and mapping of forest restoration areas	Lot	1	28720	Administrative and logistical expenses for 3 years of EDC and local staff based on current prevailing rates Contract agreement with farmers association for production of seedlings. **Counterpart Costing:** 84% Counterpart cost from AFOCO 15% Counterpart cost from EDC 1% Counterpart cost from DENR
Activity 1.2: Organizing local community, farmers association or peoples organization	Pax	25	80	
Activity 1.3: Tree identification and Seedlings sourcing of PTES and production of quality planting materials	pcs	62500	0.24	
Activity 1.4 Site preparation	ha	100	1200	1200 USD per hectare was based on regular or standards of EDC through the BINHI program given prevailing rates on the actual implementation of forest restoration the cost includes 3 year maintenance **Counterpart Costing:** 84% Counterpart cost from AFOCO 15% Counterpart cost from EDC 1% Counterpart cost from DENR
Activity 1.5. Planting and Maintenance				
Activity 1.6. Regular Monitoring and Evaluation	ha	100	292	Monthly travel cost per month of 2 hired staff
Output 2: Capacitated local community or farmers association				
Activity 2.1: Training for forest restoration, nursery management and forest protection	lot	1	10000	Conduct focus group discussion and trainings for atleast 20pax x 3 trainings x 50USD per pax x 3years and other miscellaneous expenses **Counterpart Costing:** 84% Counterpart cost from AFOCO 15% Counterpart cost from EDC 1% Counterpart cost from DENR
Activity 2.2: Development of forest protection plan				

Output 3: Established 1 Arboretum with 20 of PTES				
Activity 3.1 Preparation of arboretum design	lot	1	1000	Architectural design perspective of the arboretum based on the current prevailing rates 1000 USD/design **Counterpart Costing:** 84% Counterpart cost from AFOCO 14% Counterpart cost from EDC 2% Counterpart cost from DENR
Activity 3.2: Tree identification and Seedl ings sourcing	sdlngs	300	50	Current prevailing rate per seedlings of PTE's
Activity 3.3 Site preparation *Activity 3.4 Construction of signages, pa thwalk, information boards and other rel ated facilities* *Activity 3.5 Planting and Maintenance*	ha	2	50000	25,000 USD contract cost per hectare in the development of arboretum including scientific information, admin and logistical expenses **Counterpart Costing:** 84% Counterpart cost from AFOCO 14% Counterpart cost from EDC 2% Counterpart cost from DENR
Activity 3.6 Regular monitoring and eval uation	times	6	783	Semi-annual monitoring for 3 years and evaluation of project staff including transportation cost and admin expenses
Output 4: Updated/Developed information database for PTES 40,160 (9%)				
Activity 4.1 Photo documentation of Phili ppine threatened and endemic tree spec ies *Activity 4.2 Desktop work for completion of database and data gathering*	lot	1	15000	Regular project cost in the development of publication and website including admin and other logistical expenses **Counterpart Costing:** 84% Counterpart cost from AFOCO 14% Counterpart cost from EDC 2% Counterpart cost from DENR
Activity 4.3: Publication of information database through website, social media and printed books	lot	1	15000	Regular project cost in the publication and printing of books and development of website
Output 5: Produced information materials and developed at least 10 Propagation Protocol of PTES				
Activity 5.1 Conduct propagation trial for PTES using vegetative parts and available seeds (if any)	lot	1	70000	Including nursery facility counterpart of EDC worth 60000 and supplies for 3 years **Counterpart Costing:** 14% Counterpart cost from AFOCO 85% Counterpart cost from EDC 1% Counterpart cost from DENR
Activity 5.2 Training for clonal propagation or vegetative material	lot	1	1000	Regular training cost for members of farmers atleast 20 pax

reproduction				**Counterpart Costing:** 14% Counterpart cost from AFOCO 85% Counterpart cost from EDC 1% Counterpart cost from DENR
Output 6: Draft new forest policies and/or technical bulletins on private-public partnerships in forest restorations				
Activity 6.1 Round table discussion	times	6	200	Meeting meals for round table discussion **Counterpart Costing:** 38% Counterpart cost from AFOCO 62% Counterpart cost from DENR
Activity 6.2 Field data validation	pax	5	400	Travel logistical expenses for DENR/EDC and Project Hired Staff **Counterpart Costing:** 38% Counterpart cost from AFOCO 62% Counterpart cost from DENR
Activity 6.3.Annual conference with DEN R	pax	20	100	Admin and logistical expenses for 20pax **Counterpart Costing:** 38% Counterpart cost from AFOCO 62% Counterpart cost from DENR
Output 7. Trained and capacitated at least 10 Technical Person from DENR, EDC and AFOCO				
Activity 7.1 Benchmarking, site visit and hands-on learning opportunities *Activity 7.2 Documentation of knowledge sharing*	pax	6	2256	3 year Knowledge Sharing for DENR and EDC including airfare and other logistical expenses **Counterpart Costing:** 92% Counterpart cost from AFOCO 4% Counterpart cost from EDC 4% Counterpart cost from EDC
*Activity 7.3. Annual AFOCO Conference**	pax	2	6000	3 year AFOCO Conference for 2pax including Airfare and other logistical expenses **Counterpart Costing:** 92% Counterpart cost from AFOCO 4% Counterpart cost from EDC 4% Counterpart cost from EDC
Management Cost (EDC)	pax	7	14400	70% EDC counterpart resources for 3 years
Management Cost (FMB)	pax	3	14400	30 FMB counterpart resources for 3 years

Annex 2. List of Priority Threatened and Endemic Species for Planting in BAC-MAN

No.	Common Name	Scientific Name	Family Name	Conservation Status	Endemicity
1	Pahutan	*Mangifera altissima*	Anacardiaceae	Vulnerable (DENR-AO 2017-11)	Native only
2	Almaciga	*Agathis philippinensis*	Araucariaceae	Vulnerable (IUCN)	Native only
3	Katmon-bayani	*Dillenia megalantha*	Dilleniaceae	Vulnerable (IUCN)	Native only
4	Almon	*Shorea almon*	Dipterocarpaceae	Vulnerable (DENR-AO 2017-11)	Native only
5	White-lauan	*Shorea contorta*	Dipterocarpaceae	Vulnerable (DENR-AO 2017-11)	Philippine endemic
6	Red lauan	*Shorea negrosensis*	Dipterocarpaceae	Vulnerable (DENR-AO 2017-11)	Philippine endemic
7	Yakal	*Shorea astylosa*	Dipterocarpaceae	Critically Endangered (DENR AO 2017-11)	Native only
8	Yakal-yamban	*Shorea falciferoides*	Dipterocarpaceae	Critically Endangered (IUCN)	Native only
9	Tanguile	*Shorea polysperma*	Dipterocarpaceae	Vulnerable (DENR AO 2017-11)	Philippine endemic
10	Kamagong	*Diospyros blancoi*	Ebenaceae	Vulnerable (DENR-AO 2017-11)	Native only
11	Ata-ata	*Diospyros mindanaensis*	Ebenaceae	Other Threatened Species (DENR AO 2017-11)	Native only
12	Batete	*Kingiodendron alternifolium*	Fabaceae	Vulnerable (DENR-AO 2017-11)	Native only
13	Narra	*Pterocarpus indicus*	Fabaceae	Endangered (IUCN)	Native only
14	Kalingag	*Cinnamomum mercadoi*	Lauraceae	Vulnerable (IUCN)	Philippine endemic
15	Batikuling	*Litsea leytensis*	Lauraceae	Vulnerable (IUCN)	Philippine endemic
16	Antipolo	*Artocarpus blancoi*	Moraceae	Vulnerable (IUCN)	Philippine Endemic
17	Mapilig	*Xanthostemon bracteatus*	Myrtaceae	Vulnerable (IUCN)	Philippine endemic
18	Nato	*Palaquium luzoniense*	Sapotaceae	Vulnerable (IUCN)	Philippine endemic

19	Malak-malak	*Palaquium philippense*	Sapotaceae	Vulnerable (IUCN)	Philippine endemic
20	Pili	*Canarium ovatum* Engl.	Burseraceae	Least Concern (IUCN)	Philippine endemic
	OTHER IMPORTANT NATIVE AND RARE/THREATENED SPECIES				
1	Malapaho	*Mangifera monandra*	Anacardiaceae	Endangered	Native only
2	Piling-liitan	*Canarium luzonicum*	Burseraceae	Near Threatened (IUCN)	Philippine endemic
3	Katmon	*Dillenia philippinensis*	Dilleniaceae	Near Threatened (IUCN)	Philippine endemic
4	Mayapis	*Shorea palosapis*	Dipterocarpaceae	Least Concern (IUCN)	Native only
5	Bagtikan	*Parashorea malaanonan*	Dipterocarpaceae	Least Concern (IUCN)	Native only
6	Hamindang	*Macaranga bicolor*	Euphorbiaceae	Vulnerable (IUCN)	Native only
7	Takip-asin	*Macaranga grandifolia*	Euphorbiaceae	Vulnerable (IUCN)	Native only
8	Alauihau	*Aglaia cumingiana*	Meliaceae	Vulnerable (IUCN)	Native only
9	-	*Artocarpus treculianus*	Moraceae	Vulnerable IUCN)	Native only
10	Is-is	*Ficus ulmifolia*	Moraceae	Vulnerable (IUCN)	Native only
11	Bakad-Pula	*Prunus rubiginosa*	Rosaceae	Endangered (IUCN)	Native only
12	Butlo	*Aquilaria cumingiana*	Thymelaeaceae	Vulnerable (IUCN)	Native only